Electronic Appendix to the paper: Csaba Tölgyesi, Orsolya Valkó, Balázs Deák, András Kelemen, Tatyana M. Bragina, Róbert Gallé, László Erdős, Zoltán Bátori: Tree-herb co-existence and community assembly in natural forest-steppe transitions

**Table S1** Habitat preferences of the species recorded in the relevés. More than one group has been assigned to species that are habitat generalists to some extent. Taxa that were not identified to species level may also have an indication of habitat preference if the possible species had identical habitat preferences. The categorization is based on Komarov (1968–2002) and Brinkert et al. (2016).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | Psammophytic grassland | Steppe | Moist grassland | Forest |
| *Achillea micrantha* | x | . | . | . |
| *Achillea nobilis* | . | x | . | . |
| *Achillea setacea* | . | x | . | . |
| *Adonis volgensis* | . | x | . | . |
| *Agropyron cristatum* agg. | . | x | . | . |
| *Agropyron fragile* | x | . | . | . |
| *Allium lineare* | . | x | . | . |
| *Allium pallassii* | . | x | . | . |
| *Allium scorodoprasum* | x | x | x | x |
| *Alyssum lenense* | x | . | . | . |
| *Arabis hirsuta* | . | x | . | . |
| *Artemisia campestris* | x | . | . | . |
| *Artemisia dracunculus* | . | . | x | . |
| *Artemisia latifolia* | . | x | . | x |
| *Artemisia pontica* | . | x | . | . |
| *Artemisia schrenkiana* | . | x | . | . |
| *Artemisia sericea* | . | x | . | . |
| *Asparagus officinalis* | . | x | . | . |
| *Asperula graveolens* | . | x | . | . |
| *Astragalus sp.* | x | . | . | . |
| *Bassia laniflora* | x | . | . | . |
| *Berteroa incana* | x | x | . | . |
| *Betula pendula* | . | . | . | x |
| *Bromus inermis* | . | x | . | . |
| *Calamagrostis epigejos* | x | x | x | . |
| *Calystegia sepium* | . | . | x | . |
| *Campanula sibirica* | . | x | . | . |
| *Carex praecox* | . | x | . | . |
| *Carex sp.* | . | . | x | . |
| *Carex supina* | x | . | . | . |
| *Centaurea ruthenica* | . | x | . | . |
| *Centaurea scabiosa* | . | x | . | . |
| *Chartolepis intermedia* | . | . | x | . |
| *Chenopodium album* | x | x | x | . |
| *Chondrilla brevirostris* | x | . | . | . |
| *Cirsium arvense* | . | . | x | . |
| *Cleistogenes squarrosa* | x | . | . | . |
| *Convolvulus arvensis* | . | x | . | . |
| Species | Psammophytic grassland | Steppe | Moist grassland | Forest |
| *Crataegus chlorocarpa* | . | . | . | x |
| *Dianthus acicularis* | . | . | . | x |
| *Dianthus borbasii* | . | x | . | . |
| *Elymus caninus* | . | . | . | x |
| *Elymus repens* | x | x | x | . |
| *Ephedra distachya* | x | . | . | . |
| *Epilobium tetragonum* | . | . | x | . |
| *Equisetum hyemale* | . | . | . | x |
| *Eremogone procera* | . | x | . | . |
| *Eryngium planum* | . | x | x | . |
| *Erysimum montanum* | x | . | . | . |
| *Euphorbia seguieriana* | x | . | . | . |
| *Euphorbia virgata* | . | . | x | . |
| *Euphrasia tatarica* | . | x | . | . |
| *Falcaria vulgaris* | . | x | . | . |
| *Fallopia convolvulus* | x | x | . | x |
| *Fallopia dumetorum* | x | . | . | x |
| *Festuca beckeri* | x | . | . | . |
| *Festuca valesiaca* | . | x | . | . |
| *Filipendula ulmaria* | . | . | x | . |
| *Filipendula vulgaris* | . | x | . | . |
| *Fragaria viridis* | . | x | . | . |
| *Galatella angustissima* | . | x | . | . |
| *Galatella biflora* | . | x | . | . |
| *Galatella villosa* | . | x | . | . |
| *Galium boreale* | . | x | . | x |
| *Galium verum* | . | x | x | . |
| *Glycyrrhiza uralensis* | . | . | x | . |
| *Goniolimon elatum* | . | x | . | . |
| *Gypsophila muralis* | x | x | . | . |
| *Gypsophila paniculata* | x | . | . | . |
| *Hedysarum gmelinii* | . | x | . | . |
| *Helichrysum arenarium* | x | . | . | . |
| *Heracleum sibiricum* | . | . | x | . |
