

## Structure and composition of Butterfly (Lepidoptera: Rhopalocera) fauna in Surajpur wetland, National Capital Region, India

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### ABSTRACT

Surajpur wetland is a small urban wetland in National Capital Region, India, known for its rich biodiversity of flora and fauna. The land is protected as reserve forest under Uttar Pradesh Forest Department, Government of India. The present communication highlights the significant record of butterfly fauna of Surajpur wetland and forms the first record of its kind hitherto unreported. The study was conducted over the period of three years from March 2010 to February 2013 by applying standard methods. Butterfly species abundance was assessed qualitatively and quantitatively across the different habitats. Being different and mosaics of habitat, serves as a good host for various species of butterflies. During the study period, a total of 2916 individuals belong to 53 butterfly species and 5 families were recorded with Nymphalidae as the dominant family with 23 species and 1800 individuals. Out of 53 butterfly species, 16.98% (n=9) were recorded abundantly, followed by 15.09% (n=8) frequent, 18.87% (n=10) common, 26.42% (n=14) occasional and 22.64% (n=12) rare species. Habitat-wise composition of butterfly species recorded maximum in woodland (39 species) followed by grassland (24 species) and wetland habitat (14 species), however woodland and grassland habitat showed highest number of shared species (n=16). Species wise overall Plain Tiger butterfly *Danaus chrysippus* recorded maximum sighting frequency (42 individuals) during the study period. Out of 20 selected butterfly species, 16 species recorded in morning hours and 14 species recorded in evening hours. Month-wise, out of total 444 sightings of butterfly individuals, November recorded maximum number of individuals 17.34% (n=77) and May recorded least number of individuals 4.05% (n=18), while on seasonal basis, monsoon recorded maximum number of species (37%) followed by summer (32%) and winter (31%). According to the IUCN Red List, 5 species listed as Least Concern (LC) while the rest 47 species as Not Evaluated (NE) and 5 species listed as Schedule species in Indian Wildlife Protection Act 1972. Conservation implications are discussed in the light of the results.

**Key words:** Faunal survey, Frequency, Abundance, Diversity, Gautam Budh Nagar, Greater Noida