
Pouzďřany Steppe and Kolby Forest: Botanical Excursion Guide

Jan Roleček

The Pouzďřany Steppe and Kolby Forest are parts of the National Nature Reserve Pouzďřanská step-Kolby. The reserve is situated in southern Moravia above the village of Pouzďřany, about 25 km south of Brno and 6 km west of the town of Hustopeče.



Area around the Pouzďřany Steppe and Kolby Forest

The complex of Pouzďřany Steppe and Kolby Forest represents one of the best preserved remnants of subcontinental forest-steppe communities in the Czech Republic. Despite its limited area (47 ha), the nature reserve harbours much of the species richness of the now widely depleted Pannonian flora and fauna.

The surrounding hilly landscape belongs to the southernmost outskirts of the Central Moravian Carpathians. From the hilltop of Pouzďřany Steppe, there is a great view of the Pavlov Hills across the lower Dyje valley, partly flooded by the Nové Mlýny reservoirs. Fringes of the Bohemian-Moravian Highlands enclose the view to the west, while lowlands of the Pannonian basin stretch to the southeast. The bedrock is mostly formed of Palaeogene calcareous claystones and sandstones of the Carpathian flysch, partly covered by Pleistocene loess. Climate of the region is relatively warm (mean annual temperature 9.1 °C) and dry (mean annual precipitation 490 mm).

The reserve comprises steep sunny slopes with dry grassland vegetation (*Festucion valesiaca*; *Cirsio-Brachypodium pinnati*), scattered shrubs and solitary trees, and a plateau and shady slopes with a mesic forest (*Carpinion betuli*). The species-rich dry grasslands of sunny slopes (*Koelerio macranthae-Stipetum joannis*) are dominated by feather grasses (mostly *Stipa pennata* and *S. pulcherrima*), narrow-leaved fescues (*Festuca valesiaca*, *F. rupicola*), *Koeleria*

macrantha or *Carex humilis*. Many drought-tolerant herbs and dwarf-shrubs are admixed, e.g. *Teucrium chamaedrys*, *Thymus pannonicus*, *Potentilla arenaria*, *Galium glaucum*, *Cytisus procumbens* and *Campanula sibirica*. In disturbed (grazed, trampled, mown or formerly ploughed) places on deeper soils, rare species of continental steppe (*Crambe tataria*, *Jurinea mollis* and *Astragalus exscapus*) are particularly abundant. In more mesic sites, broad-leaved grasslands (*Polygalo majoris-Brachypodietum pinnati*) with less drought-tolerant species (*Peucedanum cervaria*, *Centaurea scabiosa*, *Geranium sanguineum*, *Adonis vernalis*, *Viola hirta* and *Orchis militaris*) occur. Scattered shrubs and solitary trees include *Crataegus monogyna*, *Prunus spinosa*, *P. fruticosa*, *Quercus pubescens* and a rare continental element *Prunus tenella* (syn. *Amygdalus nana*). From the floristic point of view, the occurrence of a small population of a Pannonian endemic *Artemisia pancicii* is the most valuable. This putative glacial relict has a maximum of 20 localities across Pannonia, in Moravia, eastern Austria and in the Deliblatska peščara in northern Serbia.

Kolby Forest on the plateau provides a nice example of Central European mesic oak-hornbeam forest (*Primulo veris-Carpinetum betuli*), though recently somewhat damaged by illegal logging. The closed canopy is dominated by *Quercus petraea*, *Acer campestre* and *Carpinus betulus*, with *Ligustrum vulgare*, *Euonymus verrucosa* or *Crataegus laevigata* in the shrub layer. The species-rich herb layer is characteristic by colourful spring aspect with *Corydalis cava*, *C. solida*, *Anemone nemorosa*, *A. ranunculoides*, *Isopyrum thalictroides* or *Viola mirabilis*. Later on, *Melica uniflora*, *Poa nemoralis*, *Convallaria majalis*, *Galium odoratum*, *Dactylis polygama* and other nemoral species become dominant. On sunny forest edges, forest-steppe species are more abundant, including *Quercus pubescens*, *Brachypodium pinnatum*, *Lithospermum purpureocaeruleum*, *Dictamnus albus*, *Euphorbia epithymoides*, *Peucedanum cervaria*, *Geranium sanguineum*, *Polygonatum odoratum*, *Carex michelii* and *Iris variegata*.