| *Hieracium umbellatum* | . | x | . | x |
| *Hieracium virosum* | . | x | . | x |
| *Hierochloe odorata* | . | . | x | x |
| *Hypochaeris maculata* | . | x | . | . |
| *Inula britannica* | . | . | x | . |
| *Inula salicina* | . | . | x | . |
| *Iris humilis* | . | x | . | . |
| *Jurinea cyanoides* | x | . | . | . |
| *Koeleria cristata* | . | x | . | . |
| *Koeleria glauca* | x | . | . | . |
| *Lactuca tatarica* | x | . | . | . |
| Species | Psammophytic grassland | Steppe | Moist grassland | Forest |
| *Lathyrus pratensis* | . | . | x | . |
| *Lathyrus tuberosus* | . | . | x | . |
| *Leymus racemosus* | x | . | . | . |
| *Libanotis pyrenaica* | . | x | . | x |
| *Linaria genistifolia* | x | . | . | . |
| *Lithospermum officinale* | . | . | . | x |
| *Lonicera tatarica* | . | x | . | . |
| *Lysimachia vulgaris* | . | . | x | . |
| *Lythrum virgatum* | . | . | x | . |
| *Medicago falcata* | . | x | . | . |
| *Melampyrum cristatum* | . | x | x | . |
| *Melilotus officinalis* | x | x | x | . |
| *Odontites vulgaris* | . | . | x | . |
| *Onosma arenaria*  | x | . | . | . |
| *Ornithogalum fischerianum* | . | x | . | . |
| *Oxytropis pillosa* | . | x | . | . |
| *Pedicularis sp.* | . | . | . | . |
| *Peucedanum alsaticum* | . | x | . | . |
| *Phleum phleoides* | . | x | . | . |
| *Phlomoides agraria* | . | x | . | . |
| *Phragmites australis* | . | . | x | . |
| *Picris hieracioides* | x | x | x | . |
| *Pilosella echioides* | . | x | . | . |
| *Pinus sylvestris*  | . | . | . | x |
| *Plantago maxima* | . | x | . | . |
| *Plantago media* | . | x | . | . |
| *Poa angustifolia*  | . | x | . | . |
| *Poa bulbosa* | x | x | . | . |
| *Poa versicolor* | . | x | . | . |
| *Polygonum patulum* | x | x | . | . |
| *Populus tremula* | . | . | . | x |
| *Potentilla argentea* | . | x | . | . |
| *Potentilla bifurca* | x | x | . | . |
| *Potentilla humifusa* | . | x | . | . |
| *Potentilla incana* | x | . | . | . |
| *Prunus fruticosa* | . | x | . | . |
| *Psephellus sibiricus* | x | . | . | . |
| *Rhamnus cathartica* | . | . | . | x |
| *Ribes saxatile* | . | . | x | x |
| *Rosa acicularis* | . | . | . | x |
| *Rubus saxatilis* | . | . | . | x |
| *Salix cinerea* | . | . | x | . |
| *Salix rosmarinifolia* | . | . | x | . |
| *Salix sp.* | . | . | . | . |
| *Salsola sp.* | x | . | . | . |
| Species | Psammophytic grassland | Steppe | Moist grassland | Forest |
| *Salvia deserta* | . | x | . | . |
| *Sanguisorba officinalis* | . | . | x | . |
| *Saussurea amara* | . | . | x | . |
| *Scabiosa sp.* | x | x | . | . |
| *Scorzonera ensifolia* | x | . | . | . |
| *Sedum telephium* | . | . | . | x |
| *Senecio jacobea* | x | x | x | . |
| *Seseli ledebourii* | . | x | . | . |
| *Silaum silaus* | . | . | x | . |
| *Silene media* | . | x | . | . |
| *Silene multiflora* | . | . | x | . |
| *Solanum dulcamara* | . | . | . | x |
| *Solidago virgaaurea* | x | . | . | x |
| *Sophora alopecuroides* | . | . | x | . |
| *Spiraea hypericifolia* | . | x | . | . |
| *Stellaria graminea* | . | . | x | . |
| *Stellaria sp.* | . | . | . | . |
| *Stipa sp.* | x | x | . | . |
| *Tanacetum vulgare* | . | x | x | . |
| *Taraxacum campylodes* | . | . | x | . |
| *Thalictrum minus* | . | x | . | . |
| *Thesium arvense* | . | x | . | . |
| *Thymus marschallianus* | . | x | . | . |
| *Tragopogon capitatus* | . | x | . | . |
| *Tragopogon ruthenicus* | x | . | . | . |
| *Tulipa sp.*  | . | x | . | . |
| *Turritis glabra* | . | . | . | x |
| *Valeriana officinalis* | . | . | x | . |
| *Verbascum phoeniceum* | . | x | . | . |
| *Veronica longifolia* | . | . | x | . |
| *Veronica prostrata* | . | x | . | . |
| *Veronica spicata* | . | x | . | . |
| *Veronica spuria* | . | x | . | x |
| *Vicia cracca*  | . | . | x | . |
| *Vicia sativa* | . | x | . | . |