



## Inventory and diversity of butterfly (Lepidoptera) in Navegaon National Park (NNTR) Gondia Maharashtra

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### Abstract

The species diversity of Butterflies of Navegaon National Park (20°45' to 21°2' N and 80°5' to 80°15' E) is situated in Gondia district of Maharashtra State. It is popular for diversity of vegetation ranging from dry-mixed forest to rain forest & enriched with varied wildlife. The present study was aimed to document this ecologically valuable group of animals (Butterflies) from this important conservation unit of central India. The outcome of this study would provide base line data for effective planning and management of this habitat. This study reveals the occurrence of 56 Butterflies belonging to 05 families.

**Keywords:** butterflies, Navegaon national park, inventory, Gondia

### Introduction

Insects especially butterflies are one of the good indicators of environmental quality of any ecosystem. Butterflies have specific habitat requirement depending upon their feeding and reproduction requirements, loss of which may cause local extinction. Thus the conservation value of a habitat could be assessed by the presence of various species of butterflies in an area.

From the time immemorial butterflies have always fascinated human kind. Butterflies are now studied as living ecological components (Kehimkar, 2011) [7]. Some of the important contribution in butterflies studies are de Niceville (1886) [3], Marshall & Swinhoe (1893) [4], Binghaus (1905), Evans (1932) [4], Heppner (1998) [5], Kunte (2000) [8], Mathew and Rahamathulla (1993) [10], Lewis (1973) [9], Sharma *et al.*, (2006) [11], Kehimkar (2008) [7], Tiple & Khurad (2009) [14], Tiple (2011) [15], Kasambe (2012), Bhandarkar & Paliwal (2015) [1] etc.

With the extensive use of pesticides, occasional fires in the forest, habitat destruction many species come under threatened category. The present investigation document the

butterfly fauna for better management, planning & conservation of this valuable conservation unit.

### Material and Methods

The observations were based on field survey. Butterflies observed were photographed, identified & classified by using literature from the Book of Indian Butterflies by Kehimkar & Butterflies in Maharashtra by Kasambe.

**STUDY AREA:** Navegaon National Park: Navegaon National park, commonly known as Navegaon Bandh, is located in Gondia district. It lies between 20°45' to 21°02' North Latitude and 80°05' to 80°15' East Longitude. It is popular in the eastern Vidarbha region of Maharashtra for diversity of vegetation ranging from dry mixed forest to rain forest. This southern tropical dry forest is enriched with varied wildlife, and is an important conservation unit in central India.

**Navegaonbandh Lake:** This site is situated in Navegaon National Park located at 20°45' to 21°02' North Latitude and 80°05' to 80°15' East Longitude, representing the lentic systems affected by fishing and other activities.

**Table 1:** List of Butterflies of Navegaon National Park, Gondia, M.S

Sr. No.	Common Name	Scientific Name
<b>Family- Papilionidae</b>		
<b>Subfamily - Papilionae</b>		
1	Common Jay	<i>Graphium doson</i>
2	Spot Sword Tail	<i>Graphium nomius</i>
3	Common Mormon	<i>Papilio polytes</i>
4	Common Peacock	<i>Papilio binor</i>
5	Banded Peacock	<i>Papilio crino</i>
6	Common Rose	<i>Pachliopta aristolochiae</i>
7	Crimson Rose	<i>Pachliopta hector</i>
8	Malabar Rose	<i>Pachliopta pandiyana</i>
9	Lime Butterfly	<i>Papilio demoleus</i>
<b>Family: Pieridae</b>		
<b>Subfamily: Colidinae</b>		
10	Common Grass Yellow	<i>Eurema hecabe</i>
11	One spot Grass Yellow	<i>Eurema andersoni</i>
12	Common Emigrant	<i>Catopsilia pomona</i>
13	Lemon Emigrant	<i>Catopsilia sps</i>

