NEW SYNTAXA OF SHRUB AND PIONEER FOREST COMMUNITIES IN AUSTRIA

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Izvleček
V članku je 5 novo opisanih in tipiziranih asociacij: (1) *Festuco rupicolae-Juniperetum sabinae*, kamor uvrščamo suha, oligotrofna grmišča z vrsto *Juniperus sabina* v montanskem pasu centralnih Alp; (2) *Balloto-Prunetum domesticae*, (3) *Sambuco nigrae-Aceretum negundo* in (4) *Balloto-Syringetum vulgaris*, to so polihemerobne, termofilne združbe, ki uspevajo na potencialnih rastiščih listopadnih gozdov; (5) *Calamagrostio villosae-Betuletum pendulae*, kamor uvrščamo brezove gozdove na zmerno svežih rastiščih na silikatni matični podlagi v višjem montanskem do subalpinskem pasu, predvsem v osrednjih Alpah. Tri pionirske gozdne tipe smo provizorično uvrstili kot sintakson brez ranga: združba *Avenella flexuosa-Betula pendula,* združba *Populus tremula-Betula pendula* in združba *Filipendula ulmaria-Betula pendula.* Obravnavana je tudi sintaksonomska uvrstitev vseh asociacij in združb.

Abstract
In this paper, five associations are newly described and typified: (1) *Festuco rupicolae-Juniperetum sabinae*, which consists of dry and oligotrophic *Juniperus sabina* scrubs of the montane zone in the inner Alps; (2) *Balloto-Prunetum domesticae*, (3) *Sambuco nigrae-Aceretum negundo* and (4) *Balloto-Syringetum vulgaris*, which are polyhemerobe, thermophilous communities, occurring in potential broad-leaved woodland areas; (5) *Calamagrostio villosae-Betuletum pendulae* comprising birch woods on moderately fresh sites on silicate bedrock of the high-montane to subalpine zone, mainly distributed in the inner Alpic zone. Three pioneer forest types are provisionally classified as rankless communities: *Avenella flexuosa-Betula pendula* community, *Populus tremula-Betula pendula* community and *Filipendula ulmaria-Betula pendula* community. The syntaxonomical assignment of all associations and communities is discussed.

Ključne besede: *Rhamno-Prunetea*, sintaksonomija, tipifikacija, Avstrija, *Junipero-Pinetea*, *Brachypodio-Betuletea*
Key words: *Rhamno-Prunetea*, Syntaxonomy, Typification, Austria, *Junipero-Pinetea*, *Brachypodio-Betuletea*

1. INTRODUCTION

Shrub communities, pioneer forests built up of softwood species and polyhemerobe woody plant communities have not yet been in the focus of Austrian vegetation scientists. In general, relevés concerning these vegetation types were made in the frame of regional studies or have remained unpublished. Monographs are rare, the most extensive one being a study by Wirth (1991) on thermophilous hedge vegetation in North-Eastern Austria. Neophytic and other ruderal shrub and forest communities are relatively well documented by the studies of Forstner (1984) and Neuhauser (2001).

According to the national vegetation survey of Austria, broad-leaved shrub communities, pioneer forests and neophytic woody plant communities belong to the classes *Rhamno-Prunetea*, *Epilobietea angustifolii* and *Galio-Urticetea* (Mucina 1993a, b, Wirth 1993). Since this classification was not based on quantitative analyses, many gaps of knowledge remained to be filled. In the course of a syntaxonomic revision of Austrian woody plant communities (see Willner 2002, Willner & al. 2002, Exner 2002), a large amount of single relevés was used to test and refine the existing national classification scheme. This analysis revealed new associations and communities, which are described in the present paper.

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2. MATERIAL AND METHODS

Both published and unpublished relevés were used. All of them fulfill the criteria of the Braun-Blanquet method concerning homogeneity and size of sample plots (Braun-Blanquet 1964). Cryptogams have often not been properly recorded. Data collection of the Man and the Biosphere (MaB) project „Hemeroby of Austrian forest ecosystems" followed a stratified random sampling design (Grabherr & al. 1998), data of the project-cluster SINUS-BINKL-LANDLEBEN within the „Austrian landscape research" (ALR; see Wrbka & al. 1999, 2002, Pollheimer & al. 2002, Zechmeister & al. 2003) were collected in the frame of a description of landscape elements. In Tables 1 to 3, species occurrences in different layers were combined. Site data, stand parameters and bibliographical information for all relevés are shown in Tables 4 to 6. Associations were defined according to the concept outlined by Willner (2001). The nomenclature of phanerogams follows Adler & al. (1994; Austria) and Tutin & al. (1964–1980; other countries), the nomenclature of mosses follows Frey & al. (1995). The denomination of syntaxa is in accordance with Weber & al. (2000).

3. RESULTS

3.1 *Juniperus sabina* shrubs [Tab. 1]

(1) *Festuco rupicolae-Juniperetum sabinae* Exner ass. nov. hoc loco

Holotype: Tab. 1, rel. 11 Wagner 1979 [=Tab. 1, rel. 17]

Juniperus sabina shrubs on dry, steep and often rocky slopes on base-rich silicate substrates. The association is distributed within the middle to high-montane zone of the inner, continental parts of the Eastern Alps. The shrub-layer is species poor, the understorey is characterized by a high number of xerotolerant species indicating relatively base rich soils with low nutrient supply. Most diagnostic species are typical for dry grasslands, e.g. *Festuca rupicola*, *Acinos alpinus*, *Koeleria pyramidata*, *Thymus praecox* agg. and *Artemisia campestris*. The ass. *Festuco-Juniperetum* is related to floristically similar *Juniperus sabina-Larix decidua* woods on deeper soils and can develop from such larch forests under grazing pressure (Wagner 1979, Rouschal 1989). In the available material, two variants can be distinguished: one with *Dianthus carthusianorum* agg. of the Lungau region and one with *Pimpinella saxifraga* agg., which is found in Virgental. The latter variant is richer in species and shows a higher portion of shrub species.

Until now, the association has been documented by Wagner (1979, 1985) in the Virgental (Ost-Tirol) and Rouschal (1989) in the Lungau region (Salzburg). Brandes (1987) published the relevé of a mesophilous, transitional *Juniperus sabina* stand with many broad-leaved woody plant species from the Matrei region (Ost-Tirol). It cannot be assigned to the *Festuco-Juniperetum* and might be regarded as a *Juniperus sabina* facies of *Pruno-Ligustretum* Tüxen 1952.

3.2 Polyhemerobe shrub and forest communities [Tab. 2]

(2) *Balloto-Prunetum domesticae* Exner ass. nov. hoc loco

Holotype: Tab. 2, rel. 6 [=Wirth 1991, tab. 7, rel. 154]

Monodominant communities, mostly hedges of *Prunus domestica* on warm sites in Eastern Austria. The ass. is often to be found on narrow slopes between vineyards, preferring fresh and nutrient rich soils (Wirth 1991). Due to the good light supply and favourable soil conditions, the understorey is well developed and dominated by ruderal elements (Wirth 1991). The ass. *Balloto-Prunetum domesticae* mostly evolves from abandoned cultivations of *Prunus domestica* under a regime of frequent cutting, which stimulates polycormon formation (Wirth 1991). On dry sites, *Prunus domestica* seems to be less competitive and the ass. then probably develops into the *Prunus domestica* variant of the *Pruno-Ligustretum*, which is the most common hedge community in North-Eastern Austria (Wirth 1991). From these stands, *Balloto-Prunetum* is differentiated by the lack of *Prunetalia* and *Berberidion* species.

Prunus domestica is an allohexapolyploide fruit-tree species of hybridogenic origin (*P. spinosa* x *P. cerasifera* ssp. *divaricata*), which is often cultivated, but also occurs spontaneously (Adler & al. 1994). In North-Eastern Austria, the species has been naturalised for a long time and occurs in approximately 30% of all hedge stands (Wirth 1991). In hedges of this region, *Prunus domestica* ssp. *domestica* is more frequent then ssp. *insititia*. The subspecies do not differ in ecological behaviour (Wirth 1991).

(3) *Sambuco nigrae-Aceretum negundo* Exner ass. nov. hoc loco

Holotype: Tab. 2, rel. 13

Acer negundo forests on warm sites of lowland ar-

eas, mostly on wastelands and ruderal slopes. Soils are moderately dry to fresh and very rich in nitrogen (Forstner 1984). The ass. is rich in shrub and tree species, the understorey is mainly composed of ruderals. *Acer negundo* is a tree species of North-American origin (Adler & al. 1994).

(4) *Balloto-Syringetum vulgaris* Exner ass. nov. hoc loco

Holotype: Tab. 2, rel. 18 [=Wirth 1991, tab. 9, rel. 11]

Syringa vulgaris polycormons on warm and dry slopes in vineyard landscapes of Eastern Austria (Wirth 1991). The shrub layer is densely closed and monodominant, the herbaceous layer is poor in species. In Europe, natural *Syringa* shrubs are confined to the Balkan peninsula (Jakucs 1959).

3.3 Pioneer forests of softwood species [Tab. 3]

(5) *Calamagrostio villosae-Betuletum pendulae* Klosterhuber ass. nov. hoc loco

Holotype: Tab. 3, rel. 44 [=Klosterhuber 1994, rel. page 114]

Light and low growing birch woods on abandoned pasture lands and in episodic avalanche paths on acidophilous silicate substrates of the high-montane to subalpine zone. Moderately dry to fresh and mostly shallow, sometimes rocky soils. The most important differential species are *Rhododendron ferrugineum* and *Calamagrostis villosa*. The ass. is characterized by an important portion of acidophytes (Klosterhuber 1994).

(6) *Avenella flexuosa-Betula pendula* community

Light birch woods of the submontane to montane zone. Mostly successional states on abandoned pasture lands (Jelem & Kilian 1975), rarely persistent natural communities on shallow substrates. Soils are predominantly moderately fresh to fresh, nutrient-poor and acidophilous. Starzengruber (1979) described this community invalidly as *Frangulo-Betuletum pendulae*. It is similar to the *Agrostio tenuis-Populetum tremulae* Passarge 1968, but differs by the dominance of *Betula pendula* instead of *Populus tremula*.

(7) *Populus tremula-Betula pendula* community

Light woods of *Populus tremula* and *Betula pendula* on mostly fresh and basiphilous soils of the submontane to montane zone. The community shows some relations to the *Salicetum capreae cirsietosum arvensis* (Oberd. 1978) Weber 1999, the *Pteridio-Betuletum* Trinajstić et Šugar 1977 and the *Betulo-Fagetum* Rauš et Matić 1994 (cf. Rauš et Matić 1994).

