

BUTTERFLIES OF RATANMAHAL WILDLIFE SANCTUARY, GUJARAT

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A study on documenting diversity of butterflies in the protected areas of Gujarat State was carried out during which Ratanmahal Wildlife Sanctuary was an area studied.

Ratanmahal Wildlife Sanctuary encompasses 55.65km² and is located between 22°32' to 22°35'N and 74°3' to 74°11'E. This area has the only large pocket of dense forest in Dahod District. The altitude ranges from 230m to 670m. Rainfall averages 980mm in a year. Minimum and maximum temperatures are 6.1°C and 44.4°C respectively.

During the course of the study, 44 species of butterflies were recorded. Of the ten families of butterflies known to occur in India (Wynter-Blyth, 1957), eight families were recorded in the Sanctuary. Family Nymphalidae had the largest number of species (14) while Acraeidae was represented by only one species (Table 1).

During the first survey trip to the Sanctuary from 17-20 March 2000, 21 species of butterflies were recorded. The low species diversity in March was probably due to high temperature (35°C). However, during the second survey trip (19-24 October 2000) 40 species of butterflies were recorded. All the scientific names follow Varshney (1979, 1985, 1990) and classification and common English names are after Wynter-Blyth (1957).

Acknowledgements

First two authors are grateful to the Director, Gujarat Ecology Education and Research (GEER) Foundation, Gandhinagar for financial support and the Forest Department, Gujarat State for giving permission to work in the Sanctuary. We are also thankful to the staff of the Sanctuary for cooperation during our stay.

References

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Table 1. List of butterflies of Ratanmahal Wildlife Sanctuary

| Common name | Scientific name | Occur. | |
|-------------------------|---|--------|------|
| | | Mar. | Oct. |
| Danaidae | | | |
| Blue Tiger | <i>Danaus limniace leopardus</i> (Butler) | - | + |
| Plain Tiger | <i>Danaus chrysippus</i> (Linnaeus) | + | + |
| Striped or Common Tiger | <i>Danaus genutia</i> (Cramer) | - | + |
| Glassy Tiger | <i>Danaus aglea</i> (Stoll) | - | + |
| Common Indian Crow | <i>Euploea core</i> (Cramer) | + | + |
| Satyridae | | | |
| Common Tree Brown | <i>Lethe rohria</i> | + | + |
| Common Three Ring | <i>Ypthima asterope mahratta</i> Moore | + | + |
| Common Evening Brown | <i>Melanitis leda ismene</i> (Cramer) | + | + |
| Nymphalidae | | | |
| Baronet | <i>Symphaedra nais</i> (Forster) | + | + |
| Baron | <i>Euthalia conthea garuda</i> (Moore) | - | + |
| Common Sailer | <i>Neptis hylas</i> (Linnaeus) | + | + |
| Great Eggfly | <i>Hypolimnas bolina</i> (Linnaeus) | + | + |
| Danaid Eggfly | <i>Hypolimnas misippus</i> (Linnaeus) | - | + |
| Yellow Pansy | <i>Precis hierta</i> (Fabricius) | + | + |
| Blue Pansy | <i>Precis orithya</i> (Linnaeus) | + | - |
| Lemon Pansy | <i>Precis lemonias</i> (Linnaeus) | + | + |
| Peacock Pansy | <i>Precis aimana</i> (Linnaeus) | + | + |
| Chocolate Pansy | <i>Precis iphita</i> (Cramer) | + | + |
| Grey Pansy | <i>Precis atllites</i> (Linnaeus) | - | + |
| Common Leopard | <i>Phalanta phalantha</i> (Drury) | - | + |
| Painted Lady | <i>Cynthia cardui</i> (Linnaeus) | - | + |
| Angled Castor | <i>Ariadne ariadne</i> (Linnaeus) | - | + |
| Acraeidae | | | |
| Tawny Coster | <i>Acraea violae</i> (Fabricius) | - | + |
| Lycaenidae | | | |
| Common Pierrot | <i>Castalius rosimon</i> (Fabricius) | - | + |
| Tiny Grass Blue | <i>Zizula gaika hylax</i> (Trimen) | - | + |
| Lesser Grass Blue | <i>Zizeeria otis</i> | - | + |
| Gram Blue | <i>Euchrysops cnejus</i> (Fabricius) | - | + |
| Common Cerulean | <i>Jamides celeno aelianus</i> (Fabricius) | - | + |
| Indian Sunbeam | <i>Curetis thetis</i> (Drury) | - | + |
| Angled Sunbeam | <i>Curetis acuta</i> | - | + |
| Indian Red Flash | <i>Rapala airbus sorya</i> (Kollar) | - | + |
| Zebra Blue | <i>Syntarucus plinius</i> (Fabricius) | + | - |
| Pallionidae | | | |
| Common Rose | <i>Atrophaneura aristolochiea</i> (Fabricius) | - | + |
| Lime Butterfly | <i>Papilio demoleus</i> Linnaeus | + | + |
| Tailed Jay | <i>Graphium agamemnon</i> (Linnaeus) | - | + |
| Spot Swordtail | <i>Graphium nomius</i> (Esper) | + | - |
| Pieridae | | | |
| Common Jezebel | <i>Delias eucharis</i> (Drury) | - | + |
| Common Emigrant | <i>Catopsilia crocale</i> (Cramer) | + | + |
| Lemon Emigrant | <i>Catopsilia pomona</i> (Fabricius) | + | + |
| Spotless Grass Yellow | <i>Eurema laeta</i> Boisduval | + | + |
| Common Grass Yellow | <i>Eurema hecabe</i> (Linnaeus) | + | + |