14	Mottled Emigrant	<i>Catopsilia pyranthe</i>
<b>Subfamily: Pierinae</b>		
15	Common Gull	<i>Cepora nerissa</i>
16	Common Wanderer	<i>Pareronia valeria</i>
17	Common Jezbel	<i>Delias eucharis</i>
18	Painted Jezbel	<i>Delias hyparete</i>
<b>Family: Lycaenidae</b>		
<b>Subfamily: Theclinae</b>		
19	Common Silverline	<i>Spindasis vulcanus</i>
<b>Subfamily: Polymmatinae</b>		
20	Painted Ciliate Blue	<i>Anthene emolus</i>
21	Common Pierrot	<i>Casalius rosimon</i>
22	Banded Pierrot	<i>Discolampa ethion</i>
23	Rounded Pierrot	<i>Tarucus extricatus</i>
24	Grass Jewel	<i>Chilades trochylus</i>
25	Indian Cupid	<i>Everes lacturnus</i>
26	Tiny Grass Blue	<i>Zizula hylax</i>
<b>Subfamily: Miletinae</b>		
27	Forest Pierrot	<i>Taraka hamada</i>
<b>Subfamily: Riodininae</b>		
28	Plum Judy	<i>Abisara echerius</i>
<b>Family: Nymphalidae</b>		
<b>Subfamily: Libytheinae</b>		
29	Common Tiger	<i>Danaus genutia</i>
30	Plain Tiger	<i>Danaus chrysippus</i>
31	Common Crow	<i>Euploea core</i>
<b>Subfamily: Charaxinae</b>		
32	Common Nawab	<i>Polyura athamas</i>
33	Tawny Rajah	<i>Charaxes psaphon</i>
34	Black Rajah	<i>Charaxes solon</i>
<b>Subfamily: Satyrinae</b>		
35	Common Evening Brown	<i>Melanitis leda</i>
36	Dark Evening Brown	<i>Melanitis phedima</i>
<b>Subfamily: Heliconinae</b>		
37	Tawny Coster	<i>Acraea terpsicore</i>
38	Yellow Coster	<i>Acraea issoria</i>
39	Common Leopard	<i>Phalanta phalantha</i>
40	Common Sergeant	<i>Athyma perius</i>
41	Common Lascar	<i>Pantoporia hordonia</i>
42	Common Sailer	<i>Neptis hylas</i>
43	Sullied Sailer	<i>Neptis clinia</i>
45	Common Brown	<i>Euthalia aconthea</i>
46	Baronet	<i>Euthalia nais</i>
<b>Subfamily: Limenithinae</b>		
47	Commander	<i>Moduza procris</i>
<b>Subfamily: Nymphalinae</b>		
48	Blue Pansy	<i>Junonia orithya</i>
49	Yellow Pansy	<i>Junonia hierta</i>
50	Gray Pansy	<i>Junonia atlites</i>
51	Chocolate Pansy	<i>Junonia iphita</i>
52	Peacock Pansy	<i>Junonia almana</i>
53	Lemon Pansy	<i>Junonia lemonias</i>
54	Danaid Eggfly	<i>Hypolimnna misippus</i>
55	Great Eggfly	<i>Hypolimnna bolina</i>
<b>Family: Hesperidae</b>		
<b>Subfamily: Hesperinae</b>		
56	Indian Palm Bob	<i>Suastus gremius</i>

## Discussion

In the present investigation 56 species belonging to 05 families of order Lepidoptera were reported. Butterfly species diversity were reported in the family Papilionidae, Pieridae, Lycaenidae, Nymphalidae and Hesperidae, in which family Nymphalidae were dominated with 27 species under 06 subfamilies. The butterflies are selective and their association with the host plants is highly specific; unlike bees, butterflies feed entirely on nectar, which obtain through

their long proboscis from flower. Thus pollination, a crucial link in the survival of ecosystem, is one such factor that needs to be well understood to develop appropriate strategies for the conservation of the biodiversity (Sharma & Joshi, 2009). From the conservation point of view this habitat is rich in flora and fauna. This study will be helpful for better conservation and management planning of the protected area. 59 species of butterflies were recorded from Pohara Malkhed Reserve Forest, Amaravati district by Kasambe & Wadatkar

(2004) [6]; 68 species from Tadoba- Andheri Tiger Reserve (Sharma & Radhakrishnan, 2006) [11]; 45 species from Pench Tiger Reserve by Singh (2004) [6]; 45 species from Melghat Tiger Reserve (Sharma & Radhakrishnan, 2005); 36 genera representing 7 families from Lonar Wildlife Sanctuary, Buldhana district (Sharma, 2008) [12] and many more reports from forests of Maharashtra reveals wide biodiversity of butterflies.

Insects are major component of macroscopic biodiversity and for this reason alone we should try to understand them better.

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**Danoid Egg fly**



**Towny Coater**



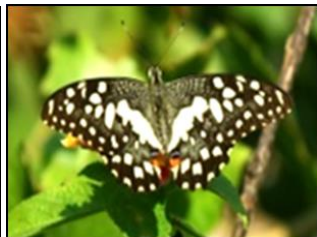
**Gray Pansy**



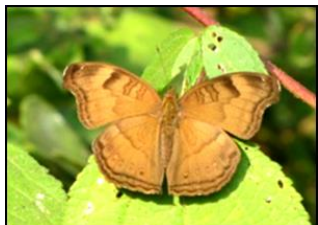
**Yellow Pansy**



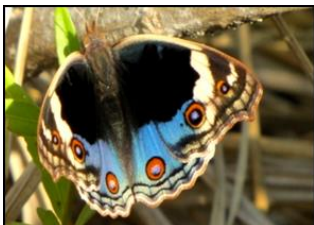
**Common Silverline**



**Lime Butterfly**



**Chocolate Pansy**



**Blue Pansy**



**Peacock Pansy**

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