

Phytosociological analysis of alpine swards and heathlands (pioneer patches) on ridges and peaks in the Julian Alps (NW Slovenia)

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Dedicated to the late Professor Tone Wraber (1938–2010), with respect and gratitude for his pioneer work in the research of subalpine-alpine vegetation in Slovenia

Key words: phytosociology, synsystematics, *Caricion firmae*, *Oxytropido-Elyinion*, *Loiseleurio-Vaccinion*, Julian Alps, Triglav National Park, Slovenia.

Ključne besede: fitocenologija, sinsistematika, *Caricion firmae*, *Oxytropido-Elyinion*, *Loiseleurio-Vaccinion*, Julijske Alpe, Triglavski narodni park, Slovenija.

Abstract

We conducted a phytosociological analysis of more than 250 relevés in the Julian Alps and compared them with similar communities elsewhere in the Alps and in the Dinaric Alps to describe the following new syntaxa of alpine swards and heathlands from the alliance *Caricion firmae* (class *Elyno-Seslerietea*): *Saxifrago squarrosae-Caricetum mucronatae*, *Saussureo pygmaeae-Caricetum rupestris*, *Seslerio sphaerocephalae-Dryadetum octopetalae*, *Homogyno discoloris-Vaccinietum gaultherioidis*, *Saxifrago paniculatae-Caricetum fuliginosae* and *Homogyno discoloris-Loiseleurietum caricetosum firmae*, the new association *Achilleo clavennae-Elynetum myosuroidis* from the alliance *Oxytropido-Elyinion* and two new syntaxa from the alliance *Loiseleurio-Vaccinion* (class *Loiseleurio-Vaccinietea*): *Homogyno alpinae-Vaccinietum gaultherioidis* and *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*. Many species that are rare, of conservation concern or protected in Slovenia occur in the newly described communities.

Izvleček

S fitocenološko analizo več kot 250 popisov in primerjavo s podobnimi združbami drugod v Alpah in Dinarskem gorstvu smo v Julijskih Alpah opisali naslednje nove sintaksone alpskih trat in resav iz zveze *Caricion firmae* (razred *Elyno-Seslerietea*): *Saxifrago squarrosae-Caricetum mucronatae*, *Saussureo pygmaeae-Caricetum rupestris*, *Seslerio sphaerocephalae-Dryadetum octopetalae*, *Homogyno discoloris-Vaccinietum gaultherioidis*, *Saxifrago paniculatae-Caricetum fuliginosae* in *Homogyno discoloris-Loiseleurietum caricetosum firmae*, novo asociacijo *Achilleo clavennae-Elynetum myosuroidis* iz zveze *Oxytropido-Elyinion* in dva nova sintaksona iz zveze *Loiseleurio-Vaccinion* (razred *Loiseleurio-Vaccinietea*): *Homogyno alpinae-Vaccinietum gaultherioidis* in *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*. V novo opisanih združbah uspevajo številne v Sloveniji redke, varstveno pomembne ali zavarovane rastlinske vrste.

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Introduction

Contiguous subalpine-alpine grasslands in the Julian Alps are usually situated on sunny aspects on slopes under ridges. They are dominated by *Sesleria caerulea* and *Carex sempervirens* whose stands are classified into the association *Ranunculo hybridi-Caricetum sempervirentis*, while the grasslands with dominating *Festuca calva* are classified into the association *Avenastro parlatorei-Festucetum calvae* (Surina 2005a). Swards and heaths on ridges and peaks at the altitude of about (1500) 1900 m – 2300 (2500) m are more fragmented, limited to small areas in the mosaic of scree and chasmophytic communities and snow bed communities. Site conditions here are very different from those on slopes (higher altitude and rockiness, initial soil, stronger wind action, differently distributed snow cover). If the surface allows, cushion-forming plants will establish themselves on such sites, usually dominated by *Carex firma* and *Dryas octopetala*. The stands dominated by the first are classified into the association *Gentiano terglouensis-Caricetum firmae* (T. Wraber 1970, 1978, Surina 2005a). The stands dominated by the latter, especially on fine talus, partly belong to the association *Dryadetum octopetalae* (Surina 2005a). On inconspicuous protrusions or small ledges on edges of rock faces with humus-rich rendzina occur stands featuring other species that dominate alongside the ones listed above, mainly those from the genus *Vaccinium* and the species *Arctostaphylos alpina*. *Elyna myosuroides* can establish itself on small areas (of a few square metres) on windy ridges where limestone is sporadically interlayered with marlstone or chert. Swards with dominating *Carex rupestris* occur on even smaller surfaces (sometimes on no more than a square metre) on windy rocky ridges or ledges on edges of northern rock faces with initial soils (lithosols). On the sunny side of the ridges, on steep, stony slopes, *Carex mucronata* sometimes occurs as the dominating species alongside *Sesleria caerulea* and *Carex firma*. While the stands of the associations *Gentiano terglouensis-Caricetum firmae*, *Dryadetum octopetalae* and *Potentilletum nitidae* are widespread and distinctive in this altitudinal belt in the Julian Alps, other forms of alpine swards and heathlands are less conspicuous and are more or less associated with rather specific sites and small surface areas. We studied the phytosociology of these fringe (minority) plant communities, which have already been discussed to some extent in several articles (Dakskobler 2003, Surina 2005a), and mutually compared them in order to contribute to the knowledge on subalpine-alpine vegetation in both the Julian Alps and Slovenian Alps in general. Research into these commu-

nities was launched by late Tone Wraber, our teacher in the study of subalpine-alpine vegetation. We came across some of his relevés in his notes that are kept in Wraber's library in the Ljubljana Botanical Garden and analysed them together with the other relevés.

Methods

Alpine grasslands in the Julian Alps (with consideration of some of our relevés from the Karavanke Mts. and the Kamnik-Savinja Alps) were studied applying the Braun-Blanquet method (Braun-Blanquet 1964). The relevés of sedge swards, pioneer patches and heathlands on ridges were entered into the FloVegSi database (Fauna, Flora, Vegetation and Paleovegetation of Slovenia) of the Jovan Hadži Institute of Biology at ZRC SAZU (T. Seliškar et al. 2003). The phytosociological relevés were arranged into tables based on hierarchical classification. We transformed the combined cover-abundance values with numerical values (1–9) according to van der Maarel (1979). Numerical comparisons were performed with the SYN-TAX 2000 program package (Podani 2001). The relevés were compared by means of “(unweighted) average linkage method” – UPGMA, using Wishart's similarity ratio. The determined communities were compared with similar, already described communities in the Alps and partly also in the Dinaric Alps. We constructed four synthetic tables. Three of them (Appendix 1, 2 and 3) are added on the end of this article. Hierarchical classification was employed in these comparisons as well, and the same method was used as in our comparison of individual relevés.

The nomenclature source for the names of vascular plants are the Mala flora Slovenia (MFS – Martinčič et al. 2007), Flora alpina (Aeschmann et al. 2004a, b, c), Poldini et al. (2001) and Foelsche (2014). The nomenclature of Flora alpina – *Sesleria caerulea* was used for the taxon *Sesleria caerulea* subsp. *calcaria* (MFS) and the nomenclature of Vascular flora of Friuli Venezia Giulia for the taxon *Achillea clavennae*. Martinčič (2003) is the nomenclature source for the names of mosses and Suppan et al. (2000) for the names of lichens. Only the most frequent taxa were determined for the mosses and lichens, some only to the rank of genus. For the names of syntaxa we follow Grabherr (1993), Grabherr et al. (1993), Theurillat (2004), Surina & Dakskobler (2005) and Šilc & Čarni (2012). In the classification of species into phytosociological groups (groups of diagnostic species) we mainly refer to the Flora alpina (Aeschmann et al. 2004a, b). The geographic coordinates of relevés are determined according to the Slovenian geographic

coordinate system D 48 (5th zone) on the Bessel ellipsoid and with Gauss-Krüger projection.

Most of the relevés discussed in this article were made in the Julian Alps, some also in the Karavanke Mts. (Kepa, the chain of Mt. Peca) and in the Kamnik-Savinja Alps (Komen in the Smrekovec Mountains, where magmatic rocks prevail, Veliki Vrh above the Makekova Kočna Valley near Zgornje Jezersko). The geological bedrock in the study area is mainly calcareous, limestone, dolomite limestone, only sporadically (the most distinctively in the vicinity of Mangart and on the ridge of the rock face Loška Stena) interlayered with more silicate rocks, marlstone, claystone and chert (Buser 2009). The studied communities occur on initial soils (lithosols) and different forms of rendzina, on small areas also on deeper, brown soil (Lovrenčak 1998, Vidic et al. 2015). The climate is montane, with mean annual precipitation of 2000 mm to 3000 mm (Zupančič 1998) and mean annual air temperature of +2 °C to -2 °C (Cegnar 1998). The amount of snowfall and snow cover duration have varied considerably in recent years, with generally milder winters, warmer summers and shorter average periods of snow cover than in the past, as can be observed from long-term annual averages. The growing season usually lasts from (May) June to September (October). The studied communities are often associated with specific sites, both in terms of terrain, soil conditions and the local climate.

Results and discussion

Review of the studied syntaxa, with types of newly described communities

Elyno-Seslerietea Br.-Bl. 1948

Seslerietalia tenuifoliae Horvat 1930

Seslerion tenuifoliae Horvat 1930

Scabiosa silenifoliae-Caricetum mucronatae Surina et T. Wraber 2005; *lectotypus* is relevé 16 in Table 1 (Surina & Wraber 2005: 102–103), while relevé 15 in the same table, which was primarily chosen as the nomenclature type – *holotypus* (Surina & Wraber 2005: 108) despite the absence of *Scabiosa silenifolia*, is not in accordance with the existing Code (Weber et al. 2000: 750, Art. 16). The same relevé was selected as *lectotypus* also for the subassociation *-edraianthetosum graminifolii*.

Seslerietalia coeruleae Br.-Bl. in Br.-Bl. et Jenny 1926

Caricion firmae Gams 1936

Gentiano terglouensis-Caricetum firmae T. Wraber 1970

Saxifrago squarrosae-Caricetum mucronatae ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 13 in Table 1.

Saussureo pygmaeae-Caricetum rupestris ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 25 in Table 2.

Seslerio sphaerocephalae-Dryadetum octopetalae ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 15 in Table 4.

Dryadetum octopetalae Rübél 1911

Pulsatillo vernalis-Dryadetum octopetalae Dakskobler, Sinjur, Veber et Zupan 2008

Homogyno discoloris-Loiseleurietum Aichinger 1933 caricetosum firmae subass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 5 in Table 5.

Homogyno discoloris-Vaccinietum gaultherioidis ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 27 in Table 5.

Empetro-Arctostaphyletum alpinae nom. prov.

Saxifrago paniculatae-Caricetum fuliginosae ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 5 in Table 6.

Oxytropido-Elyinion myosuroidis Br.-Bl. 1950

Caricetum rupestris E. et S. Pignatti 1985

Achilleo clavennae-Elynetum myosuroidis ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 35 in Table 3.

Carici curvulae-Elynetum myosuroidis (Heiselmayer 2004) Dakskobler et Surina ass. nov. hoc loco; the nomenclature type, *lectotypus*, is relevé 21 in Table 2 (Heiselmayer, 2004).

Loiseleurio-Vaccinietea Eggler ex Schubert 1960

Rhododendro-Vaccinietalia Br.-Bl. in Br.-Bl. et Jenny 1926

Loseleurio-Vaccinion Br.-Bl. in Br.-Bl. et Jenny 1926

Empetro-Vaccinietum gaultherioidis Br.-Bl. in Br.-Bl. et Jenny 1926 corr. Grabherr 1993 *rhododendretosum hirsuti* subass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 5 in Table 5.

Homogyno alpinae-Vaccinietum gaultherioidis ass. nov. hoc loco; the nomenclature type, *holotypus*, is relevé 74 in Table 5.

Homogyno alpinae-Empetretum hermaphroditae nom. prov.

Subalpine-alpine swards with dominant *Carex firma*, *C. mucronata*, *C. rupestris*

Subalpine-alpine stands with dominating sedges *Carex firma*, *C. rupestris* and (or) *C. mucronata* from the Julian Alps, partly also from the Karavanke and Kamnik-

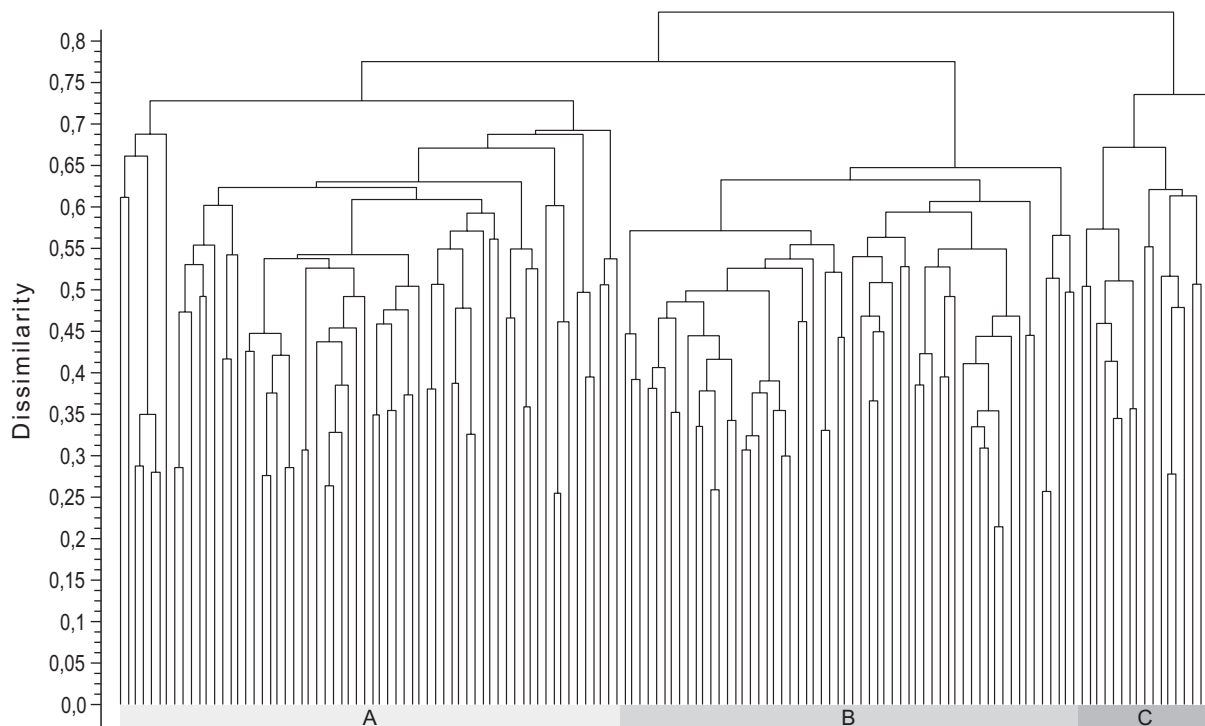


Figure 1: Dendrogram of relevés of subalpine-alpine swards with dominant sedges *Carex firma*, *C. rupestris*, *C. mucronata* in the Slovenian Alps (A – *Gentiano-Caricetum firmae*, B – *Caricetum rupestris* s. lat., C – *Caricetum mucronatae* s. lat.).

Slika 1: Dendrogram popisov subalpinsko-alpinskih trat z dominantnimi šaši *Carex firma*, *C. rupestris*, *C. mucronata* v slovenskih Alpah (A – *Gentiano-Caricetum firmae*, B – *Caricetum rupestris* s. lat., C – *Caricetum mucronatae* s. lat.).

Savinja Alps, were compared by means of hierarchical classification. For the association *Gentiano-Caricetum firmae* we used some of the already published relevés (Surina 2005a) and some that have not yet been published (Dakskobler, msr.). Despite their floristic similarity and the fact that the dominant cushion-forming species of the alpine belt in the Julian Alps, *Carex firma*, is frequent also in the stands where other sedges tend to establish themselves, the stands with the dominating *Carex firma* grouped separately from the stands with dominating *C. rupestris* and from the stands with the dominating *C. mucronata* (Figure 1). Even though such stands can be treated also at the rank of subassociation (*Caricetum firmae caricetosum mucronatae*) – compare Braun-Blanquet & Jenny (1926), Eggenberger (1994), Pignatti E. & S. (2014) and *Caricetum firmae caricetosum rupestris* (Dakskobler 2003), the results of our comparison indicate that despite their considerable floristic similarity in the Julian Alps it would nevertheless make sense to distinguish between three forms of alpine swards with dominating sedges: *Caricetum firmae* s. lat., *Caricetum rupestris* s. lat. and *Caricetum mucronatae* s. lat. This served as the basis on which we processed and analysed the relevés of the studied grasslands.

Communities with dominating *Carex mucronata* in the Julian Alps

In Table 1 we arranged 27 relevés of grasslands with dominating *Carex mucronata*. The relevés were made at the altitudes of 1430 m to 2290 m, on steep to precipitous sunny slopes where the herb layer covers between 30 and 90%. Three subunits are distinguished: var. *Carlina acaulis* (relevés 1–3 in Table 1), var. *Dianthus sylvestris* (relevés 4–10 in Table 1), of which two relevés from the Krn Mountains have already been published, Surina 2005a: 77–79, one relevé is from the eastern Karavanke Mts. and one from the Kamnik Alps) and var. *Carex firma* (relevés 11–27 in Table 1). Relevés of variants *Carex firma* and *Dianthus sylvestris* were compared with similar syntaxa with dominant *Carex mucronata* in the Alps and in the Dinaric Alps. For this comparison we made a synthetic table with the following syntaxa (Appendix 1):

- 1 CmA *Caricetum mucronatae*, Austria, Northeastern Calcareous Alps (Dirnböck et al. 2001, Table 2, column 17)
- 2 PcCm *Caricetum mucronatae* var. geogr. *Primula carniolica* = *Saxifraga squarrosae-Caricetum mucronatae* var. *Primula carniolica*, NW Dinaric Alps, Trnovski Gozd Plateau (Dakskobler 2006, Table 4, relevés 1–10)

- 3 SasCmnds *Saxifraga squarrosae-Caricetum mucronatae* var. *Dianthus sylvestris*, Julian Alps, Karavanke, Kamnik Alps, this article, Table 1, relevés 4–10
- 4 SasCmty *Saxifraga squarrosae-Caricetum mucronatae* var. *Carex firma*, Julian Alps, this article, Table 1, relevés 11–27
- 5 CfcM-Pig. *Caricetum firmae caricetosum mucronatae*, Dolomites (Pignatti E. & S. 2014, Synoptic Association Table 11, column 5)
- 6 GtCfcM *Caricetum firmae caricetosum mucronatae* = *Gentiano terglouensis-Caricetum firmae caricetosum mucronatae*, Karavanke (Aichinger 1933, Table 26, columns 5–12)
- 7 CfcM-BB *Caricetum firmae caricetosum mucronatae*, Central Alps (Braun-Blanquet & Jenny 1926, Table 7, columns 1–3)
- 8 CfcM-BB-Ra *Caricetum firmae caricetosum mucronatae*, Raethian Alps (Braun-Blanquet 1969, Table *Caricetum firmae*, columns 20–22)
- 9 CfcM *Caricetum firmae caricetosum mucronatae*, Ammergauer Alps (Eggensberger 1994, Table 19, columns 113–127)
- 10 CfcM-Dach *Caricetum firmae caricetosum mucronatae*, Dachstein Alps (Pignatti-Wikus 1959: 100–101, Table *Firnetum*, column 2)
- 11 ScsCm *Scabioso silenifoliae-Caricetum mucronatae*, NW Dinaric Alps, Mt. Snežnik (Surina & T. Wraber 2005, Table 1)
- 12 CmI *Caricetum mucronatae* s. lat., Lombard Pre-Alps, N-Italy (Ravazzi 1992, Table 1, *Cariceti xerophili*)
- 13 GhCm *Genisto-Caricetum mucronatae*, Slovenia, NW Dinaric Alps, Trnovski Gozd Plateau (Poldini 1978, Table 3)

These thirteen syntaxa were compared by means of hierarchical classification, which gave the following result (Figure 2).

This comparison demonstrates a significantly different floristic composition of the stands of associations *Genisto holopetalae-Caricetum mucronatae* (Mt. Čaven on the Trnovski Gozd Plateau, the Dinaric Alps) and *Caricetum mucronatae* s. lat. (“*Cariceti xerophili*”) from the foothills of the Southern Alps in Lombardy (northern Italy). Floristically different are also the stands of the association *Scabioso silenifoliae-Caricetum mucronatae* on Mt. Snežnik (the Dinaric Alps). Relevés of the syntaxa on rockier sites that indicate a transition to a chasmophytic community group separately: *Caricetum mucronatae* var. *Primula carniolica* (Hudournik and Govci, the northern edge of the Trnovski Gozd Plateau) and *Caricetum mucronatae* var. *Dianthus sylvestris*. In terms of floristic similarity they are accompanied by relevés from the association *Caricetum*

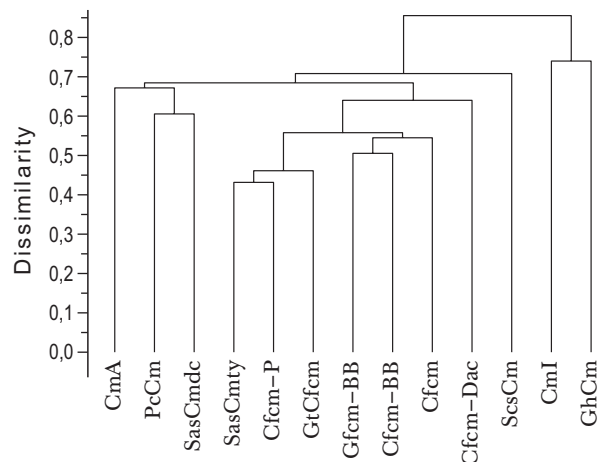


Figure 2: Dendrogram of syntaxa with dominant *Carex mucronata* in the Alps and Dinaric Alps (UPGMA, 1– similarity ratio).

Slika 2: Dendrogram sintaksonov s prevladujočo vrsto *Carex mucronata* v Alpah in Dinarskem gorstvu (UPGMA, 1– similarity ratio).

mucronata from the northeastern Alps. The relevés from other regions in the Alps form a single cluster, with relevés from the Central and Northeastern Alps separated from the relevés from the Dolomites and the Southeastern Alps. The association *Caricetum mucronatae* (Br.-Bl. et Jenny 1926) Thomaser 1977 was typified by Grabherr et al. (1993: 410–411). They selected the lectotype from the table published by Braun-Blanquet et Jenny (1926). The differential species of the association are *Campanula cochleariifolia*, *Carex humilis*, *Kerneria saxatilis*, *Leontodon incanus* and *Valeriana saxatilis*, and the dominant and constant companions include *Carex mucronata*, *Anthyllis vulneraria* subsp. *alpestris*, *Crepis jacquinii*, *C. kernerii*, *Helianthemum alpestris*, *Sesleria caerulea*.

Species, such as *Carex humilis*, *Leontodon incanus* and *Crepis kernerii* rarely occur in our relevés and *Crepis jacquinii* is absent from them altogether. Compared to the relevés from the Central Alps and the Dachstein Mountains our relevés frequently comprise *Ranunculus hybridus*, *Saxifraga squarrosa*, *S. crustata*, *Sesleria sphaerocephala*, *Koeleria eriostachya* and *Rhodothamnus chamaecistus*. Only *Ranunculus hybridus* and *Rhodothamnus chamaecistus* occur in some of the relevés of the syntaxa *Caricetum mucronatae* or *Caricetum firmae caricetosum mucronatae* from the Northeastern Alps (Eggensberger 1994, Dirnböck et al. 2001). The contact stands of these stony swards in the Julian Alps are classified into the associations *Gentiano terglouensis-Caricetum firmae* and *Ranunculo hybridi-Caricetum sempervirentis*, associations that are different from those known in the compared Alpine regions (including the Northeastern Alps) where the stands of the association *Caricetum mucronatae* s. lat. have also been reported. The studied stands from

the Julian Alps could be treated as a special geographical variant or a territorial form (Gebietsausbildung) of the association *Caricetum mucronatae*. The applicable Code of Phytosociological Nomenclature (Weber et al. 2000) does not know this syntaxonomic category so it is appropriate to classify it into a new association, *Saxifrago squarrosae-Caricetum mucronatae* ass. nov. In addition to the dominant *Carex mucronata* its differential species include the above-mentioned taxa, to a lesser extent also individual specimens of other species from the Southeastern-Alpine alliances *Caricion austroalpinae* and *Phyteumato-Saxifragion petraeae*. The listed species characterise these stands both ecologically (stony sites, the transition of grasslands into chasmophytic communities) and phytogeographically (distribution in the Eastern and Southeastern Alps).

If we compare relevé 13 (*holotypus*) with the relevé that is the nomenclature type of the association *Caricetum mucronatae* (Braun-Blanquet & Jenny 1926, Table 7, column 2, see also Grabherr et al. 1993: 410), their floristic similarity according to Sørensen (1948) is only 35%. Both relevés comprise *Carex mucronata*, *Carex firma*, *Anthyllis vulneraria* subsp. *alpestris*, *Campanula cochleariifolia*, *Gentiana clusii*, *Sesleria caerulea* and *Globularia cordifolia*. Such type dissimilarity also allows for a description of a new association. It is classified into the alliance *Caricion firmae*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*. Based on the comparison in the synthetic table (Figure 2) the stands of the syntaxon *Caricetum mucronatae* var. geogr. *Primula carniolica* (Dakskobler 2006) from the northern edge of the Trnovski Gozd Plateau (the Dinaric Alps) are also classified into the new association as a special variant *Saxifrago squarrosae-Caricetum mucronatae* var. *Primula carniolica*. The stands of the new association *Saxifrago squarrosae-Caricetum mucronatae* differ from the other subalpine-alpine grasslands discussed in this article not only with their sites (very steep, sunny aspect, rockiness or stoniness) but also with a higher proportion of species from alliances *Caricion austroalpinae*, *Phyteumato-Saxifragion petraeae* and order *Potentilletalia caulescentis* (Table 8, columns 7 and 29). The stands of the syntaxon *Saxifrago squarrosae-Caricetum mucronatae* var. *Dianthus sylvestris* indicate a transitional form of a stony subalpine-alpine grassland toward chasmophytic communities and are floristically slightly different from the stands of the variant with *Carex firma*. Figure 3 shows the distribution of the association *Saxifrago squarrosae-Caricetum mucronatae* in Slovenia based on our relevés. Some of the stands of this association may be pioneer stands that occurred as a result of the forest fire in the dwarf pine community (such as that on the hill Jehlc south of Rodica on the Tolmin-Bohinj ridge in the Julian Alps).

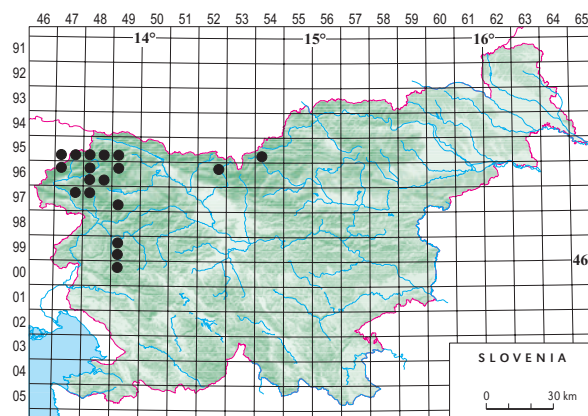


Figure 3: Localities of the stands of the association *Saxifrago squarrosae-Caricetum mucronatae* on the map of Slovenia.

Slika 3: Nahajališča sestojev asociacije *Saxifrago squarrosae-Caricetum mucronatae* na zemljevidu Slovenije.

Communities with dominating *Carex rupestris* in the Julian Alps and the Karavanke

Phytosociological fidelity of *Carex rupestris* in the Julian Alps was first described by T. Wraber (1985: 56). He observed it in the stands of associations *Gentiano terglouensis-Caricetum firmae* and *Potentilletum nitidae*. According to his findings at the time the stands dominated by this sedge are similar to the stands of the association *Elynetum*. Our first comparison of the stands with dominant *Carex rupestris* from the Julian Alps and the Karavanke (several relevés from Mt. Kepa and Mt. Peca) by means of hierarchical classification comprised also 29 relevés from the original description of the association *Caricetum rupestris* in South-Tyrolean Dolomites (Pignatti E. & S. 1985). The results demonstrated that only three of our relevés (relevés 1–3 in Table 2) grouped with the relevés from South Tyrol; all other relevés grouped separately. This provided the basis for the analytic table (Table 2), for which we selected a total of 85 relevés. These were made at the altitude between 1510 m and 2390 m, on all aspects, but predominantly on rocky ridges and shady ledges over northern rock faces. This table also served as the basis for the synthetic table (Appendix 2) in which we included the following syntaxa:

- 1 Cr-Do *Caricetum rupestris* var. *Androsace hausmannii*, South Tyrol Dolomites (Pignatti E. & S. 1985, Table 1, relevés 1–5)
- 2 Cr-DoJA Do *Caricetum rupestris* var. *typica*, South Tyrol Dolomites (Pignatti E. & S. 1985, Table 1, relevés 6–29) and relevés 1–3 in Table 2, this article, from the Julian Alps
- 3 Cr-JT *Caricetum rupestris*, South Tyrol Dolomites, Eggentaler Alm (Vorhauser & Erschbamer 2000, Table 1, column 1)

- 4 SpCrdo *Saussureo pygmaeae-Caricetum rupestris* var. *Dryas octopetala*, Julian Alps, Karavanke, this article, Table 2, relevés 4–35
- 5 SpCron *Saussureo pygmaeae-Caricetum rupestris* var. *Oxytropis neglecta*, Julian Alps, Karavanke, this article, Table 2, relevés 36–64
- 6 SpCrpc *Saussureo pygmaeae-Caricetum rupestris* var. *Potentilla clusiana*, Julian Alps, Karavanke, this article, Table 2, relevés 65–71
- 7 SpCrhd *Saussureo pygmaeae-Caricetum rupestris* var. *Homogyne discolor*, Julian Alps, this article, Table 2, relevés 79–85
- 8 SpCrsr *Saussureo pygmaeae-Caricetum rupestris* var. *Salix retusa*, Julian Alps, Karavanke, this article, Table 2, relevés 72–78
- 9 AsCr *Arabido scopolianae-Caricetum rupestris* nom. prov., Dinaric Alps, Mt. Snežnik (T. Wraber, in litt.)
- 10 *Caricetum rupestris*, Hochschwab (Dirnböck et al. 1999: 138), one relevé.

A more extensive comparison that would incorporate the communities with dominant *Carex rupestris* elsewhere in the South-European mountain ranges (e.g. in the Apennines – Biondi et al. 2000, or in the Rila Mountains – Roussakova 2002) was not required for a relevant classification of our relevés and was therefore not conducted. Our comparison of the listed syntaxa using hierarchical classification (we could not use the relevé from Hochschwab in this context) gave the following results (Figure 4):

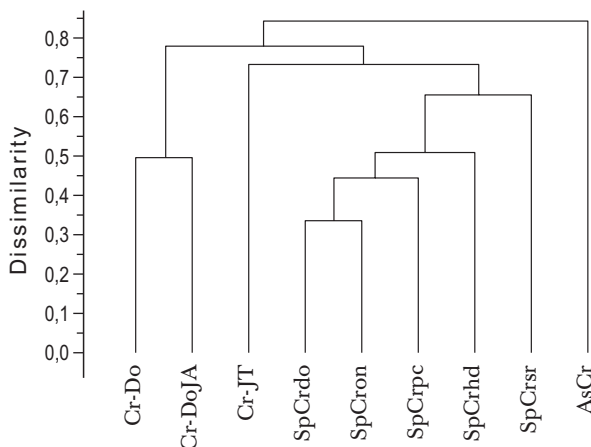


Figure 4: Dendrogram of syntaxa with dominant *Carex rupestris* in the Alps and the Dinaric Alps (UPGMA, 1–similarity ratio).

Slika 4: Dendrogram sintaksonov s prevladujočo vrsto *Carex rupestris* v Alpah in Dinarskem gorstvu (UPGMA, 1–similarity ratio).

Most of our relevés group separately from the relevés in the Dolomites in South Tyrol as well as from the relevés in the Dinaric Alps. There are currently only three

of the latter and the Dinaric community with dominant *Carex rupestris* requires further examination. The stands in the Dolomites and elsewhere in the Alps are characteristic for the alpine-subnival belt. Diagnostic (differential) species for the association *Caricetum rupestris* are *Draba dubia*, *Minuartia cherlerioides*, *Potentilla nitida* and *Sesleria sphaerocephala* (Grabherr 1993: 376–377). *Minuartia cherlerioides* is absent from the relevés from the Julian Alps and the Karavanke. T. Wraber (1967: 55–56) writes that it is limited to the alpine belt in the Julian Alps, i.e. to the belt between 2200 m and 2800 m, and classifies it as a character species of the association *Potentilletum nitidae*. *Draba dubia* was observed in only one relevé. Our relevés (except for relevés 1–3 in Table 2 that are for now classified into the association *Caricetum rupestris*) are therefore incorporated into the new association *Saussureo pygmaeae-Caricetum rupestris* ass. nov. Diagnostic species of the new association are *Carex rupestris*, *Gentiana clusii*, *Saussurea pygmaea*, *Rhodothamnus chamaecistus*, *Euphrasia minima*, *Thymus praecox* subsp. *polytrichus*, *Aster bellidiastrum* and *Arctostaphylos alpina*, which indicate sites that are slightly different from those of the stands of the another association with dominant *Carex rupestris*. Stands of the new association generally occur at significantly lower altitudes (lower part of the alpine belt) and their species composition demonstrates greater similarity with the stands of the association *Gentiano-Caricetum firmae* than that demonstrated by the association *Caricetum rupestris*. In terms of the structure of diagnostic species they are dominated by the character species of the alliance *Caricion firmae*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea* (Table 8, columns 5, 8, 9, 14 and 26). The new association is therefore classified into these higher syntaxa as well. Its floristic composition does not justify its classification into the alliance *Oxytropido-Elynon*, and even less so into the order *Elynetalia myosuroidis* or *Oxytropido-Kobresietalia* and class *Carici-Kobresietea bellardii*, which is how the association *Caricetum rupestris* is classified by Grabherr (1993) and Pignatti E. & S. (2014: 457), but not by Oriolo (2001: 100), who classifies it into the alliance *Caricion firmae*. We distinguish five variants. The central (typical) variant (relevés 4–35 in Table 2) is named after *Dryas octopetala*, which has higher frequency and medium coverage here than in the stands of other variants; also differential is a slightly higher proportion of diagnostic species of acidic subalpine-alpine heathlands from the class *Loiseleurio-Vaccinietaea* and diagnostic species of basophilic heathlands or subalpine (semi)shrubs from the order *Rhodothamnus hirsuti-Ericetalia carnea* (e.g. *Rhodothamnus chamaecistus*). The sites mainly consist of sharp talus ridges. The stands of the variant with *Oxytropis neglecta* (relevés 36–64 in Table 2) overgrow sites that are even more

initial, rocky and characterised by a large proportion of diagnostic species of the alliance *Phyteumato-Saxifragion petraeae* and order *Potentilletalia caulescentis*. The variant *Saussureo pygmaeae-Caricetum rupestris* var. *Potentilla clusiana* (relevés 65–71 in Table 2) is characterised by a large proportion of species of the class *Thlaspietea rotundifolii* and order *Potentilletalia caulescentis*, which also indicates sites with initial soils (lithosols). Stands of the variant *Saussureo pygmaeae-Caricetum rupestris* var. *Homogyne discolor* (relevés 79–85 in Table 2) usually occur at higher altitudes and are characterised by a higher proportion of the species of the class *Juncetea trifidi*, which implies soils that are better developed (rendzina with raw humus, mor or tangel) than in the stands of the previous two variants. Stands of the variant *Saussureo pygmaeae-Caricetum rupestris* var. *Salix retusa* (relevés 72–78 in Table 2) frequently occur also in the subalpine belt, on the periphery of small sinkholes in frost hollows such as mountain pastures Klek and Za Grivo at alp Ovčarija. They are differentiated by a higher proportion of diagnostic species from classes *Mulgedio-Aconitetea*, *Loiseleurio-Vaccinietea* and order *Arabidetalia caeruleae*, which indicates a contact with snow bed communities and acid reaction of rendzina with raw humus (mor or tangel). The localities of the relevés of the association *Saussureo pygmaeae-Caricetum rupestris* in Slovenia and Northeastern Italy are shown in Figure 5.