References

Podpěra J. (1928): Steppe und Waldsteppe des Hutberges oberhalb Pouzdřany (Pausram). – *Preslia* 7: 153–167.

Appendix. Selected species of vascular plants in Pouzdřany Steppe and Kolby Forest

<i>Acer campestre</i>	<i>Achillea pannonica</i>
<i>Acer pseudoplatanus</i>	<i>Ajuga chamaepitys</i>
<i>Acinos arvensis</i>	<i>Ajuga genevensis</i>
<i>Adonis flammea</i>	<i>Alliaria petiolata</i>
<i>Adonis vernalis</i>	<i>Allium oleraceum</i>
<i>Agrimonia eupatoria</i>	<i>Allium rotundum</i>
<i>Agrostis capillaris</i>	<i>Allium scorodoprasum</i>
<i>Achillea collina</i>	<i>Allium sphaerocephalon</i>

<i>Allium oleraceum</i>	<i>Campanula bononiensis</i>
<i>Allium rotundum</i>	<i>Campanula glomerata</i>
<i>Allium ursinum</i>	<i>Campanula persicifolia</i>
<i>Alyssum alyssoides</i>	<i>Campanula sibirica</i>
<i>Anemone nemorosa</i>	<i>Campanula rapunculoides</i>
<i>Anemone ranunculoides</i>	<i>Campanula trachelium</i>
<i>Anemone sylvestris</i>	<i>Cardamine impatiens</i>
<i>Anthericum ramosum</i>	<i>Cardaria draba</i>
<i>Anthoxanthum odoratum</i>	<i>Carex caryophyllea</i>
<i>Anthriscus sylvestris</i>	<i>Carex digitata</i>
<i>Anthyllis vulneraria</i>	<i>Carex humilis</i>
<i>Aquilegia vulgaris</i>	<i>Carex michelii</i>
<i>Arabidopsis thaliana</i>	<i>Carex montana</i>
<i>Arenaria serpyllifolia</i> agg.	<i>Carex muricata</i> agg.
<i>Aristolochia clematidis</i>	<i>Carex praecox</i>
<i>Arrhenatherum elatius</i>	<i>Carex supina</i>
<i>Artemisia absinthium</i>	<i>Carlina vulgaris</i> s. lat.
<i>Artemisia panicii</i>	<i>Carpinus betulus</i>
<i>Artemisia pontica</i>	<i>Caucalis platycarpus</i>
<i>Artemisia scoparia</i>	<i>Centaurea jacea</i>
<i>Asarum europaeum</i>	<i>Centaurea scabiosa</i>
<i>Asparagus officinalis</i>	<i>Centaurea stoebe</i>
<i>Asperula cynanchica</i>	<i>Centaurea triumfettii</i>
<i>Aster amellus</i>	<i>Cerastium arvense</i>
<i>Aster linosyris</i>	<i>Cerinthe minor</i>
<i>Astragalus austriacus</i>	<i>Clematis recta</i>
<i>Astragalus glycyphyllos</i>	<i>Clematis vitalba</i>
<i>Astragalus exscapus</i>	<i>Clinopodium vulgare</i>
<i>Astragalus onobrychis</i>	<i>Conringia orientalis</i>
<i>Avenula pratensis</i>	<i>Convallaria majalis</i>
<i>Avenula pubescens</i>	<i>Cornus mas</i>
<i>Betonica officinalis</i>	<i>Cornus sanguinea</i>
<i>Betula pendula</i>	<i>Corydalis cava</i>
<i>Bothriochloa ischaemum</i>	<i>Corydalis pumila</i>
<i>Brachypodium pinnatum</i>	<i>Corylus avellana</i>
<i>Brachypodium sylvaticum</i>	<i>Crambe tataria</i>
<i>Briza media</i>	<i>Crataegus monogyna</i>
<i>Bromus benekenii</i>	<i>Crataegus laevigata</i>
<i>Bromus erectus</i>	<i>Crepis praemorsa</i>
<i>Bromus inermis</i>	<i>Crepis foetida</i> subsp. <i>rhoeadifolia</i>
<i>Bromus japonicus</i>	<i>Cruciata glabra</i>
<i>Bupleurum falcatum</i>	<i>Cynoglossum officinale</i>
<i>Bupleurum rotundifolium</i>	<i>Cytisus nigricans</i>
<i>Calamagrostis arundinacea</i>	<i>Cytisus procumbens</i>
<i>Calamagrostis epigejos</i>	<i>Dactylis glomerata</i>
<i>Camelina microcarpa</i>	<i>Dactylis polygama</i>