(8) *Filipendula ulmaria-Betula pendula* community

Light woods, rarely hedges of *Betula pendula*, *Populus tremula* and *Salix caprea* in the submontane to montane zone. Soils are very fresh to moist and rich in nutrients.

4. DISCUSSION

4.1 *Festuco rupicolae-Juniperetum sabinae*

Due to the scattered occurrence of thermophilous shrub species such as *Berberis vulgaris* as well as the dry and warm site conditions, relationships to *Berberidion* (*Prunetalia spinosae*, *Rhamno-Prunetea*) are visible (see also Braun-Blanquet 1961). However, neither physiognomy nor phytosociological affinities of the dominant species are in accordance with the features of broad-leaved *Berberidion* communities and an assignment to the *Junipero sabinae-Pinetea sylvestris* class as proposed by Rivas-Martínez & Géhu (1978) and Béguin & Theurillat (1984) seems to be more appropriate. Still, lumping together forest and shrub communities into one class (*Junipero-Pinetea*) is not satisfying from a physiognomical point of view. Thus, the syntaxonomical status of *Juniperus sabina* scrubs remains unclear at the moment.

Juniperus sabina communities similar to the *Festuco-Juniperetum*, which are also confined to steep sunlit slopes with shallow soils, have been described in the Italian Aosta valley (Braun-Blanquet 1961, *Astragalo alopecuroidis-Juniperetum sabinae*) as well as in the Swiss Valais (Rivas-Martínez & Géhu 1978, *Cotino coggygriae-Juniperetum sabinae*; Béguin & Theurillat 1984, *Asplenio trichomanis-Juniperetum sabinae*). The *Asplenio-Juniperetum* is differentiated by species typical of rocky habitats, especially *Asplenium trichomanes, A. ceterach* and *Teucrium chamaedrys*. *Astragalus alopecuroides* and *Koeleria vallesiana* are exclusive features of *Astragalo-Juniperetum*. *Cotino-Juniperetum* is documented by only one relevé, making it impossible to assess its ecological and floristical variability. According to Béguin & Theurillat (1984), it is confined to screes and seems to prefer deeper soils. Zenari (1952) published species lists of *Juniperus sabina* stands in South Tyrol / Alto Adige (Italy), which show relationships to the *Festuco-Juniperetum*, but are lacking *Festuca rupicola*, *Poa molineri* and *Jovibarba arenaria* (cf. Rouschal 1989).

In the Romanian Carpathians, *Juniperus sabina* scrubs occur on thermophilous calcareous scree

sites of the submontane to montane zone. They were described as *Juniperetum sabinae* Csürös 1958 and put into *Seslerio rigidae-Pinion* (*Erico-Pinetea*; Coldea 1991). *Thymus comosus*, *Helictotrichon decorum* and *Seseli gracile* are geographical differential species of this community.

4.2 Polyhemerobe shrub and forest communities

Communities of invasive neophytes such as *Acer negundo* and *Syringa vulgaris* or naturalised fruit-tree species such as *Prunus domestica* have traditionally been neglected by syntaxonomy. Taking into account that they constitute an important part of spontaneous vegetation, this attitude can hardly be justified, even if the assignment to higher syntaxa is difficult. In contrast to traditionally recognized shrub and forest syntaxa, they might sometimes be rather shortliving. However, this is no argument against their syntaxonomical classification, which would then also apply to many herbaceous communities. Furthermore, communities dominated by neophytes might exist in similar floristic composition as native vegetation types in other bioregions and should not be ignored syntaxonomically simply because of their allochthonous status within the boundaries of a limited study area.

As far as neophytic woody plant communities are concerned, three syntaxonomical solutions have been proposed until now. Mucina (1993b) puts such communities into the class *Galio-Urticetea*, arguing that they are anthropogenous and partly planted. Following this argument, we would have to assign eutrophic *Prunus spinosa* communities, the *Balloto-Prunetum domesticae* or any other eutrophic hedge community to *Galio-Urticetea*, too, and secondary *Pinus nigra* forests with dense shrub layer to *Berberidion* (Starlinger 2000). This concept obviously violates the criterion of physiognomic homogeneity of higher syntaxa and is not consistent with current syntaxonomical approaches in other vegetation units (e.g. *Epilobietea angustifolii* / *Rhamno-Prunetea*, *Loiseleurio-Vaccinietea* / *Vaccinio-Piceetea*). Principally, the anthropogenous nature of the tree layer is no argument against syntaxonomical classification as a forest (cf. Zerbe & Sukopp 1995).

Rejecting the inclusion in *Galio-Urticetea*, neophytic woody plant communities can either be put into a separate class *Robinietea* (Jurko 1963) or – together with the ass. *Balloto-Prunetum domesticae* – assigned to the separate alliance *Balloto-Sambucion nigrae* Passarge 1978 (=*Arctio-Sambucion nigrae* Doing 1963) within *Rhamno-Prunetea* (Schubert & al. 2001). The principle of physiognomic homogeneity suggests that neophytic forest communities (*Sambuco-Aceretum negundi*) are placed into *Robinietea* and neophytic shrubs (*Balloto-Syringetum vulgaris*) into *Rhamno-Prunetea*.

In the long run, some of these communities might better be assigned to higher syntaxa of the native distribution area of the dominant species.

4.3 Pioneer forest communities

Together with *Sorbus aucuparia* woods, pioneer forests of *Betula pendula*, *Populus tremula* and *Salix caprea* are usually assigned to *Sambuco-Salicion*, which is either put into *Epilobietea angustifolii* (Oberdorfer 1978, Mucina 1993a) or *Rhamno-Prunetea* (Tüxen 1975, Weber 1999). The principle of physiognomic homogeneity clearly points towards a separation from *Epilobietea angustifolii*, which can additionally be justified by floristical arguments (Weber 1999). However, the assignment to *Rhamno-Prunetea* is questionable, too.

Rivas-Martínez & al. (2002) classify birch (*Betula pendula*), asp (*Populus tremula*) and sallow (*Salix caprea*) communities, together with *Corylus avellana* and *Sorbus aucuparia* stands, as a separate order *Betulo pendulae-Populetalia tremulae* within *Querco-Fagetea*. Following this approach, pioneer forests as well as communities of *Corylus avellana*, which are in many cases tall growing and of a forest-like appearance, are separated from low growing *Sambuco-Salicion* shrubs dominated by *Rubus idaeus*, *R. fruticosus* agg., *Sambucus nigra* and *S. racemosa*. From a physiognomical point of view, this concept seems appealing, but more global considerations may point towards another solution.

In the vast continental regions of Western Siberia beyond the distribution area of beech and oak forests, a vegetation belt of *Betula pendula*, *Populus tremula* and *Salix caprea* woods extends between boreal coniferous forests and nemoral steppe vegetation (Walter 1974). Continental birch-asp woodlands can be considered as the easternmost outposts of the European deciduous forest belt (Nimis & al. 1994). *Populus tremula* is a frequent component in these extremely continental, birch-dominated woodlands, but mainly dominates on brackish soils, whereas *Salix caprea* prefers peaty sites (Walter 1974). Ermakov & al. (1991) described the class *Brachypodio pinnati-Betuletea pendulae* as a vicar-

iant to European *Querco-Fagetea*, including birch woods (*Calamagrostio epigeii-Betuletalia pendulae*) as well as pine forests (*Carici macrourae-Pinetalia sylvestris*). Including Central European pioneer forests to *Brachypodio-Betuletea* is a promising approach and certainly compelling if this class is accepted. *Populus tremula* woods have been assigned by Korotkov & Ermakov (1999) to the *Abietetalia sibiricae* within *Querco-Fagetea*. Yet, the position of asp communities within *Querco-Fagetea* remains questionable in the light of their affinities to *Betula pendula* woodlands, which rather seem to justify an assignment to *Brachypodio-Betuletea*.

In contrast, *Corylus avellana* is limited to less continental regions, with a distribution pattern similar to *Quercus robur*. *Sorbus aucuparia* also finds its easternmost distribution limit at the Urals. These communities hardly belong to *Brachypodio-Betuletea*, but to *Rhamno-Prunetea* or *Querco-Fagetea*.

The floristical and ecological variability of birch, asp and sallow communities in Central Europe is considerable. Thus, more data are needed for an appropriate classification of these rather widespread, yet often neglected vegetation types.

5. SUMMARY

In the course of a syntaxonomic revision of Austrian woody plant communities, a large amount of single relevés was used to test and refine the existing national classification scheme. Five associations and three rankless communities are newly described (see tables 1 to 6):

(1) *Festuco rupicolae-Juniperetum sabinae* Exner ass. nov. hoc loco

Juniperus sabina shrubs on dry, steep and often rocky slopes on base rich silicate substrates within the middle to high-montane zone. Inner, continental parts of the Eastern Alps.

(2) *Balloto-Prunetum domesticae* Exner ass. nov. hoc loco

Monodominant communities, mostly hedges of *Prunus domestica* on warm, fresh and eutrophic sites in vineyard landscapes of Eastern Austria.

(3) *Sambuco nigrae-Aceretum negundo* Exner ass. nov. hoc loco

Acer negundo forests on warm, fresh and eutrophic sites of lowland areas. Mostly on wastelands and ruderal slopes.

(4) *Balloto-Syringetum vulgaris* Exner ass. nov. hoc loco

Syringa vulgaris polycormons on warm and dry slopes in vineyard landscapes of Eastern Austria.

(5) *Calamagrostio villosae-Betuletum pendulae* Klosterhuber ass. nov. hoc loco

Light and low growing birch woods on abandoned pasture lands and in episodic avalanche paths on shallow and acid soils of the high-montane to subalpine zone.

(6) *Avenella flexuosa-Betula pendula* community

Light birch woods on silicate substrates of the submontane to montane zone.

(7) *Populus tremula-Betula pendula* community

Light woods of *Populus tremula* and *Betula pendula* on mostly fresh and basiphilous soils of the submontane to montane zone.

(8) *Filipendula ulmaria-Betula pendula* community

Light woods, rarely hedges of *Betula pendula*, *Populus tremula* and *Salix caprea* on moist and eutrophic soils in the submontane to montane zone.