Manuscript received 28 June 2001;

Revised manuscript received 18 March 2002;

Accepted for publication 24 June 2002

| Common name | Scientific name | Occur. | |
|--------------------|--|--------|------|
| | | Mar. | Oct. |
| Small Grass Yellow | <i>Eurema brigitta rebella</i> (Wallace) | - | + |
| <u>Hesperiidae</u> | | | |
| Indian Skipper | <i>Spialia galba</i> (Fabricius) | - | + |
| Indian Dart | <i>Potanthus pseudomaesa</i> | + | - |

BUTTERFLIES OF NARAYAN SAROVAR WILDLIFE SANCTUARY, GUJARAT

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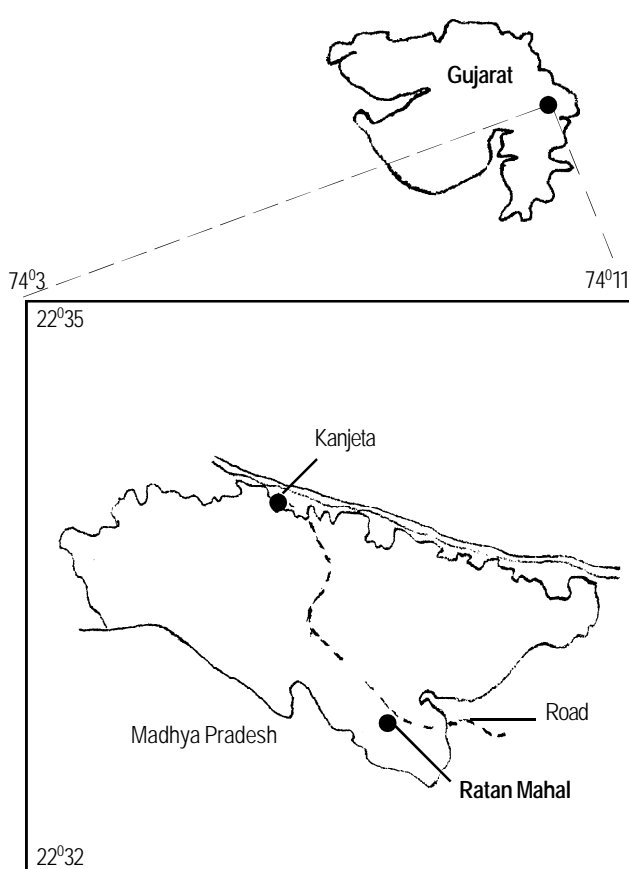


Figure 1. Map showing Ratanmahal Wildlife Sanctuary

Natural History Society 82(2): 309-321.

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Although a few species of butterflies were recorded by Wynter-Blyth (1957) from Kutch located adjacent to the Sanctuary, there exists no report on the butterflies of Narayan Sarovar Wildlife Sanctuary. This note is an attempt to fill the gap.

The Narayan Sarovar Wildlife Sanctuary is known mainly due to its role in the conservation of Chinkara, *Gazella benneti*, and its habitat. The Sanctuary encompasses 444.23km² and is situated between 23°24' to 23°44'N and 68°30' to 68°56'E in Kutch District of Gujarat. The altitude ranges from about 3-187m. The average annual rainfall of the area is 349mm. However, the area is drought-prone and variation in rainfall from year to year is considerable. Average temperature ranges from 4-48°C. Vegetation cover in the Sanctuary as per satellite data of 1997 indicates 2.8% dense forest, 25% sparse tree cover, 62.2% herbaceous cover, 3.8% cultivation, 0.5% water bodies and 5.2% other categories (Singh, 1998).

A survey of butterflies of the Sanctuary was conducted from 6-10 November 2000. Nearly 20% of area of the Sanctuary surrounding Narayan Sarovar Village was surveyed and butterflies were collected. Nets were used for collecting specimens. Collected specimens were narcotized with menthol crystals and were air-dried for identification. All the specimens were examined carefully and identified using various references such as Talbot (1939, 1947), Wynter-Blyth (1957) and Gay *et al.* (1992). All the scientific names follow Varshney (1979, 1985, 1990) and classification and common English names are after Wynter-Blyth (1957).

During the survey, we found low butterfly diversity due to unsuitable habitat. Most parts of the Sanctuary are characterized by the prevalence of dry conditions. A total of 34 species of butterflies were recorded in the survey, of which one species belonged to the family Danaidae, five to Nymphalidae, 13 to Lycaenidae, two to Papilionidae, 12 to Pieridae and one to Hesperiidae (Table 1).

Manuscript received 10 March 2001; Revised manuscript received 18 March 2002; Accepted for publication 24 August 2002