

Formalized classification of subxerophilous grassland vegetation (*Cirsio-Brachypodium pinnati*, *Bromion erecti*) in Slovak Republic.
Iveta Škodová

During the years 2006-2008 the syntaxonomical revision and formal definitions of grassland communities of Slovak Republic were performed. The base for the study was the Central Phytosociological Database of Slovakia (<http://ibot.sav.sk/cdf/index.html>). The stratified data set has been used to generate sociological species groups by the COCKTAIL method (Bruehlheide 2000). Sociological species groups together with dominance of important species have been used to formulate the definitions of associations using logical operators (Bruehlheide 1997).

Within the alliance *Cirsio pannonici-Brachypodium pinnati* the occurrence of 9 communities were published from the Slovakia. Three associations were formally defined: *Scabioso ochroleucae-Brachypodietum pinnati* Klika 1933, *Polygalo majoris-Brachypodietum pinnati* Wagner 1941 and *Carici albae-Brometum monocladi* Ujházy et al. 2007. Within the alliance *Bromion erecti* the occurrence of 3 associations were published from our country. Formal definitions of two communities were performed: *Brachypodio pinnati-Molinietum arundinaceae* Klika 1939 and *Onobrychido viciifoliae-Brometum erecti* T. Müller 1966. The results were compared with classification of subxerophilous vegetation of these two alliances in other countries of Central Europe.

Plant communities of alliance *Bromion erecti* are synecologically transitional between dry and mesophilous grasslands. They belong to the most species-rich plant communities in the western and central Europe. They are usually dominated by *Bromus erectus*, *Brachypodium pinnatum* or *Carex montana*. Semi-dry grasslands of alliance *Cirsio-Brachypodium pinnati* Hadač et Klika ex Klika 1951 are dominated by broad-leaved grasses, mostly by *Brachypodium pinnatum* or *Bromus monocladus*, rarely *Carex humilis*.

The formal definition of the *Brachypodio pinnati-Molinietum arundinaceae* was tested on the set of phytosociological relevés representing succession stages of this community from one locality. As the diagnostic species were still present in relevés even the cover of shrubs was 50 %, the relevés fit the definition. For the evaluating of favourable state of grassland community from the view of succession not only the fitting the relevé the formal definition is important, but also the cover of shrubs.

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