Indicator Species for Oligotrophic Semi-Natural Grasslands in Apuseni Mountains

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Abstract. The extensive exploitation of agricultural systems is the factor which created the semi-natural grasslands with large plant diversity. These meadows’ persistence depends in a large extent on the extensive use which can be recognized in the field by the presence of certain species having an indicator value. This paper’s objective is to elaborate a list of indicator species for the extensive use of the semi-natural grasslands in the boreal floor. The research activity was developed on the Ghețări-Poiana Câlineasa Plateau in Gârda de Sus commune (Apuseni Mountains, Romania), area for which an annual mean temperature of 5.2 °C and annual precipitations of 1197 mm are characteristic. The floristic studies were performed using Braun-Blanquét method on a 25 m² area. Out of the total grassland types which resulted after the study, solely the oligotrophic grassland types have been described (Festuca rubra – Nardus stricta and Festuca rubra). The Festuca rubra type was encountered in 24 sites comprising 42 ha, being situated on the Eastern up to the Southern slopes and these meadows are mostly used through grazing. The floristic composition is represented by 15.63 % Poaceae, 11.25 % Cyperaceae-Juncaceae, 5.57 % Fabaceae and 61.03 % plants from other botanical families (OBF). This type has an heliophilous, mesotherm, mesoxerophilic, neutralphilic, nitrophobic character, medium sensitive to mowing, treading and grazing. The Festuca rubra and Nardus stricta grassland type has been identified in 22 sites covering a total area of 40 hectares. This type is generally used through grazing. The floristic composition is represented by 43.86 % Poaceae, 20.25 % Cyperaceae-Juncaceae, 2.09 % Fabaceae and 43.45% OBF. This type of grassland has a heliophilous, microtherm, mesophilous, highly acidophilous, nitrophobic character, medium resistant to mowing, medium resistant to grazing and mowing. The indicator species for the extensive exploitation of these types of grassland are the following: Briza media, Arnica montana, Carlina acaulis, Gentianella lutescens, Gymnadenia conopsea, Polygala comosa, Silene nutans, Viola canina etc.

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REFERENCES