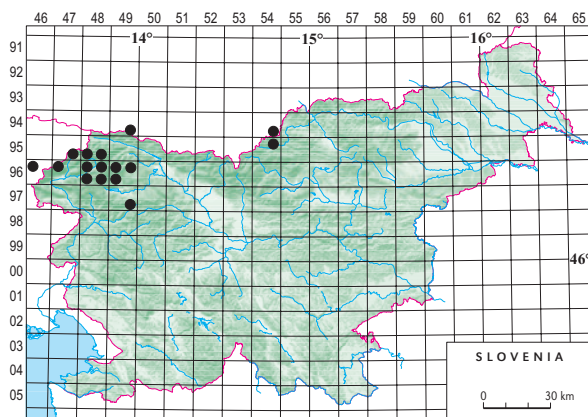


Figure 5: Localities of stands of the association *Saussureo-Caricetum rupestris* in Slovenia and NE Italy.

Slika 5: Nahajališča sestojev asociacije *Saussureo-Caricetum rupestris* v Sloveniji in severovzhodni Italiji.

Communities with dominant *Elyna myosuroides* in the Julian Alps

In the Alps, the stands with dominant *Elyna myosuroides* are the most frequent in the central part of these mountains, from the west towards the east, in the upper part of the alpine belt to the subnival belt, mainly on steep screes,

on the slopes of morains, on narrow ridges, peaks and promontories with a special microclimate and extreme wind conditions with significant temperature fluctuations but relatively well-developed soils (mull rendzina, in places transitions to brown soils). The geological bedrock is predominantly calcareous-silicate, sometimes also completely calcareous (Albrecht 1969, Grabherr 1993, Oriolo 2001, Huttegger et al. 2004). Alpine swards with *Elyna myosuroides* in south-European mountain ranges almost always occur in immediate contact with subalpine-alpine grasslands from classes *Elyno-Seslerietea* and *Juncetea trifidi* (Oriolo 2001). Such stands are rare in the Southeastern Alps, they are not characteristically developed and the character species of the association *Elynetum myosuroidis* s. lat. are frequently absent from them (T. Wraber 1978, Grabherr 1993). Two relevés of this association from the western Julian Alps – Strma peč / Monte Cimone, Mt. Travnik at Mt. Mangart, were published by Oriolo (2001, Table 2), who described the association *Elynetum myosuroidis* in the Friuli Venezia Giulia region in North-eastern Italy. Most of his relevés, however, are from the Carnic Alps. Our table (Table 3) comprises 47 relevés of alpine swards with predominating *Elyna myosuroides* from the Slovenian and partly also Italian (Sart, Montaž /Montasio) part of the Julian Alps and ordered them by means of hierarchical classification. To ensure a relevant syntaxonomic description we made a synthetic table (Appendix 3) with the following syntaxa:

- 1 AcEmvg *Achilleo clavennae-Elynetum myosuroidis* var. *Vaccinium gaultherioides*, Julian Alps, this article, Table 3, relevés 1–12
- 2 AcEmcf *Achilleo clavennae-Elynetum myosuroidis* var. *Carex firma*, Julian Alps, this article, Table 3, relevés 13–34
- 3 AcEmty *Achilleo clavennae-Elynetum myosuroidis* var. *typica*, Julian Alps, this article, Table 3, relevés 35–44
- 4 E-FVJ *Elynetum myosuroidis*, Julian and Carnic Alps in Friuli Venezia Giulia (Oriolo 2001, Table 2)
- 5 E-Do *Elynetum myosuroidis*, Dolomites (Pignatti E. & S. 2014, Synoptic Association Table 11, Column 8)
- 6 E-Eng *Elynetum myosuroidis*, Engadin (Oriolo 2001: Column 6 in Table 1)
- 7 E-Dosin *Elynetum myosuroidis*, Dolomites (Oriolo 2001, Column 7 in Table 1)
- 8 E-BB *Elynetum myosuroidis*, Central Alps (Braun-Blanquet & Jenny 1926, Table 10, Columns 1–12)
- 9 Esvcf *Elynetum myosuroidis seslerietosum varia* var. *Carex firma* (Albrecht 1969, Table 3, columns 1–6, 8–15, 17)
- 10 E-AmA *Elynetum myosuroidis*, Ammergauer Alps (Eggenberger 1994, Table 18)
- 11 Esvlm *Elynetum myosuroidis seslerietosum varia* var.

- Leontodon montanus* (Albrecht 1969, Table 3, columns 16–33)
- 12 Evv *Elynetum myosuroidis* var. *Vaccinium vitis-idaea*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, Columns 1–5)
 - 13 Esr *Elynetum myosuroidis* var. *Salix retusa*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, Columns 6–9)
 - 14 Ety *Elynetum myosuroidis* var. *typica*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, Columns 10–24)
 - 15 Ehv *Elynetum myosuroidis helictotrichetosum versicoloris* (Albrecht 1969, Table 3, Columns 111–115).

These were mutually compared through hierarchical classification, which produced the following dendrogram (Figure 6):

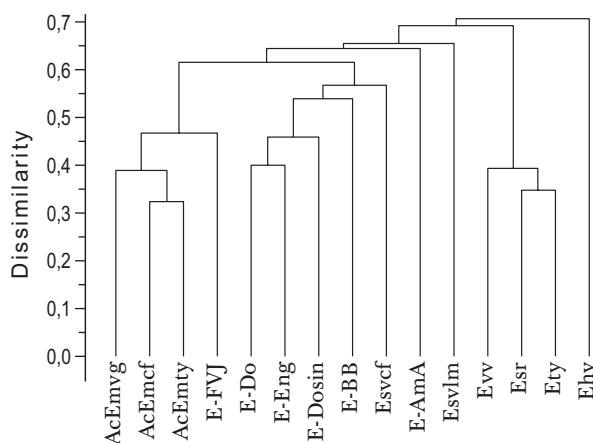


Figure 6: Dendrogram of syntaxa with dominant *Elyna myosuroides* in the Alps (UPGMA, 1–similarity ratio).

Slika 6: Dendrogram sintaksonov s prevladujočo vrsto *Elyna myosuroides* v Alpah (UPGMA, 1–similarity ratio).

The results indicate that our relevés group with those from Friuli Venezia Giulia, separately from the relevés from the Dolomites, the Northeastern and Central Alps. Heiselmayer's relevés from the High Tauern (2004) are especially distinct. Grabherr (1993: 375) lists the following species as diagnostic for the association *Elynetum myosuroides*: *Arenaria ciliata*, *Carex parviflora*, *Cerastium alpinum*, *Dianthus glacialis*, *Gentiana prostrata*, *Ligusticum mutellinoides*, *Oxytropis campestris*, *O. halleri*, *Saussurea alpina*, and as dominant species and constant companions the species *Elyna myosuroides*, *Agrostis alpina*, *Aster alpinus*, *Campanula scheuchzeri*, *Carex rupestris*, *Festuca quadriflora*, *Hedysarum hedysaroides*, *Minuartia gerardii* (*M. verna* subsp. *verna*), *Polygonum viviparum*, *Potentilla crantzii*, *Primula minima*, *Salix serpyllifolia* and *Silene acaulis*, together with lichens *Cetraria island-*

ica, *C. nivalis* and *Thamnolia vermicularis*. A number of the listed species were either not observed in our relevés (see Table 3) or are very rare. These relevés were made mainly in the lower alpine belt, at the altitude of 2070 m to 2450 m (Oriolo's relevés, *ibid.*, were made at a similar altitude), which is lower than the sites where they usually dominate in the Central Alps. The geological bedrock is predominantly calcareous (limestone, dolomite limestone), in places interlayered with marlstone and chert. The soil is usually more initial than in the Central Alps (Albrecht 1969: 32): different forms of rendzina, especially raw, humus-rich rendzina (mor or tangel) – see also Braun-Blanquet (1954: 44), in places even lithosol. Almost all of the relevés were made on windy crests and ridges, promontories or on mountain tops. The stands covered from 1 to 10 m² of the surface area.

The species composition in Table 3 and dendrogram in Figure 6 do not justify the classification of our relevés into the association *Elynetum myosuroides* s. str., so they are classified into the new association *Achilleo clavennae-Elynetum myosuroides* ass. nov. *hoc loco*. Diagnostic species of the new association are *Elyna myosuroides* (as the dominant species of these alpine swards), *Euphrasia minima*, *Achillea clavennae*, *Carex firma*, *Oxytropis neglecta*, *Aster bellidiastrum*, *Sesleria sphaerocephala*, *Homogyne discolor*, *Saussurea pygmaea* and *Koeleria eriostachya*. The listed species characterise the new association both in terms of sites (lower alpine belt, contact with the stands of the association *Gentiano terglouensis-Caricetum firmae*, rendzina with raw humus as the predominant soil type) and phytogeography – their distribution in the (South)Eastern Alps. *Achillea clavennae* is an eastern-Alpine-Illyrian species, a character species of the order *Seslerietalia coeruleae* (Grabherr et al. 1993: 404) or of the alliance *Seslerion variae* (Aeschimann et al. 2004b: 486). In the stands of the association *Elynetum myosuroides* s. lat. it sporadically occurs also in the Dolomites. Albrecht (1969) recorded it in the stands of the syntaxon *Elynetum myosuroides seslerietosum variae*, especially in the stands of the variant *Elynetum myosuroides seslerietosum variae* var. *Leontodon montanus*, for which it is differential. One of the dominant species in the stands of this variant is the taxon *Carex curvula* subsp. *rosea*. Erschbamer (1992) described the stands with dominant taxa *Elyna myosuroides* and *Carex curvula* subsp. *rosea* as the association *Elyno-Caricetum roseae*. In terms of floristics, ecology and phytogeography the stands of the syntaxon *Elynetum myosuroides seslerietosum variae* var. *Leontodon montanus* are very different from the stands of the new association *Achilleo clavennae-Elynetum myosuroides*, even though they have some species in common. This association is classified into the alliance *Oxytropido-Elynion*,

order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*. Oriolo (ibid.) proposes such synsystematic classification also for the association *Elynetum myosuroidis* s. str. Other authors, e.g. Grabherr (1993) and Pignatti E. & S. (2014: 460), classify it into the same alliance but into the order *Oxytropido-Kobresietalia* or *Elynetalia* and class *Carici-Kobresietea*. The relevés of alpine sedge swards and pioneer patches in the Julian Alps that we have processed so far do not allow for classification of any stands into the order *Oxytropido-Kobresietalia* and class *Carici-Kobresietea bellardii*. The results of our analysis, however, do not fully support the finding noted by Oriolo (2001: 100), namely that alpine sedge swards and pioneer patches with dominant *Elyna myosuroides* from the entire Alps can be classified into a single association with relatively few variants and forms, and with insignificant variety in terms of their phytogeography. Based on the results of hierarchical classification (Figure 6) the relevés published by Heiselmayer (2004, Table 2) can be classified into the new association *Carici curvulae-Elynetum myosuroidis* (Heiselmayer 2004) Dakskobler et Surina ass. nov. Some of the relevés of the syntaxon *Elynetum myosuroidis helictotrichetosum versicoloris* (Albrecht 1969, relevés 113 and 114 in Table 3) could probably be classified into this association. Despite some similarities in the species composition and ecology, a comparison with the stands of the subassociation *Caricetum curvulae elynetosum* Br.-Bl. 1926 em. Albrecht 1969 (comp. Albrecht 1969, Table 4, relevés 1 to 11) demonstrates a fundamental difference in the dominant species of both communities. While the stands described by Heiselmayer (ibid.) are dominated by *Elyna myosuroides* the stands described by Albrecht (ibid.) are dominated by *Carex curvula*. Therefore, the new name *Carici curvulae-Elynetum* does not imply that the already described subassociation has been promoted to the rank of association. The new association is classified into the alliance *Oxytropido-Elyinion*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*, with consideration of the results published by Oriolo (2001). Its diagnostic species are *Carex curvula* subsp. *curvula*, *Agrostis rupestris*, *Juncus trifidus*, *Saxifraga aizoides* and *Silene excapa*.

Three variants are distinguished in the stands of the association *Achilleo clavannae-Elynetum myosuroidis*. In addition to var. *typica* (Table 3, relevés 35–44) the variant with *Vaccinium gaultherioides* (Table 3, relevés 1–12) on relatively deep and slightly acid soils and the variant with *Carex firma* (Table 3, relevés 13–34), which is characterised by a higher frequency of the character species of the association *Gentiano terglouensis-Caricetum firmae* and of the species *Dryas octopetala*, while the soil is more initial than in the previous variant. Compared to other alpine

grasslands discussed in this paper the stands of the association *Achilleo-Elynetum* are characterised by a higher proportion of diagnostic species of the alliance *Oxytropido-Elyinion* and by a relatively high proportion of diagnostic species of the class *Juncetea trifidi* and order *Arabidetalia caeruleae* (Table 8, columns 17 to 19). The distribution of this association in the Julian Alps as established by our relevés is shown in Figure 7.

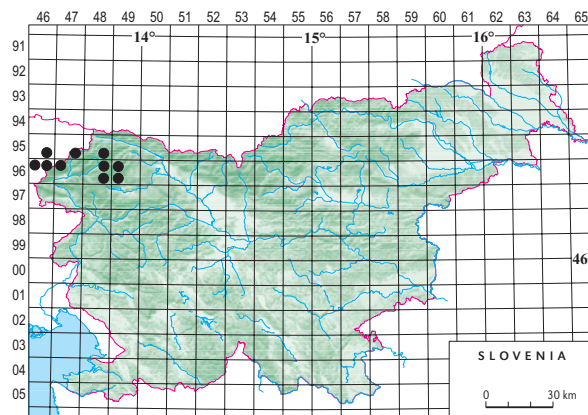


Figure 7: Localities of researched stands of the association *Achilleo clavannae-Elynetum* in the Julian Alps.

Slika 7: Nahajališča preučevanih sestojev asociacije *Achilleo clavannae-Elynetum* v Julijskih Alpah.

Communities with dominating *Dryas octopetala* in the Julian Alps

Grabherr et al. (1993: 413) report that the association *Dryadetum octopetalae* comprises mainly pioneer stands on fine calcareous and calcareous-silicate talus across a wide altitudinal range in the major part of the Alps. The dominant *Dryas octopetala* stabilises and improves soil conditions in these stands, thus allowing for gradual settlement of more demanding species. This species persists also in subsequent succession stages, but with lower medium coverage, and occurs in most alpine grasslands recorded in the Julian Alps. Surina (2005a, Phyt. Table 21) presented it with six relevés from the Krn Mountains. We described its special form, association *Pulsatillo vernalis-Dryadetum octopetalae* in the Triglav Mountains, in two frost hollows in the Fužina Pasturelands (Dakskobler et al. 2008). In the following years we made and compared a total of 49 relevés, one of which was from the Peca range in the eastern Karavanke. For now, our comparison does not include the stands of the association *Scabioso silenifoliae-Dryadetum octopetalae* from the Snežnik Mountains in the northern part of the Dinaric Alps (Surina 2005b), because they clearly differentiate from the relevés from the Southeastern Alps

with the presence of certain, mostly Illyrian (Dinaric), species such as *Scabiosa silenifolia*, *Arabis scopoliana*, *Edraianthus graminifolius*, *Carex kitabeliana*, *Thymus balcanus*, *Polygala croatica*, *Gentianella liburnica*, *Euphrasia liburnica* and *Plantago holostium*, so it is classified into the alliance *Seslerion tenuifoliae*. The relevés of the association *Pulsatillo vernalis-Dryadetum octopetalae* grouped completely separately from the other 35 relevés that were subsequently arranged in Table 4. Two groups are distinguished here. The first comprises 19 relevés (relevés 1–19 in Table 4) that characteristically occur mainly in the alpine belt, at the altitudes between 1870 m and 2390 m, with prevailing shady aspects, on very gentle slopes on ridges to steep slopes with fine talus, predominantly at the contact with alpine swards, mainly with the stands of the association *Gentiano terglouensis-Caricetum firmae* whose floristic composition is very similar. This is corroborated also by the comparative analysis of all alpine grasslands in the Julian Alps (Table 7 and Figure 13). This similarity provides the basis for the description of the new association *Seslerio sphaerocephalae-Dryadetum octopetalae* ass. nov. hoc loco. Diagnostic species of the new association are *Dryas octopetala* (dominant species), *Sesleria sphaerocephala*, *Doronicum glaciale*, *Silene acaulis*, *Lloydia serotina*, *Saxifraga paniculata* and *Salix serpyllifolia*. The listed species characterise the stands of the new association both in terms of ecology and phytogeography as an eastern-Alpine community, supposedly a stage in succession in the sere from the initial forms of the association *Dryadetum octopetalae* s. lat. towards the stands of the association *Gentiano terglouensis-Caricetum firmae*. The new association is therefore classified into the alliance *Caricion firmae*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*. Two variants are distinguished: var. *Saxifraga crustata* (relevés 1–9 in Table 4) and var. *Gentiana pumila* (relevés 10–19 in Table 4). In addition to *Saxifraga crustata* the species that differentiate the first variant are *Saxifraga squarrosa* and *Saussurea pygmaea*; this variant is characteristic for relatively stoney, rubbly sites where *Carex firma* is already gradually becoming established. In terms of proportion the stands of this syntaxon are dominated by species of the alliance *Caricion firmae* and class *Elyno-Seslerietea*, diagnostic are also species from the class *Thlaspietea rotundifolii* and order *Potentilletalia caulescentis* (column 6 in Table 8). The stands of the variant with *Gentiana pumila* occur on slightly wetter sites with better developed soils. Diagnostic species of the alliance *Caricion firmae* are no longer so distinctly dominant in its stands and the species from the alliance *Oxytropido-Elynion* and order *Arabidetalia caeruleae* (column 11 in Table 8) stand out with a higher proportion. Much more frequent in these stands than in

the stands of the previously described variant are *Doronicum glaciale*, *Salix serpyllifolia*, *Trifolium pallescens*, *Carex parviflora*, *Vaccinium gaultherioides* and *Salix reticulata*, which indicates a contact or a certain similarity with snow bed communities.

For the time being, relevés 20–35 in Table 4 are classified into the association *Dryadetum octopetalae*. The localities of its stands are in the altitudinal belt ranging from 1350 m to 2270 m, with most of them still in the subalpine belt, below 2000 m a.s.l. This is demonstrated also by the higher proportion of diagnostic species of the class *Elyno-Seslerietea* over the proportion of diagnostic species of the alliance *Caricion firmae*. There are three variants within this association. The stands of the variant with *Carex sempervirens* (relevés 20–27 in Table 4) characterise talus sites with a higher proportion of diagnostic species of the order *Arabidetalia caeruleae* and class *Thlaspietea rotundifolii* (column 25 in Table 8). The variant with *Vaccinium vitis-idaea* (relevés 28–31 in Table 4) has a higher proportion of diagnostic species from the class *Loiseleurio-Vaccinietaea*, order *Caricetalia davaliana* and class *Vaccinio-Piceetea* and is therefore characteristic of the sites with better developed, humus-rich soils (column 21 in Table 10). The stands of the variant with *Daphne striata* (relevés 32–35 in Table 4) are characterised by a higher proportion of species of the order *Rhododendro hirsuti-Ericetalia carnea* (column 22 in Table 10).

The currently known distribution of associations *Seslerio-Dryadetum octopetalae* and *Dryadetum octopetalae* in the Julian Alps as demonstrated by our relevés is shown in Figure 8.

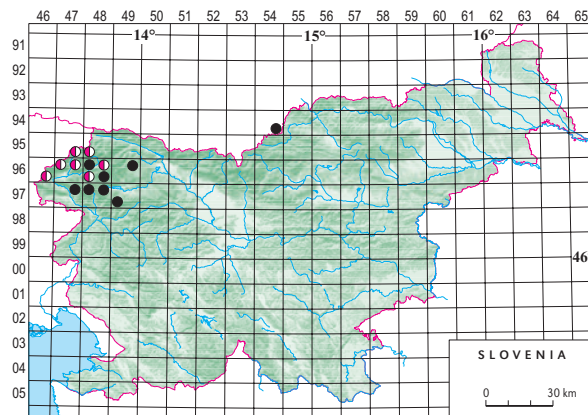


Figure 8: Localities of stands of the syntaxa *Seslerio sphaerocephalae-Dryadetum octopetalae* (●) and *Dryadetum octopetalae* (●) on the map of Slovenia.
Slika 8: Nahajališča preučevanih sestojev asociacij *Seslerio sphaerocephalae-Dryadetum octopetalae* (●) in *Dryadetum octopetalae* (●) na zemljevidu Sloveniji.

Associations *Homogyno discoloris-Loiseleurietum* and *Empetro-Vaccinietum gaultherioidis* and other communities with dominant *Vaccinium gaultherioides* in Slovenia

Table 5 comprises 75 relevés of swards or heathlands in the alpine belt of the Slovenian Alps, all of them characterised by the predominance of species that indicate acid soils and (or) raw humus, especially certain species from the family *Ericaceae* (*Vaccinium* spp., *Loiseleuria* sp., *Arctostaphylos alpina*) and *Empetrum hermaphroditum*. Their communities, which are classified into different alliances and even classes, are relatively rare in the predominantly limestone Slovenian Alps. T. Wraber (1996: 110) mentions stands of associations *Empetro-Vaccinietum* and *Arctostaphylo-Loiseleurietum*. Surina (2005a, Table 27) documented the stands of the association *Empetro-Vaccinietum* in the Krn Mountains with three relevés.

Relevé 1 in Table 5 is unique as it was made in the forest belt at the altitude of 1470 m. It is classified into the provisional association *Homogyno alpinae-Empetrum hermaphroditae* nom. prov., into the alliance *Loiseleurio-Vaccinion*, order *Rhododendro-Vaccinietalia* and class *Loiseleurio-Vaccinietea*. It indicates a succession stage in the overgrowing of former altimontane-subalpine hay meadows in the belt of acidophilous beech forests (*Luzulo-Fagetum* s. lat.). Relevés 2–6 in Table 5 are classified into the association *Empetro-Vaccinietum gaultherioidis*. Four of the relevés are from the Julian Alps. We made them in the altitudinal belt spanning from 1800 m to 2140 m, on calcareous bedrock; the soil type is rendzina with raw humus (mor or tangel). One of the relevés is from the Smrekovec Mountains in the Savinja Alps, where the geological bedrock is silicate and the soil is ranker. The dominant species of these stands are *Empetrum hermaphroditum*, *Vaccinium gaultherioides*, *V. vitis-idaea* and occasionally *V. myrtillus*. Based on the synoptic description of this association (Grabherr 1993: 454–456) we classify our relevés into the new subassociation *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti* subas. nov. hoc loco. The differential species of the subassociation, *Rhododendron hirsutum*, *Pinus mugo* and *Rhodothamnus chamaecistus*, indicate a special form of acidophilous subalpine-alpine heathlands in the predominantly calcareous Southeastern Alps. In terms of proportion they are dominated by the diagnostic species of the classes *Leuseleurio-Vaccinietea* and *Vaccinio-Piceetea* and order *Rhododendro hirsuti-Ericetalia carnea*,

but there are also relatively many mosses and lichens (column 27 in Table 8). This association is classified into the alliance *Loiseleurio-Vaccinion*, order *Rhododendro-Vaccinietalia* and class *Loiseleurio-Vaccinietea*.

Relevés 7–20 in Table 5 are classified into the association *Homogyno discoloris-Loiseleurietum*, which was first described by Aichinger (1933, Table 43) on Mt. Dobratsch / Dobrač in the Gailtal Alps. Our relevés are slightly different from his and are therefore classified into the new subassociation *Homogyno discoloris-Loiseleurietum Aichinger 1933 caricetosum firmae* subas. nov. hoc loco. Grabherr et al. (1993: 412) refer to *Loiseleuria procumbens*, *Agrostis rupestris*, *Homogyne discolor* and *Vaccinium myrtillus* as diagnostic species of the association. We add two species to the list, *Arctostaphylos alpina* and *Antennaria carpatica*. Differential species of the new subassociation are *Carex firma*, *Agrostis alpina*, *Sesleria caerulea* and *Pedicularis rostratocapitata*; they indicate the contact with the stands of *Gentiano terglouensis-Caricetum firmae*, the association that predominates in the vicinity, and shallow soil. Our relevés were made at the altitudes ranging from 1940 m to 2380 m, mostly on shady aspects, rock ledges and gentle to moderately steep slopes. The geological bedrock is calcareous (limestone, dolomite limestone), in places interlayered with marlstone and chert. The locally acidic soil is mainly the result of accumulated raw humus. Its entire floristic composition justifies the classification of the association *Homogyno discoloris-Loiseleurietum* into the alliance *Caricion firmae*, order *Seslerietalia caeruleae* and class *Elyno-Seslerietea*. Its distribution in Slovenia as demonstrated by our relevés is shown in Figure 9.

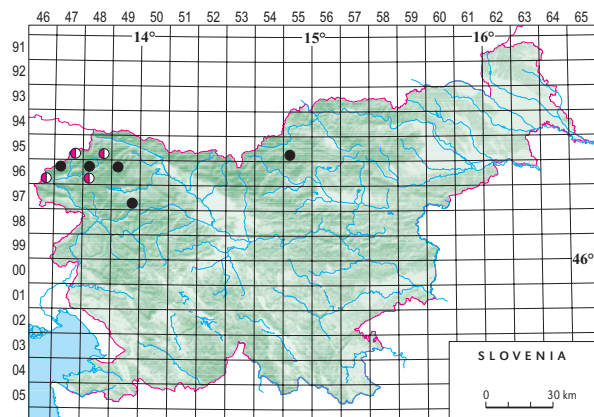


Figure 9: Localities of stands of the syntaxa *Empetro-Vaccinietum* ● and *Homogyno-Loiseleurietum* ◐ on the map of Slovenia.

Slika 9: Nahajališča sestojev sintaksonov *Empetro-Vaccinietum* ● in *Homogyno-Loiseleurietum* ◐ na zemljevidu Slovenije.

Relevés 21–61 in Table 5 are classified into the new association *Homogyno discoloris-Vaccinietum gaultherioidis*.

In terms of floristic composition this association indicates stands that are transitional between the stands of the association *Empetro-Vaccinietum*, which is classified into the alliance *Loiseleurio-Vaccinion*, and *Homogyne-Loiseleurietum*, which is classified into the alliance *Caricion firmae*, but have more in common with the latter. They are specific in that *Empetrum hermaphroditum* and *Loiseleuria procumbens* occur very rarely within them and even when they do these relevés do not group with other relevés of the stands of associations *Empetro-Vaccinietum* or *Homogyne-Loiseleurietum* in hierarchical classification procedures. They occur on similar sites, on mainly shady rock ledges on calcareous bedrock (limestone, dolomitized limestone, rarely interlayered with marlstone or chert, the soil is rendzina with row humus, mor or tangel) at altitudes between 1900 m and 2460 m. Diagnostic species of the new association, *Vaccinium gaultherioides*, *Arctostaphylos alpina*, *Rhodothamnus chamaecistus*, *Homogyne discolor*, *Dryas octopetala* and *Pedicularis rostratocapitata*, characterise this community both in terms of sites and phytogeography. We distinguish three variants, namely var. *Rhodothamnus chamaecistus* (which includes the three relevés published by Surina 2005a, Tab. 27, who classified them into the association *Empetro-Vaccinietum*) – relevés 21–50 in Table 5, var. *Gentiana pumila* (the latter is distinguished from the first mainly by the absence of species of the order *Rhododendro hirsuti-Ericetalia carneae* and a higher proportion of species of the alliance *Caricion firmae*) – relevés 51–58 in Table 5, and var. *Sesleria caerulea* (only three relevés and a higher mean coverage of *Sesleria caerulea*) – relevés 59–61 in Table 5. Based on the composition by proportions of diagnostic species (see columns 13 and 16 in Table 8) we classify the association *Homogyne discoloris-Vaccinietum gaultherioidis* into the alliance *Caricion firmae*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*.

Relevés 62–66 in Table 5 indicate a special type of cushion vegetation on ridges that we temporarily classify into the provisional association *Empetro-Arctostaphyletum alpinae* nom. prov. The site consists of shady rock ledges on limestone or dolomite limestone with raw humus-rich rendzina (mor or tangel). The dominant species of these stands are *Empetrum hermaphroditum*, *Arctostaphylos alpina*, *Dryas octopetala*, *Rhodothamnus chamaecistus*, *Vaccinium vitis-idaea* and *Carex firma*. Also diagnostic are *Homogyne alpina*, *Sesleria sphaerocephala* and *Huperzia selago*. So far, we have recorded the stands of this alpine heathland only on the ridge of Mt. Plešivec, to the east of Trentski Pelc between the Lower Trenta and Zapoden Valley (four relevés) and made one relevé of the untypical form of this association under Mt. Tolminski Kuk. The altitude is between 1900 m and 2000 m. For

the time being we classify the provisional new association based on the composition by groups of diagnostic species (column 28 in Table 8, diagnostic species of the order *Rhododendro-Ericetalia carneae* and class *Vaccinio-Piceetea* stand out with higher proportions) into the alliance *Caricion firmae*, order *Seslerietalia coeruleae* and class *Elyno-Seslerietea*.

While relevés 67 and 68 in Table 5 cannot yet be appropriately synsystematically defined, relevés 69–75 in this table are classified into the new association *Homogyne alpinae-Vaccinietum gaultherioidis* ass. nov. They grow on plateaus and ledges with very acid soils (rendzina with row humus, ranker). The geological bedrock is dolomite limestone or limestone, frequently interlayered with marlstone and chert. The predominating species

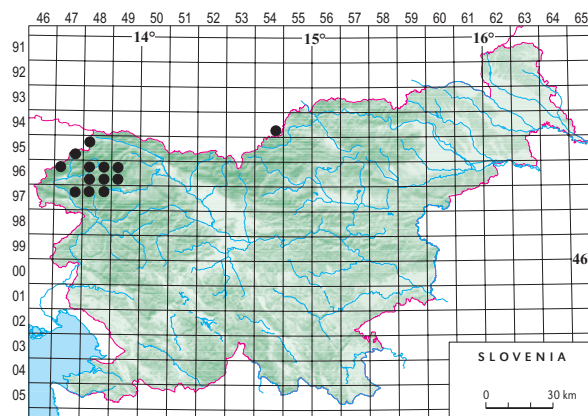


Figure 10: Localities of stands of the association *Homogyne discoloris-Vaccinietum gaultherioidis* on the map of Slovenia.

Slika 10: Nahajališča sestojev asociacije *Homogyne discoloris-Vaccinietum gaultherioidis* na zemljevidu Slovenije.

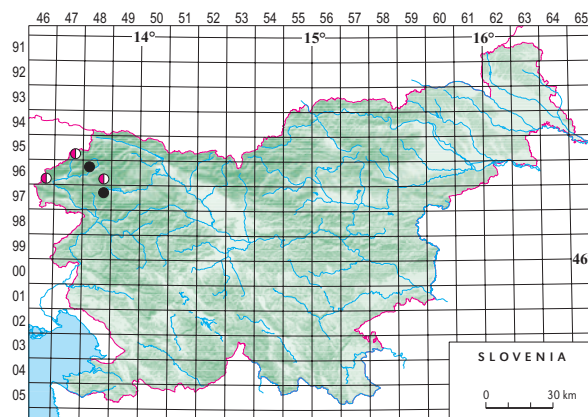


Figure 11: Localities of stands of the associations *Empetro-Arctostaphyletum alpinae* ● and *Homogyne alpinae-Vaccinietum gaultherioidis* ○ on the map of Slovenia.

Slika 11: Nahajališča sestojev asociacij *Empetro-Arctostaphyletum alpinae* ● in *Homogyne alpinae-Vaccinietum gaultherioidis* ○ na zemljevidu Slovenije.

in this alpine heathland are *Vaccinium gaultherioides*, *V. vitis-idaea*, *Homogyne alpina*, *Campanula scheuchzeri*, in some relevés also *Vaccinium myrtillus* and *Antennaria carpatica*. The diagnostic species of the new association are *Vaccinium gaultherioides*, *Homogyne alpina*, *Euphrasia minima*, *Juncus trifidus* and *Potentilla aurea*. For now, the new association is classified into the alliance *Loiseleurio-Vaccinion*, order *Rhododendro-Vaccinietalia* and class *Loiseleurio-Vaccinietea*. It is characterised by a relatively high proportion of acidophilous species characteristic for the classes *Juncetea trifidi* and *Vaccinio-Piceetea* (column 20 in Table 8).

The localities of relevés of the alpine heathlands dominated by *Vaccinium gaultherioides* are shown in Figures 10 and 11.

Association *Saxifraga paniculatae-Caricetum fuliginosae* ass. nov. hoc loco

On very small areas, mainly on edges or small ledges of northern rock faces, at the altitudes between 2250 m and 2500 m (on the edge of the Triglav northern rock face, the ridge of Špičje and Visoka Črnelška špica in the Kanin Mountains) we observed stands with predominating *Carex fuliginosa*. This is a southeastern-European montane species, a character species of the alliance *Festucion variae* (Aeschimann et al. 2004b: 822). T. Wraber (1967: 59–61) came across it only in the alpine belt in the Julian Alps, mainly in chasmophytic (*Potentilletum nitidae*) and sward communities (*Caricetum firmae* s. lat.). During our research of alpine swards and heathlands we recorded it in the stands of associations *Gentiano terglouensis-Caricetum firmae*, *Homogyne discoloris-Vaccinietum gaultherioidis*, *Dryadetum octopetalae* and *Achilleo-Elynetum* (Table 7). Relevés in Table 6 cannot be classified into any of these associations. In addition to the dominant *Carex fuliginosa* they are characterised by species of alpine grasslands (*Caricion firmae*, *Elyno-Seslerietea*), snow beds and screes (*Arabidetalia caeruleae*, *Thlaspietea rotundifolii*), and chasmophytic species (*Potentilletalia caulescentis*). The geological bedrock is limestone, in places talus; the soil is initial (lithosol), but relatively moist. We therefore classify these stands into the new association *Saxifraga paniculatae-Caricetum fuliginosae*, for the time being into the alliance *Caricion firmae*, order *Seslerietalia caeruleae* and class *Elyno-Seslerietea*. This classification is based on the composition by proportions of diagnostic species, which is as follows (relative frequencies): *Caricion firmae* 32%, *Elyno-Seslerietea* 14%, *Juncetea trifidi* 10%, *Arabidetalia caeruleae* 21%, *Thlaspietea rotundifolii* 7% and *Potentil-*

letalia caulescentis 16%. The diagnostic species of the new association are *Carex fuliginosa*, *Saxifraga paniculata*, *Salix serpyllifolia* and *Sesleria sphaerocephala*. Their simultaneous occurrence indicates cold, stony and moist alpine sites, which are rare in the Southeastern Alps. The location of the relevés is shown in Figure 12.

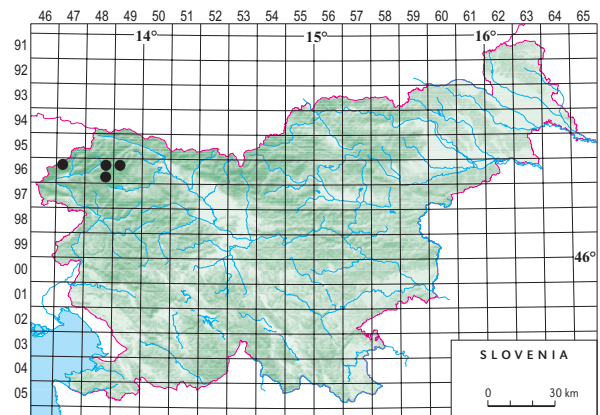


Figure 12: Localities of stands of the association *Saxifraga paniculatae-Caricetum fuliginosae* on the map of Slovenia.