The syntaxonomical status of the *Festuco rupicolae-Juniperetum sabinae* is unclear. Yet, a strong affinity to the *Junipero sabinae-Pinetea sylvestris* is obvious (see Rivas-Martínez & Géhu 1978). The ass. *Balloto-Prunetum domesticae* belongs to the ruderal alliance *Balloto-Sambucion* (*Rhamno-Prunetea*). The ass. *Sambuco nigrae-Aceretum negundo* and *Balloto-Syringetum vulgaris* are also provisionally included in this alliance. The *Calamagrostio villosae-Betuletum pendulae* is provisionally put into *Sambuco-Salicion* (*Rhamno-Prunetea*), but an assignment to the class *Brachypodio-Betuletea pendulae* (see Korotkov & Ermakov 1999) should be considered.

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Table 1: *Festuco rupicolae-Juniperetum sabinae* and related associations
Tabela 1: *Festuco rupicolae-Juniperetum sabinae* in sorodne asociacije

D: Diagnostic species

FJ: Festuco rupicolae-Juniperetum sabinae
pJ: Asplenio-Juniperetum sabinae
Js: "Juniperetum sabinae"
tJ: Astragalo-Juniperetum sabinae
CJ: Cotino coggygrio-Juniperetum sabinae
PL: Pruno-Ligustretum, Juniperus sabina-Facies

	FJ																				*pJ*	Js	tJ	CJ	PL
Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*21*	22	23	24	25
Nr. of samples (if > 1)																					*4*	17	6		
D Association group																									
Juniperus sabina	3	2	2	4	3	3	2	2	2	3	4	2	2	3	2	2	2	2	4	2	*4*	V	V	4	3
D Festuco-Juniperetum																									
Festuca rupicola	.	2	.	+	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	.	.	.	.	.
Acinos alpinus	+	.	.	.	+	+	1	1	+	+	+	.	1	+	1	1	+	+	+	1	.	.	.	.	.
Koeleria pyramidata auct.	.	+	1	.	+	.	1	+	.	2	1	2	1	2	2	2	2	1	1	2	.	.	.	.	.
Thymus praecox agg.	+	.	+	+	2	+	2	1	1	.	.	.	1	+	2	1	1	2	1	1	.	.	.	.	.
Artemisia campestris	1	+	.	+	.	.	1	1	+	1	1	1	+	+	1	.	+	+	+	.	.	.	.	.	.
Saxifraga paniculata	+	.	+	.	+	.	1	.	+	1	.	.	+	+	.	+	.	.	1	.	.	.	.	.	.
Erysimum sylvestre	.	1	.	.	1	+	+	+	.	1	+	1	+	+	1	+	+	+	+	+	.	.	.	.	.
Scabiosa columbaria	.	.	+	+	+	.	1	+	.	+	+	1	1	+	1	1	+	+	+	.	.	I	.	.	.
Galium pusillum agg.	.	.	+	+	+	+	+	1	.	.	.	.	+	+	.	.	+	.	.	+	.	.	.	.	.
Hieracium pilosella	1	.	.	.	.	1	.	+	1	.	1	.	+	+	+	.	+	+	+	1	.	.	.	.	.
Seseli libanotis	.	1	.	.	+	.	1	.	+	+	+	.	+	1	.	+	.	.	.	.	.	.	.	.	.
Carduus defloratus agg.	+	1	.	+	+	.	.	+	+	+	.	.	1	.	.	.	+	.	+	.	.	.	.	.	.
Laserpitium latifolium	.	+	.	+	.	.	.	+	.	1	.	.	+	.	.	.	.	.	+	.	.	I	.	.	.
Polygonatum odoratum	.	.	.	1	.	.	+	.	.	+	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.
Phleum phleoides	.	.	.	+	.	.	+	1	.	1	+	+	.	+	+	+	.	+	.	+	.	.	.	.	.
Aster alpinus	.	.	+	.	.	+	+	+	1	.	.	2	.	+	+	.	+	.	+	.	.	.	.	.	.
Jovibarba arenaria	.	.	.	.	2	+	+	+	1	.	.	.	.	+	+	+	.	1	+	.	.	.	.	.	.
Potentilla verna agg.	.	.	+	.	.	.	+	+	+	.	.	.	1	1	2	2	1	2	1	1	.	.	.	.	.
Poa molineri	.	.	.	.	.	.	1	+	+	1	1	+	1	+	+	1	+	1	1	1	.	.	.	.	.
Thalictrum minus agg.	+	.	.	.	.	+	+	+	.	+	+	.	+	.	.	+	.	+	+	+	.	.	.	.	.
Euphorbia cyparissias	+	1	+	.	1	1	+	1	+	.	.	1	2	+	1	1	1	1	1	2	*1*	.	.	.	.
Silene nutans s. lat.	+	1	.	.	.	.	+	+	+	+	+	+	+	1	+	+	+	+	+	+	*1*	.	.	.	.
Sempervivum arachnoideum	+	1	+	1	2	.	2	2	1	1	+	1	+	1	+	+	.	1	1	+	*3*	.	.	.	.
Sedum album	.	.	.	.	1	.	2	1	+	.	.	.	+	+	+	+	.	2	1	.	*4*	.	.	.	.
D Asplenio-Juniperetum																									
Asplenium trichomanes	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	*4*	I	.	.	.
Asplenium ceterach	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*3*	.	.	.	.
Galium lucidum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*3*	.	.	.	.
Asplenium septentrionale	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	+	.	*3*	.	.	.	.
D "Juniperetum sabinae" Csürös 1958																									
Seseli gracile	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.	.
Helictotrichon decorum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.	.
Thymus comosus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.	.
Cytisus nigricans	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.	.
Rhamnus saxatilis ssp. tinctoria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.	.
D Astragalo-Juniperetum																									
Astragalus alopecuroides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	V	.	.
Rosa div. sp.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	V	.	.
Koeleria vallesiana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*1*	.	V	.	.
Elymus hispidus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	IV	.	.
Ononis natrix	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.
Astragalus monspessulanus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.
Campanula rotundifolia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.
Poa nemoralis	.	.	.	.	.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	III	.	.
Stachys recta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	IV	.	.
D Cotino-Juniperetum																									
Cotinus coggygria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.

Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*21*	22	23	24	25
Achnatherum calamagrostis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Silene otites	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Asperula aristata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Negative D Festuco-Juniperetum																									
Teucrium chamaedrys	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*4*	IV	II	1	.
Melica ciliata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*3*	II	II	.	.
Prunus mahaleb	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*2*	.	I	1	.
Festuca vallesiaca	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*2*	.	III	.	.
Other woody plant species																									
Berberis vulgaris	.	.	.	.	.	.	.	.	+	.	+	+	1	+	+	+	+	.	.	1	*1*	II	V	1	2
Juniperus communis	.	.	.	.	.	.	.	.	.	2	+	+	2	2	1	1	2	.	.	+	*2*	II	III	1	.
Rosa dumalis s. lat.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	+	+	+	+	+	+	.	.	.	.	.
Larix decidua	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	1	.	.	+	.	I	.	.	.
D Prunetalia spinosae																									
Rhamnus cathartica	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	+	.	III	.	.	.
Rosa canina s. lat.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*3*	II	.	.	2
Fraxinus excelsior	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	+	.	I	.	.	3
Corylus avellana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	2
Prunus spinosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Ribes uva-crispa	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	+	.	.	II	.	+
D Var. Dianthus carthusianorum agg.																									
Dianthus carthusianorum agg.	.	.	.	+	+	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.	.
Sesleria albicans	1	.	4	1	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Sempervivum wulfenii	+	.	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Artemisia absinthium	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	1	.	.	*1*	.	.	.	.
Woodsia alpina	.	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sedum dasyphyllum	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	*1*	.	.	.	.
Astragalus penduliflorus	.	.	.	.	.	.	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vincetoxicum hirundinaria	+	.	.	+	.	+	+	+	.	+	.	+	+	+	.	.	.	.	.	.	.	IV	.	.	.
D Var. Pimpinella saxifraga agg.																									
Pimpinella saxifraga agg.	.	.	.	.	.	.	.	+	.	+	1	+	1	+	+	+	+	+	.	1	.	.	.	.	.
Brachypodium pinnatum agg.	.	.	.	.	.	.	+	.	.	+	1	.	1	1	+	+	1	.	+	2	.	I	.	.	1
Helianthemum nummularium agg.	.	.	+	.	.	.	+	.	.	.	1	+	2	2	2	2	2	.	+	2	.	I	.	+	.
Allium senescens	.	.	.	.	.	.	+	+	.	+	+	.	+	+	+	+	+	2	+	.	.	.	.	.	.
Trifolium montanum	.	.	.	.	.	.	.	+	+	+	1	.	1	+	+	+	+	+	+	1	.	.	.	.	.
Anthyllis vulneraria	.	.	.	.	.	.	+	+	.	+	+	+	1	+	1	1	1	+	+	.	.	.	.	.	.
Dianthus sylvestris	.	.	+	.	.	.	.	1	.	+	+	2	1	1	1	1	2	1	+	1	.	.	.	.	.
Calamagrostis varia	.	.	.	.	.	.	.	+	.	1	+	.	+	+	+	+	2	.	+	2	.	.	.	.	.
Tortella tortuosa	.	.	.	.	.	.	.	.	.	1	1	1	1	+	+	2	1	2	1	.	.	.	.	.	.
Lotus corniculatus agg.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	1	.	1	.	.	1	.	.	.	.	.
Rhinanthus aristatus agg.	.	.	.	.	.	.	.	.	.	+	+	+	2	+	.	2	+	.	+	.	.	.	.	.	.
Centaurea scabiosa	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.
Abietinella abietina	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	1	+	+	+	+	.	.	.	.	.
Thymus pulegioides	.	.	.	.	.	.	.	.	.	1	1	3	.	.	.	.	.	.	.	.	.	.	.	.	.
Sedum annuum	.	.	.	.	.	.	.	.	.	1	2	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Potentilla pusilla	.	.	.	.	.	.	.	.	.	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Cuscuta epithymum	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.
Cerastium arvense	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	+	*1*	.	.	.	.
Viola tricolor	.	.	.	.	.	.	.	.	.	+	+	.	+	+	.	+	.	.	.	.	.	.	.	.	.
Petrorhagia saxifraga	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.
Rhytidium rugosum	.	.	.	.	.	.	.	.	.	1	.	1	+	2	1	+	1	.	.	.	.	.	.	.	.
Thesium alpinum	.	.	.	.	.	.	.	.	.	+	.	.	+	.	+	.	+	.	+	.	.	.	.	.	.
Sedum sexangulare	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	.	.	.	.	.	.	.
Polygala vulgaris	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.
Campanula spicata	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	+	.	*2*	.	.	.	.
Phyteuma betonicifolia	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Verbascum lychnitis	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	.	.	+	+	.	*1*	.	.	.	.
Seseli annuum	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	+	.	+	.	+	.	.	.	.	.
Carex caryophyllea	.	.	.	.	.	.	.	.	.	.	.	+	1	1	+	+	+	.	.	1	.	.	.	.	.
Teucrium montanum	.	.	.	.	.	.	.	.	.	.	.	2	+	1	2	1	1	+	.	1	.	III	.	+	.
Carlina acaulis	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	+	+	.	+	1	.	.	.	.	.

Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*21*	22	23	24	25
Globularia cordifolia	.	.	.	.	.	.	.	.	.	.	.	.	1	2	1	+	2	.	.	+	.	.	.	.	.
Salvia pratensis	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	+	+	.	.	.	.	.	.	.
Sanguisorba minor	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	.	.	.	.	.	.	.	.
Orobanche caryophyllacea	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.
Onobrychis montana	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.
Crepis alpestris	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.
Plantago lanceolata	.	.	.	.	.	.	.	.	.	.	.	.	1	+	+	+	+	.	+	+	.	.	.	.	.
Trifolium pratense	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	+	+	.	.	.	.	.
Euphrasia officinalis	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	+	.	.	.	.	.
Carex ornithopoda agg.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	1	.	.	.	.	.
Medicago lupulina	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	+	.	.	.	.	.
Ranunculus bulbosus	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	+	.	.	.	.	.
Biscutella laevigata	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	.	.	.	I	.	.	.
Arabis hirsuta agg.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	.	.	+	.	.	.	.	.
Picea abies	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	II	.	.	.
Others																									
Galium mollugo agg.	+	+	+	+	.	+	.	.	+	1	1	+	+	1	1	1	+	1	1	+	.	V	IV	.	+
Linum catharticum	.	+	.	+	.	.	.	.	.	.	.	.	1	+	.	+	+	.	+	+	.	.	.	.	.
Agrostis capillaris	.	.	+	+	.	+	.	1	.	.	+	.	1	.	.	1	.	.	.	+	.	.	.	.	.
Rumex acetosella s. lat.	+	1	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vicia cracca agg.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Sedum maximum	+	.	.	.	.	.	.	+	.	+	1	.	.	.	.	.	.	+	.	.	.	II	.	.	.
Digitalis grandiflora	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.	.
Leontodon hispidus	.	.	.	.	.	.	+	+	.	.	.	.	+	.	+	+	+	.	.	+	.	.	.	.	.
Veronica fruticans	.	.	.	.	+	.	+	+	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.
Trifolium medium	.	.	.	.	.	+	.	+	+	1	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.
Gypsophila repens	.	.	.	.	.	.	.	1	.	.	.	+	+	+	.	.	2	.	.	+	.	.	.	.	.
Fragaria vesca	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.
Achillea millefolium agg.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	.	.	.	.	.
Asplenium ruta-muraria	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	+	.	.	.	II	.	.	.
Avenula pubescens	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Clinopodium vulgare	.	.	.	.	.	.	+	.	.	+	+	.	.	.	.	.	.	.	+	+	.	.	.	.	.
Dactylis glomerata agg.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	+	.	.	.	.	.	.	.	.
Briza media	.	.	.	.	.	.	+	.	.	.	+	.	+	.	.	+	.	.	.	1	.	.	.	.	.
Plantago media	.	.	.	.	.	.	.	+	.	.	+	.	2	+	+	.	+	.	.	+	.	.	.	.	.
Euphrasia salisburgensis	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	+	.	+	.	.	.	.	.	.
Veronica chamaedrys agg.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.
Silene vulgaris	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	+	.	.	.	II	.	.

Occuring once or with frequency I:

Alchemilla vulgaris agg. (11: +), Allium oleraceum (7: +), Arabis glabra (21: *1*), Arrhenatherum elatius (15: +), Calamagrostis arundinacea (22: 1), Campanula cochleariifolia (17: 1),
C. glomerata (13: +), Cardamine hirsuta (21: *1*), Carex alba (17: 1), Carlina vulgaris agg. (1: +), Carum carvi (19: +), Centaurea jacea (13: +),
C. phrygia agg. (10: +), Clematis alpina (13: +), Cornus mas (22: I), Crepis conyzifolia (10: +), Dianthus spiculifolius (22: I), Echium vulgare (2: +),
Galium pumilum (21: *1*), Geranium robertianum (25: 1), G. sanguineum (21: *1*), Helianthemum canum (22: I), Holcus lanatus (9: +), Hypericum maculatum agg. (12: +),
Knautia arvensis (10: +), Lactuca perennis (21: *1*), Lathyrus heterophyllus (23: I), L. pratensis (16: +), Leucanthemum maximum s.l. (10: +), Lilium bulbiferum (7: +),
Lonicera xylosteum (25: 1), Orchis ustulata (13: +), Origanum vulgare (19: +), Oxytropis campestris (17: +), Parnassia palustris (13: +), Pedicularis tuberosa (19: +),
Phleum pratense agg. (4: +), Plantago atrata (14: +), Poa glauca (19: 1), P. pratensis (13: +), Polygala chamaebuxus (20: +), Polypodium vulgare agg. (19: +),
Populus tremula (19: +), Prunella vulgaris (20: +), Prunus padus (25: 1), Rumex scutatus (10: +), Schistidium apocarpum (19: 1), Securigera varia (22: I),
Sempervivum montanum (19: +), Sesleria rigida (22, I), Silene rupestris (5: +), Sisymbrium strictissimum (25: 1), Tortula ruralis (19: +), Trifolium campestre (8: +),
Urtica dioica (25: +), Veronica officinalis (8: +), Viola collina (20: +)

Occurring twice or with frequency II:

Amelanchier ovalis (4: +, 23: I), Anthericum ramosum (22: II), Anthoxanthum odoratum agg. (4: +, 13: +), Arabis nova (21: *1*, 23: I), Arenaria serpyllifolia agg. (16: +, 20: +),
Bunium bulbocastanum (23: II), Campanula sibirica (22: II), C. trachelium (1: +, 13: +), Cardaminopsis arenosa (22: II), Carex humilis (22: II),
Centaurea triumfetti (22: II), Cerastium holosteoides (13: +, 16: +), Chamaecytisus hirsutus (22: II), Cnidium silaifolium (22: II), Convolvulus arvensis (21: *2*),
Cystopteris fragilis (21: 2, 23: II), Erigeron alpinus (13: +, 16: +), Erysimum pannonicum (22: II), Festuca acuminata (21: *2*), F. rubra agg. (20: 1),
Fraxinus ornus (22: II), Galium verum (7: 1, 8: +), Gentianella anisodonta (2: +, 13: +), Hieracium murorum (23: II), Hypericum perforatum (13: +, 14: +),
Inula ensifolia (22: II), Laserpitium siler (23: II), Leucanthemum vulgare agg. (7: 1, 22: I), Pinus sylvestris (12: +, 24: 1), Polypodium vulgare (21: *2*),
Primula elatior (22: II), P. veris (7: +, 22: II), Racomitrium canescens (13: +, 19: +), Rhamnus alpina (23: II), Rubus idaeus (7: +, 11: +),
Saponaria ocymoides (23: II), Sempervivum tectorum (21: *2*), Taraxacum sp. (13: +, 20: +), Thalictrum foetidum (23: II), Trifolium repens (15: +, 19: +),
Valeriana officinalis agg. (8: +, 13: +), V. tripteris (16: +, 19: +)

Table 2: Polyhemerobe associations
Tabela 2: Močno antropogeno vplivane asociacije

BP: Balloto-Prunetum domesticae
SA: Sambuco nigrae-Aceretum negundi
BS: Balloto-Syringetum vulgaris

	BP												SA					SB	
Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Nr. of samples (if > 1)																	18		
D Balloto-Prunetum																			
Prunus domestica	5	5	5	5	5	5	5	5	3	4	4	4	.	.	.	.	I	r	.
D Sambuco-Aceretum																			
Acer negundo													3	2	2	3	V		
Robinia pseudacacia	.	.	.	.	.	.	.	.	.	.	.	.	+	.	1	2	I	.	.
D Balloto-Syringetum																			
Syringa vulgaris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	5	5
Other shrub and tree species																			
Sambucus nigra	r	.	2	2	1	.	r	3	3	.	.	+	+	1	2	2	V	r	.
Rosa canina s. lat.	+	+	1	.	.	.	.	.	.	.	.	.	+	.	2	.	II	r	+
Juglans regia	.	.	1	.	.	.	r	.	3	.	.	.	.	.	.	.	I	.	.
Lycium barbarum	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Prunus species	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.
Fraxinus excelsior	.	r	.	.	.	.	.	.	.	.	.	.	.	2	2	+	II	.	.
Quercus robur	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
Ligustrum vulgare	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	.	II	.	.
Crataegus monogyna	.	.	.	.	.	.	.	.	.	.	.	.	+	.	2	+	II	r	.
Salix alba	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	I	.	.
Populus nigra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	I	.	.
Acer pseudoplatanus	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	I	.	.
Viburnum opulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.
Prunus avium	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	II	.	.
Salix cinerea	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	I	.	.
Prunus padus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	I	.	.
Evonymus europaea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	II	.	.
Cornus sanguinea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	III	.	.
Malus domestica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.
Acer campestre	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.
Acer platanoides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.
Galio-Urticetea, Stellarietea mediae																			
Viola odorata	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	I	.	.
Galium aparine agg.	2	3	2	2	.	3	2	.	.	.	2	.	1	.	.	3	III	.	.
Urtica dioica	.	2	2	1	.	1	+	3	.	.	.	+	+	.	1	2	IV	.	.
Anthriscus sylvestris	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	I	.	.
Geum urbanum	.	2	1	.	.	1	.	.	.	.	.	1	+	.	.	1	I	.	.
Heracleum sphondylium	.	+	.	.	.	.	.	+	.	.	.	1	.	.	.	.	I	.	.
Convolvulus arvensis	+	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	I	.	.
Carduus acanthoides	+	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	I	.	.
Cirsium arvense	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.
Rubus caesius	.	.	.	.	2	+	2	.	.	.	1	.	.	1	1	.	II	.	.
Chenopodium album agg.	.	.	.	.	2	.	1	.	.	+	.	.	.	+	+	.	I	.	.
Bryonia alba	.	.	1	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.
Arctium lappa	.	.	r	.	.	.	.	1	.	.	.	.	.	.	.	.	I	r	.
Cirsium vulgare	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	+	II	.	.
Alliaria petiolata	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	I	.	.
Lamium maculatum	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	I	.	.
Descurainia sophia	.	.	.	.	.	.	.	.	.	+	+	.	.	1	.	.	.	.	.
Fallopia convolvulus	.	.	.	.	.	.	.	.	.	+	1	.	+	.	.	.	I	.	.
Sisymbrium loeselii	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	I	.	.
Clematis vitalba	.	.	.	.	.	.	.	.	.	.	.	+	.	.	2	.	III	.	.

Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Lapsana communis	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	I	.	.
Taraxacum sp.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	II	.	.
Aegopodium podagraria	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.
Geum urbanum	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	1	.	.	.
Stellaria media agg.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	3	I	.	.
Anthriscus caucalis	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	I	.	.
Geranium pusillum	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	I	.	.
Capsella bursa-pastoris	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	I	.	.
Calystegia sepium	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	I	.	.
Tripleurospermum inodorum	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	.	I	.	.
Bryonia dioica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	I	.	.
Humulus lupulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	I	.	.
Parietaria officinalis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	I	.	.
Solidago gigantea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	II	.	.
Chelidonium majus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	II	.	.
Veronica hederifolia agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	I	.	1
Artemisietea vulgaris																			
Ballota nigra	.	1	2	2	3	3	1	2	+	+	.	2	.	.	.	.	III	1	.
Elymus repens	3	3	.	.	.	2	1	.	.	3	2	.	.	1	.	.	II	1	.
Artemisia vulgaris	1	1	+	+	.	+	.	.	.	.	.	.	+	+	2	.	III	+	.
Bromus sterilis	.	.	.	.	2	3	.	.	.	.	.	.	+	+	2	.	II	1	.
Berteroa incana	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	.	.
Equisetum arvense	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	I	.	.
Cardaria draba	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	I	.	.
Bromus inermis	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	I	.	.
Erigeron annuus	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	I	.	.
Daucus carota	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	I	.	.
Reseda lutea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	I	.	.
Molinio-Arrhenatheretea																			
Ranunculus acris	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Centaurea scabiosa	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	.	.
Dactylis glomerata agg.	.	2	+	.	.	.	+	+	+	.	1	1	.	+	.	.	II	.	.
Arrhenatherum elatius	.	2	.	.	.	.	.	.	.	1	2	1	.	2	1	.	II	.	.
Achillea millefolium agg.	+	.	.	.	.	.	.	.	.	.	1	1	.	+	+	.	I	.	.
Galium mollugo agg.	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	I	.	.
Potentilla reptans	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	I	.	.
Centaurea jacea	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	I	.	.
Ranunculus repens	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	.
Poa trivialis	.	.	.	.	.	.	.	.	.	.	.	.	+	2	.	.	I	.	.
Festuca rubra agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	I	.	.
Symphytum officinale	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	I	.	.
Pimpinella major	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	I	.	.
Trifolio-Geranietea, Festuco-Brometea																			
Allium vineale	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bupleurum falcatum	3	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Falcaria vulgaris	2	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	I	.	.
Poa angustifolia	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	I	.	.
Galium verum agg.	.	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	I	.	.
Salvia pratensis	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	I	.	.
Brachypodium pinnatum agg.	.	.	.	.	.	.	.	.	.	.	.	2	.	1	.	.	.	.	.
Others																			
Rubus fruticosus agg.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	3	I	.	.
Silene latifolia	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	I	.	.
Campanula rapunculoides	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	I	.	.
Lactuca serriola	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	II	.	.
Glechoma hederacea	.	.	.	.	.	.	.	+	.	.	.	.	.	.	1	.	I	.	.
Poa nemoralis	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	I	.	1
Phalaris arundinacea	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	2	I	.	.
Calamagrostis epigejos	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	.	II	.	.
Alopecurus geniculatus	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
Solanum dulcamara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	I	.	.
Ranunculus ficaria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.

Occurring once with abundance < 2 or with frequency I:

Acer tataricum (17: I), Agrimonia eupatoria (2: r), Agrostis stolonifera agg. (14: +), Ailanthus altissima (17: I), Allium ursinum (16: r), A. scorodoprasum (17: I), Amblystegium serpens (17: I), Anchusa officinalis (17: I), Arctium minus (17: I), A. tomentosum (6: +), Arenaria serpyllifolia (17: I), Armoracia rusticana (17: I), Asparagus officinalis (17: I), Atriplex patula (11: +), Asperula cynanchica (17: I), Aster lanceolatus (17: I), A. novi-belgii (17: I), Betula pendula (17: I), Bromus arvensis (4: 1), B. tectorum (17: I), Bryonia dioica (15: +), Bunias orientalis (10: 1), Brachythecium campestre (17: I), B. salebrosum (17: I), Bryum caespiticeum (17: I), Buddleja davidii (17: I), Cardaria draba (10: 1), Carex hirta (17: I), C. riparia (14: 1), C. secalina (14: 1), Centaurea nigrescens (17: I), C. stoebe (17: I), Cerastium semidecandrum (17: I), Chaerophyllum bulbosum (17: I), C. temulum (17: I), Chenopodium polyspermum (15: +), Cichorium intybus (17: I), Cirsium oleraceum (16: +), Colchicum autumnale (16: r), Conyza canadensis (14: +), Coronilla varia (17: I), Corylus avellana (17: I), Crepis tectorum (17: I), Cruciata laevipes (2: +), Dactylis glomerata agg. (14: +), Daucus carota (14: +), Dipsacus fullonum (14: +), Elymus repens (14: 1), Equisetum arvense (8: +), Erigeron annuus (13: +), Eryngium campestre (17: I), Euphorbia esula (11: +), E. falcata (14: +), Eurhynchium praelongum (17: I), Fallopia dumetorum (17: I), Festuca pratensis s.str. (14: 1), F. rupicola (17: I), Fragaria vesca (17: I), Galium mollugo agg. (14: 1), Geranium pyrenaicum (17: I), Hedera helix (17: I), Helianthus tuberosus (17: I), Hemerocallis fulva (17: I), Hordeum murinum (17: I), Hypericum perforatum (7: +), Impatiens parviflora (16: 1), Inula conyza (17: I), Knautia arvensis (17: I), Koeleria macrantha (17: I), Laburnum anagyroides (17: I), Lamium album (17: I), L. purpureum (17: I), Lathyrus pratensis (17: I), Leontodon hispidus (17: I), Leonurus cardiaca (17: I), Lepidium densiflorum (17: I), Linaria vulgaris (17: I), Lonicera tatarica (17: I), Lotus corniculatus (17: I), Lysimachia nummularia (16: +), L. vulgaris (14: 1), Lythrum salicaria (16: +), Medicago lupulina (17: I), M. x varia (17: I), Melilotus officinalis (17: I), Parietaria officinalis (16: +), Parthenocissus inserta (17: I), P. tricuspidata (17: I), Pastinaca sativa (17: I), Persicaria maculosa (14: 1), Phragmites australis (17: I), Physalis alkekengi (17: I), Picris hieracioides (17: I), Plantago lanceolata (17: I), Poa compressa (17: I), Populus alba (17: I), P. tremula (17: I), Potentilla anserina (17: I), P. argentea (17: I), Prunus armeniaca (17: I), P. mahaleb (13: +), P. persica (17: I), P. spinosa (17: I), Pyrus pyraster (17: I), Rhamnus cathartica (4: 1), Rubus idaeus (17: I), Rumex conglomeratus (13: +), R. crispus (17: I), R. obtusifolius (17: I), R. thyrsiflorus (17: I), Salix caprea (17: I), S. purpurea (17: I), Salvia nemorosa (17: I), S. verticillata (17: I), Silene dioica (16: +), Sanguisorba minor (17: I), Saponaria officinalis (17: I), Scabiosa ochroleuca (17: I), Silene noctiflora (17: I), S. vulgaris (17: I), Solidago canadensis (17: I), Sonchus oleraceus (17: I), Tragopogon dubius (17: I), T. orientalis (17: I), Trifolium repens (17: I), Ulmus glabra (17: I), U. minor (17: I), Vicia cracca agg. (2: 1), Viola suavis (17: I)

Table 3: Pioneer forest communities and associations
Tabela 3: Pionirske gozdne združbe in asociacije

Other species occurring twice with abundance < 2 or X:

Adoxa moschatellina (3: x, 7: x), Alchemilla vulgaris agg. (2: x, 3: x), A. species (47: +, 48: +), Anemone nemorosa (7: x, 21: +), Briza media (15: +, 47: +), Cardamine impatiens (12: +, 26: +), Carex montana (15: 1, 26: +), C. pallescens (24: +, 46: +), C. sylvatica (15: 1, 19: 1), Cerastium holosteoides (36: +, 46: +), Chrysosplenium alternifolium (1: x, 3: x), Cirsium arvense (6: x, 7: x), Clematis alpina (43: 1, 45: +), Dicranum polysetum (32: +, 52: 1), Hippocrepis comosa (28: +, 34: +), Huperzia selago (47: +, 51: +), Jasione montana (37: +, 39: +), Leucanthemum vulgare agg. (15: +, 48: +), Eupatorium cannabinum (15: 1, 36: +), Lonicera xylosteum (7: -, 16: +), Luzula sylvatica (24: 1, 44: 1), Malus domestica (3: x, 31: x), Melica nutans (43: 1, 44: 1), Mentha longifolia (1: x, 15: 1), Myosotis arvensis (1: x, 3: x), M. sylvatica agg. (47: 1, 49: +), Peucedanum ostruthium (43: +, 48: 1), Pimpinella saxifraga agg. (17: +, 37: +), Plagiochila asplenioides (33: +, 52: +), Plantago lanceolata (3: x, 48: +), Polypodium vulgare agg. (46: +, 51: +), Potentilla aurea (43: +, 44: +), Prunella vulgaris (15: 1, 48: +), Ptilium crista-castrensis (33: +, 51: +), Pyrola minor (43: +, 44: +), Ranunculus montanus (34: +, 43: 1), R. tuberosus (47: 1, 49: +), Sedum maximum (16: +, 30: 1), Senecio hercynicus (7: x, 9: x), Silene dioica (38: +, 46: +), Thymus chamaedrys agg. (38: 1, 46: +), T. praecox agg. (34: +, 44: 1), Teucrium scorodonia (21: +, 32: 1), Thuidium tamariscinum (33: 1, 52: 1), Tilia x vulgaris (3: x, 22: x), Veronica urticifolia (20: 1, 41: +), Viola reichenbachiana (15: +, 46: 1)

