

Standovár, T., Ódor, P., Aszalós, R. & Gálhidy, L. (2006): Sensitivity of ground layer vegetation diversity descriptors in indicating forest naturalness. Community Ecology 7: 199-209.

Reference: Standovár, T., Ódor, P., Aszalós, R. & Gálhidy, L. (2006): Sensitivity of ground layer vegetation diversity descriptors in indicating forest naturalness. Community Ecology 7: 199-209.

Short reference: Standovár et al. (2006)

First author: Standovár Tibor

Year: 2006

Abstract

Different diversity measures of forest floor assemblages were evaluated in order to check if they can be used as indicators of forest naturalness. We compared vascular and bryophyte vegetation of two habitat types in an unmanaged beech-dominated reserve and five managed stands of different ages. We used systematically collected data characterizing four spatial scales obtained by successively aggregating neighbouring quadrats. Species richness did not always differentiate near natural sites from managed sites, and the observed difference depended very much on the spatial scale used. The behaviour of Shannon-Wiener diversity function can only be understood if both the species richness and the evenness components are considered. Near natural plots had high Shannon-Wiener diversity values even at the finest spatial scale not only because of high number of species, but also because of high evenness. We found that a simple measure of pattern diversity – spatial variation of species importance – was the most effective in differentiating the diversity of plots with different levels of naturalness. The absolute values of pattern diversity in the forest floor vegetation were the highest in those plots where the characteristics of important limiting ecological factors were generated by natural disturbance. Vascular and bryophyte species responded differently to tree stand structural characteristics. The diversity of vascular vegetation was determined mainly by the spatial variation of light availability, whereas that of bryophyte vegetation responded to the amount and spatial heterogeneity of appropriate substrates (dead wood, rock). The use of pattern sensitive diversity measures is necessary to reveal diversity-naturalness relationships. We suggest that all diversity descriptors should be calculated for different spatial scales, since their change with spatial scale was as informative

as their actual values.

biodiversity: higher plants

biodiversity: moss

forest management

forest structure: herb layer

Notes

alfa-diversity, Bryophytes, Herbaceous plants, Fagus sylvatica, Forest management, Pattern diversity, Spatial scale, Species richness, Tree stand structure, alfa-diverzitás, mohák, lágyszárú növények, bükk, erdőgazdálkodás, folt diverzitás, fajgazdagság

Címszavazva - VA

Publisher: Akadémiai Kiadó

Journal: Community Ecology

Location: ER Archívum (2006/P-011)

Type: scientific paper

Strict forest reserves: [Kékes Forest Reserve](#) Attached document: [Standovar_etal_C](#)

HF, Gulyás Györgyi

Katalógusbavétel időpontja: Mon, 11/30/2009 - 12:00