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SPECIES DIVERSITY OF BUTTERFLY FAUNA IN MADURU OYA NATIONAL PARK, SRI LANKA

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Abstract

The butterflies are an extremely diverse group of enticing insects in Sri Lanka, comprising 248 known species, of which 26 are endemic species. Present study was conducted from January 2019 to December 2019 around the Maduru Oya Reservoir in the Maduru Oya National Park with the main objectives of estimating the butterfly diversity and its temporal variation throughout the year. The field method was based on standardized "Pollard walk" method. Line transects of about 1000 meter were applied in length in each habitat types and each transect was divided into five segments of 200 meters for the convenience of identifying butterflies by direct recording and capturing photos. Survey was carried out three days per month in the microhabitat types of Vegetated Cover (mainly composed of *Heliotropium indicum*, *Lantana camara* and *Stachytarpheta jamaicensis*), Open Grassland (mainly composed of *Panicum maximum*) and Non-vegetated Area (comprised of roads and water banks) during 0700 to 1700 hours of the sunny days. Shannon Diversity index was used to estimate the butterfly diversity of each microhabitat types. During the survey 5040 butterfly count, consisted with 5 families and 33 species, including two endemics were recorded from the park. Butterfly density was high in October 12.74% and lower in June 09.07% (n=457). Species richness was high in February (n= 31), May (n= 28), June (n= 27), November (n= 28) and December (n= 27) months. The main reasons for monthly fluctuations of both mentioned parameters were the seasonal changes with weather fluctuations and the affect of flowering and fruiting season. Papilionidae 24.25% (n=1222), Pieridae 29.46% (n=1485), Nymphalidae 26.43% (n=1332), Lycaenidae 18.49% (n=932) and Hesperiidae 1.37% (n=69) counts were recorded in each family. The highest species richness was observed in Vegetated Cover 42.86% (n=33) and the lowest was recorded in Non- Vegetated Area 25.97% (n=20). The present study discloses the fact that Maduru Oya National Park is a hidden paradise for butterflies and encourages more research studies of butterfly fauna to be conducted in national parks as this is the second study which has been carried out in a national park of Sri Lanka and first study in the Maduru Oya National Park.

Keywords: Butterflies, Maduru Oya National Park, Diversity, Temporal variation