Slika 12: Nahajališča sestojev asociacije *Saxifraga paniculatae-Caricetum fuliginosae* na zemljevidu Slovenije.

Synoptic survey of alpine swards and heathlands on the ridges and peaks of the Julian Alps

Table 7 offers a synoptic overview of the studied alpine swards and heathlands in the Julian Alps. It does not include the stands of the association *Saxifraga paniculatae-Caricetum fuliginosae* as they are distinctly different both in terms of sites and floristic composition.

The table comprises the following syntaxa:

- 1 GtCfrh *Gentiano terglouensis-Caricetum firmae* var. *Ranunculus hybridus*
- 2 GtCfpn *Gentiano terglouensis-Caricetum firmae* var. *Potentilla nitida*
- 3 GtCfty *Gentiano terglouensis-Caricetum firmae* var. *typica*
- 4 GtCfla *Gentiano terglouensis-Caricetum firmae* var. *typica* subvar. *Leontopodium alpinum*
- 5 SpCrdo *Saussureo pygmaeae-Caricetum rupestris* var. *Dryas octopetala*
- 6 SsDosc *Seslerio sphaerocephalae-Dryadetum octopetalae* var. *Saxifraga crustata*
- 7 SsCmty *Saxifraga squarrosae-Caricetum mucronatae* var. *Carex firma*
- 8 SpCron *Saussureo pygmaeae-Caricetum rupestris* var. *Oxytropis neglecta*

- 9 SpCrpc *Saussureo pygmaeae-Caricetum rupestris* var. *Potentilla clusiana*
- 10 GtCfda *Gentiano terglouensis-Caricetum firmae* var. *Dryas octopetala*
- 11 SsDogp *Seslerio sphaerocephalae-Dryadetum octopetalae* var. *Gentiana pumila*
- 12 GtCfph *Gentiano terglouensis-Caricetum firmae* var. *Primula halleri*
- 13 HdVggp *Homogyno discoloris-Vaccinietum gaultherioidis* var. *Gentiana pumila*
- 14 SpCrhd *Saussureo pygmaeae-Caricetum rupestris* var. *Homogyne discolor*
- 15 HdLpcf *Homogyno discoloris-Loiseleurietum procumbentis caricetosum firmae*
- 16 HdVgrc *Homogyno discoloris-Vaccinietum gaultherioidis* var. *Rhodothamnus chamaecistus*
- 17 AcEmvg *Achilleo clavennae-Elynetum myosuroidis* var. *Vaccinium gaultherioides*
- 18 AcEmcf *Achilleo clavennae-Elynetum myosuroidis* var. *Carex firma*
- 19 AcEmty *Achilleo clavennae-Elynetum myosuroidis* var. *typica*
- 20 HaVg *Homogyno alpinae-Vaccinietum gaultherioidis*
- 21 Dovv *Dryadetum octopetalae* var. *Vaccinium vitis-idaea*
- 22 Dods *Dryadetum octopetalae* var. *Daphne striata*
- 23 PvDova *Pulsatillo vernalis-Dryadetum octopetalae ericetosum carnea*
- 24 PvDoec *Pulsatillo vernalis-Dryadetum octopetalae vaccinietosum*
- 25 Docs *Dryadetum octopetalae* var. *Carex sempervirens*
- 26 SpCrsr *Saussureo pygmaeae-Caricetum rupestris* var. *Saxifraga retusa*
- 27 EhVg *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*
- 28 EhAa *Empetro-Arctostaphyletum alpinae* nom. prov.
- 29 SsCmds *Saxifrago squarrosae-Caricetum mucronatae* var. *Dianthus sylvestris*

These were mutually compared through hierarchical classification, which produced the following dendrogram (Figure 13):

The results demonstrate significant floristic similarity between alpine swards and heathlands on the ridges of the Julian Alps, where the classification into a specific association frequently largely depends on the cover value of edifier species. As our comparison took into consideration only species frequency (and not also the cover value) the different forms of the same association may group separately. One such example is the syntaxon *Saxifrago squarrosae-Caricetum mucronatae* var. *Dianthus sylvestris* with a floristic composition that stands out the most from all other compared communities, as well as some

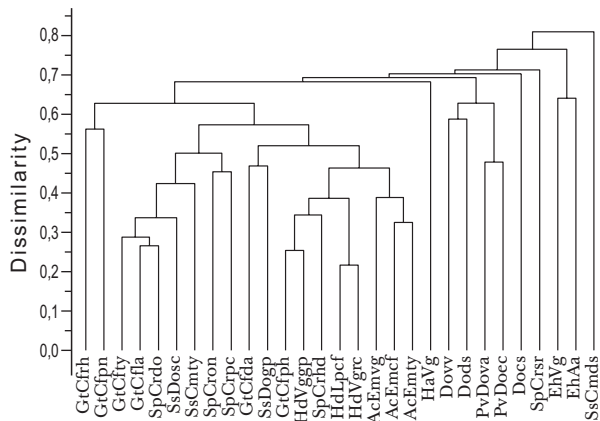


Figure 13: Dendrogram of syntaxa of alpine swards and heathlands in the Julian Alps (UPGMA, similarity ratio).

Slika 13: Dendrogram sintaksonov alpskih trat in resav v Julijskih Alpah (UPGMA, similarity ratio).

forms of the association *Saussureo-Caricetum rupestris*, but to a lesser extent. The results indicate that in terms of floristic composition the stands of *Gentiano terglouensis-Caricetum firmae*, the predominating alpine sward community on the ridges in the Julian Alps, bear the most similarity with the stands of the association *Seslerio sphaerocephalae-Dryadetum octopetalae* and some forms of associations *Saussureo-Caricetum rupestris* and *Saxifrago-Caricetum mucronatae*. The syntaxa of the association *Achilleo-Elynetum* form a separate cluster, grouping with the syntaxa of associations *Homogyno discoloris-Loiseleurietum* and *Homogyno discoloris-Vaccinietum gaultherioidis*. Stands of the association *Homogyno alpinae-Vaccinietum gaultherioidis* demonstrate a rather particular floristic composition. Stands of the association *Pulsatillo vernalis-Dryadetum octopetalae* also group separately, sharing the most similarities with different forms of the association *Dryadetum octopetalae*. The syntaxa *Empetro-Vaccinietum* and *Empetro-Arctostaphyletum* form a completely separate cluster. The described differences and similarities are accompanied by the analysis by the proportions of diagnostic species (Table 8), which we referred to already in our description of individual syntaxa.

Conclusions

Our analysis of more than 250 relevés provided an insight into the species composition and communities of alpine swards and heathlands that usually occur, in the Julian Alps and sporadically also in the Karavanke and Kamnik-Savinja Alps, on small areas and in special ecological conditions. For the most part they thrive on ex-

posed ridges, promontories and ledges. Even though they overgrow small areas they form a significant part of the diverse vegetation mosaic in the alpine belt of the South-eastern Alps. The newly described communities are the habitat of many species of conservation concern for Slovenia (Natura 2000, Red List, protected species – Čušin et al. 2004, Anon. 2002, 2004): *Arctostaphylos uva-ursi*, *Arnica montana*, *Artemisia nitida*, *Astragalus australis*, *Campanula barbata*, *C. zoysii*, *Carex curvula*, *Cerastium uniflorum*, *Chamorchis alpina*, *Coeloglossum viride*, *Dianthus sternbergii*, *D. sylvestris*, *Draba dubia*, *Elyna myosuroides*, *Festuca vivipara*, *F. varia*, *F. intercedens*, *Gentiana clusii*, *G. pannonica*, *Gymnadenia conopsea*, *G. odoratissima*, *Helictrotrichon versicolor*, *Huperzia selago*, *Juncus trifidus*, *Leontopodium alpinum*, *Lycopodium annotinum*, *Nigritella miniata* s. lat. (*N. bicolor*, *N. hygrophila*), *N. widderi*, *N. rhellicani*, *Pseudorchis albida*, *Primula auricula*, *P. minima*, *Pulsatilla alpina* subsp. *austroalpina*, *P. vernalis*, *Ranunculus alpestris*, *Saussurea alpina*, *Traunsteinera globosa* and *Trinia carniolica*. A large part of the study area is situated within the Triglav National Park. The studied alpine swards and heathlands are affected not only by the natural factors (including the increasing global warming of the atmosphere, low precipitation, including snowfall), but also by grazing of small ruminants (especially the summits of Tosc, Debeli vrh, Veliki Draški vrh, Špik) and by relatively numerous tourists visiting the area during the summer season.

Povzetek

Fitocenološka analiza alpskih trat in resav na grebenih v Julijskih Alpah (severozahodna Slovenija)

Z obdelavo več kot 250 fitocenoloških popisov smo dobili vpogled v vrstno sestavo in združbe alpskih trat in resav, ki se v Julijskih Alpah in ponekod v Karavankah in Kamniško-Savinjskih Alpah navadno pojavljajo na majhnih površinah, v posebnih ekoloških razmerah. Večinoma uspevajo na izpostavljenih grebenih, pomolih in policah. Kljub majhnim površinam, ki jih poraščajo, so pomemben del pisanega mozaika rastja v alpskem pasu Jugovzhodnih Alp. Opisali smo naslednje nove sintaksone: *Saxifraga squarrosae-Caricetum mucronatae*, *Saussureo pygmaeae-Caricetum rupestris*, *Seslerio sphaerocephalae-Dryadetum octopetalae*, *Homogyno discoloris-Loiseleurietum caricetosum firmae*, *Homogyno discoloris-Vaccinietum gaultheri-*

oidis, *Saxifraga paniculatae-Caricetum fuliginosae*, *Achilleo clavennae-Elynetum myosuroidis*, *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti* in *Homogyno alpinae-Vaccinietum gaultherioidis*.

V novo opisanih združbah uspeva precej v Sloveniji varstveno pomembnih vrst po različnih merilih (Natura 2000, Rdeči seznam, zavarovane vrste – Čušin et al. 2004, Anon. 2002, 2004): *Arctostaphylos uva-ursi*, *Arnica montana*, *Artemisia nitida*, *Astragalus australis*, *Campanula barbata*, *C. zoysii*, *Carex curvula*, *Cerastium uniflorum*, *Chamorchis alpina*, *Coeloglossum viride*, *Dianthus sternbergii*, *D. sylvestris*, *Draba dubia*, *Elyna myosuroides*, *Festuca vivipara*, *F. varia*, *F. intercedens*, *Gentiana clusii*, *G. pannonica*, *Gymnadenia conopsea*, *G. odoratissima*, *Helictrotrichon versicolor*, *Huperzia selago*, *Juncus trifidus*, *Leontopodium alpinum*, *Lycopodium annotinum*, *Nigritella miniata* s. lat. (*N. bicolor*, *N. hygrophila*), *N. widderi*, *N. rhellicani*, *Pseudorchis albida*, *Primula auricula*, *P. minima*, *Pulsatilla alpina* subsp. *austroalpina*, *P. vernalis*, *Ranunculus alpestris*, *Saussurea alpina*, *Traunsteinera globosa* in *Trinia carniolica*. Precejšen del raziskovanega območja je znotraj Triglavskega narodnega parka. Poleg naravnih dejavnikov (med njimi je v zadnjih letih gotovo tudi globalno segrevanje ozračja, manjša količina padavin, tudi snežnih) na preučene alpske trate in resave deloma vpliva paša drobnice (nekateri vrhovi, na primer Tosc, Debeli vrh, Veliki Draški vrh, Špik, so zelo popašeni) in razmeroma velik turistični obisk v poletni sezoni.

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Figures 14–25 (Photo: I. Dakskobler)



Figure 14 (Slika 14): *Saxifraga squarrosae-Caricetum mucronatae*.



Figure 15 (Slika 15): *Saussureo pygmaeae-Caricetum rupestris*.



Figure 16 (Slika 16): *Seslerio sphaerocephalae-Dryadetum octopetalae*.



Figure 17 (Slika 17): *Dryadetum octopetalae*.



Figure 18 (Slika 18): *Homogyno discoloris-Loiseleurietum caricetosum firmae*.



Figure 19 (Slika 19): *Homogyno discoloris-Vaccinietum gaultberoidis*.



Figure 20 (Slika 20): *Empetro-Arctostaphyletum alpinae* nom. prov.



Figure 21 (Slika 21): *Saxifrago paniculatae-Caricetum fuliginosae*.



Figure 22 (Slika 22): *Achilleo clavenmae-Elynetum myosuroidis*.



Figure 23 (Slika 23): *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*.



Figure 24 (Slika 24): *Homogyno alpinae-Vaccinietum gaultherioidis*.



Figure 25 (Slika 25): *Homogyno alpinae-Empetretum hermaphroditae* nom. prov.

		Successive number of relevé (Zaporedna številka popisov)																													
		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	Pr.	Fr.	
CFir	<i>Sesleria sphaerocephala</i>	.	+	.	.	.	.	.	.	.	.	+	.	.	1	+	1	1	.	2	.	+	+	+	.	.	1	+	12	44	
PS	<i>Saxifraga crustata</i>	+	+	.	1	+	.	+	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.	11	41	
CA	<i>Koeleria eriostachya</i>	.	+	.	.	.	.	+	1	.	2	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.	11	41	
CFir	Caricion firmae																														
	<i>Helianthemum alpestre</i>	.	.	.	+	+	1	+	+	1	3	1	1	1	.	+	.	.	+	.	+	1	+	+	1	2	1	+	21	78	
	<i>Carex firma</i>	.	.	.	+	.	.	.	.	.	1	1	+	1	2	1	3	2	.	+	1	1	2	.	.	.	+	.	14	52	
	<i>Dryas octopetala</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	1	+	.	1	2	.	.	+	.	.	.	.	1	r	9	33	
	<i>Pedicularis rostratocapitata</i>	.	.	.	.	.	+	.	.	1	.	.	.	.	.	.	.	.	1	1	1	1	1	.	+	.	.	.	8	30	
	<i>Phyteuma sieberi</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	+	+	+	.	.	.	6	22	
	<i>Chamorchis alpina</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	5	19	
	<i>Oxytropis neglecta</i>	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	.	5	19	
	<i>Silene acaulis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	+	+	.	.	.	5	19	
	<i>Pedicularis rosea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	4	15	
	<i>Saussurea pygmaea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	+	.	.	.	.	.	4	15	
	<i>Crepis kernerii</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	2	7
	<i>Festuca quadriflora</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Minuartia sedoides</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
	<i>Salix alpina</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
CA	Caricion austroalpinae																														
	<i>Carduus crassifolius</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	15
	<i>Laserpitium peucedanoides</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	15
	<i>Arabis vohinensis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Festuca calva</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Trifolium noricum</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Pulsatilla alpina</i> subsp. <i>austroalpina</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Trinia carnitolica</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	2	7
	<i>Gentiana lutea</i> subsp. <i>symphyandra</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
CF	Caricion ferrugineae																														
	<i>Cerastium subtriflorum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Gentiana pumila</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
OE	Oxytropido-Elymion																														
	<i>Gentiana nivalis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	11
	<i>Erigeron uniflorus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
	<i>Festuca intercedens</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
SV	Seslerietalia coeruleae																														
	<i>Gentiana clusii</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	19	70
	<i>Leontopodium alpinum</i>	.	.	+	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	1	+	2	1	.	.	15	56	
	<i>Achillea clavennae</i>	.	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	48
	<i>Erigeron glabratus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	11
	<i>Juncus monanthos</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Thesium alpinum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	7
	<i>Androsace villosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4
	<i>Galium anisophyllum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	4

Table 2 (Tabela 2): *Saussureo pygmaeae-Caricetum rupestris* ass. nov.

Successive number of relevé (Zaporedna številka popisa)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Database number of relevé (Delovna številka popisa)	244033	250657	213525	202953	250661	258863	217455	213363	213370	258115	213373	246649	258258	226383	
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	
Elevation in m (Nadmorska višina v m)	2390	2300	2380	1785	2030	2000	1900	2170	2215	2365	2220	2035	2095	2150	
Aspect (Lega)	N	SW	N	N	N	S	N	NE	NE	SSW	W	NE	SE	NE	
Slope in degrees (Nagib v stopinjah)	35	10	5	20	30	10	30	20	40	10	15	15	0-40	30	
Parent material (Matična podlaga)	DA	DA	A	DA	DA	DA	A	A	DA	A	DA	DA	A	DA	
Soil (Tla)	Li	Li	Li	Li	Re	Li	Li	Li	Li	Li	Li	Li	Li	Re	
Stoniness in % (Kamnitost v %)	30	50	10	5	5	10	10	30	10	20	10	0	100	0	
Cover of herb layer in % (Zastiranje zeliščne plasti v %): E1	70	50	80	95	95	90	90	60	80	80	90	100	40	100	
Cover of moss layer in % (Zastiranje mahovne plasti v %): E0	.	.	.	2	2	.	.	.	.	.	.	.	.	.
Number of species (Število vrst)	5	11	12	31	21	18	32	29	22	17	19	14	7	25	
Relevé area (Velikost popisne ploskve)	m ²	1	2	2	1,5	2	2	5	2	4	2	4	2	5	
Date of taking relevé (Datum popisa)	7/17/2012	10/18/2013	7/28/2005	8/13/2002	10/18/2013	6/30/2015	8/2/2007	8/9/2005	8/30/2005	8/31/2015	8/30/2005	9/14/2011	9/8/2015	7/30/2009	
Locality (Nahajališče)	Špik	Zadnji Vogel	Mangart	Črna prst -Zovh	Kreda	Veliki Draški vrh	Vodene rupe	Vršac	Vršac	Špičje - Goriški rob	Čelo	Peca - Velika glava	Srebrnjak	Prvi Vogel	
Quadrant (Kvadrant)	9548/4	9648/4	9547/4	9749/4	9648/4	9649/1	9648/4	9648/3	9648/3	9648/4	9648/3	9454/4	9648/1	9648/4	
Coordinate GK Y (D-48)	m	409267	408060	396955	418392	408786	414316	407668	403725	403663	405872	403442	483144	400269	
Coordinate GK X (D-48)	m	5145476	5133418	5145192	5121400	5132100	5135763	5132036	5133168	5132985	5134303	5132542	5151197	5137992	
Diagnostic species of the association (Diagnostične vrste asociacije)															
Cfir <i>Carex rupestris</i>	E1	3	2	3	4	2	3	1	3	4	3	4	4	3	4
SV <i>Gentiana clusii</i>	E1	+	+	+	+	+	.	.	+	.	.
Cfir <i>Saussurea pygmaea</i>	E1	+	.	+	.	+	+	.	.	+
ES <i>Euphrasia minima</i>	E1	+	1	+
ES <i>Aster bellidiastrum</i>	E1	1	+	+	.	.	.	+
JT <i>Thymus praecox subsp. polytrichus</i>	E1	+
LV <i>Rhodothamnus chamaecistus</i>	E1	.	.	.	1	2	1	1	+	1
EP <i>Arctostaphylos alpinus</i>	E1	.	.	.	1	3	3	.	+	.	.	.	+	.	.
MuA <i>Viola biflora</i>	E1	+	.	.	.	+	+	.	.
CFir <i>Caricetum firmae</i>															
<i>Carex firma</i>	E1	+	1	.	2	2	2	4	3	1	1	2	+	.	1
<i>Dryas octopetala</i>	E1	.	r	.	2	4	2	3	1	3	4	3	3	2	3

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	<i>Sesleria sphaerocephala</i>	E1	.	2	+	.	.	.	.	+	1	+	+	+	1	+
	<i>Helianthemum alpestre</i>	E1	.	.	.	.	+	.	.	.	1	1	.	+	.	+
	<i>Silene acaulis</i>	E1	.	.	.	.	+	1	+	+	.	.	.	.	.	.
	<i>Pedicularis rostratocapitata</i>	E1	.	.	.	.	.	1	+	+	.	.	+	.	.	+
	<i>Phyteuma sieberi</i>	E1	.	.	.	+	.	.	+	.	+	.	1	.	.	.
	<i>Oxytropis neglecta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca quadriflora</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Minuartia sedoides</i>	E1	+	.	+	.	.	.	.	.	.	.	+	+	.	.
	<i>Salix alpina</i>	E1	.	.	.	.	.	.	.	.	+	.	+	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia gerardii</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana terglouensis</i>	E1	.	r	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Primula halleri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Crepis kernerii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
OE	Oxytropido-Elymion															
	<i>Lloydia serotina</i>	E1	.	.	+	.	.	.	.	+	.	.	1	.	.	.
	<i>Elyna myosuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Antennaria carpatica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex atrata</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Gentiana nivalis</i>	E1	.	.	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Saussurea alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CA	Caricion austroalpinae															
	<i>Koeleria eriostachya</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Arabis vochinensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CF	Caricion ferrugineae															
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hedysarum hedysaroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis rostratospicata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SV	Seslerietalia coeruleae															
	<i>Leontopodium alpinum</i>	E1	.	.	.	.	.	.	.	1	.	.	.	.	.	1
	<i>Potentilla crantzii</i>	E1	.	.	.	.	.	.	.	+	.	+	.	.	.	.
	<i>Achillea clavennae</i>	E1	.	.	.	r	+	.	.	.	.	.	.	.	.	.
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Galium anisophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex mucronata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Androsace villosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella hygrophila</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella widderi</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ES	<i>Elyno-Seslerietea</i>															
	<i>Polygonum viviparum</i>	E1	1	.	1	+	+	+	1	1	1	.	1	.	.	+
	<i>Agrostis alpina</i>	E1	.	.	.	.	1	+	+	.	.	.	.	.	.	+
	<i>Sesleria caerulea</i>	E1	.	.	.	1	1	.	+	.	.	.	.	.	.	.
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	.	.	.	.	1	+	.	+	.	.	.	.	+
	<i>Homogyne discolor</i>	E1	.	.	.	1	2	1	1	.	.	.	.	.	.	1
	<i>Selaginella selaginoides</i>	E1	.	.	.	1	+	1	1	+	.	.	.	.	.	+
	<i>Gentianella anisodonta</i>	E1	.	.	.	r	.	.	.	.	.	+	+	.	.	.
	<i>Bartsia alpina</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Astrantia bavarica</i>	E1	.	.	.	1	.	+	+	.	.	.	.	.	.	.
	<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis verticillata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex sempervirens</i>	E1	.	.	.	r	.	+	.	.	.	.	.	.	.	.
	<i>Euphrasia salisburgensis</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.	+	.
	<i>Gentiana verna</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Globularia cordifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium strictum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium pilosum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Nigritella rhellicani</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla glaucescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Anemone narcissiflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Phyteuma orbiculare</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CC	<i>Caricetalia curvulae</i>															
	<i>Primula minima</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	+	.
NS	<i>Nardion strictae</i>															
	<i>Coeloglossum viride</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nigrescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
JT	<i>Juncetea trifidi</i>															
	<i>Campanula scheuchzeri</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Potentilla aurea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontodon helveticus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula spicata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Agrostis rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Anthoxanthum nipponicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	.	.	r	.	.	.
LV	<i>Loiseleurio-Vaccinietea</i>															
	<i>Vaccinium gaultherioides</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.	.	+
	<i>Loiseleuria procumbens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Juniperus sibirica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14
AC	Arabidetalia caeruleae (inc. Salicetea herbaceae)														
	<i>Salix retusa</i>	E1	.	r	.	.	.	.	+	1	1	+	1	.	.
	<i>Soldanella alpina</i>	E1	.	.	.	+	+	.	1	.	.	.	.	.	.
	<i>Salix serpyllifolia</i>	E1	.	.	3	.	.	.	.	.	.	.	.	.	.
	<i>Galium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex parviflora</i>	E1	.	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Doronicum glaciale</i>	E1	.	.	1	.	.	.	.	.	+	.	.	.	.
	<i>Carex ornithopodoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	r
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla fissa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga androsacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Soldanella minima</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.
TR	Thlaspietea rotundifolii														
	<i>Petrocallis pyrenaica</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa minor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	+	.	.	.	.	.	+	.	.	.	.
MC	Saxifraga aizoides	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Armeria alpina</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	1
	<i>Rhodiola rosea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga caesia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Saxifraga sedoides</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Sedum atratum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nitida</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Heliosperma alpestre</i>	E1	.	.	.	.	.	.	.	.	1	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.
PS	Phyteumato-Saxifragion petraeae														
	<i>Saxifraga squarrosa</i>	E1	.	1	.	.	.	.	.	.	+	.	+	.	+
	<i>Potentilla nitida</i>	E1	1	2	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga crustata</i>	E1	.	.	.	.	.	.	.	+	.	.	+	1	+
	<i>Saxifraga burseriana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula zoysii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
PC	Potentilletalia caulescentis														
	<i>Eritrichium nanum</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Arabis bellidifolia</i> subsp. <i>stellulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Campanula cochlearifolia</i>	E1	.	.	.	r	.	.	.	+	.	.	.	.	.
	<i>Dianthus sylvestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Draba aizoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	.	.	+	.	.	.	.	.	+	.	+	.	.
	<i>Potentilla clusiana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	.
	<i>Primula auricula</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	1
	<i>Valeriana saxatilis</i>	E1	.	.	.	1	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
AT	<i>Asplenietea trichomanis</i>															
	<i>Draba dubia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga paniculata</i>	E1	.	.	2	.	.	.	.	+	1	+	.	.	.	.
CD	<i>Caricetalia davallianae</i>															
	<i>Carex capillaris</i>	E1	.	.	.	.	.	.	+	1	.	+	.	.	.	.
	<i>Parnassia palustris</i>	E1	.	.	.	.	.	.	+	.	.	.	+	.	.	+
	<i>Pinguicula alpina</i>	E1	.	.	.	r	.	.	+	.	.	.	.	.	.	+
	<i>Tofieldia calyculata</i>	E1	.	.	.	+	.	.	1	.	.	.	.	.	.	+
	<i>Gentiana utriculosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>															
	<i>Poa alpina</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Leontodon hispidus</i>	E1	.	.	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Euphrasia picta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
RE	<i>Rhododendro hirsuti-Ericetalia carnea</i>															
	<i>Rhododendron hirsutum</i>	E1	.	.	.	1	2	.	1	.	.	.	.	.	.	.
	<i>Erica carnea</i>	E1	.	.	.	r	.	.	.	.	.	.	.	.	.	.
	<i>Pinus mugo</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.
EP	<i>Erico-Pinetea</i>															
	<i>Carex ornithopoda</i>	E1	.	.	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Chamaecytisus hirsutus</i>	E1	.	.	.	+	.	.	.	.	.	.	.	.	.	.
VP	<i>Vaccinio-Piceetea</i>															
	<i>Vaccinium vitis-idaea</i>	E1	.	.	.	+	1	.	.	.	.	.	.	.	.	.
	<i>Huperzia selago</i>	E1	.	.	.	+	.	.	+	.	.	.	.	.	.	.
	<i>Vaccinium myrtillus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
O	Other species (Ostale vrste)															
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)															
	<i>Tortella</i> sp.	E0	.	.	.	.	.	.	.	+	+	.	+	.	.	.
	<i>Thamnolia vermicularis</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Tortella tortuosa</i>	E0	.	.	.	.	+	.	.	.	.	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Ctenidium molluscum</i>	E0	.	.	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum scoparium</i>	E0	.	.	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Polytrichum alpinum</i>	E0	.	.	.	r	.	.	.	.	.	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.

	45	46	47	48	49	50	51	52	53	54	55	56	57
Successive number of relevé (Zaporedna številka popisa)	45	46	47	48	49	50	51	52	53	54	55	56	57
Database number of relevé (Delovna številka popisa)	217453	258113	241833	258623	241891	241825	241154	241828	258265	249413	249415	259700	259698
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	TW	TW	
Elevation in m (Nadmorska višina v m)	2300	2380	2340	2320	2300	2340	2080	2340	2085	2220	2230	2240	2248
Aspect (Lega)	E	SW	NW	0	S	NWW	NEE	S	S	S	S	0	0
Slope in degrees (Nagib v stopinjah)	5	10	2	0	10	25	35	0-10	40	30	10	0-10	0-10
Parent material (Matična podlaga)	A	A	DA	DA	A	DA	DA	DA	A	A	A	A	A
Soil (Tla)	Li	Li	Li	Li	Li	Li	Li	Li	Li	Li	Li	Li	Li
Stoniness in % (Kamnitost v %)	5	20	5	10	10	10	20	40	70	40	40	50	60
Cover of herb layer in % (Zastiranje zeliščne plasti v %):	E1	90	80	95	80	90	90	80	60	30	60	60	40
Cover of moss layer in % (Zastiranje mahovne plasti v %):	E0	.	.	.	.	.	.	.	.	.	.	.	.
Number of species (Število vrst)	20	12	12	12	19	25	15	17	13	21	16	19	10
Relevé area (Velikost popisne ploskve)	m ²	4	1	1	2	2	2	1	4	2	1	1	6
Date of taking relevé (Datum popisa)	8/2/2007	8/31/2015	8/21/2011	10/2/2015	8/10/2011	8/21/2011	7/13/2011	8/21/2011	9/8/2015	8/8/2013	8/8/2013	8/6/1983	8/6/1983
Locality (Nahajališče)		Zelharica	Malo Špije	Plaski Vogel	Rezija - Sart	Križ	Plaski Vogel	Koštrunovec	Plaski Vogel	Srebrnjak	Mangart - Jarečica	Mangart - Jarečica	Mangart - Jarečica
Quadrant (Kvadrant)		9648/4	9648/4	9648/4	9646/1	9548/4	9648/4	9649/1	9648/4	9648/1	9547/4	9547/4	9547/4
Coordinate GK Y (D-48)	m	407326	405419	404140	377260	408580	404197	411430	404195	400337	396487	396490	396522
Coordinate GK X (D-48)	m	5133932	5134022	5133420	5138856	5141416	5133515	5135198	5133485	5138048	5144384	5144463	5144542
Diagnostic species of the association (Diagnostične vrste asociacije)													
Cfir	<i>Carex rupestris</i>	E1	4	3	4	4	3	4	4	3	3	3	3
SV	<i>Gentiana clusii</i>	E1	1	.	.	.	+	r	+	+	.	.	.
Cfir	<i>Saussurea pygmaea</i>	E1	.	.	.	.	.	+	.	.	.	.	r
ES	<i>Euphrasia minima</i>	E1	+	+	+	+	.	+	.	+	.	.	.
ES	<i>Aster bellidiastrum</i>	E1	.	+	.	.	.	+	.	.	.	.	.
JT	<i>Thymus praecox subsp. polytrichus</i>	E1	+	1	.	.	.	.	+	.	.	.	.
LV	<i>Rhodothamnus chamaecistus</i>	E1	.	.	.	.	.	.	1	.	1	.	.
EP	<i>Arctostaphylos alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
MuA	<i>Viola biflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CFir	<i>Caricetum firmae</i>												
	<i>Carex firma</i>	E1	2	2	+	1	2	1	1	+	1	.	.
	<i>Dryas octopetala</i>	E1	+	.	+	.	.	.	.	1	+	.	+
	<i>Sesleria sphaerocephala</i>	E1	+	.	1	.	+	2	+	1	1	+	+
	<i>Helianthemum alpestre</i>	E1	1	1	+	.	.	+	+	.	.	1	1
	<i>Silene acaulis</i>	E1	.	1	.	1	+	+	.	+	.	+	+
	<i>Pedicularis rostratocapitata</i>	E1	.	.	.	.	.	+	.	.	.	.	.

58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85			
249416	253935	249417	253936	250785	249418	259702	226406	226419	212131	229468	230369	229467	258857	217439	217440	217444	217449	246655	226728	238449	217454	226417	250913	257636	249291	226420	226421			
ID	ID	ID	ID	ID	ID	TW	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID		
2230	2230	2240	2243	2295	2250	2240	2370	2360	1880	1910	2020	1900	2035	1636	1635	1635	1900	2080	1510	1510	2300	2360	2260	2110	2031	2290	2290			
SSW	0	E	N	SW	S	SE	SW	S	W	W	S	NW	S	W	N	SE	NE	NE	N	N	E	SE	NW	SW	SEE	W	E			
10	0-5	50	35	5	20	45	5	5	45	20	5	15	10	20	15	20	25	15	10	10	5	5	25	5	25	5	5			
A	A	A	A	A	A	A	DA	DA	DA	DA	DA	DA	DA	A	A	A	A	DA	DA	A	A	DA	DA	DA	DA	A	A			
Li	Li	Li	Li	Li	Li	Li	Re	Re	Li	Li	Re	Li	Li	Li	Li	Li	Li	Li	Re	Li	Li	Re	Li	Re	LI	Re	Re			
30	30	30	20	10	30	40	5	20	30	30	20	30	40	0	20	10	5	20	0	0	5	20	5	0	5	20	5			
70	70	70	80	90	70	60	90	80	70	70	80	70	40	90	80	90	90	80	100	100	90	80	95	100	95	80	95			
.	10	20	10	10	5		
17	15	22	19	22	22	14	21	27	23	21	26	16	9	17	14	13	33	14	11	8	22	22	20	22	42	33	35			
1	1	2	1	1	2	8	4	5	5	2	5	2	2	5	5	5	5	2	3	1	4	5	3	2	4	10	10			
8/8/2013	8/6/2014	8/8/2013	8/6/2014	7/31/2013	8/8/2013	8/9/1983	7/29/2009	7/29/2009	9/12/2006	7/17/2009	7/14/2009	7/17/2009	6/30/2015	7/25/2007	7/25/2007	7/25/2007	7/25/2007	9/14/2011	9/7/2009	6/30/2010	8/2/2007	7/29/2009	7/17/2013	8/1/2015	7/18/2013	7/29/2009	7/29/2009			
Mangart-Jarečica	Mangart-Jarečica	Mangart-Jarečica	Mangart-Jarečica	Črnelska špica	Mangart-Jarečica	Mangart-Rdeča glava	Debeli vrh	Debeli vrh	Klečica nad Klekom	Klečica nad Klekom	Peca	Klečica nad Klekom	Viševnik	Za Grivo	Za Grivo	Za Grivo	Vodene rupe	Peca - Velika glava	Pl. Klek	Pl. Klek	Zelharica	Debeli vrh	Mišeljska glava	Spodnje Ledine	Lazovski preval	Debeli vrh	Debeli vrh			
9547/4	9547/4	9547/4	9547/4	9647/1	9547/4	9547/4	9648/4	9648/4	9649/2	9649/2	9554/2	9649/2	9649/1	9648/4	9648/4	9648/4	9648/4	9454/4	9649/2	9649/2	9648/4	9648/4	9648/2	9649/1	9648/4	9648/4	9648/4			
396494	396491	396516	396518	386041	396538	395946	409153	409446	418892	418886	483760	418890	415537	408523	408529	408529	407665	482867	420449	420447	407345	409294	410158	410756	410124	409583	409594			
5144471	5144466	5144551	5144556	5138004	5144580	5145159	5133594	5133599	5139541	5139530	5150510	5139544	5155592	5130184	5130188	5130170	5132044	5151203	5139261	5139259	5133944	5133642	5135227	5136449	5133595	5133592	5133596			
4	4	4	4	3	3	3	3	4	4	3	4	3	3	3	4	5	4	4	4	5	1	4	3	4	4	3	1	85	100	
.	+	r	.	+	+	.	+	+	+	+	+	40	47
+	.	1	+	.	.	r	.	1	+	+	1	.	.	.	.	.	+	.	.	.	+	1	.	+	+	+	+	34	40
.	.	.	.	.	.	.	.	.	.	+	1	.	.	.	.	.	.	.	1	.	.	+	+	.	.	1	1	26	31
.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	1	1	26	31
.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	24	28
.	1	19	22
.	1	19	22
.	.	+	+	1	.	.	2	+	.	.	1	1	+	.	.	.	1	1	+	.	2	2	2	+	+	+	1	69	81	
+	+	.	.	1	2	.	.	.	+	+	+	1	.	3	+	1	3	3	.	.	+	1	2	.	+	2	1	63	74	
2	1	2	2	+	2	.	+	1	1	1	.	1	1	.	.	.	.	.	.	.	.	1	1	.	.	.	.	55	65
1	1	1	1	1	1	1	1	+	2	+	+	.	.	.	.	.	.	.	.	.	+	+	.	.	+	1	+	50	59
.	.	+	+	.	+	.	2	+	.	+	+	.	.	.	.	.	.	.	.	.	.	1	2	.	+	+	+	30	35
.	+	.	.	+	.	.	1	+	+	+	+	+	.	.	.	.	.	.	.	.	.	1	.	1	+	+	+	28	33
Pr.	Fr.																													