Daucus carota
Dianthus pontederæ
Dictamnus albus
Diploxys muralis
Dorycnium pentaphyllum agg.
Echium vulgare
Elymus caninus
Elytrigia intermedia
Elytrigia repens
Erigeron acris
Erodium cicutarium
Erophila verna
Eryngium campestre
Erysimum diffusum
Erysimum odoratum
Erysimum repandum
Euonymus europæa
Euonymus verrucosa
Euphorbia cyparissias
Euphorbia epithymoides
Euphorbia exigua
Euphorbia falcata
Euphorbia waldsteinii
Falcaria vulgaris
Festuca heterophylla
Festuca pseudovina
Festuca rupicola
Festuca valesiaca
Ficaria verna subsp. *bulbifera*
Filipendula vulgaris
Fragaria vesca
Fragaria moschata
Fragaria viridis
Fraxinus excelsior
Fumaria schleicheri
Fumaria vailantii
Galanthus nivalis
Galium aparine
Galium album
Galium glaucum
Galium odoratum
Galium sylvaticum
Galium tricornutum
Galium verum
Genista tinctoria
Geranium robertianum

Geranium sanguineum
Geum urbanum
Glaucium corniculatum
Glechoma hirsuta
Glycyrrhiza glabra
Helianthemum grandiflorum
Helichrysum arenarium
Heracleum sphondylium
Hesperis sylvestris
Hieracium auriculoides
Hieracium bauhini
Hieracium densiflorum
Hieracium kalksburgense
Hieracium lachenalii
Hieracium laevigatum
Hieracium murorum
Hieracium pilosella
Hieracium rothianum
Hieracium sabaudum
Hieracium umbellatum
Holosteum umbellatum
Humulus lupulus
Hylotelephium maximum
Hypericum hirsutum
Hypericum perforatum
Chaerophyllum bulbosum
Chaerophyllum temulum
Chamaecytisus ratisbonensis
Chamaecytisus austriacus
Chondrilla juncea
Inula ensifolia
Inula ensifolia × *I. salicina*
Inula germanica
Inula hirta
Inula oculus-christi
Inula salicina
Iris graminea
Iris pumila
Iris variegata
Isopyrum thalictroides
Jurinea mollis
Knautia arvensis
Koeleria gracilis
Lactuca quercina
Lactuca serriola
Lamium album

<i>Lappula squarrosa</i>	<i>Orobanche alsatica</i>
<i>Lathyrus niger</i>	<i>Orobanche arenaria</i>
<i>Lathyrus pannonicus</i> subsp. <i>collinus</i>	<i>Orobanche caryophyllacea</i>
<i>Lathyrus tuberosus</i>	<i>Orobanche purpurea</i>
<i>Lathyrus vernus</i>	<i>Orphantha lutea</i>
<i>Lavathera thuringiaca</i>	<i>Oxytropis pilosa</i>
<i>Ligustrum vulgare</i>	<i>Papaver maculosum</i> subsp. <i>austromoravicum</i>
<i>Lilium martagon</i>	<i>Peucedanum alsaticum</i>
<i>Linaria vulgaris</i>	<i>Peucedanum cervaria</i>
<i>Linaria genistifolia</i>	<i>Phleum phleoides</i>
<i>Linum flavum</i>	<i>Phlomis tuberosa</i>
<i>Linum hirsutum</i>	<i>Phyteuma spicatum</i>
<i>Linum tenuifolium</i>	<i>Picris hieracioides</i>
<i>Lithospermum arvense</i>	<i>Pimpinella saxifraga</i>
<i>Lithospermum officinale</i>	<i>Plantago lanceolata</i>
<i>Lithospermum purpureocaeruleum</i>	<i>Plantago media</i>
<i>Lonicera caprifolium</i>	<i>Poa angustifolia</i>
<i>Lotus corniculatus</i> s. lat.	<i>Poa bulbosa</i>
<i>Lycium barbarum</i>	<i>Poa nemoralis</i>
<i>Lycopsis arvensis</i>	<i>Polycnemon arvense</i>
<i>Malus sylvestris</i>	<i>Polygala major</i>
<i>Medicago falcata</i>	<i>Polygonatum multiflorum</i>
<i>Melampyrum arvense</i>	<i>Polygonatum odoratum</i>
<i>Melampyrum pratense</i>	<i>Populus tremula</i>
<i>Melampyrum cristatum</i>	<i>Potentilla alba</i>
<i>Melampyrum nemorosum</i>	<i>Potentilla arenaria</i>
<i>Melica nutans</i>	<i>Potentilla patula</i>
<i>Melica ciliata</i>	<i>Potentilla recta</i>
<i>Melica transsilvanica</i>	<i>Primula vulgaris</i> subsp. <i>canescens</i>
<i>Melica uniflora</i>	<i>Prunus fruticosa</i>
<i>Melittis melissophyllum</i>	<i>Prunus spinosa</i>
<i>Milium effusum</i>	<i>Pseudolysimachion spicatum</i>
<i>Moehringia trinervia</i>	<i>Pulmonaria mollis</i>
<i>Muscari comosum</i>	<i>Pulmonaria officinalis</i> agg.
<i>Muscari neglectum</i>	<i>Pulsatilla grandis</i>
<i>Muscari tenuiflorum</i>	<i>Pyrus pyraeaster</i>
<i>Neottia nidus-avis</i>	<i>Pulsatilla pratensis</i> subsp. <i>bohemica</i>
<i>Nigella arvensis</i>	<i>Quercus cerris</i>
<i>Nonnea pulla</i>	<i>Quercus petraea</i>
<i>Odontites vernus</i> subsp. <i>serotinus</i>	<i>Quercus pubescens</i>
<i>Omphalodes scorpioides</i>	<i>Quercus robur</i>
<i>Ononis spinosa</i>	<i>Ranunculus auricomus</i> agg.
<i>Orchis militaris</i>	<i>Ranunculus polyanthemus</i>
<i>Origanum vulgare</i>	<i>Rapistrum perenne</i>
<i>Ornithogalum kochii</i>	

