

Rec. zool. Surv. India, 110(Part-2) : 131-134, 2010

Short Communication

PRELIMINARY OBSERVATIONS ON THE BUTTERFLY FAUNA OF KALESAR WILDLIFE SANCTUARY, HARYANA, INDIA

INTRODUCTION

Kalesar Wildlife Sanctuary (133 Km²) lies in the northern Shivalic tract to the west of Yamuna river in Haryana. The whole gamut of natural habitat and rich phytodiversity of the sanctuary provides excellent habitat for the whole variety of fauna, more so for butterflies like Common Mormon, Common Emigrant, Evening Brown, Common Grass Yellow, Yellow Orange Tip, Plain Tiger, Common Indian Crows and Blues. No systematic study on butterfly fauna was undertaken in this sanctuary. During the amphibian faunal survey conducted recently in the protected area, 35 species of butterflies under 24 genera and 5 families were observed, which are documented in this paper.

STUDY AREA

Kalesar Wildlife Sanctuary [30°24' N 77°32' E; (Fig. 1)] is situated 5500 feet above sea level having an area of 133 Km² and the terrain varies from plains to hills rising up to 700 m. There are narrow valleys locally called 'Khol's' present between the hills. The sanctuary has a number of water bodies, both natural and man made which provide the wetland habitats in the reserve.

MATERIAL AND METHODS

The vast stretch of the protected area was surveyed randomly. Field observations on butterflies were made by randomly laying transects in the reserve in different habitats. The sites chosen represented the varied habitat types in the study area. Each transect (100-200 m.) laid was covered for observations, between 8 am. and 12 noon and the distribution of butterflies studied on an abundance/frequency scale (Taylor, Green & Stout, 2002). A long handle, simple butterfly net (30 cm. diameter) was used for netting butterflies. The

taxonomic identification was done based on the works of Evans, 1932; Wynter-Blyth, 1957; Kunte, 2000 and Gupta and Shukla, 1987&1988. The scheme of systematic classification followed is after Ackery, 1984.

RESULTS AND DISCUSSION

The butterflies recorded, represents all the major families like Nymphalidae, Papilionidae, Pieridae, Lycaenidae and Hesperidae. The study records distribution of 35 species of butterflies under 24 genera and 5 families (Table 1). The family Nymphalidae (14 species) was well represented throughout, occurring commonly, followed by Pieridae (10 species), Papilionidae (8 species), Lycaenidae (2 species) and Hesperidae (1 species). The genera *Papilio* & *Catopsilia* exhibit high species diversity with 3 species each. Only 2 species of pansy have been observed in this reserve out of 6 found in peninsular India. The family Lycaenidae was represented by only 2 species in the sanctuary. Hesperidae, being the third largest family represented only one species at the time of observation. Some rare species protected under Schedule such as *Hypolimnas misippus* (Schedule-I & II), *Pachliopta hector* (Schedule-I), *Cepora nerissa* (Schedule-II) and *Euploea core* (Schedule-IV) (Anon, 1990) were observed in the sanctuary.

The habitat association of butterflies discussed here is based on the observed distribution in various habitats. Significant variation was observed in habitat preferences between the butterflies in the forest under storey and forest canopy. This Sanctuary having various host plants like *Lantana camara*, *Ageratum conyzoides* & *Carissa spinarum* etc. are ideal habitats for butterflies in some region (Figs. 2 & 3). Invariably, the butterflies (Common Mormon, Common Jezebel, Common



Fig 1.

