



A survey report on the distribution conservation and protection of butterfly in Navegaon national park, Navegaon lake and outskirts area in Gondia district Maharashtra India

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ABSTRACT

Navegaon National Park is one of the famous park in central India located in Gondia District. Navegaon lake is also one of the famous lake and it is known as the heaven of migratory birds and also as a second Bharatpur. It has diversified flora and fauna. The Navegaon National Park spread in 133.88 sq km and the forest is of dry deciduous to moist deciduous type likewise Navegaon lake cover the area of 11 sq km. The crop type is paddy. Lake periphery cover paddy field, forest and shrub, bushes. In present survey Total 66 species of butterflies in 46 genera of 5 families were recorded. Among that in Nymphalidae family noted 28 species of 18 genera, in Lycaenidae family 9 species of 9 genera were noted, Hesperidae family 7 species of 7 genera, Papilionidae family 10 species of 3 genera and in Pieridae family 12 species of 9 genera were noted. Study revealed that Nymphalidae family is most dominating family with highest number of species. The butterfly like spotted swordtail seen rarely one or two times in total study period.

Keywords: Butterfly, Identification, Distribution, Conservation, Navegaon national park.

INTRODUCTION

Navegaon National Park is located in central India, District Gondia. Mesotrophic lake ecology of Navegaon /Bandh Lake provide healthy ecosystem to flora and fauna. Butterflies are one of them, population of butterflies decreases day by day due to climate change and butterflies are sensitive indicator of climate change. Butterflies are one of the most important pollinating agents.

According to Kehimkar the life span of butterflies is from few weeks to few months. The major task of butterfly is to propagate its species. Butterfly can go in to resting period which is similar to hibernation. There are about 18,000 species of butterflies in the world. In India there are

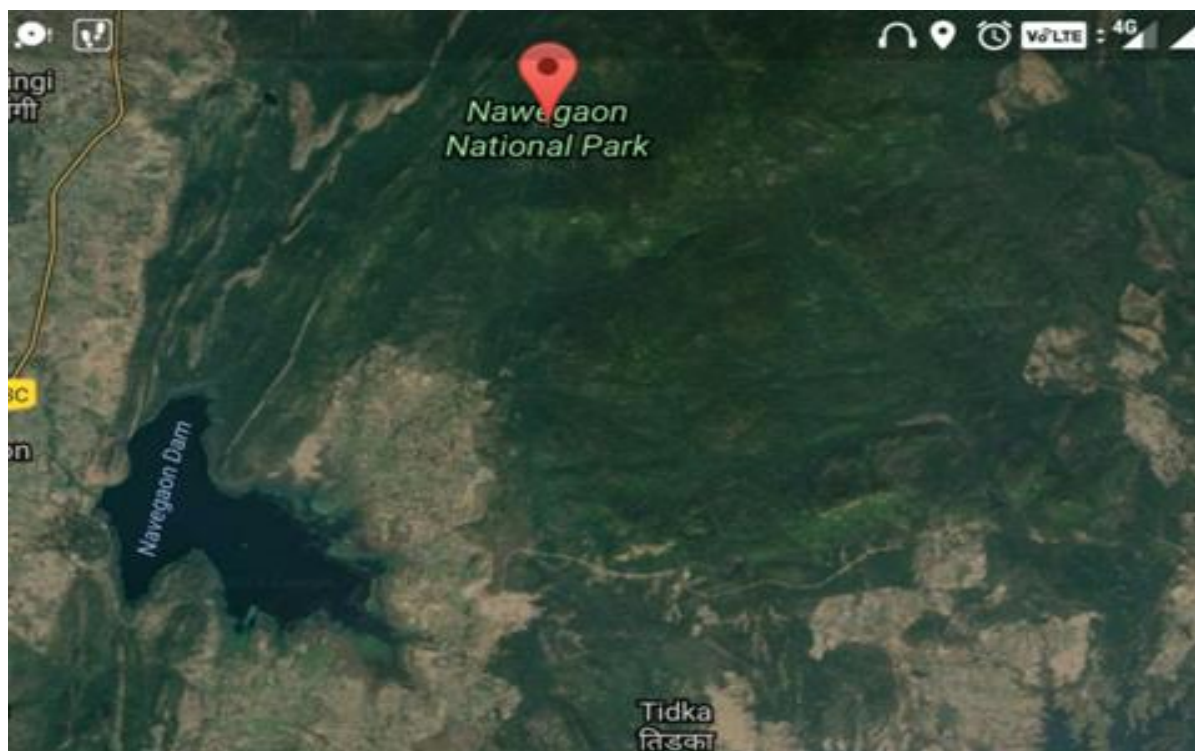


Fig 1 : Map of Study area Nawegaon National Park (Source : Google)

