

## **A COMPREHENSIVE PHYTOSOCIOLOGICAL STUDY ON PAVITRA VANA AT ARKERA RAICHUR KARNATAKA INDIA**

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### **ABSTRACT**

*This Paper Reveals A Comprehensive Micro-Phytosociological Analysis Of Pavitra Vana, A Sacred Grove Located At Arkera, Raichur, Karnataka, India. Sacred Groves Need To Be Conserved As They Provide Significant Ecological And Cultural Importance As It Is Acting As The Best Place For The Regeneration Of Native Plant Species As Well As Acting As A Seed Gene Pool For Future Regeneration. Through An In-Depth Examination Of Plant Diversity Indices, Including The Shannon-Weiner And Simpson's Diversity Indices, This Study Reveals A Well-Balanced Ecosystem Characterized By Substantial Species Richness And Evenness. The Taxonomic Composition, Both At The Family And Genus Levels, Underscores The Ecological Predominance Of Families Such As Fabaceae, Asteraceae, And Malvaceae, While Genera Like Vachellia And Phyllanthus Exhibit Notable Functional Diversity. These Findings Highlight The Critical Conservation Role Of Sacred Groves, Which Act As Biodiversity Hot Spots That Fulfill Numerous Ecological Functions, Including Soil Stabilization, Pollinator Habitat Support, And Resilience Against Environmental Stressors. This Study Emphasizes The Urgent Need For The Conservation Of Sacred Groves, Underscoring Their Integral Role In Regional Biodiversity Conservation Strategies And Their Ecological Value In Sustaining Functional And Niche-Specialized Plant Groups.*

**KEYWORDS:** Biodiversity, Sacred Grove, Species Diversity, C, Pavitra Vana Arkera, Shannon-Weiner Index, Simpson's Diversity Index, Fabaceae, Functional Diversity, Ecosystem Stability.

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