Successive number of relevé (Zaporedna številka popisa)		45	46	47	48	49	50	51	52	53	54	55	56	57
	<i>Phyteuma sieberi</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Oxytropis neglecta</i>	E1	.	+	+	.	.	+	.	.	.	+	+	.
	<i>Festuca quadriflora</i>	E1	+	.	.	.	1	.	.	.	.	.	.	+
	<i>Minuartia sedoides</i>	E1	.	.	.	1	+	.	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia gerardii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana terglouensis</i>	E1	.	.	.	.	.	r	.	.	.	.	.	.
	<i>Primula halleri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Crepis kernerii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
OE	Oxytropido-Elynion													
	<i>Lloydia serotina</i>	E1	.	.	.	.	.	.	.	.	.	.	+	+
	<i>Elyna myosuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Antennaria carpatica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	+	.	.	.	.	.	+	+	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Carex atrata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana nivalis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
CA	Caricion austroalpinae													
	<i>Koeleria eriostachya</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Arabis vochinensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
CF	Caricion ferrugineae													
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Hedysarum bedysaroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis rostratospicata</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
SV	Seslerietalia coeruleae													
	<i>Leontopodium alpinum</i>	E1	+	.	.	.	.	.	1	+	+	1	+	+
	<i>Potentilla crantzii</i>	E1	.	.	+	.	+	.	.	.	.	.	.	.
	<i>Achillea clavennae</i>	E1	.	.	.	.	.	+	.	.	.	+	.	+
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Galium anisophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex mucronata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Androsace villosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella hygrophila</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella widderi</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
ES	Elyno-Seslerietea													
	<i>Polygonum viviparum</i>	E1	1	1	1	1	1	+	+	+	.	+	+	+
	<i>Agrostis alpina</i>	E1	1	.	+	+	1	+	1	+	.	+	+	.
	<i>Sesleria caerulea</i>	E1	+	.	.	.	+	.	.	.	.	+	+	.
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	.	.	.	.	.	+	+	+	+	.	.
	<i>Homogyne discolor</i>	E1	.	.	.	.	.	+	.	.	.	.	.	.

58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	Pr.	Fr.
+	.	+	.	.	1	.	+	+	1	1	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	27	32
+	+	+	+	+	+	1	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	19	22
.	+	1	+	.	.	.	+	.	.	.	.	.	.	17	20
.	.	.	.	+	.	.	+	1	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	17	20
.	+	.	+	.	1	.	.	+	1	.	.	.	.	.	.	.	10	12
.	.	r	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	9
.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	7	8
.	+	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	6
.	3	4
.	r	.	.	.	3	4
.	+	.	.	2	2
.	.	.	.	+	1	1
.	+	+	.	+	+	.	.	+	+	.	+	.	.	15	18
+	.	.	+	.	2	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	9	11
.	+	+	+	1	.	2	.	2	8	9
.	2	.	.	.	.	.	7	8
.	.	.	.	+	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	5
.	+	+	3	4
.	3	4
.	2	2
.	7	8
.	1	1
.	.	.	.	+	.	.	1	1	.	.	.	.	.	.	.	.	r	.	.	.	.	.	+	.	.	+	1	11	13
.	+	+	2	2
.	1	1
+	+	1	+	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	29	34
.	+	+	.	.	.	2	+	1	+	.	1	1	+	.	.	.	.	.	16	19	
.	+	+	14	16
.	+	+	+	.	8	9
.	+	4	5
.	3	4
.	+	.	.	2	2
.	+	+	2	2
.	+	+	.	2	2
.	1	1
.	1	1
.	1	1
.	1	1
+	+	1	+	1	1	1	.	2	.	.	1	.	.	1	1	1	1	+	.	.	1	1	1	1	1	1	1	65	76
+	.	+	+	1	.	.	2	+	.	+	+	.	.	+	+	.	1	1	.	.	3	+	3	3	1	+	1	45	53
.	.	r	+	.	+	.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	1	+	+	+	.	+	+	37	44
.	1	1	+	20	24
.	+	+	3	1	.	+	+	18	21

Successive number of relevé (Zaporedna številka popisa)		45	46	47	48	49	50	51	52	53	54	55	56	57
	<i>Selaginella selaginoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentianella anisodonta</i>	E1	.	.	+	1	.	.	.	.	.	.	.	.
	<i>Bartsia alpina</i>	E1	.	.	.	.	1	.	.	.	.	.	.	.
	<i>Astrantia bavarica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis verticillata</i>	E1	.	.	+	.	.	+	.	.	.	.	.	.
	<i>Carex sempervirens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Euphrasia salisburgensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana verna</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Globularia cordifolia</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Cerastium strictum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium pilosum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella rhellicani</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla glaucescens</i>	E1	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Anemone narcissiflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Phyteuma orbiculare</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
CC	Caricetalia curvulae													
	<i>Primula minima</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
NS	Nardion strictae													
	<i>Coeloglossum viride</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nigrescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
JT	Juncetea trifidi													
	<i>Campanula scheuchzeri</i>	E1	+	.	.	+	.	.	.	.	.	.	.	E1
	<i>Potentilla aurea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontodon helveticus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula spicata</i>	E1	.	.	.	+	.	.	.	.	.	.	.	.
	<i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Agrostis rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Anthoxanthum nipponicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
LV	Loiseleurio-Vaccinietea													
	<i>Vaccinium gaultherioides</i>	E1	+	.	.	.	+	.	.	.	.	.	.	.
	<i>Loiseleuria procumbens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Juniperus sibirica</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
AC	Arabidetalia caeruleae (inc. Salicetea herbaceae)													
	<i>Salix retusa</i>	E1	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Soldanella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix serpyllifolia</i>	E1	.	1	.	.	.	1	.	.	.	.	.	.
	<i>Galium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex parviflora</i>	E1	.	.	.	.	+	+	.	.	.	.	.	.
	<i>Doronicum glaciale</i>	E1	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Carex ornithopodoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla fissa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		45	46	47	48	49	50	51	52	53	54	55	56	57
	<i>Ranunculus alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga androsacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Soldanella minima</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
TR	<i>Thlaspietea rotundifolii</i>													
	<i>Petrocallis pyrenaica</i>	E1	1	+	.	.	.	.	.	.	+	.	.	.
	<i>Poa minor</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
MC	<i>Saxifraga aizoides</i>	E1	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Armeria alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhodiola rosea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga caesia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga sedoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Sedum atratum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nitida</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Heliosperma alpestre</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
PS	<i>Phyteumato-Saxifragion petraeae</i>													
	<i>Saxifraga squarrosa</i>	E1	.	+	.	.	.	.	.	+	1	+	+	.
	<i>Potentilla nitida</i>	E1	.	.	.	.	+	.	.	+	+	+	1	1
	<i>Saxifraga crustata</i>	E1	.	.	.	.	.	.	.	+	.	+	.	.
	<i>Saxifraga burseriana</i>	E1	.	.	.	.	.	.	.	.	.	+	.	.
	<i>Campanula zoyzii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
PC	<i>Potentilletalia caulescentis</i>													
	<i>Eritrichium nanum</i>	E1	.	.	.	.	.	.	.	.	.	.	+	1
	<i>Arabis bellidifolia</i> subsp. <i>stellulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula cochleariifolia</i>	E1	.	.	.	.	.	.	.	.	.	r	.	.
	<i>Dianthus sylvestris</i>	E1	.	.	.	.	.	.	+	.	.	1	.	.
	<i>Draba aizoides</i>	E1	.	.	.	.	.	.	.	.	.	.	+	+
	<i>Festuca alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Potentilla clusiana</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Primula auricula</i>	E1	.	.	.	.	.	.	1	+	.	+	.	.
	<i>Valeriana saxatilis</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
AT	<i>Asplenietea trichomanis</i>													
	<i>Draba dubia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga paniculata</i>	E1	.	.	.	.	.	.	.	+	.	.	+	1
CD	<i>Caricetalia davallianae</i>													
	<i>Carex capillaris</i>	E1	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Parnassia palustris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pinguicula alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Tofieldia calyculata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana utriculosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>													
	<i>Poa alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	2
	<i>Leontodon hispidus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Euphrasia picta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
RE	<i>Rhododendro hirsuti-Ericetalia carnea</i>													
	<i>Rhododendron hirsutum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.

58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	Pr.	Fr.	
.	1	1	
.	+	1	1
.	1	1
.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	.	14	16	
.	+	+	5	6
.	+	4	5
.	r	+	3	4
.	+	.	.	.	2	2
.	2	2
.	+	+	2	2
.	+	2	2
.	2	2
.	2	2
.	1	1
.	1	1
.	1	1
.	+	1	1	+	1	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	25	29
+	.	+	+	1	+	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	20	24
+	+	+	16	19	
+	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	5	
.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	
.	.	+	+	+	7	8	
.	1	1	
+	+	.	.	.	r	+	.	.	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14	16
.	3	4	
.	2	2	
.	1	.	.	.	.	.	.	.	.	+	.	.	.	.	.	11	13	
.	+	3	2	+	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	13	
.	+	.	.	.	+	+	.	.	12	14	
.	+	+	.	+	6	7	
.	+	1	1	
+	+	+	+	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	19	22	
.	+	+	2	+	1	+	.	.	.	.	+	.	.	.	.	15	18		
.	+	+	+	9	11		
.	+	r	.	.	.	.	.	.	.	r	.	9	11		
.	+	6	7		
.	2	2		
.	.	.	.	+	+	+	+	1	+	+	+	+	+	.	.	.	+	.	.	.	.	.	.	.	.	.	14	16	
.	+	1	+	1	7	8	
.	+	1	1		
.	+	1	.	.	.	6	7		

Successive number of relevé (Zaporedna številka popisa)		45	46	47	48	49	50	51	52	53	54	55	56	57
	<i>Erica carnea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pinus mugo</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
EP	Erico-Pinetea													
	<i>Carex ornithopoda</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Chamaecytisus hirsutus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
VP	Vaccinio-Piceetea													
	<i>Vaccinium vitis-idaea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Huperzia selago</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Vaccinium myrtillus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
O	Other species (Ostale vrste)													
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia</i> sp.	E1	.	.	.	.	+	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)													
	<i>Tortella</i> sp.	E0	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Thamnia vermicularis</i>	E0	.	.	.	.	.	.	.	.	.	+	.	.
	<i>Tortella tortuosa</i>	E0	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ctenidium molluscum</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum scoparium</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Polytrichum alpinum</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.

Legend – Legenda

ID	Igor Dakskobler
TW	Tone Wraber
A	Limestone – apnenec
D	Dolomite – dolomit
Li	Lithosol – kamnišče
Re	Rendzina – rendzina
MC	Montio-Cardaminetea

58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	Pr.	Fr.	
.	+	2	2	
.	1	1	
.	+	.	.	+	1	.	1	6	7
.	1	1	
.	+	.	+	2	.	.	.	.	.	.	.	.	.	10	12	
.	+	6	7	
.	2	2	
.	1	.	.	1	1	
.	+	1	1	
.	1	1	
.	.	.	.	+	.	.	.	+	1	.	.	.	.	.	.	1	.	.	.	.	.	+	.	.	.	.	.	14	16
+	+	.	1	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	7
.	6	7	
.	+	.	+	4	5	
.	1	1	
.	1	1	
.	1	1	
.	1	1	
.	1	1	

Table 3 (Tabela 3): *Achilleo clavannae-Elynetum myosuroidis* ass. nov.

Successive number of relevé (Zaporedna številka popisa)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Database number of relevé (Delovna številka popisa)	244441	217546	220782	259703	244590	244446	244454	244451	244458	244447	254633	258321	219666	220780	220781	226470	241161	
Author of relevé (Avtor popisa)	ID	ID	ID	TW	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	
Elevation in m (Nadmorska višina v m)	2100	2010	2170	2158	2320	2180	2130	2160	2095	2180	2110	2115	2200	2140	2150	2200	2080	
Aspect (Lega)	E	W	SW	0	S	E	SW	NE	W	NE	SW	SW	SW	SSW	NW	E	0	
Slope in degrees (Nagib v stopinjah)	30	5	5	5	25	20	15	20	30	15	35	35	5	10	5	10	0	
Parent material (Matična podlaga)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	DA	DA	
Soil (Tla)	Re	Li	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Li	Re	
Stoniness in % (Kamnitost v %)	20	20	5	10	5	30	30	5	20	10	20	10	0	20	0	10	0	
Cover of herb layer in % (Zastiranje zeliščne plasti v %) E1	80	80	90	90	95	70	70	95	80	90	80	90	100	80	100	90	100	
Number of species (Število vrst)	49	23	26	29	23	24	33	34	48	32	31	32	25	23	24	26	26	
Relevé area (Velikost popisne ploskve) m ²	10	10	5	3	4	2	5	5	10	2	3	5	10	10	5	5	10	
Date of taking relevé (Datum popisa)	8/17/2012	8/3/2007	9/11/2008	8/9/1983	8/30/2012	8/17/2012	8/17/2012	8/17/2012	8/17/2012	8/17/2012	10/3/2014	9/12/2015	8/22/2008	9/11/2008	9/11/2008	8/17/2009	7/13/2011	
Locality (Nahajališče)	Bavh	Pod Vrsaki	Kaninski pod	Mangart - Sedelce - Visoka Špica	Hudi vršič	Bavh	Vrh Goleževce	Vrh Goleževce	Bedinji vrh	Bavh	Mali Bedinji vrh - Konjska škrbina	Bedinji vrh	Kaninski pod	Kaninski pod	Kaninski pod	Montraž - Pecol	Koštrunovec	
Quadrant (Kvadrant)	9547/4	9648/4	9646/2	9547/4	9647/1	9547/4	9547/4	9547/4	9547/4	9547/4	9547/4	9547/4	9646/2	9646/2	9646/2	9546/4	9649/1	
Coordinate GK Y (D-48) m	5141322	397098	407533	382390	395323	385625	396981	396704	396753	396556	396965	396235	382396	382352	382375	379938	411411	
Coordinate GK X (D-48) m	5134513	5135288	5145102	5138075	5141282	5141163	5141217	5141008	5141284	5140710	5140706	5135308	5135188	5135260	5144131	5135386		
Diagnostic species of the association (Diagnostične vrste asociacije)																		
OE <i>Elyna myosuroides</i>	E1	3	3	4	4	3	3	4	3	4	4	3	3	4	3	3	4	3
JT <i>Euphrasia minima</i> (inc. <i>E. pulchella</i>)	E1	1	+	+	.	1	+	+	+	+	+	+	.	+	.	1	.	
SV <i>Achillea clavannae</i>	E1	1	2	+	1	1	1	1	1	.	1	1	1	+	1	2	.	
Cfir <i>Carex firma</i>	E1	.	.	.	.	.	.	+	.	.	.	.	2	3	2	1	.
Cfir <i>Oxytropis neglecta</i>	E1	1	.	1	+	.	.	.	+	.	.	.	.	.	+	+	1
ES <i>Aster bellidiastrum</i>	E1	.	.	+	+	1	.	.	.	1	.	+	1	1	1	+	.	
Cfir <i>Sesleria sphaerocephala</i>	E1	.	.	+	.	.	.	.	.	.	+	.	.	+	+	.	.
ES <i>Homogyne discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cfir <i>Saussurea pygmaea</i>	E1	.	.	+	.	.	.	.	.	.	.	.	.	1	+	.	+
CA <i>Koeleria eriostachya</i>	E1	.	.	.	+	.	.	+	.	1	.	.	.	.	.	+	1
OE <i>Oxytropido-Elynetum</i>																		
<i>Antennaria carpatica</i>	E1	+	.	.	.	.	+	+	1	+	.	.	+	.	+	.	+
<i>Erigeron uniflorus</i>	E1	+	.	+	.	.	1	+	+	+	.	+	+	+	+	.	1	
<i>Carex atrata</i>	E1	1	+	.	.	.	.	+	.	+	+	+	+	.	.	.	.
<i>Gentiana nivalis</i>	E1	.	.	.	.	+	.	.	.	.	.	.	.	.	.	1	.
<i>Lloydia serotina</i>	E1	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca intercedens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cfr	<i>Caricion firmae</i>																		
	<i>Dryas octopetala</i>	E1	2	.	.	1	.	+	.	1	2	1	1	+	1	1	2	1	3
	<i>Silene acaulis</i>	E1	+	.	+	.	.	+	1	1	1	.	1	+	1	1	+	1	+
	<i>Helianthemum alpestre</i>	E1	.	1	1	1	.	1	.	.	.	.	1	+	+	2	+	+	+
	<i>Minuartia sedoides</i>	E1	.	.	+	.	.	.	.	+	+	+	+	+	.	+	.	.	.
	<i>Festuca quadriflora</i>	E1	.	.	.	.	.	+	+	+	+	1	.	1	+	.	1	+	.
	<i>Pedicularis rostratocapitata</i>	E1	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+
	<i>Phyteuma sieberi</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Carex rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	.	.	.	.	.	.	r	.	.	.	.	.	.	+	.
	<i>Primula halleri</i>	E1	+	.	.	.	.	.	.	r	.	.	.	.	.	.	.	+	.
	<i>Minuartia gerardii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana terglouensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CA	<i>Caricion austroalpiniae</i>																		
	<i>Arabis vochinensis</i>	E1	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.
CF	<i>Caricion ferrugineae</i>																		
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	+	.	.	1	.	.	.
	<i>Hedysarum hedysaroides</i>	E1	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.
	<i>Cerastium subtriflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Pedicularis rostratospicata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SV	<i>Seslerietalia coeruleae</i>																		
	<i>Potentilla crantzii</i>	E1	1	.	2	1	1	+	.	.	1	+	1	+	1	.	.	.	.
	<i>Leontopodium alpinum</i>	E1	1	.	.	.	.	.	.	.	.	.	.	+	.	.	1	.	1
	<i>Gentiana clusii</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Juncus monanthos</i>	E1	.	+	+	.	.	.	.	.	.	.	.	.	.	+	.	+	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Galium anisophyllum</i>	E1	.	+	+	.	+	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Festuca norica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Gentiana orbicularis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Thesium alpinum</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ES	<i>Elyno-Seslerietea</i>																		
	<i>Polygonum viviparum</i>	E1	1	.	+	1	.	+	1	1	1	.	1	1	.	+	1	1	.
	<i>Agrostis alpina</i>	E1	.	2	2	2	1	+	1	.	+	1	.	+	1	.	+	.	3
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	1	+	3	+	2	1	1	1	1	+	.	.	.	+	.	.	+
	<i>Sesleria caerulea</i>	E1	1	.	+	+	1	+	+	.	.	.	.	.	1	1	.	.	.
	<i>Gentianella anisodonta</i>	E1	1	.	+	1	1	+	.	+	+	1	.	.	+	.	.	1	.
	<i>Pedicularis verticillata</i>	E1	+	.	.	.	1	+	+	.	.	.	+	1	.	.	.	.	.
	<i>Bartsia alpina</i>	E1	1	+	.	.	.	.	+	.	+	.	.	.	1	.	+	1	+
	<i>Selaginella selaginoides</i>	E1	.	.	.	.	.	.	+	+	+	.	.	.	1	+	+	.	.
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
	<i>Cerastium strictum</i>	E1	.	.	.	1	1	.	.	.	.	+	.	+	+	.	.	.	+
	<i>Gentiana verna</i>	E1	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Myosotis alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex sempervirens</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Astrantia bavarica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

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	Pr.	Fr.	
.	+	1	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	6	13	
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	2
3	.	+	+	.	+	2	+	3	3	2	2	3	2	4	4	4	+	+	+	1	1	.	.	.	+	1	2	+	.	37	79	
1	1	1	+	1	+	+	1	.	.	1	+	.	.	+	2	1	+	+	.	.	+	1	.	+	+	1	2	1	2	36	77	
.	+	+	+	.	1	.	.	+	+	1	.	.	.	1	+	+	1	+	.	1	+	+	+	+	+	.	.	.	.	29	62	
.	+	.	1	+	.	+	+	+	.	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	+	1	2	.	.	19	40
.	+	.	.	.	.	.	.	+	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	15	32
.	+	+	.	+	.	+	+	.	.	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	14	30	
.	+	+	.	.	+	.	+	+	.	.	.	.	.	.	.	.	+	r	.	.	.	.	.	.	+	.	.	.	+	.	10	21
.	.	+	.	.	.	.	.	+	.	.	.	.	.	+	2	.	.	1	+	2	.	.	.	.	.	.	.	.	+	.	8	17
+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	5	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	1	.	5	11
.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	3	6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	4
+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	11
.	1	1	1	+	1	.	.	1	+	+	1	.	.	.	.	.	+	.	.	.	+	.	+	.	.	.	.	1	+	+	17	36
.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	2	.	.	.	.	.	+	+	2	.	.	.	7	15
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	+	+	1	+	.	1	+	.	+	+	1	1	.	.	.	.	+	.	1	+	.	+	.	.	.	.	.	.	.	.	24	51
+	.	.	+	.	.	+	1	.	.	.	.	.	.	.	.	.	1	1	1	1	.	.	+	+	.	.	.	.	.	.	15	32
+	.	.	.	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	+	+	.	.	.	.	.	.	.	1	+	13	28
.	.	.	+	+	.	1	1	.	+	.	.	.	.	.	.	.	1	.	.	1	.	+	+	.	.	.	.	.	.	.	10	21
.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	8	17
.	.	.	+	.	+	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	7	15
.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	13
.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	3	6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
1	2	2	1	.	1	1	+	1	1	+	1	.	1	1	2	1	1	1	2	.	1	+	+	.	2	2	1	1	2	38	81	
.	2	+	+	+	1	2	1	2	+	2	+	1	1	1	1	1	1	+	+	.	1	.	+	.	1	2	+	3	37	79		
1	.	.	+	1	1	.	.	.	.	.	+	.	1	1	2	1	1	.	.	.	+	+	+	.	.	.	.	1	+	.	28	60
.	.	.	+	+	1	.	.	+	+	.	.	+	.	1	+	.	+	1	3	2	1	.	.	.	+	.	.	+	2	.	24	51
.	.	.	1	1	+	1	+	.	+	1	1	+	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	22	47
.	.	.	.	.	+	+	.	.	+	+	+	.	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	17	36
.	.	.	.	.	.	+	.	.	+	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	15	32
.	.	.	.	.	.	+	.	.	+	.	.	.	+	+	1	1	.	.	.	.	.	.	+	.	.	1	.	.	+	+	14	30
+	.	.	.	.	+	+	+	.	+	.	.	.	.	+	+	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	12	26
.	+	.	.	.	+	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	12	26
.	.	.	+	+	1	.	.	.	.	.	.	.	.	1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	23
.	1	+	1	+	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	1	.	9	19
.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	+	1	.	.	.	.	.	.	+	.	+	.	.	.	.	.	8	17
+	.	.	.	.	.	+	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	13
+	.	.	.	+	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	5	11

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	<i>Euphrasia salisburgensis</i>	E1	.	.	.	1	.	+	.	.	.	.	.	.	.	+	.	.	.
	<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Anemone baldensis</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium pilosum</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Hieracium villosum</i>	E1	.	.	.	.	.	.	r	.	.	.	.	.	+	.	.	.	.
	<i>Nigritella rhellicani</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Phyteuma orbiculare</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhinanthus glacialis</i>	E1	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
	<i>Alchemilla glaucescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla vulgaris</i>	E1	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
CC	<i>Caricetalia curvulae</i>																		
	<i>Festuca vivipara</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
NS	<i>Nardion strictae</i>																		
	<i>Luzula exspectata</i>	E1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Coeloglossum viride</i>	E1	+	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.
	<i>Alchemilla flabellata</i>	E1	.	.	.	+	.	.	.	1	+	.	.	.	.	.	.	.	.
	<i>Antennaria dioica</i>	E1	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.
JT	<i>Juncetea trifidi</i>																		
	<i>Campanula scheuchzeri</i>	E1	1	+	.	.	.	1	.	1	+	+	.	.	1	.	.	.	.
	<i>Luzula spicata</i>	E1	.	.	.	r	1	.	.	.	.	.	+	1	.	.	.	.	.
	<i>Anthoxanthum nipponicum</i>	E1	.	.	.	1	.	.	+	1	1	.	.	.	.	.	.	.	.
	<i>Juncus jacquinii</i>	E1	+	.	.	.	.	.	.	.	.	+	1	+	.	.	.	.	.
	<i>Potentilla aurea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
	<i>Juncus trifidus</i>	E1	+	.	.	.	1	.	.	+	.	.	+	.	.	.	.	.	.
	<i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.
	<i>Agrostis rupestris</i>	E1	+	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
	<i>Helictotrichon versicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontodon helveticus</i>	E1	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
LV	<i>Loiseleurio-Vaccinietae</i>																		
	<i>Vaccinium gaulttherioides</i>	E1	+	+	+	2	.	2	1	2	1	1	+	1	.	.	.	.	+
	<i>Arctostaphylos alpina</i>	E1	+	.	.	+	.	.	.	1	+	1	.	.	.	.	.	.	.
	<i>Juniperus sibirica</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
AC	<i>Arabidetalia caeruleae (inc. Salicetea herbaceae)</i>																		
	<i>Salix retusa</i>	E1	1	1	+	1	1	.	1	.	+	+	+	.	+	.	.	.	.
	<i>Carex parviflora</i>	E1	+	.	.	.	1	.	.	1	.	.	1	.	.	.	.	.	.
	<i>Trifolium pallescens</i>	E1	.	1	+	+	.	.	.	.	.	.	.	+	+	1	+	+	.
	<i>Alchemilla fissa</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Salix serpyllifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.
	<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	+	.	+	1	+	.	.	.	.
	<i>Galium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Doronicum glaciale</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Soldanella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex ornithopodoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TR	<i>Thlaspietea rotundifolii</i>																		
	<i>Petrocallis pyrenaica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Rhodiola rosea</i>	E1	.	+	.	.	.	.	+	.	+	1	.	+	.	.	.	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Heliosperma alpestre</i>	E1	.	+	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.
	<i>Taraxacum alpinum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MC	<i>Saxifraga aizoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nitida</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PS	<i>Phyteumato-Saxifragion petraeae</i>																		
	<i>Saxifraga crustata</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+

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	Pr.	Fr.		
+	1	.	.	.	5	11		
.	1	+	+	.	.	.	.	.	.	.	.	.	3	6		
.	+	2	4	
.	2	4	
.	2	4	
.	2	4	
.	2	4	
.	+	1	2
.	1	2	
.	2	.	.	.	1	2	
.	.	+	.	.	+	+	+	.	+	.	.	.	+	+	+	+	+	12	26	
+	+	1	+	+	+	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	+	.	+	.	11	23	
.	5	11
.	2	4
.	+	+	+	1	+	1	.	.	.	.	1	.	.	.	.	.	+	.	.	.	+	+	+	+	+	+	.	+	1	23	49	
.	+	+	+	+	1	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	1	.	.	12	26
.	.	.	.	+	+	1	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	17
.	+	1	.	.	.	6	13	
.	+	+	+	+	+	6	13	
.	.	.	+	+	1	.	.	.	.	.	+	.	.	.	.	.	.	r	.	.	.	.	.	.	.	.	.	.	.	.	6	13
.	+	5	11	
.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	4	9
.	+	3	6	
.	3	6	
.	1	.	.	.	3	6	
.	.	.	+	1	1	3	2	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	3	2	.	1	2	23	49
+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	9	19	
.	1	2
.	1	+	+	1	.	.	.	1	1	1	1	.	.	.	.	1	.	.	.	+	.	.	.	.	.	+	2	.	1	.	23	49
.	+	+	2	.	+	+	+	+	+	+	1	1	+	1	+	+	.	.	.	.	.	+	.	.	.	.	.	+	.	.	21	45
.	.	.	+	.	+	1	+	.	.	1	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	15	32
.	+	+	1	.	+	1	.	3	.	.	.	.	+	.	.	.	.	.	9	19	
.	1	.	.	.	.	.	.	.	.	+	.	.	.	.	.	1	2	.	.	.	.	2	.	1	8	17		
.	2	2	.	.	.	6	13	
.	+	.	.	+	+	+	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	11	
.	.	.	.	1	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	9
.	+	+	+	3	6	
+	1	.	.	.	.	.	.	.	.	.	2	4	
.	+	2	4	
+	.	+	+	+	+	7	15	
.	5	11
.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	3	6	
.	3	6	
.	+	+	2	4	
.	1	2	
.	1	2	
.	+	7	15	

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	<i>Potentilla nitida</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga burseriana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga squarrosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Paederota lutea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PC	<i>Potentilletalia caulescentis</i>																	
	<i>Dianthus sylvestris</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.
	<i>Primula auricula</i>	E1	+	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Eritrichium nanum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula cochleariifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla clusiana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
AT	<i>Asplenietea trichomanis</i>																	
	<i>Saxifraga paniculata</i>	E1	+	.	+	.	.	.	+	.	.	.	.	.	.	.	+	+
	<i>Asplenium viride</i>	E1	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>																	
	<i>Carex capillaris</i>	E1	+	.	.	.	.	.	+	1	+	+	.	+	.	.	.	.
	<i>Parnassia palustris</i>	E1	1	.	.	+	.	.	+	1	+	+	+	1	.	.	.	+
	<i>Gentiana utriculosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pinguicula alpina</i>	E1	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia</i>																	
	<i>Poa alpina</i>	E1	.	.	1	1	1	+	+	+	1	.	1	1	.	.	.	+
	<i>Leontodon hispidus</i>	E1	.	+	.	.	1	.	.	.	+	.	.	.	.	.	.	.
	<i>Trifolium repens</i>	E1	.	.	.	.	.	+	+	1	1	1	.	.	.	.	.	.
	<i>Trifolium pratense</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Euphrasia picta</i>	E1	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Trollius europaeus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.
	<i>Cerastium fontanum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MuA	<i>Mulgedio-Aconitetea</i>																	
	<i>Viola biflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.
RE	<i>Rhododendro hirsuti-Ericetalia carneae</i>																	
	<i>Rhodothamnus chamaecistus</i>	E1	+	.	.	.	.	.	+	+	+	.	.	.	.	.	+	.
	<i>Rhododendron hirsutum</i>	E1	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.
EP	<i>Erico-Pinetea</i>																	
	<i>Carex ornithopoda</i>	E1	2	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.
VP	<i>Vaccinio-Piceetea</i>																	
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	.	+	1	1	.	.	.	.	.	.	.
	<i>Vaccinium vitis-idaea</i>	E1	.	1	.	.	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Vaccinium myrtillus</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
O	Other species (Druge vrste)																	
	<i>Alchemilla</i> sp.	E1	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
	<i>Festuca</i> sp.	E1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontodon</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)																	
	<i>Tortella</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Tortella tortuosa</i>	E0	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
	<i>Thamnolia vermicularis</i>	E0	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia arbuscula</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Legend – Legenda

ID	Igor Dakskobler	D	Dolomite – dolomit	Li	Lithosol – kamnišče
TW	Tone Wraber	L	Marlstone – laporovec	Re	Rendzina – rendzina
A	Limestone – apnenec	R	Chert – roženec	MC	<i>Montio-Cardaminetea</i>

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	Pr.	Fr.	
.	+	+	r	3	6	
.	+	+	2	4	
.	2	4	
.	1	2	
+	1	1	+	+	7	15	
.	1	.	.	+	+	.	7	15
+	+	.	.	.	+	3	6	
+	+	2	4	
.	+	1	2	
.	+	1	2	
1	.	.	+	+	.	.	+	.	.	+	.	+	+	+	.	1	+	+	.	.	.	.	16	34		
.	1	2	
.	.	+	1	+	+	1	.	.	.	+	.	.	.	.	.	.	+	.	.	.	1	+	.	.	+	.	.	+	17	36
+	.	+	.	.	1	.	.	+	+	+	+	16	34	
.	+	2	4	
.	2	4	
.	+	+	1	1	+	1	.	1	+	1	+	.	.	+	.	+	1	+	.	.	+	+	.	.	+	1	1	.	29	62		
.	1	1	.	.	.	.	.	1	1	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	9	19		
.	5	11	
.	+	1	.	.	.	.	.	.	.	.	.	.	.	2	4		
.	2	4		
.	2	4		
.	+	1	2		
.	.	.	.	1	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	7	15
.	5	11	
.	2	4		
.	1	.	.	.	.	.	+	.	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	8	17		
.	3	6	
.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	6		
.	1	2		
.	1	2		
.	1	2		
.	1	2		
.	1	2		
.	1	2		
.	1	2		
.	+	+	+	1	+	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	8	17		
+	3	6		
.	1	.	.	.	.	.	.	.	.	2	4		
.	1	2		
.	1	2		
.	1	2		
.	1	2		
.	1	2		

Table 4 (Tabela 4): *Sesleria sphaerocephalae-Dryadetum octopetalae* ass. nov., *Dryadetum octopetalae*.

