

## Study of Tree and Shrub Species Diversity in Forestry Plans with Different Forest Management

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### Abstract

The aim of this research was to investigate the diversity of tree and shrub species in forestry plan in a watershed and in almost the same ecological conditions but different in forest management plan in the part of Golestan province forest. To this end, the 6675 hectares of the watershed number of 85 in 5 different plans in series one (30-year forestry plan with University Scientific Management), series two Doctor Bahramnia (without implementation and protection), series four Shamoshak, Naharkhoran plan and Sad Abad plan were selected. Inventory grid was designed by a systematic cluster sampling method with 239 circle plots in the study area. In each sample, species composition and diameter at breast height of trees and shrubs were measured. Species diversity in different series, were performed by calculating the heterogeneity indices, species richness and evenness. Statistical analysis of significant differences between the values of biodiversity of woody species among different series was performed by Duncan's test. The results showed that biodiversity of woody species in the one and two series of Shastkalateh forest under academic management was better than other plans and forestry plan of Naharkhoran is in an unfavorable situation in terms of diversity indices.

**Keywords:** Biodiversity, Golestan province, Hyrcanian forest, Management.

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