Other species occurring once with abundance < 2 or X:

Aconitum variegatum (6: x), Agrostis stolonifera agg. (15: 1), Alopecurus pratensis (2: x), Antennaria dioica (34: +), Aquilegia vulgaris agg. (15: +), Artemisia vulgaris agg. (2: x), Arum maculatum (19: +), Astrantia major (15: 1), Atrichum undulatum (40: +), Campanula barbata (46: +), C. persicifolia (20: +), C. rotundifolia (37: +), Cardaminopsis arenosa (20: +), Carduus defloratus agg. (34: +), Carex acutiformis (12: +), C. davalliana (15: 1), C. hirta (25: +), C. leporina (48: +), C. paniculata (15: 1), Carum carvi (47: +), Centaurea phrygia agg. (47: +), Chelidonium majus (35: +), Cirsium vulgare (15: +), Clematis vitalba (15: +), Convallaria majalis (15: +), Crepis biennis (1: x), Cruciata glabra (25: 1), Cyclamen purpurascens (15: +), Cynosurus cristatus (15: +), Danthonia decumbens (46: +), Daphne mezereum (6: -), Dianthus carthusianorum agg. (34: +), Dicranum species (27: 1), Digitalis grandiflora (47: +), Empetrum hermaphroditum (44: 1), Epilobium ciliatum (1: x), E. collinum (34: +), Epipactis atrorubens (28: 1), Equisetum telmateia (19: r), Eurhynchium angustirete (20: 2), E. striatum (40: +), Festuca altissima (21: +), Filipendula vulgaris (15: +), Fissidens taxifolius (19: 1), Fragaria moschata (26: +), Gagea pratensis (7: x), Galanthus nivalis (7: x), Galeopsis species (25: +), Galium pusillum agg. (34: 1), G. sylvaticum (20: +), Genista pilosa (15: r), Geranium robertianum (6: x), Geum rivale (47: 1), Hedera helix (26: +), Helianthemum nummularium agg. (34: 1), Hieracium hoppeanum (46: +), H. intybaceum (43: 1), H. lachenalii (43: 1), H. sabaudum (21: +), H. sp. (24: +), Humulus lupulus (8: x), Impatiens glandulifera (3: x), Jovibarba arenaria (49: 1), Juglans regia (26: +), Juncus articulatus (15: 1), J. effusus (21: +), J. trifidus (49: +), Knautia arvensis (2: x), Lamium maculatum (6: x), L. purpureum (10: 1), Lathyrus pratensis (15: +), Leontodon autumnalis (36: +), Leucobryum glaucum (32: +), Lilium bulbiferum (35: +), Linaria vulgaris (6: -), Linum catharticum (15: +), Lupinus polyphyllus (22: x), Luzula pilosa (40: +), Lychnis flos-cuculi (14: +), Lycopus europaeus (11: +), Lysimachia nemorum (24: +), Medicago lupulina (26: 1), Milium effusum (48: +), Moehringia trinervia (38: +), Molinia arundinacea (32: 1), Persicaria lapathifolia (3: x), Phleum alpinum agg. (43: 1), Phyteuma persicifolium (46: 1), Plagiomnium species (33: +), Plagiothecium species (40: +), Poa annua (48: +), P. pratensis (18: r), Pogonatum urnigerum (20: 1), Polypodium vulgare (27: 1), Polytrichum commune (37: +), P. juniperinum (37: 1), Potentilla alba (26: +), Primula hirsuta (51: +), P. veris (15: +), P. vulgaris (26: +), Prunus spinosa (6: -), Pulmonaria stiriaca (20: 1), Pyrola species (52: +), Ranunculus lanuginosus (48: +), Rhamnus cathartica (22: -), Rhodobryum roseum (33: +), Rhododendron hirsutum (24: +), Rhytidiadelphus squarrosus (47: +), Rumex acetosella s. lat. (37: +), R. alpestris (46: +), Salix myrsinifolia (12: 1), S. sp. (23: x), Salvia verticillata (1: -), Sanicula europaea (15: +), Scirpus sylvaticus (13: 1), Senecio germanicus (14: +), Soldanella alpina (50: +), Sonchus arvensis (12: +), Sphagnum girgensohnii (51: 1), S. quinquefarium (51: 1), Stellaria media agg. (21: +), Streptopus amplexifolius (50: +), Tanacetum corymbosum agg. (15: +), Taxus baccata (15: r), Thalictrum minus agg. (14: +), Thesium alpinum (46: +), Trifolium repens (15: +), Ulmus glabra (7: x), Vaccinium uliginosum agg. (51: +), Verbascum nigrum (32. +), Veronica beccabunga (15: +), Viola canina (52: +), V. riviniana (38: +), Vitis vinifera (26: +)

Table 3: Pioneer forest communities and associations
Tabela 3: Pionirske gozdne združbe in asociacije

The three-step scale used in the relevés of Täubl (1996) was coded as follows: "-" for rare, "x" for subdominant and "X" for dominant species.