Successive number of relevé (Zaporedna številka popisa)	1	2	3	4	5	6	7	8	9	10	11	12	
Database number of relevé (Delovna številka popisa)	213361	216445	216507	253975	213486	241944	244209	213371	213372	211961	211962	219654	
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	
Elevation in m (Nadmorska višina v m)	2060	2100	2225	2110	1870	2070	2254	2215	2180	2310	2310	2240	
Aspect (Lega)	NW	NE	NNW	NNE	N	NE	E	E	SSE	N	NNW	NE	
Slope in degrees (Nagib v stopinjah)	25	35	30	20	70	40	2	5	1	5	10	25	
Parent material (Matična podlaga)	A	A	A	A	A	A	DA	DA	DA	A	A	A	
Soil (Tla)	Li	Li	Li	Li	Li	Re	Li	Li	Li	Li	Li	Re	
Stoniness in % (Kamnitost v %)	10	20	30	20	50	20	20	5	0	5	5	0	
Cover of herb layer in % (Zastiranje zeliščne plasti v %): E1	90	80	70	80	50	80	80	95	100	100	90	100	
Cover of moss layer in % (Zastiranje mahovne plasti v %): E0	.	5	.	.	.	.	.	.	.	.	.	10
Number of species (Število vrst)	25	28	15	12	20	15	16	31	29	11	15	34	
Relevé area (Velikost popisne ploskve) m ²	5	4	2	4	10	2	2	5	5	5	5	10	
Date of taking relevé (Datum popisa)	8/9/2005	8/6/2007	8/1/2007	8/8/2014	8/5/2005	8/29/2011	7/31/2012	8/30/2005	8/30/2005	7/18/2006	7/18/2006	8/19/2008	
Locality (Nahajališče)	Travnik	Kanin - Velika Baba	Vrh Krnice	Trenski Pelc	Velika Tičarica	Babanjski Skedenj	Škednjevec	Vršac	Vršac	Velika Črnelška špica	Velika Črnelška špica	Morež	
Quadrant (Kvadrant)	9648/3	9646/4	9647/2	9648/1	9648/1	9646/4	9648/2	9648/3	9648/3	9647/1	9647/1	9647/2	
Coordinate GK Y (D-48) m	403234	380935	393746	401136	403418	381641	409779	403524	403460	386191	386200	395860	
Coordinate GK X (D-48) m	5133305	5133332	5138949	5138841	5135720	5133462	5134630	5132859	5132764	5138029	5138026	5140322	
Diagnostic species of the association (Diagnostične vrste asociacije)													
Cfir <i>Dryas octopetala</i>	E1	4	4	4	4	2	4	4	5	3	4	4	3
Cfir <i>Sesleria sphaerocephala</i>	E1	1	2	2	1	2	2	+	+	.	1	1	.
Cfir <i>Silene acaulis</i>	E1	1	2	2	1	.	2	1	1	.	.	+	.
OE <i>Lloydia serotina</i>	E1	+	+	+	+	+	+	+
AT <i>Saxifraga paniculata</i>	E1	.	.	+	+	.	1	1	+
DH <i>Doronicum glaciale</i>	E1	.	1	+	2	3	.
AC <i>Salix serpyllifolia</i>	E1	.	.	+	3	3	+
CFir <i>Caricion firmae</i>													
<i>Carex firma</i>	E1	3	3	3	3	.	3	2	1	.	2	.	
<i>Helianthemum alpestre</i>	E1	.	.	.	1	.	.	+	.	.	.	.
<i>Pedicularis rostratocapitata</i>	E1	+	+	.	+	.	.	.	+	.	+	+	
<i>Festuca quadriflora</i>	E1	.	1	+	.	.	1	1	.	.	.	1	

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	
	<i>Chamorchis alpina</i>	E1	.	+	.	.	.	1	.	+	+	.	.	r
	<i>Oxytropis neglecta</i>	E1	.	+	.	.	.	.	+	1	1	.	.	+
	<i>Phyteuma sieberi</i>	E1	+	.	.	.	+	.	.	.	.	.	.	.
	<i>Saussurea pygmaea</i>	E1	1	.	.	.	.	1	2	1	+	.	.	.
	<i>Minuartia sedoides</i>	E1	.	.	.	.	.	.	.	+	+	.	+	.
	<i>Salix alpina</i>	E1	.	.	.	.	+	.	.	.	.	.	.	.
	<i>Primula wulfeniana</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Crepis kernerii</i>	E1	1	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex rupestris</i>	E1	.	.	.	.	.	.	2	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	1	1	.
	<i>Geranium argenteum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Primula halleri</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Saxifraga exarata</i> subsp. <i>carniolica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
CA	<i>Caricion austroalpinae</i>													
	<i>Koeleria eriostachya</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Laserpitium peucedanoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Senecio abrotanifolius</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Arabis vochinensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
CF	<i>Caricion ferrugineae</i>													
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
	<i>Hedysarum hedysaroides</i>	E1	+	1	.	.	.	.	.	.	.	.	.	1
	<i>Cerastium subtriflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
OE	<i>Oxytropido-Elyniion</i>													
	<i>Carex atrata</i>	E1	.	.	.	.	.	.	.	.	.	+	+	.
	<i>Antennaria carpatica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	r
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
SV	<i>Seslerietalia coeruleae</i>													
	<i>Achillea clavennae</i>	E1	.	+	.	.	.	1	.	.	+	.	.	1
	<i>Gentiana clusii</i>	E1	+	+	.	.	.	.	1	+	.	.	.	.
	<i>Galium anisophyllum</i>	E1	.	.	.	.	.	.	.	+	.	.	.	+
	<i>Potentilla crantzii</i>	E1	.	+	.	.	.	.	.	.	+	.	.	.
	<i>Leontopodium alpinum</i>	E1	.	+	.	.	.	1	.	+	+	.	.	.
	<i>Androsace villosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Juncus monanthos</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Thesium alpinum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca norica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	1
	<i>Leucanthemum heterophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	.	.	1	.	.	.
	<i>Traunsteinera globosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
ES	<i>Elyno-Seslerietea</i>													
	<i>Polygonum viviparum</i>	E1	1	1	+	+	+	.	.	2	1	1	1	1
	<i>Sesleria caerulea</i>	E1	+	.	.	.	.	.	+	+	+	.	.	1
	<i>Aster bellidiastrum</i>	E1	1	+	.	.	+	2	1	1	+	.	.	1
	<i>Selaginella selaginoides</i>	E1	.	1	.	.	.	.	1	.	.	.	.	+

13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Pr.	Fr.	
r	+	+	8	23
.	.	+	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	23
.	+	.	.	.	+	r	.	.	.	1	.	+	.	+	.	.	.	.	.	.	.	.	.	8	23
.	+	6	17
.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	14
.	+	1	1	+	.	.	.	.	.	.	.	.	.	.	.	5	14
.	+	+	+	4	11
.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	3	9
.	1	1	3	9
.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	6
.	2	6
.	1	3
.	1	3
.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	3
.	1	.	+	.	.	.	.	.	.	.	+	3	9
.	+	.	+	+	3	9
.	1	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	3	9
.	+	1	3
1	+	1	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	17
.	3	9
.	+	1	3
.	+	+	4	11
.	.	+	.	.	+	3	9
.	+	+	2	6
.	+	.	.	+	2	6
.	1	.	.	.	.	.	1	3
+	.	+	.	.	.	1	.	.	.	.	.	.	2	.	+	.	+	.	.	.	.	.	.	10	29
.	+	.	+	.	.	+	.	.	.	+	1	+	.	.	10	29
.	.	.	.	+	.	.	+	.	+	+	.	.	+	.	.	7	20
.	+	1	.	1	1	.	1	.	7	20
.	+	5	14
.	+	1	+	.	3	9
+	.	.	.	+	+	3	9
.	+	2	6
.	+	+	.	2	6
.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	3
.	1	3
.	+	1	3
.	+	1	3
.	1	3
.	r	.	1	3
1	+	1	1	2	1	.	+	1	1	1	1	.	.	.	1	.	+	+	+	+	.	1	27	77	
1	1	1	.	+	.	+	.	+	+	1	+	.	+	.	1	1	2	1	1	1	1	1	23	66	
.	1	.	.	+	+	.	2	+	1	+	.	15	43	
+	1	1	1	1	.	.	.	.	.	.	.	.	.	+	+	.	+	+	.	.	+	.	13	37	

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
<i>Agrostis alpina</i>	E1	.	1	+	.	.	.	3	.	.	.	.	.
<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	+	.	.	.	.	.	.	+	.	.	+
<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	.	.	.	.	.	.	.	+	+	.	.	.
<i>Bartsia alpina</i>	E1	.	+	.	+	.	.	+	+	.	.	.	+
<i>Carex sempervirens</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
<i>Homogyne discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Gentianella anisodonta</i>	E1	.	.	.	.	.	.	.	+	+	.	.	+
<i>Astrantia bavarica</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium villosum</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
<i>Pedicularis verticillata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Polygala alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Daphne striata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Globularia cordifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium pilosum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla alpigena</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.
<i>Cerastium strictum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euphrasia salisburgensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lotus alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Nigritella rhellicani</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Phyteuma orbiculare</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anemone baldensis</i>	E1	.	.	.	.	.	.	1	.	.	.	.	.
<i>Gentiana verna</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Globularia nudicaulis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
NS <i>Nardion strictae</i>													
<i>Coeloglossum viride</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
<i>Antennaria dioica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Arnica montana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Festuca nigrescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Nardus stricta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
JT <i>Juncetea trifidi</i>													
<i>Euphrasia minima</i>	E1	.	.	.	.	.	.	.	+	+	.	.	+
FV <i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Campanula scheuchzeri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	1
<i>Agrostis rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
<i>Anthoxanthum nipponicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Solidago virgaurea</i> subsp. <i>minuta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
LV <i>Loiseleurio-Vaccinietae</i>													
<i>Arctostaphylos alpina</i>	E1	1	2	.	+	+	.	.	.	.	.	.	4
<i>Vaccinium gaulterioides</i>	E1	.	.	.	.	.	.	.	.	+	.	.	3
<i>Juniperus sibirica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
AC <i>Arabidetalia caeruleae</i> (inc. <i>Salicetea herbaceae</i>)													
<i>Trifolium pallescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	1
<i>Carex ornithopodoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex parviflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ranunculus traunfellneri</i>	E1	.	.	+	.	.	r	.	.	.	+	.	.
<i>Salix retusa</i>	E1	1	.	.	.	.	.	.	+	+	.	.	.

13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Pr.	Fr.
.	+	1	+	+	1	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	11	31
.	.	2	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	+	+	+	.	+	11	31
.	+	1	.	+	.	+	+	1	.	+	+	10	29
.	.	.	+	+	.	1	.	.	.	.	.	.	.	.	+	9	26
.	+	+	+	1	+	+	.	.	.	.	.	.	.	.	+	+	9	26
.	1	+	.	1	1	1	1	+	.	1	8	23
.	.	.	+	+	+	6	17
.	+	.	.	.	+	.	.	+	4	11
.	+	.	+	+	4	11
.	.	+	1	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	11
.	1	+	.	+	+	4	11
.	3	3	+	.	3	9
.	1	.	+	1	3	9
+	+	+	.	3	9
.	1	.	.	.	.	.	.	.	.	.	.	.	r	.	.	.	2	6
.	+	2	6
.	+	+	.	2	6
.	+	.	+	2	6
.	1	.	.	+	.	2	6
.	r	1	2	6
.	+	1	2	6
.	+	1	3
.	1	3
.	+	1	3
.	r	.	.	.	1	3
.	.	1	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	9
.	+	2	6
.	1	.	.	.	.	1	3
.	r	.	.	.	.	1	3
.	+	1	3
.	+	1	3
1	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	17
.	.	+	.	+	2	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	4	11
.	.	.	.	+	+	4	11
.	+	2	6
.	+	1	3
.	+	1	3
3	.	+	3	.	.	.	.	.	.	.	.	+	.	.	1	+	4	.	.	.	.	3	13	37
+	3	2	.	+	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	7	20
.	+	+	1	.	.	.	.	3	9
1	.	+	1	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	17
.	+	+	1	+	+	.	1	.	.	6	17
.	1	+	+	+	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	6	17
.	.	.	1	.	.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	6	17
.	.	.	.	3	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	14

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
	<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Soldanella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Soldanella minima</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Thlaspi minimum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
TR	<i>Thlaspietea rotundifolii</i>												
MC	<i>Saxifraga aizoides</i>	E1	+	+	+	+	.	.	.	.	.	+	.
	<i>Heliosperma alpestre</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca laxa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa minor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Rumex scutatus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Achillea atrata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Aquilegia einseleana</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Arabis alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Athamanta cretensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium carinthiacum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Moehringia ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga sedoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Sedum atratum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PS	<i>Phyteumato-Saxifragion petraeae</i>												
	<i>Saxifraga squarrosa</i>	E1	.	+	+	+	1	+	.	+	.	.	.
	<i>Saxifraga crustata</i>	E1	1	1	+	1	+	2	.	.	.	.	.
	<i>Potentilla nitida</i>	E1	.	.	.	.	.	r	.	.	.	.	.
PC	<i>Potentilletalia caulescentis</i>												
	<i>Valeriana saxatilis</i>	E1	.	.	.	.	1	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	+	.	.	.	.	.	1	1	1	1	.
	<i>Campanula cochleariifolia</i>	E1	.	.	.	.	+	.	.	+	.	.	.
	<i>Primula auricula</i>	E1	.	.	.	.	+	.	.	+	+	.	.
	<i>Potentilla clusiana</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Valeriana elongata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
AT	<i>Asplenieta trichomanis</i>												
	<i>Asplenium viride</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>												
	<i>Carex capillaris</i>	E1	.	.	.	.	.	.	.	+	.	.	1
	<i>Parnassia palustris</i>	E1	.	.	.	.	+	.	.	+	+	.	1
	<i>Pinguicula alpina</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Tofieldia calyculata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula sudetica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>												
	<i>Poa alpina</i>	E1	.	.	.	.	.	.	.	+	+	.	.
	<i>Leontodon hispidus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trifolium pratense</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trifolium repens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trollius europaeus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
FB	<i>Festuco-Brometea</i>												
	<i>Hippocrepis comosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Prunella grandiflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex caryophyllea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Gymnadenia conopsea</i>	E1	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
MuA	Betulo-Alnetea, Mulgedio-Aconitetea												
	<i>Viola biflora</i>	E1	1	.	.	.	.	+	1	.	.	.	.
	<i>Salix waldsteiniana</i>	E1	.	.	.	.	.	.	.	.	.	.	.
RE	Rhododendro hirsuti-Ericetalia carneae												
	<i>Rhodothamnus chamaecistus</i>	E1	2	+	.	.	2	2	.	.	.	.	1
	<i>Rhododendron hirsutum</i>	E1	.	.	.	.	.	.	.	.	.	.	1
	<i>Pinus mugo</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Erica carnea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
EP	Erico-Pinetea												
	<i>Carex ornithopoda</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Gymnadenia odoratissima</i>	E1	.	.	.	.	.	.	.	.	.	.	.
VP	Vaccinio-Piceetea												
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	r
	<i>Vaccinium vitis-idaea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Huperzia selago</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Larix decidua</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Moneses uniflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Picea abies</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Pyrola rotundifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Vaccinium myrtillus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
QF	Querco-Fagetea												
	<i>Anemone nemorosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
O	Other species (Druge vrste)												
	<i>Minuartia</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)												
	<i>Tortella tortuosa</i>	E0	.	.	.	.	+	.	.	+	.	.	.
	<i>Tortella</i> sp.	E0	+	+	+	.	.	.	.	.	.	.	.
	<i>Thamnia vermicularis</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	+	.	.	.	.	.	.	.	.	.
	<i>Orthothecium rufescens</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	.	.	.	.	.	.	.	.	.

Legend – Legenda

- ID Igor Dakskobler
- BS Boštjan Surina
- A Limestone – apnenec
- D Dolomite – dolomit
- L Marlstone – laporovec
- R Chert – roženec
- Li Lithosol – kamnišče
- Re Rendzina – rendzina
- FV *Festucion variaie*
- MC *Montio-Cardaminetea*

13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Pr.	Fr.
.	.	.	.	+	1	.	+	.	.	.	.	6	17
.	+	1	3
.	1	2	1	.	.	3	+	+	11	31
.	.	+	+	+	.	4	11
.	+	+	+	.	.	.	3	9
.	2	3	2	6
.	+	1	3
.	2	.	1	3
1	1	1	2	1	.	.	.	.	.	.	.	.	.	.	1	.	+	+	.	.	.	.	9	26
.	1	2	.	.	.	.	.	.	.	.	.	.	.	+	.	1	2	2	.	.	.	.	6	17
.	+	2	6
.	1	3
.	+	1	3
.	+	1	3
.	2	.	.	.	.	.	.	.	.	.	.	.	.	1	3
.	+	1	3
.	+	1	3
.	1	3
.	1	3
.	1	3
.	1	3
.	+	1	3
.	+	1	.	4	11
.	3	9
.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	6
.	1	3
.	+	1	3
.	.	+	1	3
.	+	1	3

Table 5: Associations *Empetro-Vaccinietum gaultherioidis* and *Homogyno discoloris-Loiseleurietum* and other communities with dominant *Vaccinium gaultherioides* in Slovenia.

Successive number of relevé (Zaporedna številka popisa)	1	2	3	4	5	6	7	8	9	10	11	12
Database number of relevé (Delovna številka popisa)	250566	249088	257513	249540	257657	203528	220784	253419	244585	249515	249240	250910
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Elevation in m (Nadmorska višina v m)	1470	1660	1793	2140	2130	1940	1950	1970	2320	2270	1900	2250
Aspect (Lega)	NE	N	N	N	NE	N	N	NEE	N	N	NW	NNE
Slope in degrees (Nagib v stopinjah)	20	30	30	25	5	10	25	5	15	2	15	20
Parent material (Matična podlaga)	AGR	An	DA	A	DA	DA	A	ALR	A	A	A	DA
Soil (Tla)	Dy	Ra	Re	Re	Re	Li	Re	Ra	Re	Re	Re	Re
Stoniness in % (Kamnitost v %)	0	10	5	0	10	5	0	5	10	0	3	1
Cover of herb layer in % (Zastiranje zeliščne plasti v %):	E1	100	90	95	100	80	90	95	95	90	100	95
Cover of moss layer in % (Zastiranje mahovne plasti v %):	E0	.	.	20	.	.	.	10	.	20	.	.
Number of species (Število vrst)	22	19	16	24	12	25	30	30	39	25	24	22
Relevé area (Velikost popisne ploskve)	m ²	5	5	2	2	2	1	10	4	6	2	10
Date of taking relevé (Datum popisa)	10/13/2013	7/9/2013	7/17/2015	8/12/2013	7/31/2015	8/27/2003	9/11/2008	7/7/2014	8/30/2012	7/31/2013	7/28/2013	7/17/2013
Locality (Nahajališče)	Kobla	Komen	Črna pnt	Rombon	Rjavina - Teme	Zaporoški vrh	Kanin - Mali dol	Mangart - Mali vrh	Hudi Vršič	Velika Črnelška špica	Travniška dolina	Mišeljska glava
Quadrant (Kvadrant)	9749/4	9555/3	9749/4	9647/1	9649/1	9648/1	9646/4	9547/4	9647/1	9647/1	9648/3	9649/1
Coordinate GK Y (D-48)	m	420696	488542	417655	389080	414836	399274	382262	395816	385755	386011	402981
Coordinate GK X (D-48)	m	5121559	5141600	5121249	5137053	5138740	5137480	5134198	5144036	5138063	5137996	5132697
Diagnostic species of syntaxa (Diagnostične vrste sintaksonov)												
LV <i>Vaccinium gaultherioides</i>	E1	.	4	4	4	2	1	4	3	3	4	4
VP <i>Vaccinium vitis-idaea</i>	E1	2	1	1	1	2	2	1	+	2	.	.
VP <i>Homogyne alpina</i>	E1	2	.	.	2	.	2	1	1	1	.	.
LV <i>Empetrum hermaphroditum</i>	E1	4	1	3	4	3	3	.	.	.	.	.
VP <i>Deschampsia flexuosa</i>	E1	3	.	.	.	.	.	.	.	.	.	.
LV <i>Loiseleuria procumbens</i>	E1	.	.	.	.	.	.	3	4	4	3	4
ES <i>Homogyne discolor</i>	E1	.	.	.	.	.	.	+	.	+	.	1
VP <i>Vaccinium myrtillus</i>	E1	2	4	3	3	.	+	.	.	.	.	1
JT <i>Agrostis rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
Cfir <i>Dryas octopetala</i>	E1	.	.	.	1	.	+	1	.	2	+	+
CFir <i>Carex firma</i>	E1	.	.	.	.	.	+	.	.	1	+	1

Tabela 5: Asociaciji *Empetro-Vaccinietum gaultherioidis* in *Homogyno discoloris-Loiseleurietum* ter druge združbe s prevladujočo vrsto *Vaccinium gaultherioides* v Sloveniji.

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	
258865	259696	250792	216440	259693	259691	253423	258864	201704	201707	201775	249532	244026	244444	250783	226465	241775	250046	246652	246657	220973	244440	244364	250781	250793	258125	
ID	TW	ID	ID	TW	TW	ID	ID	BS	BS	BS	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
2055	1940	2270	2150	2050	2380	1940	2045	1985	1990	2130	2192	2270	2180	2300	2200	1890	1985	2060	2065	2055	2090	2300	2305	2270	2290	
N	N	NWW	SSW	N	SE	NE	NE	NNE	W	N	NW	SE	NNE	N	N	W	NW	NE	W	N	NNE	NE	NW	NW	NE	
30	10	3	2	5	5	5	10	20	5	5	5	25	25	2	15	5	5	5	20	25	10	60	10	5	20	
DA	AL	A	A	DA	DA	ALR	DA	AL	AL	DA	A	DA	A	A	ALR	A	DA	DA	DA	A	A	DA	A	A	DA	
Re	Ra	Re	Li	Li	Li	Ra	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Li	Re	Re	Re	Li	Re	Re	Re	
5	0	20	0	0	0	0	5	0	0	0	10	0	5	0	0	0	0	0	10	0	5	10	5	5	10	
95	100	80	100	100	100	100	95	100	90	100	95	100	95	100	90	100	100	100	90	100	95	90	95	95	90	
.	.	.	.	.	.	.	.	30	30	.	.	30	.	.	30	.	.	.	.	10	.	.	.	.	.
20	35	30	28	36	31	23	13	37	47	28	25	26	28	27	23	28	27	13	13	27	30	42	38	29	25	
5	6	3	10	6	9	4	2	2	4	2	3	10	4	2	10	3	2	3	3	10	5	2	4	3	5	
6/30/2015	8/6/1983	7/31/2013	8/6/2007	7/28/1967	9/8/1966	7/7/2014	6/30/2015	8/5/2003	8/5/2003	8/22/2003	8/12/2013	7/19/2012	8/17/2012	7/31/2013	8/15/2009	8/17/2011	9/24/2013	9/14/2011	9/14/2011	8/19/2008	8/17/2012	8/14/2012	7/31/2013	7/31/2013	6/29/2015	
			Kanin - Turn pod Laško planjo																							
5135743	414205	9649/1	Veliki Draški vrh					5127804	397883	9748/1	Lemež															
5144170	395724	9547/4	Mangart - Mali vrh					5128044	398153	9748/1	Lemež															
5138002	386000	9647/1	Velika Črnelška špica					5125723	397011	9747/2	Krn-Srednji vrh															
5134283	381234	9646/4	Kanin - Turn pod Laško planjo					5136951	389125	9647/1	Rombon															
5139190	413307	9649/1	Kot - Pekel					5147083	400318	9548/1	Visoka Ponca															
5141212	409074	9548/4	Kriška stena - Križ					5141284	396955	9547/4	Bavh															
5144086	395862	9547/4	Mangart - Mali vrh					5137999	386067	9647/1	Velika Črnelška špica															
5135729	414218	9649/1	Veliki Draški vrh					5145234	396964	9547/4	Mangart-Rateški Mangart															
								5138085	397899	9648/1	Zagorelec - Čez Lužo															
								5139341	401647	9648/1	Trenta - Plesivec															
								5151166	483051	9454/4	Peca - Velika glava															
								5151164	482823	9454/4	Peca - Velika glava															
								5140634	396025	9547/4	Morež - Konjska škrbina															
								5141316	397121	9547/4	Bavh															
								5139900	398356	9648/1	Zaednji Pelc															
								5137996	386077	9647/1	Velika Črnelška špica															
								5138005	386019	9647/1	Velika Črnelška špica															
								5134361	406093	9648/4	Špičje - Goriški rob															
3	2	3	+	2	1	1	+	2	2	3	2	3	3	4	1	3	3	3	3	3	4	1	1	4	4	
1	1	3	.	.	+	1	2	1	2	4	4	3	3	4	4	3	3	3	3	.	1	.	.	.	+	
.	1	.	3	.	.	1	.	1	.	.	1	.	2	1	.	.	+	.	.	2	.	2	2	1	.	
.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3	.	.	.	.	.	.	.
4	4	1	3	2	1	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	1	.	+	2	2	.	.	.	1	1	.	+	.	1	+	+	.	.	2	2	.	1	.	+	2	
.	2	.	.	.	.	3	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
+	.	.	.	.	.	+	+	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
+	1	1	+	1	2	.	1	+	2	1	4	+	.	1	+	2	2	2	.	1	1	1	3	1	2	
.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	+	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12	
ES	<i>Sesleria caerulea</i>	E1	.	.	1	+	.	+	.	+	1	+	+	.
Cfir	<i>Silene acaulis</i>	E1	.	.	.	+	.	.	.	+	.	.	.	+
SV	<i>Potentilla crantzii</i>	E1	.	.	.	.	.	.	+	.	.	+	.	.
LV	<i>Loiseleurio-Vaccinietea</i>													
	<i>Arctostaphylos alpina</i>	E1	.	.	+	1	+	2	4	4	1	1	1	.
	<i>Juniperus sibirica</i>	E1	+	.	.	.	1	.	.	+	.	.	.	.
CC	<i>Caricetalia curvulae</i>													
	<i>Primula minima</i>	E1	.	1	.	.	.	.	.	.	.	.	.	.
	<i>Campanula alpina</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium piliferum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex curvula</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium alpinum</i>	E1	.	.	.	.	.	.	.	.	.	2	.	.
NS	<i>Nardion strictae</i>													
	<i>Coeloglossum viride</i>	E1	.	.	.	.	.	.	+	.	.	.	+	.
	<i>Anthoxanthum nipponicum</i> (inc. <i>A. odoratum</i> s. lat.)	E1	.	.	.	+	.	.	.	.	.	.	.	.
	<i>Festuca nigrescens</i>	E1	.	.	.	.	.	.	.	.	.	.	2	.
	<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla flabellata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Nardus stricta</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla erecta</i>	E1	1	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula barbata</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Carex pallescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca ovina</i> agg.	E1	.	+	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana pannonica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pseudorchis albida</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
JT	<i>Juncetea trifidi</i>													
	<i>Campanula scheuchzeri</i>	E1	.	.	.	+	1	1	+	+	.	.	.	.
	<i>Euphrasia minima</i> (inc. <i>E. pulchella</i>)	E1	.	.	.	.	.	.	1	+	r	.	.	.
	<i>Leontodon helveticus</i>	E1	.	.	.	.	.	.	1	1	.	.	1	.
	<i>Juncus trifidus</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Potentilla aurea</i>	E1	.	.	.	.	.	.	.	1	.	+	+	.
FV	<i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Juncus jacquinii</i>	E1	.	.	.	.	.	.	.	1	.	.	.	.
	<i>Helictotrichon versicolor</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.
	<i>Solidago virgaurea</i> subsp. <i>minuta</i>	E1	+	.	.	.	.	.	.	+	.	.	.	.
	<i>Geum montanum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
FV	<i>Festuca varia</i>	E1	.	+	.	.	.	.	.	.	.	.	.	.
OE	<i>Oxytropido-Elynon</i>													
	<i>Antennaria carpatica</i>	E1	.	.	.	.	.	.	+	2	2	+	.	+
	<i>Lloydia serotina</i>	E1	.	.	.	.	.	.	.	.	+	+	.	.
	<i>Carex atrata</i>	E1	.	.	.	1	.	.	.	.	.	.	.	.
	<i>Elyna myosuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	1
	<i>Erigeron uniflorus</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Gentiana nivalis</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
	<i>Antennaria dioica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca intercedens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
Cfir	Caricion firmae												
	<i>Pedicularis rostratocapitata</i>	E1	.	.	.	.	.	.	+	+	+	+	+
	<i>Festuca quadriflora</i>	E1	.	.	.	+	.	.	.	+	.	.	.
	<i>Helianthemum alpestre</i>	E1	.	.	.	.	.	.	.	r	+	.	+
	<i>Sesleria sphaerocephala</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Phyteuma sieberi</i>	E1	.	.	+	.	.	.	.	.	.	.	.
	<i>Saussurea pygmaea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Oxytropis neglecta</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia sedoides</i>	E1	.	.	.	.	.	.	+	+	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Primula halleri</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Geranium argenteum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia gerardii</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CA	Caricion austroalpinae												
	<i>Koeleria eriostachya</i>	E1	.	.	.	+	.	.	.	.	.	.	.
	<i>Pulsatilla alpina</i> subsp. <i>austroalpina</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Festuca calva</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Laserpitium peucedanoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trifolium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CF	Caricion ferrugineae												
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	.	.	+	+	.	+
	<i>Hedysarum hedysaroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium subtriflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex ferruginea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Serratula tinctoria</i> subsp. <i>macrocephala</i>	E1	+	.	.	.	.	.	.	.	.	.	.
SV	Seslerietalia coeruleae												
	<i>Gentiana clusii</i>	E1	.	.	.	.	.	.	.	+	.	.	.
	<i>Achillea clavennae</i>	E1	.	.	.	+	.	.	+	.	+	.	.
	<i>Juncus monanthos</i>	E1	.	.	.	.	.	.	+	.	.	+	.
	<i>Galium anisophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontopodium alpinum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Androsace villosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca norica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella widderi</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa pumila</i>	E1	.	.	.	.	.	.	+	.	.	.	.
	<i>Trisetum alpestre</i>	E1	.	.	.	.	.	.	.	.	.	.	.
ES	Elhmo-Seslerietea												
	<i>Polygonum viviparum</i>	E1	.	.	+	.	1	.	1	1	2	.	2
	<i>Selaginella selaginoides</i>	E1	.	.	.	1	.	+	1	+	+	1	+
	<i>Agrostis alpina</i>	E1	.	.	.	+	.	.	+	.	+	1	1

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
<i>Aster bellidiflorus</i>	E1	.	.	.	.	.	.	+	.	.	.	.	.
<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	.	.	.	.	.	.	.	+	.	.	.	.
<i>Bartsia alpina</i>	E1	.	.	.	+	.	.	.	.	+	.	.	.
<i>Astrantia bavarica</i>	E1	.	.	.	+	.	.	.	.	.	.	+	.
<i>Gentianella anisodonta</i>	E1	.	.	.	.	.	.	.	.	.	+	.	.
<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	.	.	.	.	.	.	+	.	.	+	.
<i>Pedicularis verticillata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
<i>Carex sempervirens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium pilosum</i>	E1	.	.	.	.	.	.	+	.	r	.	.	.
<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla glaucescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Arabis vochinensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
<i>Hieracium villosum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Nigritella rhellicani</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Phyteuma orbiculare</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
<i>Euphrasia salisburgensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lotus alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anemone narcissiflora</i>	E1	+	.	.	.	.	.	.	.	.	.	.	.
<i>Gentiana verna</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Myosotis alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rhinanthus glacialis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Betonica alopecuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	+	.
<i>Cerastium strictum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Daphne striata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Helianthemum grandiflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium dentatum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
FB Festuco-Brometea, Trifolio-Geranietea													
<i>Gymnadenia conopsea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Libanotis sibirica</i> subsp. <i>montana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
AC Arabidetalia caeruleae (inc. Salicetea herbaceae)													
<i>Salix retusa</i>	E1	.	.	.	.	.	.	.	.	+	.	.	+
<i>Carex parviflora</i>	E1	.	.	.	+	.	.	.	.	1	+	.	.
<i>Soldanella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla fissa</i>	E1	.	.	.	.	.	.	.	1	+	1	+	.
<i>Trifolium pallescens</i>	E1	.	.	.	+	.	.	+	1	.	1	.	.
<i>Doronicum glaciale</i>	E1	.	.	.	1	.	.	r	.	+	.	.	.
<i>Galium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	1
<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Salix serpyllifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex ornithopodoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	+
<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
TR Thlaspietea rotundifolii													
MC <i>Saxifraga aizoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rhodiola rosea</i>	E1	.	.	.	.	.	.	.	.	+	.	.	.
<i>Festuca nitida</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Biscutella laevigata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
	<i>Heliosperma alpestre</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium bifidum</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Petrocallis pyrenaica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Pimpinella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Achillea atrata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia austriaca</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa minor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	.	.	.	.	+	.	.	.
	<i>Saxifraga sedoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PS	<i>Phyteumato-Saxifragion petraeae</i>												
	<i>Saxifraga crustata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga squarrosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PC	<i>Potentilletalia caulescentis</i>												
	<i>Primula auricula</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Dianthus sylvestris</i>	E1	.	.	.	.	.	.	.	.	r	.	.
	<i>Festuca alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Valeriana saxatilis</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Festuca stenantha</i>	E1	.	.	.	.	.	.	.	.	.	.	.
AT	<i>Asplenietea trichomanis</i>												
	<i>Saxifraga paniculata</i>	E1	.	.	.	.	.	.	.	+	.	.	.
	<i>Asplenium viride</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>												
	<i>Carex capillaris</i>	E1	.	.	.	.	+	.	.	+	.	.	.
	<i>Parnassia palustris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Tofieldia calyculata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Pinguicula alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana utriculosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>												
	<i>Poa alpina</i>	E1	.	.	.	.	.	1	.	1	1	.	.
	<i>Trollius europaeus</i>	E1	.	.	.	.	.	r	.	.	.	+	.
	<i>Leontodon hispidus</i>	E1	.	.	.	.	.	+	.	.	.	.	.
	<i>Trifolium repens</i>	E1	.	.	.	.	.	.	.	.	.	+	.
	<i>Euphrasia picta</i>	E1	.	.	.	.	.	+	.	.	.	.	.
	<i>Trifolium pratense</i>	E1	.	.	.	.	.	.	.	.	.	.	.
MuA	<i>Mulgedio-Aconitetea, Betulo-Alnetea</i>												
	<i>Viola biflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Veratrum album</i> subsp. <i>lobelianum</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Alnus viridis</i>	E1	.	+	.	.	.	.	.	.	.	.	.
	<i>Salix glabra</i>	E2a	.	.	+	.	.	.	.	.	.	.	.
	<i>Sorbus chamaemespilus</i>	E2a	+	.	.	.	.	.	.	.	.	.	.
RE	<i>Rhododendro hirsuti-Ericetalia carnea</i>												
	<i>Rhodothamnus chamaecistus</i>	E1	.	.	.	.	2	1	.	.	.	+	.
	<i>Rhododendron hirsutum</i>	E1	+	+	2	.	3	2	.	.	.	+	.
	<i>Pinus mugo</i>	E2a	.	.	+	.	+	+	.	.	.	.	.
	<i>Erica carnea</i>	E1	2	.	.	.	.	.	.	.	.	.	.
	<i>Rhododendron x intermedium</i>	E1	.	.	.	.	.	.	.	.	.	.	.
EP	<i>Erico-Pinetea</i>												
	<i>Carex ornithopoda</i>	E1	.	.	.	+	+	.	.	+	.	.	1

