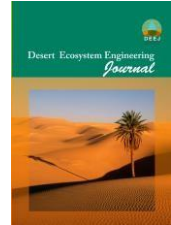




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Comparison of the Whittaker plot and Modified–Whittaker plot in determining species richness of rangeland Taleghan

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Abstract

A standardized sampling technique for measuring plant diversity is needed to assist in resource inventories and for monitoring long-term trends in vascular plant species richness with considering to the estimated richness amount (via different methods) are changing influenced by interaction of plot distance and shape, and also, presenting of a plot design (that can be near to reality) is important due to the studying of species richness in ecological concepts. In this research, we compared the two sampling methods, Whittaker plot and Modified Whittaker plot in grassland and shrubland vegetation types in Taleghan rangeland of Iran. The result of this study showed that there is a significant difference between the two methods in determining species richness for grassland and shrubland vegetation types in Taleghan rangelands. The Modified Whittaker design often returned significantly higher ($P < 0.05$) species richness values in the 1 m, 10 m and 100 m sub-plots.

Keywords: Whittaker plot, Modified Whittaker plot, Species richness, Taleghan rangelands.

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