

Structure, Composition and Diversity of Degraded Dry Tropical Forest in Balamdi Watershed of Chhattisgarh Plain, India

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ABSTRACT Pattern of structure, composition and diversity of woody vegetation in over and under storey degraded Dry Tropical Forest of Chhattisgarh, India was evaluated in four different aspects. The density, frequency, basal area and IVI alongwith diversity indices viz. Shannon index, Simpson index, Species richness, Equitability and Beta diversity were computed to see the variation in plant community. The study illustrated the variation in tree species from 6 (eastern aspect) to 9 (southern aspect) in overstorey and 5 (eastern and western aspect) to 9 (southern aspect) in understoried forest. The *Cleistanthus collinus* with highest IVI value in northern (52.52) and western aspect (59.90), *Boswellia serrata* in southern (48.98) and *Terminalia alata* in eastern aspect (56.16) were the predominant tree species in overstorey vegetation. The highest IVI of *Diospyros melanoxylon* (64.80) in northern, *Boswellia serrata* and *Madhuca indica* (both with 39.15) in southern, *Madhuca indica* (71.40) in eastern and *Cleistanthus collinus* (75.15) in western aspect recorded predominant vegetation layer in the understorey of dgraded forest. The Shannon index, Simpson's index, Species richness, Equitability and Beta diversity values were almost higher in overstorey as compared to understorey as a result; the present study reveals the poor regeneration pattern in the degraded forest.