Successive number of relevé (Zaporedna številka popisa)		1	2	3	4	5	6	7	8	9	10	11	12
VP	Vaccinio-Piceetea												
	<i>Huperzia selago</i>	E1	.	+	+	.	.	+	+	.	.	.	.
	<i>Larix decidua</i>	E1	.	r	.	.	.	.	.	.	.	.	.
	<i>Lycopodium annotinum</i>	E1	.	+	.	.	.	.	.	.	.	.	.
	<i>Luzula sylvatica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Pyrola minor</i>	E1	.	.	.	.	.	.	+	.	.	+	.
	<i>Calamagrostis arundinacea</i>	E1	2	.	.	.	.	.	.	.	.	.	.
	<i>Homogyne sylvestris</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Lonicera caerulea</i>	E2a	.	.	.	.	+	.	.	.	.	.	.
	<i>Luzula luzuloides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Picea abies</i>	E1	r	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga cuneifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Sorbus aucuparia</i>	E1	.	+	.	.	.	.	.	.	.	.	.
QF	Quercio-Fagetea												
	<i>Hieracium lachenalii</i>	E1	+	.	.	.	.	.	.	.	.	.	.
O	Other species (Druge vrste)												
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	1	.	.	.	.
	<i>Alchemilla</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia</i> sp.	E1	.	.	.	.	.	.	.	+	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)												
	<i>Hylacomium splendens</i>	E0	.	+	1	1	2	+	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	+	.	.	1	.	.
	<i>Cetraria islandica</i>	E0	.	.	.	.	.	+	+	.	+	.	.
	<i>Tortella tortuosa</i>	E0	.	.	.	.	.	.	.	.	.	.	+
	<i>Dicranum</i> sp.	E0	.	.	.	.	.	1	.	.	.	.	.
	<i>Thamnolia vermicularis</i>	E0	.	.	.	.	.	.	1	.	1	.	.
	<i>Cetraria</i> sp.	E0	.	.	.	.	.	.	.	+	.	.	.
	<i>Cladonia arbuscula</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia</i> sp.	E0	.	.	+	.	.	1	.	.	.	.	.
	<i>Dicranum scoparium</i>	E0	.	+	1	.	.	.	.	.	.	.	.
	<i>Cladonia furcata</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia stellaris</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Ditrichum flexicaule</i>	E0	.	.	.	.	.	.	.	.	1	.	.
	<i>Polytrichum</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria nivalis</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Tortella</i> sp.	E0	.	.	.	.	.	1	.	.	.	.	.
	<i>Drepanocladus</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Plagiothecium denticulatum</i>	E0	.	+	.	.	.	.	.	.	.	.	.
	<i>Pleurozium schreberi</i>	E0	+	.	.	.	.	.	.	.	.	.	.
	<i>Polytrichum formosum</i>	E0	.	.	+	.	.	.	.	.	.	.	.
	<i>Racomitrium lanuginosum</i>	E0	.	+	.	.	.	.	.	.	.	.	.
	<i>Cetrelia cetrarioides</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia pyxidata</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Peltigera leucophebia</i>	E0	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)	39	40	41	42	43	44	45	46	47	48	49	50
Database number of relevé (Delovna številka popisa)	250912	233521	249238	244216	249289	241769	253586	254102	220758	254103	249538	249541
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Elevation in m (Nadmorska višina v m)	2250	1950	1915	1990	2060	2095	1890	1995	2050	2000	2080	1940
Aspect (Lega)	NNW	N	NW	NE	SEE	NE	NW	NE	E	N	NE	NE
Slope in degrees (Nagib v stopinjah)	25	15	10	25	15	3	20	3	5	3	10	25
Parent material (Matična podlaga)	DA	DA	A	DA	DA	A	ALR	A	A	A	A	A
Soil (Tla)	Re	Re	Re	Re	Re	Li	Re	Re	Li	Re	Re	Re
Stoniness in % (Kamnitost v %)	0	0	2	0	5	0	0	0	5	0	10	0
Cover of herb layer in % (Zastiranje zeliščne plasti v %):	E1	100	100	100	100	95	100	95	100	90	100	90
Cover of moss layer in % (Zastiranje mahovne plasti v %):	E0	.	.	.	.	.	5	.	.	.	.	.
Number of species (Število vrst)	23	40	43	35	54	28	30	30	27	27	25	29
Relevé area (Velikost popisne ploskve)	m ²	4	10	5	20	10	2	2	3	10	4	2
Date of taking relevé (Datum popisa)	7/17/2013	8/5/2009	7/28/2013	7/31/2012	7/17/2013	8/17/2011	7/17/2014	8/30/2014	9/10/2008	8/30/2014	8/12/2013	8/12/2013
Locality (Nahajališče)		Mišeljska glava	Mišeljski preval	Travniška dolina	Mišeljska dolina	Mišeljski preval	Veliki Jelenk	Rdeči rob	Zeleni vrh	Kanjavčeve police	Zeleni vrh	Rombon
Quadrant (Kvadrant)		9648/2	9649/3	9648/3	9649/1	9649/3	9648/1	9748/1	9748/2	9648/2	9748/2	9647/1
Coordinate GK Y (D-48)	m	410180	410890	402636	410575	410487	397883	399822	404871	409125	404915	388879
Coordinate GK X (D-48)	m	5135246	5134301	5132473	5134860	5134590	5138567	5123764	5124762	5136682	5124764	5137131
Diagnostic species of syntaxa (Diagnostične vrste sintaksonov)												
LV <i>Vaccinium gaultherioides</i>	E1	2	3	3	3	3	2	4	4	3	4	4
VP <i>Vaccinium vitis-idaea</i>	E1	.	.	.	.	.	2	1	3	2	.	.
VP <i>Homogyne alpina</i>	E1	.	1	2	1	+	+	.	.	.	.	1
LV <i>Empetrum hermaphroditum</i>	E1	.	+	.	.	.	.	.	.	.	.	+
VP <i>Deschampsia flexuosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
LV <i>Loiseleuria procumbens</i>	E1	.	1	4	.	1	.	.	.	.	.	.
ES <i>Homogyne discolor</i>	E1	3	1	1	1	1	+	1	2	1	1	.
VP <i>Vaccinium myrtillus</i>	E1	.	.	.	.	1	1	.	.	.	.	1
JT <i>Agrostis rupestris</i>	E1	.	+	+	.	.	.	.	.	.	.	.
Cfir <i>Dryas octopetala</i>	E1	3	+	+	3	2	+	.	1	1	2	3
CFir <i>Carex firma</i>	E1	.	+	.	2	1	.	+	1	2	2	.
ES <i>Sesleria caerulea</i>	E1	+	1	+	.	1	+	+	1	+	+	1
Cfir <i>Silene acaulis</i>	E1	1	+	2	.	+	.	.	.	+	.	+
SV <i>Potentilla crantzii</i>	E1	.	.	+	.	+	.	+	1	.	1	+
LV <i>Loiseleurio-Vaccinietaea</i>												
<i>Arctostaphylos alpina</i>	E1	2	3	3	+	1	3	3	3	3	1	3

Successive number of relevé (Zaporedna številka popisa)		39	40	41	42	43	44	45	46	47	48	49	50
	<i>Juniperus sibirica</i>	E1	.	.	.	.	.	.	+	.	.	.	.
CC	<i>Caricetalia curvulae</i>												
	<i>Primula minima</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium piliferum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex curvula</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium alpinum</i>	E1	.	.	1	.	.	.	.	.	.	.	.
NS	<i>Nardion strictae</i>												
	<i>Coeloglossum viride</i>	E1	.	+	+	+	.	.	+	.	.	.	.
	<i>Anthoxanthum nipponicum</i> (inc. <i>A. odoratum</i> s. lat.)	E1	.	.	1	.	.	+	.	.	.	.	.
	<i>Festuca nigrescens</i>	E1	.	.	2	.	.	+	.	.	.	.	.
	<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla flabellata</i>	E1	.	.	.	.	.	1	.	.	.	.	+
	<i>Luzula alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Nardus stricta</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla erecta</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula barbata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex pallescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca ovina</i> agg.	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana pannonica</i>	E1	.	.	r	.	.	.	.	.	.	.	.
	<i>Pseudorchis albida</i>	E1	.	.	.	.	.	.	.	.	.	.	.
JT	<i>Juncetea trifidi</i>												
	<i>Campanula scheuchzeri</i>	E1	.	.	+	.	.	+	.	1	+	1	.
	<i>Euphrasia minima</i> (inc. <i>E. pulchella</i>)	E1	.	+	.	.	.	r	.	+	.	+	.
	<i>Leontodon helveticus</i>	E1	.	.	.	.	1	.	.	.	.	.	.
	<i>Juncus trifidus</i>	E1	.	.	+	.	.	.	.	.	.	.	.
	<i>Potentilla aurea</i>	E1	+	+	+	.	+	.	.	.	.	.	.
FV	<i>Carex fuliginosa</i>	E1	2	.	.	.	.	.	.	.	.	.	.
	<i>Juncus jacquinii</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Helictotrichon versicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Solidago virgaurea</i> subsp. <i>minuta</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Geum montanum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	.	.	.
FV	<i>Festuca varia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
OE	<i>Oxytropido-Elymion</i>												
	<i>Antennaria carpatica</i>	E1	.	.	.	.	+	.	.	.	.	1	+
	<i>Lloydia serotina</i>	E1	+	.	.	.	.	.	.	.	+	.	.
	<i>Carex atrata</i>	E1	.	.	+	.	.	.	.	.	.	.	+
	<i>Elyna myosuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Gentiana nivalis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Antennaria dioica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca intercedens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
Cfir	<i>Caricion firmae</i>												
	<i>Pedicularis rostratocapitata</i>	E1	.	+	.	1	+	.	+	+	1	+	+
	<i>Festuca quadriflora</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Helianthemum alpestre</i>	E1	.	.	+	.	+	.	.	.	.	.	.
	<i>Sesleria sphaerocephala</i>	E1	2	.	.	.	.	.	.	+	.	+	.
	<i>Phyteuma sieberi</i>	E1	.	.	+	.	+	.	.	.	.	.	.
	<i>Saussurea pygmaea</i>	E1	.	.	.	+	+	.	.	1	.	+	.
	<i>Oxytropis neglecta</i>	E1	.	.	.	.	+	.	.	.	.	.	+

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Pr.	Fr.	
.	4	5	
.	2	3
.	1	1
.	+	1	1
.	2	.	.	1	1
.	+	1	.	6	8
.	.	.	.	r	.	+	.	r	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	22	29
.	+	+	+	10	13
.	+	1	.	.	.	.	+	.	8	11
+	+	4	5
.	3	4
.	+	+	.	3	4
.	1	.	.	.	.	.	3	4
.	2	3
.	1	1
.	+	1	1
.	1	1
.	1	1
.	1	.	.	1	1
+	+	.	1	+	1	+	+	.	+	.	.	+	.	.	.	.	+	1	1	1	1	1	+	+	44	59	
1	+	.	.	.	+	1	.	.	+	.	.	.	.	.	.	.	+	.	.	1	+	+	.	.	25	33	
+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	+	.	.	.	.	.	1	+	14	19	
+	+	+	+	.	1	.	1	3	1	.	13	17	
.	1	.	.	.	.	1	+	12	16	
.	.	1	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	9
.	+	+	6	8
.	2	.	5	7
.	+	.	.	.	+	4	5	
.	+	.	.	2	3
.	+	2	3
.	1	1
2	1	.	.	2	.	.	.	.	+	.	.	.	.	r	.	.	1	.	.	3	.	+	.	2	26	35	
+	+	+	20	27
.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	13	17
.	1	.	.	.	.	.	.	.	.	.	+	1	.	+	7	9	
.	+	+	6	8
.	5	7
.	3	.	.	.	.	2	3
.	1	1
.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
+	+	.	+	+	.	1	+	.	.	1	1	.	.	.	.	.	.	.	.	.	.	32	43
+	+	1	3	.	.	2	1	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	19	25
.	+	.	+	+	.	.	+	1	15	20
.	2	1	+	1	+	.	.	.	.	.	.	.	.	.	.	14	19
.	.	.	+	.	+	+	.	.	.	+	11	15
.	.	.	+	1	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	11	15
.	+	.	+	.	.	+	+	10	13

Successive number of relevé (Zaporedna številka popisa)		39	40	41	42	43	44	45	46	47	48	49	50
	<i>Minuartia sedoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	r	.	+	.	.	.	.	.	+
	<i>Primula halleri</i>	E1	.	.	.	1	+	.	.	.	.	.	.
	<i>Carex rupestris</i>	E1	.	.	.	.	.	.	.	.	+	.	.
	<i>Geranium argenteum</i>	E1	.	.	.	.	.	1	.	.	.	.	.
	<i>Ranunculus hybridus</i>	E1	.	+	.	.	+	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia gerardii</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CA	<i>Caricion austroalpinae</i>												
	<i>Koeleria eriostachya</i>	E1	.	+	r	+	.	+	+	+	.	.	+
	<i>Pulsatilla alpina</i> subsp. <i>austroalpina</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Festuca calva</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Laserpitium peucedanoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trifolium noricum</i>	E1	.	.	.	.	.	1	.	.	.	.	.
CF	<i>Caricion ferrugineae</i>												
	<i>Gentiana pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hedysarum hedysaroides</i>	E1	.	.	.	.	.	.	.	1	.	+	1
	<i>Cerastium subtriflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex ferruginea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Serratula tinctoria</i> subsp. <i>macrocephala</i>	E1	.	.	.	.	.	.	.	.	.	.	.
SV	<i>Seslerietalia coeruleae</i>												
	<i>Gentiana clusii</i>	E1	.	.	r	+	+	.	.	+	+	+	.
	<i>Achillea clavennae</i>	E1	.	.	+	.	+	+	.	.	.	.	1
	<i>Juncus monanthos</i>	E1	.	+	+	+	.	.	.	.	.	.	.
	<i>Galium anisophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Leontopodium alpinum</i>	E1	.	.	+	+	+	.	.	+	.	.	.
	<i>Erigeron glabratus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Androsace villosa</i>	E1	.	.	.	+	+	.	.	.	.	.	.
	<i>Festuca norica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	.	.	.	.	1
	<i>Astragalus australis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Nigritella widderi</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trisetum alpestre</i>	E1	.	.	.	.	.	.	.	.	.	.	.
ES	<i>Elymo-Seslerietea</i>												
	<i>Polygonum viviparum</i>	E1	2	1	1	1	1	+	1	+	1	.	1
	<i>Selaginella selaginoides</i>	E1	1	1	1	1	1	+	1	1	1	1	+
	<i>Agrostis alpina</i>	E1	2	+	1	1	+	2	.	+	1	+	.
	<i>Aster bellidiastrum</i>	E1	.	+	.	.	1	.	.	.	1	.	.
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	.	.	+	+	1	.	.	+	.	+	.
	<i>Bartsia alpina</i>	E1	.	.	+	.	+	+	+	+	1	+	.
	<i>Astrantia bavarica</i>	E1	.	2	2	1	1	1	1	+	+	1	.
	<i>Gentianella anisodonta</i>	E1	.	+	.	.	.	+	.	+	.	+	.
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	+	+	.	+	.	.	.	.	.	+
	<i>Pedicularis verticillata</i>	E1	+	.	.	.	+	.	.	.	+	.	+
	<i>Carex sempervirens</i>	E1	.	+	+	+	+	.	.	.	1	.	.
	<i>Hieracium pilosum</i>	E1	.	+	.	.	+	.	.	.	.	.	.
	<i>Aster alpinus</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Alchemilla glaucescens</i>	E1	.	.	.	.	.	+	.	.	.	.	.

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Pr.	Fr.	
+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	9	12
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	7	9
1	1	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	6	8
.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	4	5
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3
.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	2	3
.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	+	.	.	.	1	.	.	.	.	.	+	.	.	.	+	+	.	.	.	17	23
.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	7	9
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
+	+	1	+	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	27
.	+	+	+	.	2	12	16
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3
.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	+	+	+	.	.	.	+	+	+	+	+	.	+	.	.	.	.	.	.	.	23	31
.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	22	29
.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	15	20
.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	12	16
.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	7	9
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	6	8
.	.	.	.	.	.	.	.	r	r	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	7
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	3	4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	2	3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	2	3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	2	3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	1	1
.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
1	1	2	2	1	1	1	1	1	1	1	.	.	+	.	.	1	1	1	+	1	1	2	1	2	63	84	
1	1	1	1	.	+	+	.	+	+	1	1	1	.	.	1	1	1	+	.	+	.	.	.	.	53	71
.	+	.	+	3	2	+	.	.	.	+	1	1	2	1	+	1	+	.	.	+	+	1	.	+	50	67	
.	+	+	+	1	1	.	+	1	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	29	39
+	+	.	1	.	1	+	.	.	+	+	.	.	.	+	+	.	.	.	.	+	+	.	.	+	28	37
.	1	.	.	+	+	.	.	.	+	1	.	.	.	+	.	+	.	+	.	.	.	.	.	+	27	36
.	+	.	1	.	+	.	.	1	.	1	.	.	.	.	1	.	.	.	1	.	.	.	.	.	25	33
+	1	.	.	.	1	+	+	.	.	.	.	.	+	+	.	.	+	+	.	.	.	.	.	.	20	27
.	.	.	+	.	.	.	.	2	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	19	25
.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	.	.	.	17	23
1	1	+	.	.	+	.	.	.	+	2	.	.	.	.	.	.	.	.	1	.	.	.	.	+	16	21
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	7	9
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	r	.	.	+	5	7
.	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	5

Successive number of relevé (Zaporedna številka popisa)		39	40	41	42	43	44	45	46	47	48	49	50
	<i>Arabis vochinensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium villosum</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	+	+	.	.	.	.	.	.	.
	<i>Nigritella rhellicani</i>	E1	.	.	.	+	.	.	.	.	.	.	.
	<i>Phyteuma orbiculare</i>	E1	.	+	.	.	.	.	.	.	.	.	.
	<i>Euphrasia salisburgensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Lotus alpinus</i>	E1	.	.	.	.	.	.	+	.	.	.	.
	<i>Anemone narcissiflora</i>	E1	.	.	.	.	.	.	1	.	.	.	.
	<i>Gentiana verna</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Myosotis alpestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhinanthus glacialis</i>	E1	.	.	.	.	.	.	.	+	.	.	.
	<i>Alchemilla exigua</i>	E1	.	.	.	.	.	.	.	.	.	+	.
	<i>Betonica alopecuroides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium strictum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Daphne striata</i>	E1	.	.	.	.	.	2	.	.	.	.	.
	<i>Helianthemum grandiflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium dentatum</i>	E1	.	.	+	.	.	.	.	.	.	.	.
FB	Festuco-Brometea, Trifolio-Geranietea												
	<i>Gymnadenia conopsea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Libanotis sibirica</i> subsp. <i>montana</i>	E1	.	.	.	.	.	.	+	.	.	.	.
AC	Arabidetalia caeruleae (inc. Salicetea herbaceae)												
	<i>Salix retusa</i>	E1	+	.	.	+	.	.	.	.	.	.	.
	<i>Carex parviflora</i>	E1	+	+	.	.	+	.	.	.	.	.	.
	<i>Soldanella alpina</i>	E1	.	+	.	+	+	+	1	+	.	+	.
	<i>Alchemilla fissa</i>	E1	.	.	.	1	+	.	.	.	.	.	+
	<i>Trifolium pallescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Doronicum glaciale</i>	E1	2	.	.	.	.	.	.	.	.	.	.
	<i>Galium noricum</i>	E1	1	.	.	.	.	.	.	.	.	.	.
	<i>Salix reticulata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix serpyllifolia</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Carex ornithopodioides</i>	E1	.	.	.	.	.	.	.	.	.	+	.
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	.	.	.
TR	Thlaspietea rotundifolii												
MC	<i>Saxifraga aizoides</i>	E1	.	+	.	+	.	.	.	.	.	.	.
	<i>Rhodiola rosea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca nitida</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	.	+	.	.	.	.	.	.	.
	<i>Heliosperma alpestre</i>	E1	.	+	.	.	.	.	.	.	.	.	.
	<i>Hieracium bifidum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Petrocallis pyrenaica</i>	E1	.	.	.	+	.	.	.	.	.	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Pimpinella alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Achillea atrata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia austriaca</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa minor</i>	E1	.	.	.	.	+	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga sedoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PS	Phyteumato-Saxifragion petraeae												
	<i>Saxifraga crustata</i>	E1	+	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga squarrosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PC	Potentilletalia caulescentis												
	<i>Primula auricula</i>	E1	.	.	.	3	+	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		39	40	41	42	43	44	45	46	47	48	49	50
	<i>Dianthus sylvestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	.	.	.	.	+	.	+	.	.	.	.
	<i>Valeriana saxatilis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Festuca stenantha</i>	E1	.	.	.	.	.	.	+	.	.	.	.
AT	<i>Asplenietea trichomanis</i>												
	<i>Saxifraga paniculata</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Asplenium viride</i>	E1	.	.	.	.	.	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>												
	<i>Carex capillaris</i>	E1	.	+	+	.	+	.	.	.	+	+	+
	<i>Parnassia palustris</i>	E1	.	1	.	.	1	.	+	.	.	+	.
	<i>Tofieldia calyculata</i>	E1	.	1	1	1	+	.	.	.	.	.	.
	<i>Pinguicula alpina</i>	E1	.	.	.	+	+	+	.	.	.	.	.
	<i>Gentiana utriculosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.
PaT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>												
	<i>Poa alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	+
	<i>Trollius europaeus</i>	E1	.	.	.	.	+	.	+	+	.	+	.
	<i>Leontodon hispidus</i>	E1	.	1	.	+	.	1	.	.	.	.	.
	<i>Trifolium repens</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Euphrasia picta</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Trifolium pratense</i>	E1	.	.	.	.	.	.	.	.	.	.	.
MuA	<i>Mulgedio-Aconitetea, Betulo-Alnetea</i>												
	<i>Viola biflora</i>	E1	.	.	.	+	+	.	+	.	+	+	.
	<i>Veratrum album</i> subsp. <i>lobelianum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Alnus viridis</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix glabra</i>	E2a	.	.	.	.	.	.	.	.	.	.	.
	<i>Sorbus chamaemespilus</i>	E2a	.	.	.	.	.	.	.	.	.	.	.
RE	<i>Rhododendro hirsuti-Ericetalia carneae</i>												
	<i>Rhodothamnus chamaecistus</i>	E1	.	+	+	+	1	+	1	+	+	.	1 1
	<i>Rhododendron hirsutum</i>	E1	.	+	+	.	.	1 1	2	+	+	3	3
	<i>Pinus mugo</i>	E2a	.	.	.	.	.	.	.	.	.	.	.
	<i>Erica carnea</i>	E1	.	.	.	.	.	+	.	.	.	.	.
	<i>Rhododendron x intermedium</i>	E1	.	.	.	.	.	.	.	.	.	.	.
EP	<i>Erico-Pinetea</i>												
	<i>Carex ornithopoda</i>	E1	+	+	1	.	1	.	+	.	.	.	.
VP	<i>Vaccinio-Piceetea</i>												
	<i>Huperzia selago</i>	E1	.	+	.	.	.	.	.	.	.	.	.
	<i>Larix decidua</i>	E1	.	.	.	.	.	.	.	.	+	.	.
	<i>Lycopodium annotinum</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula sylvatica</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Pyrola minor</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Calamagrostis arundinacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Homogyne sylvestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Lonicera caerulea</i>	E2a	.	.	.	.	.	.	.	.	.	.	.
	<i>Luzula luzuloides</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Picea abies</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga cuneifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Sorbus aucuparia</i>	E1	.	.	.	.	.	.	.	.	.	.	.
QF	<i>Quercu-Fagetea</i>												
	<i>Hieracium lachenalii</i>	E1	.	.	.	.	.	.	.	.	.	.	.
O	Other species (Druge vrste)												
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.

Successive number of relevé (Zaporedna številka popisa)		39	40	41	42	43	44	45	46	47	48	49	50
	<i>Alchemilla</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)												
	<i>Hylocomium splendens</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhytidiadelphus triquetrus</i>	E0	1	.	.	.	.	+	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	+	.	.	.	.	.	.	.	.
	<i>Tortella tortuosa</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Thamnia vermicularis</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia arbuscula</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia</i> sp.	E0	.	.	.	.	.	.	.	+	.	.	.
	<i>Dicranum scoparium</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia furcata</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia stellaris</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Ditrichum flexicaule</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Polytrichum</i> sp.	E0	+	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria nivalis</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Tortella</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Drepanocladus</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Plagiothecium denticulatum</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Pleurozium schreberi</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Polytrichum formosum</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Racomitrium lanuginosum</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetrelia cetrarioides</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia pyxidata</i>	E0	.	.	.	.	.	.	.	.	.	.	.
	<i>Peltigera leucophlebia</i>	E0	.	.	.	.	.	.	.	.	.	.	.

Legend – Legda

- Relevé 1: *Homogyno alpinae-Empetretum hermaphroditae* nom. prov.
 Relevés 2–6: *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*
 Relevés 7–20: *Homogyno discoloris-Loiseleurietum caricetosum firmae*
 Relevés 21–61: *Homogyno discoloris-Vaccinietum gaultherioidis*
 Relevés 62–66: *Empetro-Arctostaphyletum alpinae* nom. prov.
 Relevés 69–75: *Homogyno alpinae-Vaccinietum gaultherioidis*

- ID Igor Dakskobler
 BS Boštjan Surina
 TW Tone Wraber
 An Andesite – andezit
 A Limestone – apnenec
 D Dolomite – dolomit
 L Marlstone – laporovec
 R Chert – roženec
 G Claystone – glinavec
 Li Lithosol – kamnišče
 Re Rendzina – rendzina
 Ra Ranker – ranker
 Dy Dystric brown soil – distrična rjava tla
 MC *Montio-Cardaminetea*
 FV *Festucion variaie*

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Pr.	Fr.	
.	1	1
.	1	1
.	+	2	.	.	.	.	.	.	.	.	11	15
.	3	.	.	.	.	.	.	.	.	10	13
.	10	13
.	7	9
.	5	7
.	4	5
.	4	5
.	4	5
.	5	7
.	4	5
.	3	4
.	3	4
.	3	4
.	2	3
.	2	3
.	2	3
.	2	3
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1
.	1	1

Table 6 (Tabela 6): *Saxifraga paniculatae*-*Caricetum fuliginosae* ass. nov.

Successive number of relevé (Zaporedna številka popisa)	1	2	3	4	5	6	7	8			
Database number of relevé (Delovna številka popisa)	258111	250786	258075	258110	262408	262411	258069	258077			
Author of relevé (Avtor popisa)	ID	ID	ID	ID	ID	ID	ID	ID			
Elevation in m (Nadmorska višina v m)	2390	2294	2500	2275	2375	2385	2500	2500			
Aspect (Lega)	SWW	N	NE	N	NE	N	SE	NW			
Slope in degrees (Nagib v stopinjah)	5	30	2	45	2	20	5	2			
Parent material (Matična podlaga)	A	A	Gr	A	A	Gr	Gr	Gr			
Soil (Tla)	Li	Li	Li	Li	Li	Li	Li	Li			
Stoniness in % (Kamnitost v %)	20	20	50	60	30	60	40	20			
Cover of herb layer in % (Zastiranje zelišč. plasti v %): E1	80	80	50	40	70	40	60	80			
Number of species (Število vrst)	16	11	14	10	12	11	8	10			
Relevé area (Velikost popisne ploskve)	m ²	2	1	1	1	2	2	5	1		
Date of taking relevé (Datum popisa)	8/31/2015	7/31/2013	9/1/2015	8/31/2015	8/8/2016	8/8/2016	9/1/2015	9/1/2015			
Locality (Nahajališče)	Veliko Špiče	Velika Črnelška špica	Zaplanja - Plemenice	Špiče - Goriški rob	Sfinga - Plemenice	Sfinga - Plemenice	Zaplanja - Plemenice	Zaplanja - Plemenice			
Quadrant (Kvadrant)	9648/4	9647/1	9649/1	9648/4	9648/2	9648/2	9649/1	9649/1			
Coordinate GK Y (D-48)	m	405455	386043	410573	406072	409910	409956	410562	410566		
Coordinate GK X (D-48)	m	5134052	5137992	5138192	5134364	5138150	5138175	5138173	5138201		
Diagnostic species of the association (Diagnostične vrste asociacije)										Pr.	Fr.
FV <i>Carex fuliginosa</i>	E1	1	3	4	3	3	3	4	4	8	100
AT <i>Saxifraga paniculata</i>	E1	1	1	2	1	1	2	1	1	8	100
AC <i>Salix serpyllifolia</i>	E1	1	2	.	+	2	1	1	2	7	88
Cfir <i>Sesleria sphaerocephala</i>	E1	.	+	+	.	+	1	.	+	5	63
Cfir <i>Caricion firmae</i>											
<i>Minuartia sedoides</i>	E1	+	+	+	1	+	+	1	+	8	100
<i>Carex firma</i>	E1	+	1	.	.	1	1	.	.	4	50
<i>Silene acaulis</i>	E1	.	.	1	.	2	1	.	.	3	17
<i>Helianthemum alpestre</i>	E1	2	2	.	.	.	.	.	.	2	25
<i>Minuartia gerardii</i>	E1	+	.	+	.	.	.	.	.	2	25
<i>Dryas octopetala</i>	E1	.	2	r	.	.	.	.	.	2	25
<i>Phyteuma sieberi</i>	E1	.	.	+	+	.	.	.	.	2	25
<i>Oxytropis neglecta</i>	E1	+	.	.	.	.	.	.	.	1	13
<i>Gentiana terglouensis</i>	E1	.	.	+	.	.	.	.	.	1	13
OE <i>Oxytropido-Elymion</i>											
<i>Arenaria ciliata</i>	E1	.	.	.	.	+	+	.	.	2	25
CF <i>Caricion ferrugineae</i>											
<i>Gentiana pumila</i>	E1	.	.	.	.	+	.	.	.	1	13

Successive number of relevé (Zaporedna številka popisov)		1	2	3	4	5	6	7	8	Pr.	Fr.
ES	Elyno-Seslerietea										
	<i>Polygonum viviparum</i>	E1	+	2	.	1	1	.	.	.	4 50
	<i>Aster bellidiastrum</i>	E1	+	.	.	.	.	+	.	.	2 25
PaT	<i>Poa alpina</i>	E1	+	.	.	.	1	.	.	.	2 25
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	2	.	.	.	.	.	.	.	1 13
	<i>Gentianella anisodonta</i>	E1	+	.	.	.	.	.	.	.	1 13
JT	Juncetea trifidi										
	<i>Euphrasia minima</i>	E1	+	.	.	.	.	.	.	.	1 13
AC	Arabidetalia caeruleae										
DH	<i>Doronicum glaciale</i>	E1	.	1	.	1	1	1	1	+	6 75
	<i>Carex parviflora</i>	E1	2	.	+	.	.	.	+	.	3 38
CD	<i>Carex capillaris</i>	E1	2	.	.	.	.	.	.	.	1 13
AA	<i>Cerastium uniflorum</i>	E1	.	.	+	.	.	.	.	.	1 13
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	+	.	.	.	.	1 13
TR	Thlaspietea rotundifolii										
	<i>Saxifraga sedoides</i>	E1	.	.	+	.	.	.	.	+	2 25
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	+	.	.	+	.	2 25
MC	<i>Saxifraga aizoides</i>	E1	.	+	.	.	.	.	.	.	1 13
	<i>Papaver julicum</i>	E1	.	.	.	.	.	.	.	+	1 13
PC	Potentilletalia caulescentis										
AV	<i>Eritrichium nanum</i>	E1	.	.	1	.	.	.	.	+	2 25
	<i>Saxifraga crustata</i>	E1	.	.	+	.	.	.	.	.	1 13
	<i>Saxifraga squarrosa</i>	E1	.	.	.	+	.	.	.	.	1 13
	<i>Festuca alpina</i>	E1	.	.	.	.	.	+	.	.	1 13
	<i>Minuartia cherlerioides</i>	E1	.	.	.	.	.	.	.	+	1 13

Legend – Legenda

- ID Igor Dakskobler
- A Limestone – apnenec
- Gr Gravel – grušč
- Li Lithosol – kamnišče
- AT *Asplenietea trichomanis*
- FV *Festucion variae*
- PoT *Poa alpinae*-*Trisetetalia*
- DH *Drabion boppeanae*
- CD *Caricetalia davalliana*
- AA *Androsacion alpinae*
- AV *Androsacion vandellii*
- MC *Montio-Cardaminetea*

Table 7: Synthetic table of alpine swards and heathlands in the Julian Alps.
Tabela 7: Sintezna tabela alpinskih trat in resav v Julijskih Alpah.

