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Diversity of Butterflies (Lepidoptera) found around Sonegaon Lake, Nagpur, Maharashtra, India

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ABSTRACT

Sonegaon Lake is located in Nagpur City of Maharashtra. To ascertain the diversity of butterflies found around Sonegaon Lake, faunistic studies were conducted during the months of September 2018 to August 2019. This study has revealed a total of 36 species of butterflies in 26 genera of 5 families inhabiting the study area. Among the five families of butterflies recorded, Family Papilionidae is represented by 6 species, Pieridae by 7 species, Nymphalidae by 16 species, Lycaenidae by 5 species and Hesperidae is represented by 2 species of butterflies.

Key words: Butterfly, Lepidoptera, Maharashtra, Nagpur, Sonegaon Lake.

INTRODUCTION

Butterflies are a conspicuous group of insects belonging to order Lepidoptera. Owing to their large size and beautiful colouration, they are one of the most admired and studied animal groups in the world. They are mostly diurnal insects and are found in most types of terrestrial ecosystems. Butterflies are used by conservation biologists as indicator species to identify habitats that are critical and need to be protected (Kehimkar, 2008). The highest numbers of butterfly species are found in the tropical countries. India is no exception to this and has rich diversity of butterflies.

The diversity of butterflies of Nagpur which lies in the Vidarbha region of Maharashtra is well documented. Tiple and Khurad (2009) have reported 145 butterfly species from Nagpur city. Tiple (2011) has reported 166 species of butterflies from the Vidarbha region of Maharashtra.

The area around Sonegaon Lake is surrounded by greenery. It provides good habitat

for various species of butterflies in a highly populated city like Nagpur. Hence, the present study has been carried out to ascertain the diversity of butterflies around Sonegaon Lake.

MATERIALS AND METHODS

Nagpur City (c. 21.06°N 79.03°E) is located in the North-Eastern region of Maharashtra. Sonegaon Lake is one of the biggest lakes in Nagpur city. It is a man-made lake spread over an area of twelve and half hectares. There is a garden at the southern end of the Lake. The boundary of the Lake is also dotted with good amount of vegetation, which includes food plants of many butterfly species. The diversity of butterflies was studied through weekly surveys around Sonegaon Lake during the period of September 2018 to August 2019. The butterflies that were sighted during the study were identified with the help of the field guide by Kehimkar (2008). Wherever possible, the butterfly species were photographed for authentication.

RESULTS AND DISCUSSION

The study of the diversity of butterflies found around Sonagaon Lake has revealed a total of 36 species in 26 genera of 5 families (Table 1). Among the different types of butterflies found here (Figs. 1-32), family Papilionidae is represented by 6 species, family Pieridae by 7 species, family Nymphalidae by 16 species, family Lycaenidae by 5 species and family Hesperidae is represented by 2 species of butterflies (Table 2).

When compared with the study carried out by Tiple and Khurad (2009), it is found that all the butterfly species recorded in this study are commonly found in Nagpur and are not threatened. The highest numbers of butterfly species were observed from the middle of the monsoon months to near the end of winter (Late August to Late January). Lowest numbers of butterflies were observed during the summer months.

From this study, it has been concluded that increasing the green cover in the study area can result in further increase in the diversity of butterflies found here.