	Filipendula-Betula community															Populus-Betula community												Avenella-Betula community												Calamagrostio-Betuletum											
Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
D Association group																																																				
Betula pendula	x	x	.	x	x	X	x	x	x	.	.	2	4	4	4	2	2	.	3	4	2	.	x	+	2	.	2	.	4	2	X	3	4	5	3	2	2	4	2	2	3	3	4	4	5	3	3	3	3	3	3
D Filipendula-Betula and Populus-Betula community																																																			
Populus tremula	x	x	x	.	x	x	x	X	x	.	.	.	.	+	.	3	.	.	3	2	.	x	x	2	2	3	2	4	.	.	.	.	.	.	+	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.
Salix caprea	x	x	X	x	-	-	x	x	-	2	3	.	.	.	1	.	1	2	.	.	1	.	.	.	2	.	.	.	.	.	.	.	.	.	1	+	+	.	+	.	2	1	.	.	.	.	.	.	.	.	.
Acer pseudoplatanus	-	.	x	x	.	x	x	X	X	1	.	.	.	.	+	.	.	.	.	+	+	x	-	+	+	.	+	.	.	.	.	.	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Fraxinus excelsior	x	.	X	X	.	x	x	.	X	2	.	+	.	.	2	1	.	2	2	.	2	x	.	.	1	2	.	.	.	.	-	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Corylus avellana	-	.	.	x	x	x	x	x	.	.	.	.	.	.	.	3	.	.	.	2	.	x	.	.	.	3	1	+	2	.	.	.	+	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.
Woody plant species common in higher altitudes																																																		
Picea abies	x	-	-	x	-	-	x	x	x	.	.	.	.	.	2	2	.	2	1	2	2	x	x	2	.	.	2	1	.	.	x	+	2	1	+	1	1	1	.	2	2	2	2	2	2	2	+	2	+	2	2
Sorbus aucuparia	.	.	.	.	.	x	.	X	X	.	.	.	.	+	+	.	.	.	.	1	3	x	x	2	.	.	+	+	2	.	.	.	2	+	.	2	.	.	.	+	2	+	.	+	2	+	2	1	.	2	1	2
Salix appendiculata	-	x	.	.	x	.	.	x	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	2	+	+	2	+	2	.	.	2	.
Alnus alnobetula	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	x	x	.	.	.	.	.	.	.	-	.	.	.	4	+	2	2	2	2	3	3	2	3	2	2	.	2	1	.	1	.
Larix decidua	-	.	.	-	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	2	.	x	-	.	.	.	.	1	1	.	.	.	.	1	.	+	+	.	+	.	2	+	1	2	2	.	2	2	+	2	.	.
D Filipendula-Betula community																																																		
Alnus incana	.	.	.	.	x	.	x	.	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	2	.	.	.	.
Prunus padus	-	.	.	x	.	x	.	x	x	.	.	1	.	+	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Viburnum opulus	-	.	.	.	.	-	-	x	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Salix purpurea	x	x	.	.	.	.	.	.	.	3	.	1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Filipendula ulmaria	x	x	X	-	.	.	x	.	.	.	.	+	2	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Chaerophyllum hirsutum	x	x	x	.	.	.	x	x	.	.	.	+	.	.	2	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	1	+	+	.	3	+	.	.	.	.	.
Cirsium oleraceum	X	x	x	x	x	.	x	.	.	1	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Equisetum arvense	x	x	.	x	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lysimachia vulgaris	.	x	.	.	.	-	.	.	x	.	1	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lythrum salicaria	.	x	x	.	.	.	.	.	.	.	1	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Petasites hybridus	.	X	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phalaris arundinacea	.	.	.	.	.	.	.	.	.	.	4	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Urtica dioica	X	x	X	x	x	X	x	X	x	5	1	2	.	3	.	+	2	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Geum urbanum	x	.	.	x	.	x	x	x	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sambucus nigra	.	.	x	x	x	x	x	-	x	.	.	1	.	1	.	.	.	.	.	.	1	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anthriscus sylvestris	x	.	.	x	-	x	.	x	x	.	1	.	.	1	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dactylis glomerata agg.	.	.	x	x	x	x	x	x	x	2	.	.	.	1	1	.	.	.	.	.	+	.	.	.	2	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.
Heracleum sphondylium	x	x	.	x	x	x	x	.	x	.	.	.	.	1	.	.	.	.	.	.	.	x	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Impatiens noli-tangere	x	.	x	.	.	.	x	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Petasites albus	X	x	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
Aegopodium podagraria	x	x	.	x	x	x	.	x	.	3	.	+	.	2	.	1	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
D Calamagrostio-Betuletum																																																				
Calamagrostis villosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	2	5	3	2	3	2	3	4	2	2
Rhododendron ferrugineum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	3	1	3	2	1	2	3	.
Vaccinium vitis-idaea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	+	.	+	+	2	2	2	1	+	2	+
Betula pubescens	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	3	2	.	.	.	.
Lonicera caerulea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	1	.	2	.	.	.	.
Agrostis agrostiflora	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2	.	.	1	.	.	.
Viola biflora	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	1	+	1	.	.	.	.	.	2	.	.
Homogyne alpina	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	1	.	+	.	.	.	1	.	+
Lycopodium annotinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	1	.	.	1	.
Nardus stricta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	+	.	.	.	.	.	.	.	+	+
Acidophilous species																																																				
Hypericum maculatum agg.	x	.	x	.	x	x	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Campanula patula	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Holcus mollis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	1	1	2	1	.	.	.	.	.	.	.	.	.	.	.	.
Carex pilulifera	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	1	+	+	.	.	.	.	.	.	.	.	.	.	.
Agrostis capillaris	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	+	.	.	1	.	.	.	.	.	.	.	.	.	1	1	1	2	2	2	1	2	+	2	.	.	.	.	.	.	.	.	.
Potentilla erecta	.	.	.	.	x	x	.	x	x	.	.	.	.	.	.	.	.	.	.	.	.	x	x	+	.	.	.	.	.	.	.	.	.	1	.	.	2	+	1	+	2	+	+	+	.	.	.	.	.	+	.	+
Vaccinium myrtillus	.	.	.	.	.	x	.	x	x	.	.	.	.	.	.	.	.	.	.	+	+	x	x	3	.	.	3	.	.	.	.	2	3	.	.	1	.	1	.	3	2	1	1	2	2	2	2	1	1	2	1	2
Luzula luzuloides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.	1	.	x	x	.	1	.	1	.	1	.	.	.	2	1	.	1	+	+	.	1	1	2	1	2	2	+	2	2	1	.	.	1
Avenella flexuosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	+	1	.	.	+	2	3	.	4	.	+	.	2	2	1	1	2	2	.	.	.	2	1	1	+
Polytrichum formosum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	2	.	.	.	.	1	+	1	.	1	.	.	.	.	.	.	.	.	1	1
Calluna vulgaris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	4	.	.	.	.	2	.	3	.	1	+	+	.	.	+	1	.	.	.	+	+
Hylocomium splendens	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	+	.	.	.	.	.	+	.	1	.	.	.	.	.	1	2	3
Pleurozium schreberi	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	1	2	.	.	.	.	+	.	.	.	+	.	1	.	.	.	.	.	.	1	2
Lonicera nigra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	.
Thelypteris limbosperma	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	1	.	3
Blechnum spicant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
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Salvia glutinosa	.	.	.	x	.	x	x	.	.	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cruciata laevipes	x	.	.	x	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Crataegus monogyna	-	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Cornus sanguinea	.	.	.	-	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euonymus europaeus	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Ribes uva-crispa	.	.	.	-	.	x	x	.	.	.	.	.	.	.	.	r	.	.	.	.	.	.	-	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Stachys sylvatica	x	.	.	.	.	.	x	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Geranium phaeum	.	x	x	.	.	x	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Salix fragilis	x	x	X	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Mycelis muralis	.	.	.	x	.	.	.	x	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galeopsis speciosa	x	.	.	.	.	-	x	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pulmonaria officinalis agg.	x	.	.	x	.	.	x	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Asarum europaeum	x	.	.	x	.	.	x	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pimpinella major	.	.	.	.	.	.	x	.	.	.	.	+	.	.	1	.	r	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Vicia sepium	x	.	.	.	x	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Lysimachia nummularia	.	.	.	x	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galeopsis pubescens	.	.	x	x	x	x	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Valeriana tripteris	.	x	.	x	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Impatiens parviflora	.	.	.	.	.	.	x	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galeobdolon luteum agg.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Knautia drymeia	x	.	.	x	x	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phragmites australis	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Molinia caerulea	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Brachypodium sylvaticum	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rubus caesius	.	.	.	.	.	.	.	.	.	.	.	1	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dryopteris filix-mas	.	.	.	.	x	x	x	.	x	.	.	.	.	.	.	1	.	1	.	1	1	.	.	.	1	.	.	.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Galium aparine agg.	.	.	x	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Clinopodium vulgare	.	.	x	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Campanula trachelium	.	.	.	x	.	x	x	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Taraxacum sp.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Leontodon hispidus	.	.	.	.	.	x	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vicia cracca agg.	.	x	x	.	.	x	x	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Primula elatior	.	.	.	.	.	.	x	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scrophularia nodosa	x	.	.	.	.	x	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Alnus glutinosa	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
Symphytum officinale	.	x	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Prunus avium	.	.	.	x	.	.	.	.	-	.	.	.	.	.	+	.	.	.	.	.	2	-	.	.	1	1	.	.	.	.	x	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Frangula alnus	.	.	.	.	x	.	.	x	.	.	.	1	.	+	.	.	.	.	.	.	2	-	.	.	+	.	.	.	.	.	2	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rubus fruticosus agg.	-	.	.	x	-	x	.	x	.	.	.	.	.	.	.	.	.	.	r	.	4	-	.	.	.	2	.	.	.	.	-	.	.	.	.	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.
Rubus idaeus	x	x	x	x	x	x	-	X	x	.	.	.	.	.	.	.	2	3	.	.	2	x	x	1	.	.	.	.	.	2	.	.	.	.	1	.	1	.	.	.	.	2	+	2	.	.	.	1	+	+	.
Fragaria vesca	-	.	.	-	.	x	x	.	.	+	.	.	.	.	.	+	.	.	.	+	+	x	.	.	2	.	.	.	1	.	.	.	1	+	+	+	.	+	.	1	+	+	.	.	1	.	+	.	.	.
Athyrium filix-femina	x	.	x	x	.	x	.	x	x	.	.	.	.	+	.	.	.	2	.	+	+	x	.	2	.	.	.	.	.	.	.	.	+	.	.	+	.	1	+	+	2	1	.	.	.	.	+	1	.	.
Senecio ovatus	x	.	x	x	.	x	.	x	x	.	.	+	.	.	1	.	.	.	.	1	.	x	.	+	.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	1	+	.	1	+	+	.	+	2	+	+	.	.
Epilobium montanum	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	+	.	.	+	1	.	.	.	.	.	.	.	.	.
Solidago virgaurea	.	.	.	.	.	x	x	.	x	.	.	.	.	.	.	.	.	.	.	+	+	x	x	+	+	.	r	+	.	.	.	.	1	.	.	.	.	+	+	+	1	1	.	.	.	1	.	.	1	+	1
Oxalis acetosella	x	.	.	.	.	.	x	x	x	.	.	.	.	.	.	1	.	.	.	1	1	.	.	+	.	.	.	.	1	.	.	.	+	.	+	.	.	1	.	1	+	1	.	2	1	.	.	1	.	2	+	.
Epilobium angustifolium	.	.	X	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	+	.
Gymnocarpium dryopteris	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	+	.	1	+	+	.	.	2	+	.
Polygonatum verticillatum	.	.	.	.	.	x	.	x	x	.	.	.	.	.	.	+	.	.	.	.	.	.	x	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	.	1	.	.	.	.
Achillea millefolium agg.	x	x	x	.	x	x	x	x	.	.	.	.	.	.	+	.	+	.	.	.	.	x	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	+	.	.	.	+	+	.	.	.
Galium mollugo agg.	x	.	x	.	.	x	x	.	.	.	.	.	.	+	.	.	+	+	.	.	+	x	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	+	.	+	.	.	.	.	.	.	.	.	.	.

Lotus corniculatus agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	+	1	.	.	.	.	.
Veronica officinalis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	+	.	.	.	.	.	+	.	.	.
Angelica sylvestris	.	.	.	.	.	.	.	.	.	1	+	.	.	1	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galeopsis tetrahit agg.	x	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	+	.	.	.
Crepis paludosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Tussilago farfara	x	.	.	x	.	.	x	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.
Equisetum sylvaticum	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.
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Gnaphalium sylvaticum	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.
Aruncus dioicus	.	.	.	.	.	.	x	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sambucus racemosa	.	.	.	.	.	-	.	-	.	.	.	.	.	.	.	.	.	2	.	.	2	.	x	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Quercus petraea agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Festuca heterophylla	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Calamagrostis epigejos	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Veronica chamaedrys agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	+	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	.	1	.	.	.	.	.	.
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Trifolium pratense	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Carlina acaulis	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Festuca rubra agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.
Veratrum album	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Deschampsia cespitosa	.	.	.	.	.	.	.	.	.	.	.	.	2	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Euphrasia rostkoviana agg.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	1	.	.	.	.	.	.	.	.	.	.
Paris quadrifolia	.	.	.	.	.	.	x	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.
Caltha palustris	.	.	x	.	.	.	x	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Phleum pratense agg.	.	x	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.
Rumex acetosa	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Ranunculus acris	.	.	x	x	.	x	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Gentiana asclepiadea	.	.	.	.	X	x	x	x	x	.	.	.	.	.	.	.	.	.	.	1	.	x	.	1	.	.	.	.	.	.	.	.	.	.	.	1	1	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.
Stellaria graminea	.	x	.	.	.	x	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	1	.	.	.	.	.	.	.	.	.	.	.
Plantago major	.	.	.	x	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Valeriana officinalis agg.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Juniperus communis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	.
Calystegia sepium	.	.	.	.	.	.	.	.	.	+	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Glechoma hederacea	.	.	.	.	.	.	.	x	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sphagnum capillifolium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Column nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Festuca nigrescens	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Dactylorhiza maculata agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	+
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Fagus sylvatica	.	.	.	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	2	+	2	.	.	.	.	.	1	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Sedum album	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	r	+	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Calamagrostis varia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Calamagrostis arundinacea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Brachypodium pinnatum agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	2	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Laserpitium latifolium	x	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sorbus aria agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Anthoxanthum odoratum agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	1	.	.	+	.	+	.	.	+	.	.	.	1	.	.	+	.
Festuca ovina agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	1	.	.	.
Hieracium murorum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	.	.	.	.	+	2	1	.	.	.	.	.	+	+	.	1	.	.	.	+	.	.	1
Ranunculus repens	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.
Maianthemum bifolium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	1	.	+	.
Knautia maxima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	+	.	.	.
Prenanthes purpurea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	+	+
Campanula rotundifolia agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Hieracium pilosella	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	+
Pinus mugo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
Trifolium medium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.
Silene vulgaris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	1	.	1	+	.	1	.	+	.
Phyteuma betonicifolium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	+	+	1	.	.	.	.	+
Rhytidiadelphus triquetrus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	.	.	.	1	.	+	.	.	.	.	.	1	2
Pinus cembra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	+	.	.	2	.
Stellaria nemorum agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	1	.	.
Dryopteris carthusiana agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	+	.	.	+	2	+	1	.
Arnica montana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	+	.	.	.	.	.
Melampyrum sylvaticum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	1	+	.	.	+	+	.	.	.	.	.	+
Cirsium heterophyllum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	1	.	.	.	.	.	+	.
Chaerophyllum villarsii	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	1	.	.	.
Cirsium palustre	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	+	.	1	.	.	.	.	.	.	.	.
Phegopteris connectilis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	+	.	+	+	.	.	.	.	.	.
Plagiomnium affine	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.
Geranium sylvaticum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	+	.	.	.	.	.
Pteridium aquilinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.
Dicranum scoparium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	1	1	.
Athyrium distentifolium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	+	.	.	.	1	+	.