	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												
Successive number (Zaporedna številka)	7	5	36	16	32	9	17	29	7	7	10	10	8	7	14	31	12	22	10	7	4	4	6	8	8	7	5	5	7												
Number of relevés (Število popisov)	7	5	36	16	32	9	17	29	7	7	10	10	8	7	14	31	12	22	10	7	4	4	6	8	8	7	5	5	7												
Sign for syntaxa (Oznaka sintaksonov)	GCfh	GCfpa	GCfya	GCfha	SPCrdo	SSDosc	SSCmy	SPCron	SPCrpe	IBS	GCfda	SSDosp	GCfph	HDVgsp	SPCrhd	HDVpct	IBS	HDVgrc	AcEmvg	AcEmcf	AcEmy	HDVg	IBS	Dov	Dods	PVDova	PVDocc	Doss	SPCrst	EhVg	EhAa	SSCmids									
Author of relevés (Avtor popisov)	BSID	ID	IBS	ID	ID	ID	IDTW	IDTW	ID	IBS	IBS	ID	ID	ID	ID	IDTW	IBS	IBS	IDTW	ID	IDTW	ID	IBS	IBS	ID	ID	BSID	ID	ID	ID	IDBS										
CFir	E1	100	100	100	97	89	76	72	71	100	40	100	88	100	70	42	8	64	40	43	75	100	75	100	75	88	43	80	14	14	14										
<i>Carex firma</i>	E1	86	60	67	100	44	44	35	14	71	43	40	60	38	71	64	52	17	45	5	25	50	50	50	13	25	60	29	29	29	29	29									
<i>Pedicularis rostratocapitata</i>	E1	86	20	14	19	6	53	43	43	43	43	10	10	10	10	6	6	5	5	5	25	50	50	50	13	25	60	29	29	29	29	29	29								
<i>Ranunculus hybridus</i>	E1	71	40	6	44	6	44	12	45	29	14	40	10	38	29	7	16	33	41	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70							
<i>Oxytropis neglecta</i>	E1	71	40	64	69	44	22	35	17	86	29	30	20	38	14	21	13	27	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30						
<i>Phyteuma sieberi</i>	E1	43	80	44	56	50	22	82	83	71	43	40	13	71	36	16	50	68	80	14	75	75	75	75	63	38	14	20	20	20	20	20	20	20	20						
<i>Helianthemum alpestre</i>	E1	43	60	33	69	22	78	29	48	29	57	60	90	88	71	43	52	67	82	70	29	33	33	33	33	13	29	20	20	20	20	20	20	20	20	20					
<i>Silene acaulis</i>	E1	29	80	8	25	9	22	6	24	57	43	30	40	25	14	29	6	50	45	20	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14				
<i>Minuartia sedoides</i>	E1	14	20	14	3	3	3	3	3	43	43	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9			
<i>Gentiana tenglonensis</i>	E1	14	20	14	3	3	3	3	3	43	43	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		
<i>Salix alpina</i>	E1	14	40	14	50	44	56	24	31	57	14	10	20	38	86	7	13	8	32	40	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14		
<i>Saussurea pygmaea</i>	E1	14	60	53	56	63	89	65	86	86	29	70	40	13	29	14	23	17	50	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		
<i>Sesleria sphaerocephala</i>	E1	14	60	6	63	6	44	29	17	14	14	40	10	10	10	7	16	8	14	10	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14		
<i>Chamorchis alpina</i>	E1	14	60	6	63	6	44	29	17	14	14	40	10	10	10	7	16	8	14	10	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
<i>Geranium argenteum</i>	E1	14	60	6	63	6	44	29	17	14	14	40	10	10	10	7	16	8	14	10	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
<i>Festuca quadriflora</i>	E1	60	14	25	13	44	12	31	14	29	60	40	75	14	29	23	50	32	20	14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
<i>Minuartia gerardii</i> (<i>M. verna</i> subsp. <i>verna</i>)	E1	60	3	3	3	3	3	3	3	14	29	10	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
<i>Saxifraga exarata</i> subsp. <i>carniolica</i>	E1	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
<i>Veronica aphylla</i>	E1	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
<i>Dryas octopetala</i>	E1	20	100	94	100	100	47	52	57	100	100	50	100	86	71	90	67	91	70	14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
<i>Crepis kernerii</i>	E1	31	6	3	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
<i>Carex rupestris</i>	E1	11	13	100	11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
<i>Primula wulfeniana</i>	E1	8	6	6	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
<i>Pedicularis rosea</i>	E1	8	6	6	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
<i>Primula halleri</i>	E1	8	6	6	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
OE	E1	14	8	6	16	44	43	70	43	70	25	29	36	42	17	14	20	14	20	14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		
<i>Lloydia serotina</i>	E1	60	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
<i>Arenaria ciliata</i>	E1	60	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		

Successive number (Zaporedna številka)	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		
<i>Nigritella miniata</i> s. lat. (<i>N. bicolor</i> , <i>N. hygrophila</i>)	E1	.	.	.	6	3	.	.	.	.	.	10	.	29	.	6	5	.	.	.	.	.	.	.	.	.	.	.	.
<i>Gentiana orbicularis</i>	E1	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.
<i>Trisetum alpestre</i>	E1	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.
<i>Asnagalus australis</i>	E1	.	.	.	.	.	.	7	.	.	10	.	.	.	.	.	.	.	20	14	.	.	.	.	.	.	.	.	.
<i>Festuca norica</i>	E1	.	.	.	.	.	.	.	.	.	10	.	.	.	.	3	8	5	.	.	.	.	.	.	.	.	.	.	.
<i>Nigritella widdéri</i>	E1	.	.	.	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Poa pumila</i>	E1	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Leucanthemum heterophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.
<i>Traunsteinera globosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.
ES <i>Ehyno-Seslerietea</i>																															
<i>Aster bellidiastrum</i>	E1	86	20	86	56	41	78	53	17	43	86	10	80	75	71	36	52	50	55	.	.	75	75	67	75	13	.	.	40	29	
<i>Sesleria caerulea</i>	E1	86	60	50	69	59	44	88	34	29	57	60	70	63	86	71	84	50	45	60	71	100	100	83	100	63	.	40	40	100	
<i>Polygonum viviparum</i>	E1	57	80	61	88	72	78	53	90	29	100	90	100	100	100	93	90	75	82	80	100	75	75	100	75	63	71	40	20	29	
<i>Bartsia alpina</i>	E1	43	20	19	44	19	44	35	10	14	57	20	40	38	57	29	42	33	32	20	29	.	25	.	50	25	.	20	20	.	
<i>Globularia cordifolia</i>	E1	29	.	6	.	.	.	41	3	29	.	.	.	.	.	.	.	.	.	.	.	.	75	.	.	.	.	.	86
<i>Hieracium villosum</i>	E1	29	20	11	13	.	11	6	.	14	.	10	.	.	.	10	8	5	.	.	.	75	.	.	.	.	.	.	29
<i>Agrostis alpina</i>	E1	14	40	11	56	41	33	35	65	57	0	60	60	63	100	71	74	75	86	60	57	.	25	83	75	13	57	20	100	.	
<i>Alchemilla cinerea</i>	E1	14	
<i>Anemone narcissiflora</i>	E1	14	.	3	.	3	3	20	.	.	
<i>Aster alpinus</i>	E1	14	.	8	.	3	11	12	.	.	.	10	.	.	.	6	.	30	43	25	63	
<i>Astrantia bavarica</i>	E1	14	.	14	19	25	11	.	.	14	.	10	38	43	21	45	.	18	.	14	25	50	50	100	.	.	20	20	.	.	
<i>Carex sempervirens</i>	E1	14	.	17	19	9	11	18	.	29	.	40	50	.	7	26	8	23	.	29	.	50	.	88	75	
<i>Homogyne discolor</i>	E1	14	.	44	38	31	.	6	3	14	.	60	100	71	64	68	.	55	10	14	75	75	67	88	25	29	.	20	.		
<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	14	80	22	44	34	22	29	17	29	14	10	90	63	86	29	42	83	55	40	43	75	75	83	50	13	29	.	40	14	
<i>Selaginella selaginoides</i>	E1	14	.	53	44	34	22	12	.	57	60	50	75	57	71	81	25	41	10	29	50	50	100	50	13	14	20	60	.		
<i>Gentianella anisodonta</i>	E1	.	80	22	19	22	22	25	10	29	14	30	60	63	29	14	29	67	55	20	14	25	.	17	.	14	.	40	.		
<i>Myosotis alpestris</i>	E1	.	40	3	.	.	.	.	.	29	.	10	.	.	.	6	8	23	20	.	.	.	.	.	.	.	.	.	.
<i>Pedicularis verticillata</i>	E1	.	40	8	38	.	.	6	8	.	14	40	40	25	43	21	32	50	41	20	14	.	.	50	13	.	.	.	.
<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	20	33	50	41	22	76	14	.	29	20	50	13	43	36	32	8	36	30	.	50	75	17	63	25	.	20	43		
<i>Euphrasia salisburgensis</i>	E1	.	20	11	13	6	.	6	.	14	14	.	.	.	14	3	17	9	10	.	25	.	13	13	14	.	.	86			
<i>Gentiana verna</i>	E1	.	.	8	6	.	.	18	.	14	.	.	60	.	14	.	3	42	27	0	14	0	25	.	13	.	.	.	14		
<i>Alchemilla alpigena</i>	E1	.	.	6	.	.	.	.	.	29	.	.	.	.	43	.	3	17	23	10	.	25	.	.	.	.	.	.	14
<i>Alchemilla exigua</i>	E1	.	.	3	.	6	3	
<i>Daphne striata</i>	E1	.	.	3	.	.	24	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	75	.	88	.	.	.	.
<i>Helianthemum nummularium</i> subsp. <i>grandiflorum</i>	E1	.	.	3	.	.	6	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	57
<i>Linum alpinum</i> subsp. <i>judicum</i>	E1	.	.	3	19	3	.	18	.	14	.	30	.	14	.	6	.	.	.	.	.	.	.	25	33	75	.	.	.
<i>Lotus alpinus</i>	E1	.	.	3	.	.	.	.	.	14	.	.	.	.	3	.	.	.	.	.	.	14	25	25	.	.	.	.	.
<i>Polygala alpestris</i>	E1	.	.	3	6	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	25	75	.	.	.	.	14	

Successive number (Zaporedna številka)	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		
<i>Potentilla aurea</i>	E1	.	.	.	3	.	.	.	.	.	10	.	29	29	16	.	23	10	43	.	.	67	38	.	14	.	.	.	.
<i>Borychium lunaria</i>	E1	.	.	.	3	.	.	.	.	.	.	.	.	.	.	3	8	18	10	14	.	.	.	.	.	.	.	.	.
<i>Luzula spicata</i>	E1	.	.	.	.	.	.	3	.	.	20	.	14	.	.	33	32	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex fuliginosa</i>	E1	.	.	.	.	.	.	3	.	.	30	10	38	.	.	13	8	9	10	.	.	.	.	.	.	.	.	.	13
<i>Anthoxanthum nipponicum</i>	E1	.	.	.	.	.	.	.	.	14	.	10	.	14	7	16	33	18	.	43	25	.	33	38	.	.	.	.	20
<i>Juncus trifidus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	25	.	14	10	33	.	10	57	.	.	.	.	.	.	.	.	.
<i>Helictotrichon versicolor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	21	3	.	30	14	.	.	.	.	.	.	.	.	.	.
<i>Juncus jacquinii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	21	3	33	.	20	14	.	.	.	.	.	.	.	.	.	.
<i>Geum montanum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.
<i>Solidago virgaurea</i> subsp. <i>minuta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.	29	.	.	.	17	.	13	.	20	.	.
<i>Pulsatilla vernalis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	100	100	.	.	.	.	.
<i>Festuca varia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20
LV																															
Loiseleurio-Vaccinietea																															
<i>Arctostaphylos alpina</i>	E1	.	.	31	44	47	44	18	.	.	40	10	38	14	71	87	42	14	10	29	75	25	.	.	13	43	60	100	.		
<i>Vaccinium gaultherioides</i>	E1	.	.	17	25	34	11	.	7	14	50	70	100	71	100	100	92	36	20	100	.	.	83	63	13	57	80	40	.		
<i>Loiseleuria procumbens</i>	E1	.	.	.	.	3	.	.	.	.	.	.	13	14	100	13	.	.	.	.	.	.	.	.	.	.	.	.	14
<i>Juniperus sibirica</i>	E1	.	.	.	.	.	.	3	14	.	.	.	.	7	3	8	.	.	.	.	75	.	83	75	.	40	.	14	
<i>Empetrum hermaphroditum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	13	.	7	13	.	.	.	.	.	.	.	.	.	.	100	80
AC																															
Arabidetalia caeruleae (inc. Salicetea berbaceae)																															
<i>Trifolium pallescens</i>	E1	14	20	.	.	.	.	.	.	29	50	10	13	.	36	6	42	41	10	43	.	.	17	.	13	.	20	.	14
<i>Carex ornithopodioides</i>	E1	14	.	.	6	6	20	20	25	.	14	6	5	10	.	75	25	
<i>Salix retusa</i>	E1	14	40	14	19	19	33	.	17	14	71	20	50	14	36	35	75	45	30	43	.	.	67	.	.	86	.	.	.		
<i>Soldanella alpina</i>	E1	14	20	11	13	13	.	.	.	.	29	0	30	13	57	7	29	.	5	.	50	.	33	75	13	.	.	40	
<i>Veronica alpina</i>	E1	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex parviflora</i>	E1	20	.	.	.	.	.	.	7	.	50	30	50	14	29	29	33	68	10	14	.	.	.	.	13	.	20	.	.
<i>Ranunculus traunfelleri</i>	E1	20	25	25	6	22	.	.	.	71	20	10	.	.	3	.	9	.	.	.	.	.	.	.	.	25	.	.	.
<i>Doronicum glaciale</i>	E1	20	.	6	3	22	.	7	43	80	.	.	14	29	.	18	.	.	.	.	.	.	.	.	.	20	.	.	.
<i>Soldanella minima</i>	E1	.	25	.	3	11	.	.	.	29	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.
<i>Thlaspi minimum</i>	E1	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.
<i>Galium noricum</i>	E1	.	6	.	.	.	.	.	.	14	.	10	.	57	36	6	23	.	.	.	.	.	.	.	.	14	.	.	.
<i>Salix serpyllifolia</i>	E1	.	3	6	11	11	.	17	29	50	20	.	.	.	17	9	20	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla fissa</i>	E1	.	.	6	.	6	.	3	14	.	10	13	14	36	19	8	18	40	43	.	.	.	50	.	.	.	.	.	.
<i>Salix reticulata</i>	E1	.	.	.	3	.	3	.	3	29	40	.	.	.	7	13	33	.	20	.	.	.	.	.	.	.	.	.	.
<i>Ranunculus alpestris</i>	E1	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Gnaphalium supinum</i>	E1	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Saxifraga androsacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14	.	.
TR																															
Thlaspietea rotundifolii																															
<i>Petrocallis pyrenaica</i>	E1	57	80	8	13	3	.	29	28	29	.	10	13	29	.	3	.	23	10	.	.	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)	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				
<i>Picea abies</i>	E1	.	.	3	.	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	20	.	.			
<i>Vaccinium myrtillus</i>	E1	.	.	.	6	.	.	.	.	.	.	.	29	13	8	.	.	.	.	43	25	.	67	.	.	.	80	60	.	.		
<i>Luzula sylvatica</i>	E1	.	.	.	.	.	.	.	.	14	.	.	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pyrola minor</i>	E1	.	.	.	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lycopodium annotinum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	7	3	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
<i>Luzula luzuloides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Saxifraga cuneifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Moneses uniflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.	.
<i>Pyrola rotundifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.	.
<i>Avenella flexuosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
<i>Calamagrostis arundinacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
<i>Homogyne sylvestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
<i>Lonicera caerulea</i>	E2a	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
<i>Sorbus aucuparia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.		
QF Quercus-Fageteta																																	
<i>Anemone nemorosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium lachenalii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.	.
O Other species (Druge vrste)																																	
<i>Minuartia</i> sp.	E1	.	20	.	.	.	.	3	.	.	10	10	.	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Festuca</i> sp.	E1	.	.	6	6	.	.	.	.	.	10	13	.	7	3	8	.	.	.	14	.	.	.	.	.	.	.	14	.	.	.	.
<i>Festuca violacea</i> agg.	E1	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alchemilla</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.	7	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hieracium</i> sp.	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14
ML Mosses and lichens (Mahovi in lišaji)																																	
<i>Tortella tortuosa</i>	E0	.	60	31	6	9	22	12	10	.	.	.	13	.	10	10	8	9	25	.	.	13	.	.	.	40	43
<i>Thamnomolia vernicularis</i>	E0	.	20	.	6	.	6	21	14	.	20	.	.	20	6	8	.	10
<i>Tortella</i> sp.	E0	.	20	19	13	22	33	24	10	29	29	10	14	.	3	23	30	.	.	.	.	.	.	.	88	.	14	.	.	.	.	14
<i>Cetraria islandica</i>	E0	.	.	6	.	3	.	.	.	10	.	.	.	14	16	.	5	.	.	.	.	.	.	.	17	.	.	29	.	.	.	.
<i>Crenidium molluscum</i>	E0	.	.	3	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14
<i>Schistidium apocarpum</i>	E0	.	.	3	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29
<i>Dicranum scoparium</i>	E0	.	.	.	.	3	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	40	.	.	.	.
<i>Polytrichum alpinum</i>	E0	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Parmelia</i> sp.	E0	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dicranum</i> sp.	E0	.	.	.	.	11	.	.	.	14	.	.	.	.	6	.	.	.	.	.	.	.	.	.	38	.	14	.	.	.	40	.
<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	.	.	10	.	.	.	7	23	8	.	.	.	.	.	.	.	.	.	.	14	.	.	.	.	.
<i>Dischidium capillaceum</i>	E0	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.	.
<i>Hylocomium splendens</i>	E0	.	.	.	.	.	.	.	.	14	.	.	.	.	13	.	.	.	.	.	.	.	.	.	.	.	.	80	20	.	.	.
<i>Cetraria</i> sp.	E0	.	.	.	.	.	.	.	.	.	.	.	.	14	.	.	10	14	.	.	.	.	.	.	.	.	.	.	.	.	20	.
<i>Ditrichum flexicaule</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	7	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 8: Groups of diagnostic species in alpine swards and heathlands in the Julian Alps (relative frequencies).

Tabela 8: Skupine diagnostičnih vrst v alpinških tratah v Julijskih Alpah (relativne frekvence).

Successive number (Zaporedna številka)	1	2	3	4	5	6	7	8	9	10	11
Number of relevés (Število popisov)	7	5	36	16	32	9	17	29	7	7	10
Sign for syntaxa (Oznaka sintaksonov)	GrCfrh	GrCfjn	GrCfty	GrCfla	SpCrdo	SsDosc	SsCmty	SpCron	SpCrpc	GrCfda	SsDogp
<i>Caricion firmae</i>	24.2	28	25.8	30.7	31.0	33.5	23.0	39.6	40.1	21.1	24.8
<i>Oxytropido-Elyinion</i>	0.6	2	0.5	1.2	2.3	2.1	1.0	2.9	3.5	2.9	6.7
<i>Caricion austroalpinae</i>	1.1	0.7	0.9	1.7	0.8	0	3.5	0.4	0.7	2.4	0
<i>Caricion ferrugineae</i>	1.1	2	0.6	0.9	0.3	1.0	0.3	1.0	2.1	3.8	2.9
<i>Seslerietalia coeruleae</i>	12.9	8	7.1	10.4	9.7	8.4	14.3	6.8	6.3	6.2	4.6
<i>Elyno-Seslerietea</i>	18.0	17.3	21.6	26.9	22.7	19.9	25.4	16.7	16.9	20.6	17.2
<i>Caricetalia curvulae</i>	0	0	0	0	0.2	0	0	0	0.7	0	0
<i>Nardion strictae</i>	0	0.7	0.8	0.5	0.3	0	0.3	0.2	0	0.1	1.7
<i>Juncetea trifidi</i>	1.1	2.7	1.3	2.1	3.1	1.0	1.5	3.3	0.7	1.4	4.2
<i>Loiseleurio-Vaccinieta</i>	0	0	2.0	2.6	4.2	2.6	0.8	0.6	0	0.1	3.8
<i>Arabidetalia caeruleae</i> (inc. <i>Salicetea herbaceae</i>)	2.2	5.3	3.8	3.1	2.6	4.7	0	3.5	0.7	12.4	13.9
<i>Thlaspietea rotundifolii</i>	6.2	6	6.4	2.4	1.6	5.2	5.6	2.9	4.2	7.7	3.4
<i>Phyteumato-Saxifragion petraeae</i>	13.5	6.7	4.4	2.8	2.8	3.7	4.8	7.1	2.8	1.9	0.4
<i>Potentiletalia caulescentis</i>	9.0	9.3	5.6	3.1	3.4	5.2	8.6	6.1	11.3	4.3	1.3
<i>Asplenetalia trichomanis</i>	1.1	2	0.5	1.2	0.8	1.0	0.3	2.7	0	2.9	3.4
<i>Caricetalia davalliana</i>	2.8	2.7	3.5	2.6	3.7	2.6	1.0	0.6	1.4	2.9	2.9
<i>Poo alpinae-Trisetetalia</i>	0	1.3	1.6	0	0.8	1.0	0.5	0.9	5.6	1.9	1.7
<i>Festuco-Brometea</i>	0	0	1.3	0.5	0	0	0.8	0	0	0	0
<i>Betulo-Alnetea, Mulgedio-Aconitetea</i>	3.4	1.3	1.9	0.9	1.1	1.6	1.0	0.9	0.7	0.1	0.4
<i>Rhododendro hirsuti-Ericetalia carnea</i>	1.7	0	5.9	2.8	3.9	2.1	4.0	0.9	0.7	0.5	1.3
<i>Erico-Pinetea</i>	1.1	0	0.3	0.5	0.3	0	1.3	0.2	0	0	0
<i>Vaccinio-Picetea</i>	0	0	1.4	2.1	2.0	1.0	0	0.2	0	1.9	3.4
<i>Quercu-Fagetea</i>	0	0	0	0	0	0	0	0	0	0	0
Other species (Druge vrste)	0	0.7	0.3	0.2	0	0	0	0.4	0	0	0.8
Mosses and lichens (Mahovi in lišaji)	0	3.3	2.6	0.9	2.3	3.1	2.1	2.3	1.4	2.4	1.3
Total (Skupaj)	100	100	100	100	100	100	100	100	100	100	100

- 1 *Gentiano terglouensis-Caricetum firmae* var. *Ranunculus hybridus*
- 2 *Gentiano terglouensis-Caricetum firmae* var. *Potentilla nitida*
- 3 *Gentiano terglouensis-Caricetum firmae* var. *typica*
- 4 *Gentiano terglouensis-Caricetum firmae* var. *typica* subvar. *Leontopodium alpinum*
- 5 *Saussureo pygmaeae-Caricetum rupestris* var. *Dryas octopetala*
- 6 *Seslerio sphaerocephalae-Dryedetum octopetalae* var. *Saxifraga crustata*
- 7 *Saxifrago squarrosae-Caricetum mucronatae* var. *Carex firma*
- 8 *Saussureo pygmaeae-Caricetum rupestris* var. *Oxytropis neglecta*
- 9 *Saussureo pygmaeae-Caricetum rupestris* var. *Potentilla clusiana*
- 10 *Gentiano terglouensis-Caricetum firmae* var. *Dryas octopetala*
- 11 *Seslerio sphaerocephalae-Dryedetum octopetalae* var. *Gentiana pumila*
- 12 *Gentiano terglouensis-Caricetum firmae* var. *Primula halleri*
- 13 *Homogyne discoloris-Vaccinietum gaultherioidis* var. *Gentiana pumila*
- 14 *Saussureo pygmaeae-Caricetum rupestris* var. *Homogyne discolor*
- 15 *Homogyne discoloris-Loiseleurietum procumbentis caricetosum firmae*

	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	10	8	7	14	30	12	22	10	7	4	4	6	8	8	7	5	5	7
GrCfph																		
HdVggp																		
SpCrhd																		
HdLpcf																		
HdVgrc																		
AcEmvg																		
AcEmef																		
AcEmry																		
HaVg																		
Dovv																		
Dods																		
PvDova																		
PvDoec																		
Docs																		
SpCrsr																		
EhVg																		
EhAa																		
SsCmnd																		
	20.5	23.1	26.0	14.7	12.9	12.5	22.7	21.6	7.3	14.1	15.6	8.4	7.9	22.2	22.3	4.3	19.4	11.1
	1.7	4.2	4.1	4.7	4.4	9.1	7.6	9.0	3.9	3.0	0	1.6	0	0.8	7.1	1.1	1.9	0.6
	0.1	0.5	0	0.5	1.8	1.8	0.8	2.0	2.8	1.0	5.5	2.6	6.5	2.4	0	2.1	0	5.3
	1.7	3.3	1.5	1.8	1.7	1.0	1.8	3.3	2.2	0	0	0	0	0.8	0.9	1.1	0	0.6
	10.6	5.2	6.1	4.7	7.3	9.9	8.4	9.4	7.3	8.1	11.9	8.9	8.3	5.6	6.3	2.1	7.8	11.7
	31.4	30.2	32.1	22.0	25.8	22.1	26.4	18.8	21.3	27.3	45.0	26.7	33.1	24.6	15.2	10.6	21.4	22.2
	0	0	0	0.5	0.4	0	0	0.4	1.7	0	0	0	0	0	0.9	2.1	0	0
	1.3	1.4	2.6	2.6	2.4	2.1	2.7	1.6	4.5	5.1	0	5.8	4.0	0	0	4.3	0.1	0
	5.9	9.0	6.1	9.6	5.5	10.2	6.4	8.6	17.4	3.0	0	10.5	7.6	2.4	2.7	5.3	0.1	0
	2.6	6.1	3.6	10.4	7.2	4.4	1.8	1.2	5.1	6.1	0.9	5.2	4.0	1.6	7.1	14.9	10.7	0.6
	6.3	6.1	5.6	7.8	5.9	6.5	8.5	5.7	5.6	5.1	0.9	5.2	2.2	7.1	7.1	3.2	1.9	0.6
	3.0	2.4	2.0	0.8	1.9	2.1	1.3	2.0	0	2.0	1.8	2.1	1.1	12.7	4.5	0	0.1	1.8
	1.3	0.5	1.5	0.3	0.2	0.5	0.1	1.6	0	0	0	0	0	0.8	0	0	0	11.1
	2.0	0.5	0.5	0.3	0.8	1.3	1.3	3.7	0	2.0	1.8	0	0	4.8	0.9	0	0	14.0
	0.7	0.5	0.5	0.3	0.5	1.0	1.3	2.0	0	0	0	0	0	1.6	0	0	0	1.2
	4.0	3.8	1.5	2.3	3.1	4.2	1.9	2.4	2.2	5.1	1.8	4.7	3.2	4.0	8.0	0	0.1	1.2
	3.3	0.9	2.0	3.3	3.2	5.5	3.1	3.7	3.9	2.0	1.8	6.8	4.0	0.8	1.8	0	0.1	0.6
	0	0	0	0	0.1	0	0	0	0	2.0	3.7	0	1.1	0	0	0	0	5.3
	0.3	0.9	0.5	0.3	1.3	0.5	0.6	0.4	1.1	2.0	0	0.5	0	0.8	5.4	4.3	0.1	0.6
	0.3	0	0.5	2.6	3.5	1.6	0.2	0	0	3.0	6.4	1.0	8.3	2.4	0.9	7.4	10.7	4.7
	0.3	0	2.0	0.5	0.9	0.8	0.8	0	1.7	0	1.8	3.1	1.8	0	0	2.1	0	1.8
	0.1	0.5	0.5	6.5	4.9	1.6	0.2	0	9.0	8.1	0	6.3	3.2	3.2	3.6	22.3	14.6	0.6
	0	0	0	0	0	0	0	0	0	1.0	0	0	0	0	0	1.1	0	0
	0.7	0.5	0	0.8	0.1	0.5	0.2	0	0.6	0	0	0	0	0	0.9	0	0	0.6
	0.3	0.5	0.5	2.9	4.2	0.8	1.3	2.4	2.2	0	0.9	0.5	4.0	1.6	4.5	11.7	5.8	4.1
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

- 16 *Homogyno discoloris-Vaccinietum gaultherioidis* var. *Rhodothamnus chamaecistus*
 17 *Achilleo clavennae-Elynetum myosuroidis* var. *Vaccinium gaultherioides*
 18 *Achilleo clavennae-Elynetum myosuroidis* var. *Carex firma*
 19 *Achilleo clavennae-Elynetum myosuroidis* var. *typica*
 20 *Homogyno alpinae-Vaccinietum gaultherioidis*
 21 *Dryadetum octopetalae* var. *Vaccinium vitis-idaea*
 22 *Dryadetum octopetalae* var. *Daphne striata*
 23 *Pulsatillo vernalis-Dryadetum octopetalae ericetosum carnea*
 24 *Pulsatillo vernalis-Dryadetum octopetalae vaccinietosum*
 25 *Dryadetum octopetalae* var. *Carex sempervirens*
 26 *Saussureo pygmaeae-Caricetum rupestris* var. *Salix retusa*
 27 *Empetro-Vaccinietum gaultherioidis rhododendretosum hirsuti*
 28 *Empetro-Arctostapyletum alpinae* nom. prov.
 29 *Saxifrago squarrosae-Caricetum mucronatae* var. *Dianthus sylvestris*

Appendix 1: Synthetic table of communities with dominant *Carex mucronata*.

Priloga 1: Sintezna tabela združb s prevladujočo vrsto *Carex mucronata*.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	
Number of relevés (Število popisov)		7	10	7	17	13	7	3	3	25	5	20	6	10	
Author (Avtor)		DDG	ID	IDBS	IDTW	PP	EA	BB	BB	PEg	PW	BSTW	CR	LP	
Sign for syntaxa (Oznaka sintaksonov)		CmA	PcCm	SasCmnds	SasCmty	Cfcm - Pig.	GtCfcm	Cfcm-BB	Cfcm-BB-RA	Cfcm	Cfcm-Dach	ScsCm	CmI	GhCm	
CFir	Caricion firmae														
	<i>Carex firma</i>	E1	43	30	14	76	92	100	100	67	72	20	45	.	.
	<i>Crepis jacquinii</i>	E1	43	.	.	.	.	.	100	33	.	60	.	.	.
	<i>Dryas octopetala</i>	E1	43	20	14	47	31	86	100	100	60	20	35	.	.
	<i>Helianthemum alpestre</i>	E1	43	20	100	82	100	100	67	100	44	100	75	.	50
	<i>Ranunculus hybridus</i>	E1	43	.	71	53	46	29	.	.	.	10	.	.	.
	<i>Minuartia sedoides</i>	E1	29	.	.	6	15	43	.	.	.	.	.	.	.
	<i>Pedicularis rosea</i>	E1	29	.	.	24	39	.	.	.	.	.	.	.	.
	<i>Silene acaulis</i>	E1	29	.	.	29	85	.	.	.	40	.	.	.	.
	<i>Oxytropis neglecta</i>	E1	.	.	29	12	.	.	.	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	.	.	14	.	31	.	.	.	.	.	.	.	.
	<i>Sesleria sphaerocephala</i>	E1	.	.	.	65	62	71	.	.	.	.	.	.	.
	<i>Phyteuma sieberi</i>	E1	.	.	.	35	31	29	.	.	.	.	.	.	.
	<i>Chamorchis alpina</i>	E1	.	.	.	29	.	14	.	.	.	.	.	.	.
	<i>Saussurea pygmaea</i>	E1	.	.	.	24	.	14	.	.	.	.	.	.	.
	<i>Crepis kernerii</i>	E1	.	.	.	12	.	14	.	.	24	.	40	.	.
	<i>Festuca quadriflora</i>	E1	.	.	.	12	39	.	67	33	24	80	15	.	.
	<i>Carex rupestris</i>	E1	.	.	.	.	15	.	33	.	.	.	5	.	.
	<i>Gentiana terglouensis</i>	E1	.	.	.	.	8	.	.	.	.	.	.	.	.
	<i>Primula wulfeniana</i>	E1	.	.	.	.	.	43	.	.	.	.	.	.	.
	<i>Gentiana froelichii</i>	E1	.	.	.	.	.	14	.	.	.	.	.	.	.
OE	Oxytropido-Elyinion														
	<i>Gentiana nivalis</i>	E1	.	.	14	12	.	.	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	.	.	.	6	23	.	.	.	.	.	.	.	.
	<i>Festuca intercedens</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.	.
	<i>Elyna myosuroides</i>	E1	.	.	.	.	46	.	.	33	.	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	.	.	.	.	.	.	33	.	.	.	.	.
CA	Caricion austroalpinae														
	<i>Carduus crassifolius</i>	E1	14	10	14	.	.	.	.	.	.	.	.	.	10
	<i>Laserpitium peucedanoides</i>	E1	.	30	29	12	.	.	.	.	.	10	.	.	.
	<i>Arabis vochinensis</i>	E1	.	.	.	12	.	43	.	.	.	.	.	.	.
	<i>Festuca calva</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.	.
	<i>Koeleria eriostachya</i>	E1	.	.	43	41	.	.	.	.	.	45	.	.	.
	<i>Pulsatilla alpina</i> subsp. <i>austroalpina</i>	E1	.	.	14	6	.	.	.	.	.	5	.	.	.
	<i>Senecio abrotanifolius</i>	E1	.	.	14	.	31	.	.	.	.	.	.	.	40
	<i>Trifolium noricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Trinia carniolica</i>	E1	.	.	.	12	.	.	.	.	.	5	.	.	.
	<i>Euphorbia variabilis</i>	E1	.	.	.	.	.	.	.	.	.	.	50	.	.
	<i>Centaurea rhaetica</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	
CF	<i>Caricion ferrugineae</i>														
	<i>Pedicularis rostratocapitata</i>	E1	43	.	29	35	62	29	.	.	32	100	.	.	.
	<i>Pulsatilla alpina</i> subsp. <i>alpina</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium subtriflorum</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana pumila</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.	.
SV	<i>Seslerietalia coeruleae</i>														
	<i>Carex mucronata</i>	E1	100	100	100	100	100	100	100	100	100	100	100	100	100
	<i>Trisetum alpestre</i>	E1	100	.	.	6	.	14	.	.	.	.	.	.	.
	<i>Achillea clavennae</i>	E1	43	10	71	29	8	.	.	.	40	65	.	.	.
	<i>Galium anisophyllum</i>	E1	43	.	.	.	.	29	.	.	12	80	10	.	.
	<i>Gentiana clusii</i>	E1	43	40	57	88	46	100	100	33	60	20	45	100	90
	<i>Festuca brachystachys</i> subsp. <i>pallidula</i>	E1	29	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Thesium alpinum</i>	E1	29	.	14	6	.	.	.	.	4	.	10	.	.
	<i>Juncus monanthos</i>	E1	14	.	.	12	.	.	.	.	.	.	.	.	.
	<i>Leucanthemum atratum</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Minuartia gerardii</i>	E1	14	.	.	.	46	29	33	33	.	20	.	.	.
	<i>Oxytropis jacquinii</i> (<i>O. montana</i>)	E1	14	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontopodium alpinum</i>	E1	.	20	29	65	62	.	33	33	.	.	75	.	.
	<i>Erigeron glabratus</i>	E1	.	.	14	12	.	.	.	.	12	.	10	.	.
	<i>Androsace villosa</i>	E1	.	.	.	6	.	.	.	.	.	.	25	.	.
	<i>Gentiana orbicularis</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.	.
	<i>Potentilla crantzii</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.	.
	<i>Leucanthemum heterophyllum</i>	E1	.	.	.	.	.	.	.	.	.	.	10	17	70
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	.	.	.	.	.	.	.	10	.	.
	<i>Carex baldensis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	100	.
SJ	<i>Seslerietalia tenuifoliae</i>														
	<i>Edraianthus graminifolius</i>	E1	.	20	.	.	.	.	.	.	.	.	50	.	.
	<i>Scabiosa silenifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	65	.	.
	<i>Gentianella liburnica</i>	E1	.	.	.	.	.	.	.	.	.	.	5	.	.
	<i>Thymus balcanus</i>	E1	.	.	.	.	.	.	.	.	.	.	5	.	.
	<i>Genista holopetala</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	90
ES	<i>Elyno-Seslerietea</i>														
	<i>Linum alpinum</i> (in. <i>L. julicum</i>)	E1	100	.	.	18	.	.	.	.	.	.	10	.	.
	<i>Globularia cordifolia</i>	E1	71	90	86	41	46	57	33	33	52	.	25	67	100
	<i>Carduus defloratus</i>	E1	43	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Euphrasia salisburgensis</i>	E1	43	.	86	12	.	71	.	67	68	40	5	67	10
	<i>Scabiosa lucida</i>	E1	43	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	43	40	14	29	39	57	.	.	40	.	.	.	.
	<i>Acinus alpinus</i>	E1	29	.	14	.	.	.	.	.	4	.	.	.	.
	<i>Anthyllis vulneraria</i> (inc. subsp. <i>alpestris</i>)	E1	29	40	43	76	77	29	100	33	32	40	30	33	100
	<i>Betonica alopecuros</i>	E1	29	20	.	.	.	.	.	.	.	.	.	.	50
	<i>Carex sempervirens</i>	E1	29	.	.	18	.	.	.	33	8	.	.	.	.
	<i>Hieracium villosum</i>	E1	29	60	29	6	.	.	.	33	20	.	35	.	.
	<i>Phyteuma orbiculare</i>	E1	29	.	14	.	.	.	.	.	16	.	15	.	.
	<i>Sesleria caerulea</i>	E1	29	100	100	88	62	86	100	100	92	100	.	100	100
	<i>Aster bellidiastrum</i>	E1	14	.	29	53	62	14	.	.	.	20	30	.	.
	<i>Hieracium glabratum</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Polygonum viviparum</i>	E1	14	.	29	53	54	29	33	.	16	.	.	.	.
	<i>Ranunculus montanus</i> agg.	E1	14	.	.	.	.	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
	<i>Rhinanthus glacialis</i>	E1	14	.	14	.	.	.	.	.	.	.	.	100
	<i>Polygala alpestris</i>	E1	.	10	14	6	.	.	.	12	40	.	.	.
	<i>Alchemilla alpigena</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Agrostis alpina</i>	E1	.	.	.	35	.	14	.	100	44	.	40	.
	<i>Bartsia alpina</i>	E1	.	.	.	35	23	.	33	.	.	.	10	.
	<i>Daphne striata</i>	E1	.	.	.	24	54	29	.	.	12	.	.	.
	<i>Gentianella anisodonta</i>	E1	.	.	.	24	.	43	.	.	.	.	.	.
	<i>Hieracium pilosum</i>	E1	.	.	.	24	.	.	.	.	4	.	.	.
	<i>Gentiana verna</i>	E1	.	.	.	18	.	.	33	.	8	.	.	.
	<i>Aster alpinus</i>	E1	.	.	.	12	.	.	.	67	8	.	5	.
	<i>Selaginella selaginoides</i>	E1	.	.	.	12	.	.	.	.	.	.	.	.
	<i>Homogyne discolor</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Pedicularis verticillata</i>	E1	.	.	.	6	.	14	.	.	.	.	.	.
	<i>Astrantia bavarica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana lutea</i> subsp. <i>symphyandra</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Globularia nudicaulis</i>	E1	.	.	.	.	.	.	.	.	.	10	33	.
	<i>Horminium pyrenaicum</i>	E1	.	.	.	.	31	.	.	.	.	.	17	.
	<i>Androsace chamaejasme</i>	E1	.	.	.	.	.	.	.	.	40	.	.	.
	<i>Gentianella aspera</i>	E1	.	.	.	.	.	.	.	.	52	.	.	.
	<i>Myosotis alpestris</i>	E1	.	.	.	.	.	.	.	.	.	20	.	.
	<i>Laserpitium nitidum</i>	E1	.	.	.	.	.	.	.	.	.	.	50	.
	<i>Senecio doricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	40
NS	<i>Nardion strictae</i>													
	<i>Coeloglossum viride</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Gentianella campestris</i>	E1	.	.	.	.	.	.	.	.	8	.	.	.
	<i>Antennaria dioica</i>	E1	.	.	.	.	.	.	.	.	.	5	.	.
JT	<i>Juncetea trifidi</i>													
	<i>Euphrasia minima</i>	E1	.	.	.	29	.	.	.	.	.	.	50	.
	<i>Campanula scheuchzeri</i>	E1	.	.	.	6	.	.	.	.	4	.	.	.
	<i>Veronica fruticans</i>	E1	.	.	.	.	.	.	.	.	4	.	.	.
	<i>Botrychium lunaria</i>	E1	.	.	.	.	.	.	.	.	4	.	.	.
LV	<i>Loiseleurio-Vaccinietea</i>													
	<i>Juniperus sibirica</i>	E1	.	10	14	.	.	.	.	.	.	20	.	.
	<i>Arctostaphylos alpina</i>	E1	.	.	.	18	.	.	.	33	.	.	.	.
AC	<i>Arabidetalia caeruleae</i>													
	<i>Trifolium pallelescens</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	.	.	.	.	.	.	5	.	.
	<i>Salix serpillifolia</i>	E1	.	.	.	.	15	.	.	.	4	.	.	.
	<i>Soldanella minima</i>	E1	.	.	.	.	.	14	.	.	.	.	.	.
	<i>Salix retusa</i>	E1	.	.	.	.	.	.	.	.	4	.	.	.
	<i>Ranunculus alpestris</i>	E1	.	.	.	.	.	.	.	.	.	20	.	.
TR	<i>Thlaspietea rotundifolii</i>													
	<i>Gypsophila repens</i>	E1	43	.	29	18	.	.	.	.	20	.	.	.
	<i>Heliosperma alpestre</i>	E1	43	.	.	18	.	.	.	.	.	15	.	.
	<i>Athamanta cretensis</i>	E1	43	.	14	18	46	.	.	.	60	60	25	.
	<i>Biscutella laevigata</i>	E1	43	.	.	24	31	29	.	.	4	.	20	17
	<i>Saxifraga caesia</i>	E1	43	.	.	6	31	71	67	100	24	40	.	.
	<i>Galium meliodorum</i>	E1	29	.	.	.	.	.	.	.	.	.	.	.
	<i>Dianthus sternbergii</i>	E1	29	.	.	.	.	.	.	.	.	.	.	.
	<i>Galium truniacum</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
	<i>Pimpinella alpina</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium carinthiacum</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium glaucum</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Linaria alpina</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Poa minor</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Hladnikia pastinacifolia</i>	E1	.	40	.	.	.	.	.	.	.	.	.	50
	<i>Aquilegia iulia</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium bifidum</i>	E1	.	10	.	.	.	.	.	4	.	5	.	.
	<i>Petrocallis pyrenaica</i>	E1	.	.	.	29	.	.	.	.	.	.	.	.
	<i>Aquilegia einseleana</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Armeria alpina</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Leontodon hispidus</i> subsp. <i>hyoseroides</i>	E1	.	.	.	6	.	.	.	4	.	.	.	.
	<i>Achillea oxyloba</i>	E1	.	.	.	.	39	.	.	.	.	.	.	.
	<i>Saxifraga aizoides</i>	E1	.	.	.	.	.	14	.	33	.	.	.	.
	<i>Sedum atratum</i>	E1	.	.	.	.	.	14	33	33	.	.	.	.
	<i>Trisetum argenteum</i>	E1	.	.	.	.	.	.	.	.	.	40	.	.
	<i>Euphorbia triflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	100
	<i>Viola pinnata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
	<i>Festuca spectabilis</i> subsp. <i>carniolica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
PS	<i>Phyteumato-Saxifragion petraeae</i>													
	<i>Phyteuma scheuchzeri</i> subsp. <i>columnnae</i>	E1	.	50	.	.	.	.	.	.	.	.	50	10
	<i>Primula carniolica</i>	E1	.	50	.	.	.	.	.	.	.	.	.	.
	<i>Saxifraga squarrosa</i>	E1	.	20	43	53	15	.	.	.	.	.	.	.
	<i>Bupleurum petraeum</i>	E1	.	20	29	.	.	.	.	.	.	.	.	.
	<i>Paederota lutea</i>	E1	.	20	43	.	.	.	.	.	.	.	.	10
	<i>Saxifraga crustata</i>	E1	.	20	86	18	8	29	.	.	.	.	.	.
	<i>Silene hayekiana</i>	E1	.	10	29	.	.	.	.	.	.	.	.	.
	<i>Campanula zoysii</i>	E1	.	.	29	12	.	.	.	.	.	.	.	.
	<i>Artemisia nitida</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Potentilla nitida</i>	E1	.	.	.	24	.	.	.	.	.	.	.	.
	<i>Paederota bonarota</i>	E1	.	.	.	12	15	.	.	.	.	.	.	.
	<i>Arabis scopoliana</i>	E1	.	.	.	.	.	.	.	.	.	35	.	.
	<i>Campanula justiniana</i>	E1	.	.	.	.	.	.	.	.	.	10	.	.
	<i>Telekia speciosissima</i>	E1	.	.	.	.	.	.	.	.	.	.	83	.
PC	<i>Potentilletalia caulescentis</i>													
	<i>Primula auricula</i>	E1	100	50	100	47	.	.	.	33	84	.	.	20
	<i>Campanula cochleariifolia</i>	E1	43	.	29	35	.	57	67	.	52	100	50	.
	<i>Kernera saxatilis</i>	E1	43	30	.	.	62	.	.	33	4	80	5	.
	<i>Valeriana saxatilis</i>	E1	43	70	29	65	.	57	.	33	36	.	.	20
	<i>Campanula cespitosa</i>	E1	29	80	14	.	.	.	.	.	.	.	15	30
	<i>Potentilla clusiana</i>	E1	29	10	14	24	.	.	.	.	40	.	.	.
	<i>Androsace lactea</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Draba stellata</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium porrifolium</i>	E1	14	.	.	.	.	.	.	.	.	.	5	50
	<i>Minuartia langii</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla caulescens</i>	E1	.	20	.	.	.	.	.	.	.	.	.	.
	<i>Daphne alpina</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Rhamnus pumilus</i>	E1	.	10	.	.	.	.	.	.	.	.	5	.
	<i>Dianthus sylvestris</i>	E1	.	.	86	12	8	14	.	.	.	.	.	.
	<i>Festuca stenantha</i>	E1	.	.	57	.	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
	<i>Erysimum sylvestre</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Eritrichium nanum</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Saxifraga burseriana</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
	<i>Draba aizoides</i>	E1	.	.	.	.	.	.	33	33	.	.	.	.
	<i>Hieracium scorzonerifolium</i>	E1	.	.	.	.	.	.	.	.	16	.	.	.
	<i>Hieracium bupleuroides</i>	E1	.	.	.	.	.	.	.	.	4	.	5	.
AT	Asplenietea trichomanis													
	<i>Jovibarba hirta</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Sedum album</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Asplenium ruta-muraria</i>	E1	.	10	14	.	.	.	.	.	4	.	5	.
	<i>Saxifraga paniculata</i>	E1	.	.	14	6	.	.	.	.	4	.	.	.
	<i>Asplenium viride</i>	E1	.	.	.	.	.	.	.	.	.	.	5	.
	<i>Carex brachystachys</i>	E1	.	.	.	.	.	.	.	.	.	.	5	.
CD	Caricetalia davallianae													
	<i>Carex capillaris</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Parnassia palustris</i>	E1	14	.	14	12	.	.	.	.	.	.	.	20
	<i>Pinguicula alpina</i>	E1	14	.	.	6	23	.	.	.	4	.	.	30
	<i>Tofieldia calyculata</i>	E1	.	20	.	.	.	.	.	.	4	.	5	10
	<i>Gentiana utriculosa</i>	E1	.	.	14	6	.	.	.	.	44	.	5	10
Mo	Molinion													
	<i>Inula salicina</i>	E1												67
	<i>Gladiolus palustris</i>	E1												33
	<i>Molinia caerulea</i>	E1												33 60
PoT	Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea													
	<i>Leontodon hispidus</i>	E1	29	.	.	6	.	.	.	.	20	.	17	.
	<i>Lotus corniculatus</i>	E1	29	40	.	.	.	.	.	.	16	.	.	.
	<i>Poa alpina</i>	E1	29	.	14	.	.	29	.	.	4	.	.	.
	<i>Euphrasia picta</i>	E1	.	.	.	6	.	.	.	.	.	.	.	.
SS	Saturejion subspicatae													
	<i>Stipa pennata</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Centaurea rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	100
	<i>Echinops ritro</i> subsp. <i>ruthenicus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	100
	<i>Euphrasia illyrica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	90
	<i>Genista sylvestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	90
	<i>Satureja subspicata</i> subsp. <i>liburnica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	90
	<i>Linum narborens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	80
	<i>Ruta divaricata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	80
	<i>Plantago argentea</i> subsp. <i>liburnica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	40
	<i>Scorzonera austriaca</i>	E1	.	.	.	.	.	.	.	.	.	.	.	40
	<i>Campanula marchesettii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	30
	<i>Genista sericea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	30
	<i>Plantago holosteum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
	<i>Potentilla tommasiana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
FB	Festuco-Brometea													
	<i>Helianthemum nummularium</i> s. lat.	E1	43	10	57	6	.	.	.	.	12	.	100	.
	<i>Hippocrepis comosa</i>	E1	43	.	14	.	.	.	.	.	4	.	.	.
	<i>Linum catharticum</i>	E1	43	20	43	.	.	.	.	.	24	.	17	60
	<i>Gentianella austriaca</i>	E1	43	.	.	.	.	.	.	.	.	.	.	.
	<i>Buphthalmum salicifolium</i>	E1	29	10	.	.	.	.	.	.	.	.	17	20