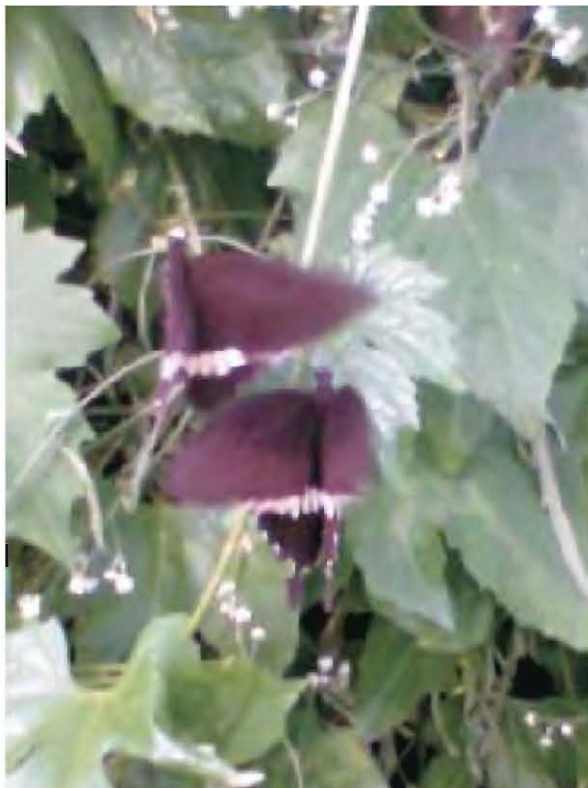


Fig 2.

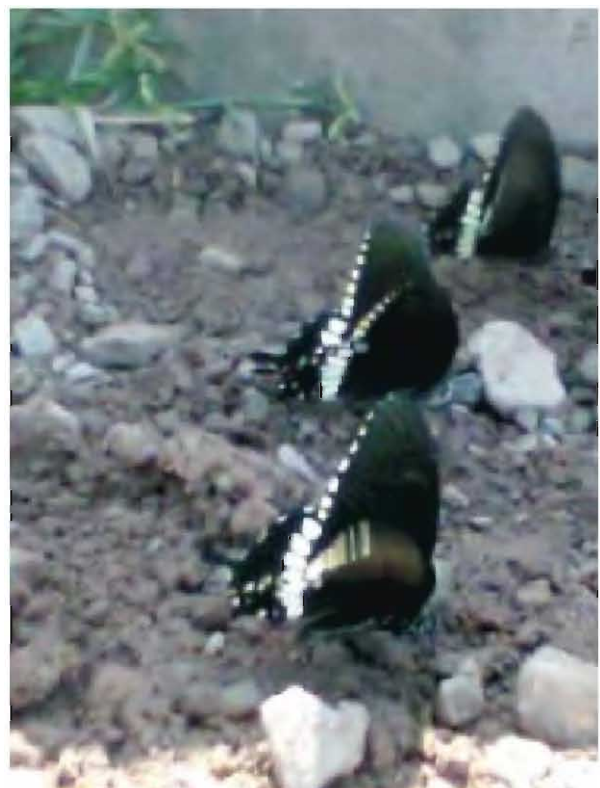


Fig 3.

Emigrant) were observed to congregate in the cool and shady places around streams and rivers. The riverine habitat (Yamuna river bank) was found to be most rich in species, probably due to availability of water, mineral and salts. Most of the butterflies were also observed in human settlements (around the sanctuary), probably due to availability of various plant resources. The family Nymphalidae exhibited for greater diversity in species content (richness). Common Mormon, Common Leopard, Small Grass Yellow, Common Grass yellow, Mottled Emigrant & Yellow Orange Tip were found abundant (> 50 %). Common Gull, Common Emigrant

& Lemon Emigrant were common (10-50%), while Common Sailor, Plain Tiger, Lemon Pansy, Chocolate Pansy, Lime Butterfly, Dinead Eggfly, Great Egg fly Common Rose, Common Indian Crow, Common Pierrot were frequent (1-10%) in the sanctuary.

ACKNOWLEDGEMENTS

The authors express their gratitude to Dr. Ramakrishna, Director ZSI, Kolkata, for facilities; the P.C.C.F, C.C.F of the Forest Dept., Haryana as well as the Conservator of Forest and Field Director of the Kalesar Wildlife sanctuary for the necessary support extended.

