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Research Article

Variation in butterfly species diversity and seasonality in the agricultural and agro-forest land type of Rayagada district, southern Odisha, India

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ABSTRACT

This is the maiden study conducted from January, 2020 to December, 2020 to document the changes in butterfly assemblages and their seasonality in two experimental sites i.e., (a) agricultural land of Kutigam (AGL) and (b) agro-forest land of Chamarjodi (AGF) of Rayagada district, Odisha. A total of 1534 individuals belonging to 75 butterfly species, 58 genera, 14 subfamilies under five families was recorded. Mostly Nymphalidae butterfly species were found in both AGF and AGL, where the least abundant family was Hesperiidae. AGF was found to be more species diverse (n=73 species) than AGL (n=50) but the species abundance was found more in AGL (629 individuals; 41% of total individuals). than AGF (905; 58.99%). Diversity indices like Shannon-Wiener index (H'), Simpson's index (γ) and evenness (J) was found to be higher in AGF. Overall, most species were observed during summer season (n=63 species), followed by monsoon (n=62) and winter (n=56). Main cause of this variation in butterfly community of these two sites was species dispersal, resource availability, predation and habitat disturbances. Current threats and conservation measures for the butterfly fauna of these two agriculturally important areas of Rayagada district was also discussed.

Key words: **:** Lepidoptera, Butterflies, Abundance, Occurrence, South Odisha, Eastern India