1501 species of which 321 are skippers, 109 white and yellows, 521 Brush footed butterflies, 443 blues and 107 Swordtails. Navegaon national park located in Vidarbha. In winter season migratory bird visit the lake due to its ideal ecosystem. Navegaon national park spread in 133.88 sq km & coordinates of navegaon National park is 20°56'N 80°10'E. Navegaon lake spread in 11 sq km.

MATERIALS AND METHODS

The present study was carried out from May 2015. study a year is divided in to post monsoon and pre monsoon. Pre monsoon period considered from May to September and post monsoon from October to April. Different location was selected on the basis of occurrence and availability of flowering plant and hosting plants. Mainly (1) The peripheral surrounding of nawegaon/Bandh lake (2) Area of Nawegaon National Park. The above area visited once in a week for observation alternatively that is morning time in Navegaon National park and evening time Navegaon lake and vice versa. The visiting time was from 7AM to 11 AM in morning and from 3 PM to 6 PM in evening. The observation time were fixed on the basis of high activity of butterfly.

Observation were carried out with the help of Binocular and photographic evidence. Butterflies were identified on the basis of handbook by Issac Kehimkar and Dr. Raju Kasambe also from online available literature. some photos were identified through what's app group.

RESULTS AND CONCLUSION:

In this present study wide range of butterfly diversity found in the studied area, including paddy field, forest, surrounding of lake having abundant host plant flora. In study area 5 different families of Butterflies were recorded. Total 66 species of 46 genera were recorded. Out of this in Nymphalidae family found more species of butterfly that is 28 of 18 genera. Below this in Pieridae family 12 species of 9 genera were recorded. In Papilionidae family 10 species of 3 genera were recorded. In Lycaenidae family 9 species of 9 genera were recorded and very less 7 species of 7 genera were recorded in Hesperidae family. The study revealed that Nymphalidae is most dominating family with highest number of species.

