

CHECKLIST OF BUTTERFLIES (LEPIDOPTERA: PAPILIONOIDEA) IN AND AROUND LAKE TOWN, KOLKATA

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This study was carried out to ascertain the butterfly fauna in the urban settlement of Lake Town and adjoining areas and discover the flowers and other resources used by adults.

The study was conducted in four areas, viz. Site 1: Forest Office and adjoining area at Dum Dum Park, VIP Road; Site 2: Lake Town Park area (Third Lake); Site 3: East Calcutta Girls' College Campus and Site 4: Kestopur Canal side garden, VIP Road stretching from Bangur to Lake Town. Butterflies were recorded by opportunistic surveys throughout the year from July 2018 to August 2021, excluding the period of March 2020 to August 2020 and in May 2021 due to restrictions for COVID – 19 pandemics. The field trips were undertaken from 8.30 to 11.30 am and in the afternoon from 2.30 to 4.30 pm. A binocular (Nikon Action EX 10X50 CF) and Fieldscope (Nikon Prostaff SEP 25) were used to spot the butterflies. The specimens were identified according to Evans (1932), Haribal (1992), Kehimkar (2008), Kunte (2000), Smetacek (2017), Varshney (2010) and Varshney and Smetacek (2015).

A total of 28 species belonging to 5 families were recorded during the study period. Out of five families, Nymphalidae represented by 10 species, was the most

dominant, followed by Pieridae and Papilionidae (each represented by 7 species) and Lycaenidae, represented by 3 species. Family Hesperidae was represented by a single species (Table 1). Based on the frequency of observation, butterflies were classified as abundant (observed more than 75%), regular (30% to <75%) and rare (< 30%).

A detailed checklist of the butterflies including their status in the study area is presented in Table 1. Several authors have reported the diversity of butterfly fauna in and around Kolkata. Ghosh & Siddique (2005) reported 68 species, Mukherjee et al. (2015) reported 96 species in and around urban Kolkata. 33 species of butterfly fauna were reported from the Mudiya Ecological Park by Chowdhury & Chowdhury (2007). Mukherjee et al. (2016) found 54 species in Kolkata metropolis. In the present study, 28 species of butterflies were recorded in a comparatively small study area (Table 1). Findings are very significant as the study area is situated mostly beside the very busy VIP road amidst the urban settlement. An earlier study supports Nymphalidae as the most dominant family in the semi urban areas of Howrah and Haldia (Pahari et al., 2018). But contrary to findings in the present study, Mukherjee et al, (2015) reported Lycaenidae as the most dominant

family in the suburban areas of Kolkata. It was observed that the quantity and diversity of butterflies was reducing throughout the study period. It may be due to the constantly increasing anthropogenic activity, pollution or reduction in vegetation, or else a combination of these and other factors. Rapid and constant urbanization in this area leads to habitat destruction which has an adverse impact

on butterfly diversity. This check list is intended to serve as base line data for what was present during this period in a rapidly changing landscape and this report will provide important information to develop effective conservation measures like creation of butterfly gardens etc. in the study area.

Table 1. Butterfly diversity at Lake Town, South Dum Dum Municipality, Kolkata.

| Sl. No. | Common Name | Scientific Name | Family | Observed on flowers / Organic matter | Remarks |
|---------|-----------------------|--|--------------|--------------------------------------|----------|
| 1. | Common Rose | <i>Pachliopta aristolochiae</i> Fabricius, 1775 | Papilionidae | <i>Lantana camara</i> (L.) | Regular |
| 2. | Crimson Rose | <i>Pachliopta hector</i> (Linnaeus, 1758) | Papilionidae | <i>Lantana camara</i> (L.) | Regular |
| 3. | Common Mime | <i>Papilio clytia</i> (Linnaeus, 1758) | Papilionidae | <i>Ixora coccinea</i> L. | Regular |
| 4. | Common Banded Peacock | <i>Papilio crino</i> Fabricius, 1792 | Papilionidae | <i>Hibiscus rosa-sinensis</i> L. | Rare |
| 5. | Lime Butterfly | <i>Papilio demoleus</i> Linnaeus, 1758 | Papilionidae | <i>Catharanthus roseus</i> (L.) | Regular |
| 6. | Common Mormon | <i>Papilio polytes</i> Linnaeus, 1758 | Papilionidae | <i>Citrus limon</i> (L.) | Abundant |
| 7. | Common Jay | <i>Graphium doson</i> C. & R. Felder, 1864 | Papilionidae | <i>Magnolia champaca</i> (L.) | Rare |
| 8. | Grass Demon | <i>Udaspes folus</i> (Cramer, 1775) | Hesperiidae | <i>Lantana camara</i> (L.) | Abundant |