Reseda lutea
Reseda luteola
Rosa canina
Rosa dumalis
Rosa gallica
Rosa spinosissima
Salix caprea
Salsola kali subsp. *rosacea*
Salvia nemorosa
Salvia pratensis
Salvia verticillata
Sambucus nigra
Sanguisorba minor
Saponaria officinalis
Scabiosa ochroleuca
Sclerochloa dura
Scorzonera austriaca
Scorzonera cana
Scorzonera hispanica
Scorzonera purpurea
Securigera varia
Sedum acre
Senecio jacobaea
Serratula tinctoria
Seseli hippomarathrum
Seseli osseum
Sherardia arvensis
Silene nutans
Silene otites
Silene vulgaris
Sisymbrium loeselii
Solidago virgaurea
Sorbus domestica
Sorbus torminalis
Stachys annua
Stachys recta
Staphyllea pinnata
Stellaria holostea
Stipa capillata
Stipa pennata
Stipa pulcherrima
Symphytum tuberosum
Tanacetum corymbosum

Teucrium chamaedrys
Thalictrum minus
Thesium dollineri
Thesium linophyllum
Thlaspi perfoliatum
Thymus glabrescens
Thymus pannonicus
Tilia cordata
Tragopogon dubius
Tragopogon orientalis
Trifolium alpestre
Trifolium medium
Trifolium montanum
Trifolium rubens
Trinia glauca
Ulmus glabra
Ulmus laevis
Ulmus minor
Valeriana stolonifera subsp.
 angustifolia
Verbascum chaixii subsp.
 austriacum
Veronica praecox
Veronica prostrata
Veronica teucrium
Veronica vindobonensis
Viburnum lantana
Viburnum opulus
Vicia dumetorum
Vicia cracca
Vicia pisiformis
Vicia sylvatica
Vicia tenuifolia
Vinca minor
Vincetoxicum hirundinaria
Viola ambigua
Viola hirta
Viola mirabilis
Viola reichenbachiana
Viola riviniana
Viola suavis
Viola tricolor subsp. *saxatilis*

17th International Workshop European Vegetation Survey
Using phytosociological data to address ecological questions

1-5 May 2008, Masaryk University, Brno, Czech Republic
Abstracts and Excursion Guides

Edited by
Milan Chytrý

Excursion Guides by
Jiří Danihelka, Milan Chytrý, Jan Roleček & Vít Grulich

Published by Masaryk University, Brno
1st edition, 2008
Serial number Př-4/08-02/58
Printed by www.knihovnicka.cz, Tribun EU s. r. o.

ISBN 978-80-210-4585-9