Table 1 : List of Butterflies of Navegaon national park

Sr. No.	Common name	Scientific Name	Occurance (Month)	Genera
A	Papilionidae			
1	Sport Swordtail	<i>Graphium nomius</i> (Esper)	June	Graphium
2	Common Rose	<i>Pachliopta oristolochiae</i> (Fabricius)	Nov	Pachliopta
3	Crimson Rose	<i>Pachliopta Hector</i> (Linnaeus)	Nov	Pachliopta
4	Lime	<i>Papilio demoleus</i> Linnaeus	Oct	Papilio
5	Common Mormon	<i>Papilio Polytes</i> Linnaeus	Oct	Papilio
6	Tailed Jay	<i>Graphium agamemmon</i> (Linnaeus)	Oct	Graphium
7	Blue Mormon	<i>Papilio polymnestor</i> (Cramer)	Nov	papilio
8	Common Jay	<i>Graphium doson</i> (C.& R.Felder)	Nov	Graphium
9	Common Blue Bottle	<i>Graphium sarpedon</i> (Linnaeus)	Oct	Graphium
10	Common Banded Peacock	<i>Papilio crino</i> Fabricius	Nov	Papilio
B	Pieridae			
11	Pioneer	<i>Belenois aurota</i> (Fabricius)	Sep	Belenois
12	Lemon Emigrant	<i>Catopsilia pomona</i> (Fabricius)	Sep	Catopsilia
13	Mottled Emigrant	<i>Catopsilia pyranthe</i> (Linnaeus)	Sep	Catopsilia
14	Common Gull	<i>Cepora nerissa</i> (Fabricius)	Sep	Cepora
15	Common jezebel	<i>Delias aucharis</i> (Linnaeus)	Nov	Delias
16	One-Spot Grass Yellow	<i>Eurema andersoni</i> (Moore)	Nov	Eurema
17	Spot less Grass Yellow	<i>Eurema laeta</i> (Boisduval)	Dec	Eurema
18	Common Grass yellow	<i>Eurema hecabe</i> (Linnaeus)	Aug	Eurema
19	Psyche	<i>Leptosia nina</i> (Fabricius)	Feb	Leptosia
20	Common Wanderer	<i>Pareronia valeria</i> (Cramer)	Dec	Pareronia
21	Common Albatross	<i>Appias albino</i> (Boisduval)	Nov	Appias
22	Yellow orange tip	<i>Ixias pyrene</i> (Linnaeus)	Oct	Ixias
C	Hesperidae			
23	Common Banded Awl	<i>Hasora chromus</i> (Cramer)	Oct	Hasora
24	Conjoined Swift	<i>Pelopidas conjuncta</i> (Herrich-schaffer)	Nov	Pelopidas
25	Golden Angel	<i>Caprona ransonnetii</i> (C. & R.fedler)	Aug	Caprona
26	Grass Demon	<i>Udaspes folus</i> (Cramer)	Dec	Udaspes
27	Rice Swift	<i>Borbo cinnara</i> (Wallace)	Oct	Borbo
28	Indian Skipper	<i>Spialia galba</i> (Fabricius)	Nov	Spialia
29	Tricoloured pied flat	<i>Coladenia indrani</i> (moore)	Jan	Coladenia
D	Lycaenidae			
30	Common Cerulean	<i>Jamides celeno</i> (Cramer)	July	Jamides
31	Common Pierrot	<i>Castalius rosimon</i> (Fabricius)	Sep	Castalius
32	Common Silverline	<i>Spindasis vulcanus</i> (Fabricius)	Nov	Spindasis
33	Dark Grass Blue	<i>Zizeeria karsandra</i> (Moore)	Oct	Zizeeria
34	Leaf Blue	<i>Amblypodia anita</i> hewiston	Sep	Amblypodia
35	Tailless Line Blue	<i>Prosotas dubiosa indica</i> evans	Nov	Prosotas
36	Gram Blue	<i>Euchrysops cnejus</i> (Fabricius)	Sep	Euchrysops
37	Pea Blue	<i>Lampides boeticus</i> (Linnaeus)	Aug	Lampides
38	Indian Red Flash	<i>Rapala iarbus</i> (Fabricius)	Nov	Rapala
E	Nymphalidae			
39	Angled Caster	<i>Ariadne ariadne</i> (Linnaeus)	Oct	Ariadne
40	Baronet	<i>Euthalia nais</i> (Forster)	Sep	Euthalia
41	Black Raja	<i>Charaxes solon</i> (Fabricius)	Feb	Charaxes

Table 1 : continued...

Sr. No.	Common name	Scientific Name	Occurance (Month)	Genera
42	Blue Pancy	<i>Junonia orithya</i> (Linnaeus)	Dec	Junonia
43	Chokolate Pancy	<i>Junonia iphita</i> (Cramer)	Jan	Junonia
44	Common Bushbrown	<i>Mycalesis presues</i> (Fabricius)	Sep	Mycalesis
45	Common Caster	<i>Ariadne merione</i> (Cramer)	Jan	Ariadne
46	Common Evening Brown	<i>Melanitis leda</i> (Linnaeus)	Aug	Melanitis
47	Common Leopard	<i>Phalanta phalanta</i> (Drury)	July	Phalanta
48	Common Nawab	<i>Polyura athamas</i> (Drury)	Dec	Polyura
49	Common sailer	<i>Neptis hylas</i> (Linnaeus)	March	Neptis
50	Commander	<i>Moduza procris</i> (Cramer)	March	Moduza
51	Danaid Eggfly	<i>Hypolimnas misippus</i> (Linnaeus)	Sep	Hypolimnas
52	Great Eggfly	<i>Hypolimnas bolina</i> (Linnaeus)	Sep	Hypolimnas
53	Grey Pancy	<i>Junonia atlites</i> (Linnaeus)	July	Junonia
54	Lemon Pancy	<i>Junonia lemonias</i> (Linnaeus)	Nov	Junonia
55	Peacock Pancy	<i>Junonia almana</i> (Linnaeus)	July	Junonia
56	Plain Tiger	<i>Danans chrysippus</i> (Linnaeus)	Oct	Danans
57	Striped Tiger	<i>Danaus genutia</i> (Cramer)	Feb	Danaus
58	Twany Coster	<i>Acraea violae</i> (Fabricius)	Aug	Acraea
59	Common Crow	<i>Euploea core</i>	Oct	Euploea
60	Blue Tiger	<i>Tirumala limniace</i> (Cramer)	Dec	Tirumala
61	Common Baron	<i>Euthalia aconthea</i> Cramer	April	Euthalia
62	Common Sergeant	<i>Athyma perius</i> (Linnaeus)	July	Athyma
63	Yellow Pancy	<i>Junonia hierta</i> (Fabricius)	Dec	Junonia
64	Dark Evening Brown	<i>Melanitis phedima</i> (Cramer)	Oct	Melanitis
65	Glassy Tiger	<i>Parantica aglea</i> (Stoll)	Dec	Parantica
66	Great Evening Brown	<i>Melanitis zitenius</i> (Herbst)	Sep	Melanitis