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|-----|---------------------|--|-------------|--------------------------------------|----------|
| 9. | Common Emigrant | <i>Catopsilia pomona</i> (Fabricius, 1775) | Pieridae | <i>Lantana camara</i> (L.) | Abundant |
| 10. | Mottled Emigrant | <i>Catopsilia pyranthe</i> (Linnaeus, 1758) | Pieridae | <i>Lantana camara</i> (L.) | Abundant |
| 11. | Common Grass Yellow | <i>Eurema hecabe</i> (Linnaeus, 1758) | Pieridae | <i>Tridax procumbens</i> L. | Abundant |
| 12. | Psyche | <i>Leptosia nina</i> (Fabricius, 1793) | Pieridae | <i>Cleome viscosa</i> L. | Abundant |
| 13. | Striped Albatross | <i>Appias libythea olferna</i> C. Swinhoe, 1890 | Pieridae | <i>Catharanthus roseus</i> (L.) | Rare |
| 14. | Common Gull | <i>Cepora nerissa</i> Fabricius, 1775 | Pieridae | <i>Ixora coccinea</i> L. | Abundant |
| 15. | Common Jezaebel | <i>Delias eucharis</i> (Drury, 1773) | Pieridae | <i>Vitex negundo</i> L. | Abundant |
| 16. | Apefly | <i>Spalgis epius</i> (Westwood, 1851) | Lycaenidae | <i>Murraya koenigii</i> (L.) | Rare |
| 17. | Common Pierrot | <i>Castalius rosimon</i> (Fabricius, 1775) | Lycaenidae | <i>Cynodon dactylon</i> (L.) | Rare |
| 18. | Quaker | <i>Neopitheops zalmora</i> (Butler, 1870) | Lycaenidae | <i>Glycosmis pentaphylla</i> (Retz.) | Regular |
| 19. | Plain Tiger | <i>Danaus chrysippus</i> Linnaeus, 1758 | Nymphalidae | <i>Cosmos bipinnatus</i> Cav. | Abundant |
| 20. | Common Tiger | <i>Danaus genutia</i> (Cramer, 1779) | Nymphalidae | <i>Zinnia elegans</i> Jacq. | Regular |
| 21. | Common Crow | <i>Euploea core</i> (Cramer, 1780) | Nymphalidae | <i>Lantana camara</i> (L.) | Abundant |

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|-----|----------------------|---|-------------|--|----------|
| 22. | Common Evening Brown | <i>Melanitis leda</i> (Linnaeus, 1758) | Nymphalidae | Cow dung | Abundant |
| 23. | Common Bushbrown | <i>Mycalesis perseus</i> (Fabricius, 1775) | Nymphalidae | Cow dung | Abundant |
| 24. | Angled Castor | <i>Ariadne ariadne</i> (Linnaeus, 1763) | Nymphalidae | <i>Tragia involucrate</i> L. | Regular |
| 25. | Tawny Coster | <i>Acraea terpsicore</i> (Linnaeus, 1758) | Nymphalidae | <i>Hybanthus enneaspermus</i> (L.) | Rare |
| 26. | Peacock Pansy | <i>Junonia almana</i> (Linnaeus, 1758) | Nymphalidae | <i>Hygrophila auriculata</i> Schumach | Abundant |
| 27. | Grey Pansy | <i>Junonia atlites</i> (Linnaeus, 1763) | Nymphalidae | <i>Hygrophila auriculata</i> Schumach | Abundant |
| 28. | Great Eggfly | <i>Hypolimnas bolina</i> (Linnaeus, 1758) | Nymphalidae | <i>Portulaca oleracea</i> L. | Regular |

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