

Phytosociological Analysis of Mixed Deciduous Forests of Bundelkhand Region

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Abstract: *A phytosociological study was conducted in the mixed deciduous forests of the Bundelkhand region to analyze the community structure, species composition, and diversity patterns. Bundelkhand's unique semi-arid climate and varied edaphic conditions support a distinct flora. This research aimed to understand the ecological dynamics of these vital forests, crucial for biodiversity conservation and ecosystem services. Quadrant sampling was used to collect data on species presence, abundance, and frequency. Various ecological indices, including species richness, diversity indices (Shannon-Wiener, Simpson), and dominance patterns were calculated. The study revealed the dominant tree species and their associated communities. Analysis of the data provided insights into the forest's current ecological status and its response to environmental factors. The findings contribute to effective conservation strategies and sustainable management of these ecologically important forests in Bundelkhand region*

Keywords: Bundelkhand, mixed deciduous forests, phytosociology, species diversity, dominance, community structure, ecological dynamics, biodiversity conservation