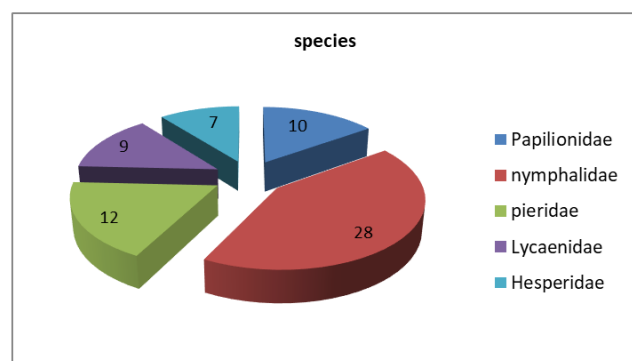


Fig-1-Species wise distribution of Butterflies

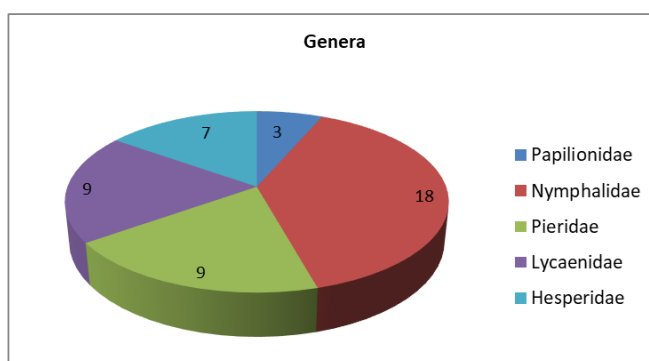


Fig-2-Genera wise Distribution Of Butterflies

Table 2 : Table showing the family wise species and genera of butterflies

Sr. No.	Family	Number Of Species	Number of Genera
1	Papilionidae	10	3
2	Nymphalidae	28	18
3	Pieridae	12	9
4	Lycaenidae	9	9
5	Hesperidae	7	7
	Total	66	46



Udapses folus



Danaus genutia



Moduza procris



Euploea core



Catopsilia pyranthe



Delias aucharis



Papillion po



Acraeat terpsicore



Hypolimnna misippus



Junonia atlites



Junonia almana



Danaus chrysippus



Graphium nomius



Amblypodia anita



Euthaliya nais



Atrophaneura hector



Atrophaneura aristolochiae



Polyura athamas



Leptosia nina



Junonia orithya



Neptis hylas



Phalanta phalanta



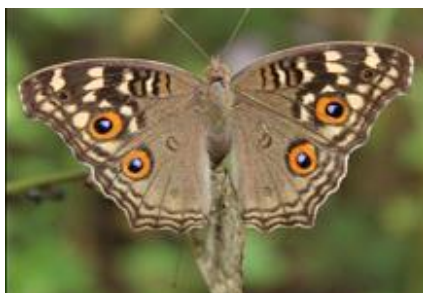
Castalius rosimon



Melanitis leda



Papilio demoleus Linnaeus



Junonia lemonias



Pareronia valeria



Belenois aurota



Graphium doson



Cepora nerissa



Melanitis phedima



Spindasis fabricius



Caprona ransonnetti



Castopsilis pomona



Castopsilis pyranthe



Eurema Hecabe



Rapala larbus



Eurema andersoni



Tirumala limniace



Papilio polytes



Mycalesis perseus



Ariadne merione



Papilio crino



Mycalesis perseus (Dry Season)



Zizeerai karsandra



Jamides celeno



Talicada nyseus



Congregation of butterflies near Bodarai mata temple

In Navegaon National park we saw the congregation of butterflies near left side of Bodarai Mata temple in the trunk of large tree and nearby also. There were common crow and blue tiger was more in quantity.

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