Table 4: Site data, stand parameters and bibliographical information of Table 1
Tabela 4: Podatki o rastišču, sestoju in bibliografski vir za Tabelo 1

	Source	Orig. table nr.	Orig. relevé nr.	Relevé area (m²)	Altitude (m)	Slope (°)	Cover shrub layer (%)	Aspect	Locality
1	Rouschal 1989		1	80	1200	45		S	Lungau - Muhr
2	Rouschal 1989		23	90	1300	60		S	Lungau - Muhr
3	Rouschal 1989		2	100	1300	55		S	Lungau - W of Jedl
4	Rouschal 1989		3	90	1250	60		S	Lungau - W of Jedl
5	Rouschal 1989		22	70	1000	75		SSE	Lungau - E of Muhr
6	Rouschal 1989		4	90	1250	30		S	Lungau - Muhr/Jedl
7	Rouschal 1989		6	100	1100	40		S	Lungau - E of Hemerach
8	Rouschal 1989		9	50	1100	60		S	Lungau - Mayerhof
9	Rouschal 1989		21	70		12		S	Lungau - E of Muhr
10	Wagner 1979	1	16		1560	50	70	W	Virgental - Hinterbichl
11	Wagner 1979	1	17		1480	40	70	S	Virgental - near Bichl W of Prägraten
12	Wagner 1979	1	18		1300	45	20	S	Virgental - road Obermauer-Bojobach
13	Wagner 1985	1	2		1380	35		S	Virgental - Obermauern
14	Wagner 1985	1	3		1500	40		SSE	Virgental - Budam
15	Wagner 1985	1	4		1410	40		S	Virgental - Obermauern-Bojobach
16	Wagner 1985	1	6		1400	30		S	Virgental - Obermauern
17	Wagner 1985	1	9		1380	45		S	Virgental - Obermauern
18	Wagner 1985	1	13		1360	40		S	Virgental - Wallhorn
19	Wagner 1985	1	15		1490	40		S	Virgental - Hinterbichl
20	Wagner 1985	1	17		1410	30		S	Virgental - Wallhorn
21	Béguin & Theurillat 1984	4	*						Valais
22	Coldea 1991	31	*						Rumanian Carpathians
23	Braun-Blanquet 1961	28	*						Aosta
24	Rivas-Martínez & Géhu 1978	43		30		15		S	Valais
25	Brandner 1987	3	7	10	1100				Matrei

*: Column contains more than 1 relevé

Table 5: Site data, stand parameters and bibliographical information of Table 2
Tabela 5: Podatki o rastišču, sestoju in bibliografski vir za Tabelo 2

	Source	Orig. table nr.	Orig. relevé nr.	Relevé area (m²)	Altitude (m)	Slope (°)	Cover tree layer (%)	Cover shrub layer (%)	Cover herb layer (%)	Height trees (m)	Height shrubs (m)	Aspect	Locality
Balloto-Prunetum domesticae													
1	Wirth 1991	7	144		255	5	0	95	60	0	3	NE	NE Austria (Weinviertel)
2	Wirth 1991	7	122		375	5	0	80	90	0	3	ENE	NE Austria (Weinviertel)
3	Wirth 1991	7	35		260	25	0	95	30	0	6	SE	NE Austria (Weinviertel)
4	Wirth 1991	7	94		210	15	0	95	20	0	4	SSW	NE Austria (Weinviertel)
5	Wirth 1991	7	121		190	5	0	95	70	0	5	ESE	NE Austria (Weinviertel)
6	Wirth 1991	7	154		230	15	0	95	60	0	4	SE	NE Austria (Weinviertel)
7	Wirth 1991	7	119		205	40	5	95	20	4		WNW	NE Austria (Weinviertel)
8	Wirth 1991	7	71		190	20	0	80	40	0	6	NNE	NE Austria (Weinviertel)
9	Wirth 1991	7	249		200	25	50	80	3	4		NW	NE Austria (Weinviertel)
10	unpubl. (ALR)					30-44						NE	Gobelsburg-Hadersdorf
11	unpubl. (ALR)					30-44						N	Retz
12	Ecker 1998	VIII.6	32708000										Theyern, Traisental
Sambuco nigrae-Aceretum negundi													
13	unpubl. (ALR)					0-5						–	Karlhof
14	unpubl. (ALR)					0-5						–	Pamhagen
15	unpubl. (ALR)					0-5						–	Teichhof
16	unpubl. (MaB)			625	150	<5	70	15	15	22		–	District Neusiedl am See
17	Forstner 1984	178	*										E Austria
Balloto-Syringetum vulgaris													
18	Wirth 1991	9	153		240	5	0	100	3	0	3	SSE	NE Austria (Weinviertel)
19	Wirth 1991	9	11		240	10	0	100	3	0	2	SW	NE Austria (Weinviertel)

Table 6: Site data, stand parameters and bibliographical information of Table 3 (see page 47)
Tabela 6: Podatki o rastišču, sestoju in bibliografski vir za Tabelo 3 (glej stran 47)

	Source	Orig. table nr.	Orig. relevé nr.	Relevé area (m²)	Altitude (m)	Slope (°)	Cover tree layer (%)	Cover shrub layer (%)	Cover herb layer (%)	Cover moss layer (%)	Height trees (m)	Height shrubs (m)	Aspect	Locality
Filipendula ulmaria-Betula pendula community														
1	Täubl 1996	8	101		660	10							S	Mürztal
2	Täubl 1996	8	102		615	5							SE	Mürztal
3	Täubl 1996	8	99		720	5							W	Mürztal
4	Täubl 1996	4	37		690	10							NE	Mürztal
5	Täubl 1996	7	90		730	5							N	Mürztal
6	Täubl 1996	6	74		860	20							SE	Mürztal
7	Täubl 1996	6	76		675	15							NE	Mürztal
8	Täubl 1996	6	79		895	10							N	Mürztal
9	Täubl 1996	6	78		865	35							N	Mürztal
10	unpubl. (ALR)					0-5							NW	Post
11	unpubl. (ALR)					6–14							SW	Edlitz a. d. Thaya
12	unpubl. (ALR)					6–14							SE	Irdning
13	unpubl. (ALR)					0–5							–	Lauteracher Ried
14	unpubl. (ALR)					6–14							NW	Irdning
15	unpubl. (MaB)			625	640	5	60	35	90	30	17	0	N	District Wiener Neustadt
Populus tremula-Betula pendula community														
16	Schneidergruber 1997	v2	183											Mölltal
17	Schneidergruber 1997	v5	122											Mölltal
18	Schneidergruber 1997	v2	109											Mölltal
19	unpubl. (MaB)			625	460	15	85	5	5	5	24	5	W	District Salzburg/Umgebung
20	unpubl. (MaB)			625	775	45	70	30	50	10	25	6	NW	District Bruck a. d. Mur
21	unpubl. (MaB)			570	560	5	65	35	90	30	7	4	N	District Braunau am Inn
22	Täubl 1996	5	66		890	15							SE	Mürztal
23	Täubl 1996	6	81		960	5							NW	Mürztal
24	unpubl. (ALR)					15–29							E	Brennkopf
25	unpubl. (ALR)					15–29							NW	Otternitz
26	Klampfl 1989	2	8											SE of Pischelsdorf
27	unpubl. (Beiser)			100	790	div.	30	10	50	80	5		S	Montafon
28	Kielhauser 1954	2	3		1500	30						4	SW	Kaunerberg-Falpaus
Avenella flexuosa-Betula pendula community														
29	Schneidergruber 1997	v2	152											Mölltal
30	Schneidergruber 1997	v5	155											Mölltal
31	Täubl 1996	5	62		805	20							S	Mürztal
32	Starzengruber 1979	II	1	500	520	5	30	20	50	0			SW	Sauwald
33	unpubl. (Beiser)			150	1080	7	7	70	20	80	7		NNW	Montafon
34	unpubl. (ALR)					15–29							SW	Hinterschriefling
35	Moser 1998	p.7	2nd rel.											Rechberg
36	Jelem & Kilian 1975	2	118		900	15							NW	Gasen
37	Jelem & Kilian 1975	2	119		850	20							S	Naintsch
38	Jelem & Kilian 1975	2	120		1050	30							NE	Heilbrunn
39	Jelem & Kilian 1975	2	121		800	20							S	Naintsch
40	Jelem & Kilian 1975	2	117		1100	30							NE	Heilbrunn
Calamagrostio villosae-Betuletum pendulae														
41	unpubl. (MaB)			625	1540	25	0	70	90	10	0	9	E	District Spittal a. d. Drau
42	unpubl. (MaB)			150	1390	35	15	80	50	15	16	4	NE	District Spittal a. d. Drau
43	unpubl. (MaB)			625	1500	20	0	75	65	3	0	2	NW	District Landeck
44	Klosterhuber 1994	1	49		1530	45	40	45	99	30			NW	St. Anton am Arlberg
45	Klosterhuber 1994	1	50		1580	30	50	75	95	15			W	St. Anton am Arlberg
46	Klosterhuber 1994	1	115		1750	0	35	50	80	20			–	Ventertaler Ache
47	Klosterhuber 1994	1	116		1830	35	50	30	80	35			SE	Ventertal
48	Klosterhuber 1994	1	117		1740	0	55	5	75	30			–	Ventertaler Ache
49	unpubl. (MaB)			625	1700	35	45	20	80	15	12	8	SW	District Lienz
50	unpubl. (MaB)			625	1600	35	50	25	80	25	8	4	N	District Landeck
51	unpubl. (MaB)			625	1800	6	0	70	80	35	0	8	W	District Innsbruck
52	unpubl. (Beiser)			175	1080	7	7	70	5	70	6		NW	Montafon