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Table-1 : List of butterflies in Kalesar Wildlife Sanctuary, Haryana

Sl. No.	Family & Species	Wing Span (mm)	Relative abundance
	Papilionidae (Swallow tails)		
1.	<i>Graphium doson eleius</i> (Frushstorfer, 1939)	76-78	Frequent
2.	<i>Princeps nephelus nephelus</i> (Boisduval, 1836)	70-100	Frequent
3.	<i>Papilio polytes</i> Linnaeus, 1758 Common Mormon	90-100	Common
4.	<i>Papilio demoleus</i> (Linnaeus, 1758), Lime Butterfly	80-100	Frequent
5.	<i>Papilio agestor</i> (Gray, 1832), Tawny mime	65-90	Frequent
6.	<i>Pachlioptata aristolochiae</i> Fabricius, Common Rose	80-110	Frequent
7.	<i>Pachlioptata hector</i> (Linnaeus), Crimson rose	65-100	Frequent
8.	<i>Leptosia nina</i> (Fabricius) The Psyche	25-53	Common
	Pieridae (White & Yellows)		
9.	<i>Delias eucharis</i> Drury, Common Jezebel	66-83	Common
10.	<i>Cepora nerissa</i> (Common gull)	40-65	Common
11.	<i>Terias hecabe</i> (Linnaeus, 1881) Common Grass yellow	40- 50	Frequent
12.	<i>Terias brigitta</i> (Stoll) Small Grass yellow	30-40	Frequent
13.	<i>Catopsilia pomona</i> Fabricius, Common Emigrant.	50-70	Common
14.	<i>Catopsilia pyranthe</i> (Linnaeus, 1758) Mottled Emigrant	50-70	Abundant
15.	<i>Catopsilia crocale</i> (Linnaeus, 1758) Lemon Emigrant	50-70	Common
16.	<i>Ixias pyrene</i> (Yellow orange tip)	50-70	Abundant
17.	<i>Ixas marianne</i> (Cramer) White Orange Tip	50-55	Common
18.	<i>Hebomia glaucippe</i> Butler (Great orange tip)	65-100	Abundant
	Nymphalidae (Brush footed butterflies)		
19.	<i>Phalanta Phalanta</i> (Drury, 1770), Common Leopard	58- 64	Abundant
20.	<i>Junonia lemonias</i> Linnaeus, 1758, Lemon Pansy	45-60	Frequent
21.	<i>Junonia iphita</i> , Cramer, 1782, Chocolate Pansy	60-70	Frequent
22.	<i>Neptis hylas</i> , Linnaeus, 1758, Common Sailor	50-60	Frequent
23.	<i>Danaus chrysippus</i> (Linnaeus, 1758), Plain Tiger	70-80	Frequent
24.	<i>Danaus genutia</i> (Cramer, 1779), Striped Tiger	72-100	Frequent
25.	<i>Parantica aglea</i> (Stoll, 1984), Glassy Tiger	60-85	Frequent
26.	<i>Euploea core</i> (Cramer, 1780), Common Indian crow	85-95	Frequent
27.	<i>Hypolimnas misippus</i> Linnaeus, 1764 Danaid Eggfly	72	Frequent
28.	<i>Hypolimnas bolina</i> (Linnaeus, 1758), Great Eggfly	70-110	Frequent
29.	<i>Mycalesis tubitha</i> (Fabricius, 1763) Common Bush brown	45-50	Common
30.	<i>Mycalesis mineus</i> (Linnaeus) Dark brand bush brown	48-80	Frequent
31.	<i>Melanitis leda</i> Linnaeus, Common Evening brown	56-80	Common
32.	<i>Euthalia nais</i> Forster, 1771, Baronet	58-70	Frequent
	Lycaenidae (Blues)		
33.	<i>Catalius rosimon</i> , Common Pierrot	45-50	Frequent
34.	<i>Catochrysops strabo</i> (Forget me not)	23-32	Frequent
	Hesperiidae (Skippers)		
35.	<i>Zizula hylax</i> (Fabricius, 1775) Tiny grass blue	15-20	Frequent

*Abundant:>50%, Common: 10-50% & Frequent:1-10%.