Table 1: Butterflies found around Sonagaon Lake, Nagpur

S. NO.	COMMON NAME	SCIENTIFIC NAME
Family Papilionidae (Swallowtails)		
1.	Common Rose	<i>Atrophaneura aristolochiae</i> (Fabricius, 1775)
2.	Crimson Rose	<i>Atrophaneura hector</i> (Linnaeus, 1758)
3.	Tailed Jay	<i>Graphium agamemnon</i> (Linnaeus, 1758)
4.	Common Jay	<i>Graphium doson</i> (C. & R. Felder, 1864)
5.	Lime Butterfly	<i>Papilio demoleus</i> Linnaeus, 1758
6.	Common Mormon	<i>Papilio polytes</i> Linnaeus, 1758
Family Pieridae (Whites and Yellows)		
7.	Common Emigrant	<i>Catopsilia pomona</i> Fabricius, 1775
8.	Mottled Emigrant	<i>Catopsilia pyranthe</i> (Linnaeus, 1758)
9.	Common Gull	<i>Cepora nerissa</i> Fabricius, 1775
10.	Common Jezebel	<i>Delias eucharis</i> (Drury, 1773)
11.	Small Grass Yellow	<i>Eurema brigitta</i> (Cramer, 1780)
12.	Common Grass Yellow	<i>Eurema hecabe</i> (Linnaeus, 1758)
13.	Common Wanderer	<i>Pareronia valeria</i> (Cramer, 1776)
Family Nymphalidae (Brush-footed Butterflies)		
14.	Tawny Coster	<i>Acraea terpsicore</i> (Linnaeus, 1758)
15.	Angled Castor	<i>Ariadne ariadne</i> (Linnaeus, 1763)
16.	Plain Tiger	<i>Danaus chrysippus</i> (Linnaeus, 1758)
17.	Striped Tiger	<i>Danaus genutia</i> (Cramer, 1779)
18.	Common Crow	<i>Euploea core</i> (Cramer, 1780)
19.	Common Baron	<i>Euthalia aconthea</i> (Hewitson, 1874)
20.	Great Eggfly	<i>Hypolimnas bolina</i> (Linnaeus, 1758)
21.	Danaid Eggfly	<i>Hypolimnas misippus</i> (Linnaeus, 1764)
22.	Peacock Pansy	<i>Junonia almana</i> (Linnaeus, 1758)
23.	Yellow Pansy	<i>Junonia hierta</i> (Fabricius, 1798)
24.	Lemon Pansy	<i>Junonia lemonias</i> (Linnaeus, 1758)
25.	Blue Pansy	<i>Junonia orithya</i> (Linnaeus, 1758)
26.	Common Evening Brown	<i>Melanitis leda</i> (Linnaeus, 1758)
27.	Common Sailer	<i>Neptis hylas</i> (Linnaeus, 1758)
28.	Common Leopard	<i>Phalanta phalantha</i> (Drury, 1773)
29.	Blue Tiger	<i>Tirumala limniace</i> (Cramer, 1775)
Family Lycaenidae (Blues)		
30.	Common Pierrot	<i>Castalius rosimon</i> (Fabricius, 1775)
31.	Lime Blue	<i>Chilades lajus</i> (Cramer, 1782)
32.	Zebra Blue	<i>Leptotes plinius</i> (Fabricius, 1793)
33.	Red Pierrot	<i>Talicauda nyseus</i> (Guerin, 1843)
34.	Lesser Grass Blue	<i>Zizina otis</i> (Fabricius, 1787)
Family Hesperidae (Skippers)		
35.	Common Banded Awl	<i>Hasora chromus</i> (Cramer, 1782)
36.	Small Branded Swift	<i>Pelopidas mathias</i> (Fabricius, 1798)

Table 2: Number of Butterfly Species and Genera recorded in each Family

FAMILY	NUMBER OF GENERA	NUMBER OF SPECIES
Papilionidae	03	06
Pieridae	05	07
Nymphalidae	11	16
Lycaenidae	05	05
Hesperiidae	02	02



Figs. 1 – 16: 1. *Atrophaneura aristolochiae* 2. *Atrophaneura hector* 3. *Graphium agamemnon* 4. *Graphium doson* 5. *Papilio demoleus* 6. *Papilio polytes* 7. *Catopsilia pomona* 8. *Catopsilia pyranthe* 9. *Cepora nerissa* 10. *Delias eucharis* 11. *Eurema brigitta* 12. *Pareronia valeria* 13. *Acraea terpsicore* 14. *Danaus chrysippus* 15. *Euploea core* 16. *Euthalia aconthea*.



Figs. 17 – 32: 17. *Hypolimnas bolina* 18. *Hypolimnas misippus* 19. *Junonia almana* 20. *Junonia hierta* 21. *Junonia lemonias* 22. *Junonia orithya* 23. *Melanitis leda* 24. *Neptis hylas* 25. *Phalanta phalantha* 26. *Tirumala limniace* 27. *Castalius rosomon* 28. *Chilades lajus* 29. *Leptotes plinius* 30. *Talicada nyseus* 31. *Zizina otis* 32. *Pelopidas mathias*.

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