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
	<i>Carlina acaulis</i>	E1	14	.	.	.	.	.	.	4	.	.	17	70
	<i>Helictotrichon praeustum</i>	E1	14	.	29	.	.	.	.	.	.	.	.	.
	<i>Hieracium pilosella</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Teucrium montanum</i>	E1	.	50	.	.	.	.	.	.	.	.	83	100
	<i>Coronilla vaginalis</i>	E1	.	10	.	.	.	.	.	.	.	.	33	50
	<i>Bromopsis transsilvanica</i>	E1	.	.	29	.	.	.	.	.	.	.	.	.
	<i>Koeleria pyramidata</i>	E1	.	.	14	.	.	.	.	.	.	.	.	20
	<i>Gymnadenia conopsea</i>	E1	.	.	.	12	.	.	.	.	.	5	50	40
	<i>Gentianella ciliata</i>	E1	.	.	.	6	.	.	.	.	.	5	.	20
	<i>Carex humilis</i>	E1	.	.	.	.	.	29	.	.	.	.	67	90
	<i>Prunella grandiflora</i>	E1	.	.	.	.	.	.	.	.	.	10	17	50
	<i>Thesium linophyllum</i>	E1	.	.	.	.	.	.	.	.	.	5	.	.
	<i>Stachys recta</i> (inc. <i>S. subcrenata</i>)	E1	.	.	.	.	.	.	.	.	.	.	17	10
	<i>Scabiosa graminifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	100	50
	<i>Scabiosa columbaria</i>	E1	.	.	.	.	.	.	.	.	.	.	83	.
	<i>Gentianella germanica</i>	E1	.	.	.	.	.	.	.	.	.	.	67	.
	<i>Peucedanum oreoselinum</i>	E1	.	.	.	.	.	.	.	.	.	.	50	70
	<i>Campanula rotundifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Centaurium erythraea</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Fumana procumbens</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Allium carinatum</i> subsp. <i>pulchellum</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Bupleurum ranunculoides</i>	E1	.	.	.	.	.	.	.	.	.	.	17	10
	<i>Galium purpureum</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Polygala nicaeensis</i>	E1	.	.	.	.	.	.	.	.	.	.	17	50
	<i>Prunella laciniata</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Teucrium chamaedrys</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Trinia glauca</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Anthyllis jacquinii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	90
	<i>Inula ensifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	90
	<i>Asperula cynanchica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	80
	<i>Campanula glomerata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	60
	<i>Inula hirta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	50
	<i>Linum tenuifolium</i>	E1	.	.	.	.	.	.	.	.	.	.	.	50
	<i>Galium lucidum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	40
	<i>Gentiana tergestina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	40
	<i>Bromopsis erecta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	30
	<i>Dorycnium germanicum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	30
	<i>Knautia fleischmannii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	20
	<i>Ophrys insectifera</i>	E1	.	.	.	.	.	.	.	.	.	.	.	20
	<i>Centaurea triumfettii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
	<i>Seseli austriacum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
TG	Trifolio-Geranietea													
	<i>Anthericum ramosum</i>	E1	14	.	.	.	.	.	.	.	.	.	33	70
	<i>Laserpitium latifolium</i>	E1	14	.	.	.	.	.	.	.	.	.	.	.
	<i>Laserpitium siler</i>	E1	14	.	.	.	.	.	.	.	.	.	17	20
	<i>Polygonatum odoratum</i>	E1	.	10	.	.	.	.	.	.	.	.	.	70
	<i>Viola hirta</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Thalictrum minus</i>	E1	.	.	.	.	.	.	.	.	.	.	17	30
	<i>Vincetoxicum hirundinaria</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.
	<i>Thesium bavarum</i>	E1	.	.	.	.	.	.	.	.	.	.	17	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
RP	<i>Bupleurum falcatum</i> subsp. <i>cernuum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	20
	Rhamno-Prunetea													
	<i>Juniperus communis</i>	E1	.	20	.	.	.	.	.	.	.	.	17	10
	<i>Cotoneaster integerrimus</i>	E1	.	.	.	.	.	.	.	.	.	5	.	.
MuA	<i>Frangula rupestris</i>	E1	.	.	.	.	.	.	.	.	.	.	.	20
	Mulgedio-Aconitetea, Betulo-Alnetea													
	<i>Salix glabra</i>	E1	.	50	.	.	.	.	.	.	.	.	.	20
	<i>Salix waldsteiniana</i>	E1	.	20	.	.	.	.	.	.	.	.	.	.
RE	<i>Salix appendiculata</i>	E1	.	10	14	.	.	.	.	.	.	15	.	.
	<i>Viola biflora</i>	E1	.	.	.	24	.	.	.	.	.	10	.	.
	Rhododendro hirsuti-Ericetalia carnea													
	<i>Rhodothamnus chamaecistus</i>	E1	14	80	43	47	.	14	.	.	4	.	.	.
EP	<i>Erica carnea</i>	E1	14	30	29	41	39	29	.	.	20	80	15	100
	<i>Arctostaphylos uva-ursi</i>	E1	.	40	14	.	.	.	.	.	.	5	33	.
	<i>Rhododendron hirsutum</i>	E1	.	30	29	6	.	.	.	.	.	20	40	.
	<i>Pinus mugo</i>	E1	.	.	.	.	.	.	.	.	.	80	20	.
EP	<i>Cytisus emeriflorus</i>	E1	.	.	.	.	.	.	.	.	.	.	83	.
	Erico-Pinetea													
	<i>Leontodon incanus</i>	E1	14	.	.	.	.	.	.	.	24	.	10	.
	<i>Allium ericetorum</i>	E1	.	80	.	6	.	.	.	.	.	.	10	33
	<i>Asperula aristata</i>	E1	.	70	29	18	.	.	.	.	.	.	.	33
	<i>Euphrasia cuspidata</i>	E1	.	50	.	.	.	.	.	.	.	.	.	10
	<i>Calamagrostis varia</i>	E1	.	20	.	.	.	.	.	.	.	.	25	90
	<i>Carex ornithopoda</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Cotoneaster tomentosus</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Epipactis atrorubens</i>	E1	.	10	.	.	.	.	.	.	.	.	.	33
	<i>Gymnadenia odoratissima</i>	E1	.	10	.	6	.	.	.	.	4	.	.	17
	<i>Polygala chamaebuxus</i>	E1	.	10	.	.	.	.	.	.	8	.	.	33
	<i>Rubus saxatilis</i>	E1	.	10	.	.	.	.	.	.	.	.	5	.
	<i>Chamaecytisus hirsutus</i> subsp. <i>ciliatus</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Daphne cneorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	50
	<i>Aster amellus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	33
	<i>Amelanchier ovalis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	17
	<i>Chamaecytisus purpureus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	17
	<i>Rhamnus saxatilis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	17
<i>Crepis slovenica</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10	
VP	Vaccinio-Piceetea													
	<i>Larix decidua</i>	E1	.	.	14	.	.	.	.	.	.	.	.	.
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	14	.	.	.	.	.	.
FS	<i>Maianthemum bifolium</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
	Fagetalia sylvaticae													
	<i>Cyclamen purpurascens</i>	E1	.	10	.	.	.	.	.	.	.	5	.	10
	<i>Fagus sylvatica</i>	E1	.	10	.	.	.	.	.	.	.	.	.	.
QP	<i>Festuca altissima</i>	E1	.	.	.	.	.	.	.	.	.	5	.	.
	Quercetalia pubescentis													
	<i>Ostrya carpinifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	17	20
	<i>Mercurialis ovata</i>	E1	.	.	.	.	.	.	.	.	.	.	.	30
	<i>Clematis recta</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
	<i>Convallaria majalis</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
<i>Sorbus aria</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10	

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13
QF	Quercus-Fagetea													
	<i>Quercus petraea</i>	E1	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Chamaecytisus supinus</i>	E1	.	.	.	.	.	.	.	.	.	.	.	10
O	Other species (Druge vrste)													
	<i>Hieracium</i> sp.	E1	.	.	14	.	.	.	.	.	.	15	.	.
	<i>Thymus</i> sp.	E1	.	.	.	.	.	.	.	.	.	15	.	.
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	.	.	.	5	.	.
	<i>Orobanche</i> sp. (inc. <i>gracilis</i>)	E1	.	.	.	.	.	.	.	.	.	.	17	20
ML	Mosses and lichens (Mahovi in lišaji)													
	<i>Tortella tortuosa</i>	E0	29	60	43	12	62	57	67	.	76	20	.	.
	<i>Ctenidium molluscum</i>	E0	14	.	14	.	.	.	.	4	.	10	.	.
	<i>Schistidium apocarpum</i>	E0	.	20	29	6	.	.	.	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Fissidens dubius</i>	E0	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Grimmia pulvinata</i>	E0	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Homalothecium</i> sp.	E0	.	10	.	.	.	.	.	.	.	.	.	.
	<i>Tortella</i> sp. (inc. <i>inclinata</i>)	E0	.	10	14	24	.	.	.	4	40	.	.	.
	<i>Thamnomia vermicularis</i>	E0	.	.	.	6	31	29	67	.	8	.	.	.
	<i>Cladonia pyxidata</i>	E0	.	.	.	.	46	43	.	.	20	.	.	.
	<i>Cetraria islandica</i>	E0	.	.	.	.	31	14	67	.	4	20	.	.
	<i>Solorina sacata</i>	E0	.	.	.	.	15	14	.	.	.	.	.	.
	<i>Cetraria juniperina</i>	E0	.	.	.	.	.	29	.	.	.	.	.	.
	<i>Cetraria nivalis</i>	E0	.	.	.	.	.	29	.	.	.	.	.	.
	<i>Cetraria cucullata</i>	E0	.	.	.	.	.	14	.	.	.	.	.	.
	<i>Cladonia symphycarpa</i>	E0	.	.	.	.	.	.	.	60	.	.	.	.
	<i>Distichium capillaceum</i>	E0	.	.	.	.	.	.	.	40	.	10	.	.
	<i>Hypnum vucheri</i>	E0	.	.	.	.	.	.	.	12	.	.	.	.
	<i>Peltigera rufescens</i>	E0	.	.	.	.	.	.	.	8	.	.	.	.
	<i>Cetraria tilesii</i>	E0	.	.	.	.	.	.	.	8	.	.	.	.
	<i>Ditrichum flexicaule</i>	E0	.	.	.	.	.	.	.	4	.	.	.	.
	<i>Tortella</i> sp.	E0	.	.	.	.	.	.	.	.	40	.	.	.
	<i>Orthothecium rufescens</i>	E0	.	.	.	.	.	.	.	.	.	5	.	.

- 1 CmA *Caricetum mucronatae*, Austria, Northeastern Calcareous Alps (Dirnböck et al. 2001, Table 2, column 17)
- 2 PcCm *Caricetum mucronatae* var. *geogr. Primula carniolica* = *Saxifrago squarrosae*-*Caricetum mucronatae* var. *Primula carniolica*, NW Dinaric Alps, Trnovski gozd plateau (Dakskobler 2006, Table 4, relevés 1–10)
- 3 SasCmDs *Saxifrago squarrosae*-*Caricetum mucronatae* var. *Dianthus sylvestris*, Julian Alps, Karavanke, Kamnik Alps, this article, Table 1, relevés 4–10
- 4 SasCmty *Saxifrago squarrosae*-*Caricetum mucronatae* var. *Carex firma*, Julian Alps, this article, Table 1, relevés 11–27
- 5 CfcM-Pig. *Caricetum firmae caricetosum mucronatae*, Dolomites (Pignatti E. & S. 2014, Synoptic Association Table 11, column 5)
- 6 GtCfcM *Caricetum firmae caricetosum mucronatae* = *Gentiano terglouensis*-*Caricetum firmae caricetosum mucronatae*, Karavanke (Aichinger 1933, Table 26, columns 5–12)
- 7 CfcM-BB *Caricetum firmae caricetosum mucronatae*, Central Alps (Braun-Blanquet & Jenny 1926, Table 7, columns 1–3)
- 8 CfcM-BB-RA *Caricetum firmae caricetosum mucronatae*, Raethian Alps (Braun-Blanquet 1969, Table *Caricetum firmae*, columns 20–22)
- 9 CfcM *Caricetum firmae caricetosum mucronatae*, Ammergauer Alps (Eggensberger 1994, Table 19, columns 113–127)
- 10 CfcM-Dach *Caricetum firmae caricetosum mucronatae*, Dachstein Alps (Pignatti-Wikus 1959: 100–101, Table *Firmetum*, column 2)
- 11 ScsCm *Scabiosa silenifoliae*-*Caricetum mucronatae*, NW Dinaric Alps, Mt. Snežnik (Surina & T. Wraber 2005, Table 1)
- 12 CmI *Caricetum mucronatae* s. lat., Lombard Pre-Alps, N-Italy (Ravazzi 1992, Table 1, Cariceti xerofili)
- 13 GhCm *Genisto*-*Caricetum mucronatae*, Slovenia, NW Dinaric Alps, Trnovski gozd plateau (Poldini 1978, Table 3)

Appendix 2: Synthetic table of communities with dominant *Carex rupestris*.

Priloga 2: Sintezna tabela združb s prevladujočo vrsto *Carex rupestris*.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10
Number of relevés (Število popisov)		5	27	5	32	29	7	7	7	3	1
Author (Avtor)		pp	PIPID	VE	ID	IDTW	ID	ID	ID	TW	DD*
Sign for syntaxa (Oznaka sintaksonov)		Cr-Do	Cr-DoJA	Cr-JT	SpCrdo	SpCron	SpCrpc	SpCrhd	SpCrst	AsCr	
CFir	Caricion firmae										
	<i>Carex rupestris</i>	E1	100	100	100	100	100	100	100	100	4
	<i>Minuartia sedoides</i>	E1	80	81	.	9	24	57	14	.	1
	<i>Sesleria sphaerocephala</i>	E1	80	81	40	63	86	86	29	.	.
	<i>Minuartia verna</i> subsp. <i>verna</i> (<i>M. gerardii</i>)	E1	60	52	40	.	14	14	14	.	1
	<i>Silene acaulis</i>	E1	20	52	20	22	48	29	71	29	2
	<i>Gentiana terglouensis</i>	E1	.	44	.	3	3	.	.	.	.
	<i>Carex firma</i>	E1	.	37	.	97	72	71	100	43	33
	<i>Dryas octopetala</i>	E1	.	19	.	100	52	57	86	71	+
	<i>Phyteuma sieberi</i>	E1	.	19	.	44	17	86	14	14	.
	<i>Festuca quadriflora</i>	E1	.	15	80	13	31	14	14	29	33
	<i>Helianthemum alpestre</i>	E1	.	15	80	50	83	71	71	.	67
	<i>Chamorchis alpina</i>	E1	.	.	20	6	17	14	.	.	.
	<i>Oxytropis neglecta</i>	E1	.	.	80	6	45	29	29	.	.
	<i>Pedicularis rostratocapitata</i>	E1	.	.	60	44	14	71	71	.	+
	<i>Saussurea pygmaea</i>	E1	.	.	.	44	31	57	86	14	.
	<i>Primula halleri</i>	E1	.	.	.	6	.	.	14	.	.
	<i>Ranunculus hybridus</i>	E1	.	.	.	6	.	43	.	.	.
	<i>Salix alpina</i>	E1	.	.	.	6	10	14	.	57	.
	<i>Crepis kernerii</i>	E1	.	.	.	3	.	.	14	.	.
	<i>Veronica aphylla</i>	E1	.	.	.	.	3	.	.	.	.
OE	Oxytropido-Elynion										
	<i>Arenaria ciliata</i>	E1	40	7	80	.	7	29	.	.	1
	<i>Minuartia biflora</i>	E1	20	11	.	.	.	.	.	.	.
	<i>Erigeron uniflorus</i>	E1	20	7	.	6	14	.	14	.	.
	<i>Elyna myosuroides</i>	E1	.	30	80	6	10	29	29	.	.
	<i>Lloydia serotina</i>	E1	.	4	.	16	17	.	29	29	.
	<i>Draba siliquosa</i>	E1	.	4	.	.	.	.	.	.	.
	<i>Gentiana nivalis</i>	E1	.	.	.	9	.	.	.	.	.
	<i>Antennaria carpatica</i>	E1	.	.	.	6	.	.	43	43	.
	<i>Carex atrata</i>	E1	.	.	.	3	.	14	.	14	1
	<i>Saussurea alpina</i>	E1	.	.	.	.	.	.	29	.	.
CA	Caricion austroalpinae										
	<i>Koeleria eriostachya</i>	E1	.	.	.	13	7	14	.	.	33
	<i>Arabis vochinensis</i>	E1	.	.	.	3	.	.	.	.	.
CF	Caricion ferrugineae										
	<i>Hedysarum bedysaroides</i>	E1	.	.	40	.	3	14	.	.	+
	<i>Gentiana pumila</i>	E1	.	.	.	6	10	29	43	14	+
	<i>Pedicularis rostratospicata</i>	E1	.	.	.	.	3	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10
SV	Seslerietalia coeruleae										
	<i>Saxifraga exarata</i> subsp. <i>moschata</i>	E1	15	.	.	.	.	.	.	.	.
	<i>Leontopodium alpinum</i>	E1	.	80	41	48	.	29	.	67	.
	<i>Achillea clavennae</i>	E1	.	80	28	10	14	.	.	100	.
	<i>Erigeron neglectus</i>	E1	.	40	.	.	.	.	.	.	.
	<i>Carex mucronata</i>	E1	.	20	9	.	.	.	.	33	.
	<i>Galium anisophyllum</i>	E1	.	20	6	3	14	.	.	33	.
	<i>Festuca norica</i>	E1	.	20	.	.	.	.	.	.	.
	<i>Gentiana clusii</i>	E1	.	.	75	31	43	57	.	33	+
	<i>Erigeron glabratus</i>	E1	.	.	16	.	29	14	.	100	.
	<i>Potentilla crantzii</i>	E1	.	.	13	10	29	14	86	.	.
	<i>Androsace villosa</i>	E1	.	.	3	.	.	14	.	.	.
	<i>Nigritella hygrophila</i>	E1	.	.	3	.	.	.	.	.	.
	<i>Astragalus australis</i>	E1	.	.	.	7	.	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1	.	.	.	3	.	.	.	.	.
	<i>Nigritella bicolor</i>	E1	.	.	.	.	.	14	.	.	.
	<i>Nigritella rubra</i>	E1	.	.	.	.	.	14	.	.	.
	<i>Nigritella widderi</i>	E1	.	.	.	.	.	14	.	.	.
	<i>Saussurea discolor</i>	E1	.	.	.	.	.	.	14	.	.
SJ	Seslerietalia tenuifoliae										
	<i>Edraianthus graminifolius</i>	E1	.	.	.	.	.	.	.	33	.
ES	Elyno-Seslerietea										
	<i>Polygonum viviparum</i>	E1	20	59	80	72	90	29	100	71	1
	<i>Agrostis alpina</i>	E1	.	.	80	41	65	57	100	57	.
	<i>Carex sempervirens</i>	E1	.	.	80	9	.	.	.	.	+
	<i>Ranunculus montanus</i>	E1	.	.	80	.	.	.	.	.	+
	<i>Sesleria caerulea</i>	E1	.	.	80	59	34	29	86	.	1
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1	.	.	60	41	14	.	43	.	.
	<i>Aster alpinus</i>	E1	.	.	40	3	.	.	.	.	.
	<i>Anemone baldensis</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Gentiana verna</i>	E1	.	.	20	.	.	14	14	14	.
	<i>Hieracium villosum</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Polygala alpestris</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Aster bellidiastrum</i>	E1	.	.	.	41	17	43	71	.	33
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1	.	.	.	34	17	29	86	29	.
	<i>Selaginella selaginoides</i>	E1	.	.	.	34	.	.	57	14	.
	<i>Homogyne discolor</i>	E1	.	.	.	31	3	.	71	29	.
	<i>Astrantia bavarica</i>	E1	.	.	.	25	.	.	43	.	.
	<i>Gentianella anisodonta</i>	E1	.	.	.	22	10	29	29	14	.
	<i>Bartsia alpina</i>	E1	.	.	.	19	10	14	57	.	+
	<i>Alchemilla exigua</i>	E1	.	.	.	6	.	29	43	.	.
	<i>Euphrasia salisburgensis</i>	E1	.	.	.	6	.	14	.	.	.
	<i>Anemone narcissiflora</i>	E1	.	.	.	3	.	.	.	.	.
	<i>Hieracium pilosum</i>	E1	.	.	.	3	.	.	14	.	.
	<i>Linum alpinum</i> subsp. <i>julicum</i>	E1	.	.	.	3	.	.	14	.	.
	<i>Nigritella rbellicani</i>	E1	.	.	.	3	.	.	14	.	.
	<i>Pedicularis verticillata</i>	E1	.	.	.	.	7	.	43	.	.
	<i>Alchemilla glaucescens</i>	E1	.	.	.	.	3	.	.	.	.
	<i>Globularia cordifolia</i>	E1	.	.	.	.	3	29	.	.	.
	<i>Cerastium strictum</i>	E1	.	.	.	.	.	29	.	.	.
	<i>Phyteuma orbiculare</i>	E1	.	.	.	.	.	.	14	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10
	<i>Androsace chamaejasme</i>	E1	.	.	.	.	.	.	.	.	+
	<i>Myosotis alpestris</i>	E1	.	.	.	.	.	.	.	.	+
	<i>Viola alpina</i>	E1	.	.	.	.	.	.	.	.	+
CC	<i>Caricetalia curvulae</i>										
	<i>Veronica bellidioides</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Primula minima</i>	E1	.	.	.	3	.	14	.	14	.
NS	<i>Nardion strictae</i>										
	<i>Antennaria dioica</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Festuca nigrescens</i>	E1	.	.	20	.	.	.	14	.	.
	<i>Coeloglossum viride</i>	E1	.	.	.	6	3	.	29	.	.
	<i>Luzula exspectata</i>	E1	.	.	.	.	.	.	29	.	.
JT	<i>Juncetea trifidi, Festucion variae</i>										
	<i>Helictotrichon versicolor</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Phyteuma hemisphaericum</i>	E1	.	.	20	.	.	.	.	.	.
	<i>Euphrasia minima</i>	E1	.	.	.	38	41	14	43	14	.
	<i>Campanula scheuchzeri</i>	E1	.	.	.	16	7	.	57	.	.
	<i>Leontodon helveticus</i>	E1	.	.	.	3	.	.	14	.	.
	<i>Potentilla aurea</i>	E1	.	.	.	3	.	.	29	14	.
	<i>Botrychium lunaria</i>	E1	.	.	.	3	.	.	.	.	.
FV	<i>Carex fuliginosa</i>	E1	.	.	.	.	3	.	.	.	+
	<i>Luzula spicata</i>	E1	.	.	.	.	3	.	14	.	.
	<i>Anthoxanthum nipponicum</i>	E1	.	.	.	.	.	.	14	.	.
	<i>Agrostis rupestris</i>	E1	.	.	.	.	.	.	14	.	.
	<i>Valeriana celtica</i>	E1	.	.	.	.	.	.	.	.	2
LV	<i>Loiseleurio-Vaccinietea</i>										
	<i>Arctostaphylos alpina</i>	E1	.	.	.	47	.	.	14	43	.
	<i>Vaccinium gaulttherioides</i>	E1	.	.	.	34	7	.	71	57	.
	<i>Loiseleuria procumbens</i>	E1	.	.	.	3	.	.	14	14	.
	<i>Juniperus sibirica</i>	E1	.	.	.	.	3	.	.	.	.
AC	<i>Arabidetalia caeruleae (inc. Salicetea herbaceae)</i>										
	<i>Salix serpyllifolia</i>	E1	.	63	40	.	17	.	.	.	.
	<i>Draba hoppeana</i>	E1	.	15	.	.	.	.	.	.	.
	<i>Cerastium uniflorum</i>	E1	.	4	.	.	.	.	.	.	.
	<i>Carex parviflora</i>	E1	.	4	.	.	7	.	14	.	.
	<i>Salix retusa</i>	E1	.	4	.	19	17	14	14	86	1
	<i>Doronicum glaciale</i>	E1	.	4	.	3	7	.	.	.	.
	<i>Ranunculus alpestris</i>	E1	.	.	20	.	3	.	.	.	.
	<i>Soldanella alpina</i>	E1	.	.	.	13	.	.	57	.	.
	<i>Carex ornithopodooides</i>	E1	.	.	.	6	.	.	.	.	.
	<i>Ranunculus traunfellneri</i>	E1	.	.	.	6	.	.	.	.	.
	<i>Salix reticulata</i>	E1	.	.	.	3	3	.	.	.	.
	<i>Soldanella minima</i>	E1	.	.	.	3	.	.	.	.	.
SH	<i>Alchemilla fissa</i>	E1	.	.	.	.	3	.	14	.	.
	<i>Galium noricum</i>	E1	.	.	.	.	.	.	57	14	+
	<i>Saxifraga androsacea</i>	E1	.	.	.	.	.	.	14	.	.
	<i>Doronicum clusii</i>	E1	.	.	.	.	.	.	.	.	+
TR	<i>Thlaspietea rotundifolii</i>										
	<i>Saxifraga caesia</i>	E1	.	30	20	3	3	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	20	15	.	3	3	14	.	.	.
	<i>Saxifraga facchinii</i>	E1	.	15	.	.	.	.	.	.	.
	<i>Saxifraga sedooides</i>	E1	.	11	.	3	.	.	14	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	
	<i>Petrocallis pyrenaica</i>	E1	.	7	.	3	28	29	29	0	.	+
	<i>Moehringia ciliata</i>	E1	.	4	.	.	.	.	.	.	.	.
	<i>Athamantia cretensis</i>	E1	.	.	60	.	.	.	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	60	3	.	.	.	.	.	.
	<i>Armeria alpina</i>	E1	.	.	.	6	.	.	.	.	.	+
	<i>Festuca nitida</i>	E1	.	.	.	3	.	.	.	.	.	.
	<i>Heliosperma alpestre</i>	E1	.	.	.	3	.	.	.	.	.	.
	<i>Poa minor</i>	E1	.	.	.	3	7	14	.	14	.	.
	<i>Saxifraga aizoides</i>	E1	.	.	.	.	3	.	14	14	.	.
	<i>Gypsophila repens</i>	E1	.	.	.	.	3	.	14	.	.	.
	<i>Rhodiola rosea</i>	E1	.	.	.	.	.	.	.	29	.	.
	<i>Trisetum argenteum</i>	E1	.	.	.	.	.	.	.	.	100	.
PS	<i>Phyteumato-Saxifragion petraeae</i>											
	<i>Androsace hausmannii</i>	E1	80	.	.	.	.	.	.	.	.	.
	<i>Androsace helvetica</i>	E1	20	4	.	.	.	.	.	.	.	.
	<i>Potentilla nitida</i>	E1	20	48	60	3	48	29	14	.	.	.
	<i>Saxifraga squarrosa</i>	E1	20	26	.	22	48	14	14	.	.	.
	<i>Paederota bonarota</i>	E1	.	.	20	.	.	.	.	.	.	.
	<i>Campanula zoysii</i>	E1	.	.	.	.	.	14	.	.	.	.
	<i>Arabis scopoliana</i>	E1	.	.	.	.	.	.	.	.	100	.
PC	<i>Potentilletalia caulescentis</i>											
	<i>Festuca alpina</i>	E1	80	19	.	16	10	14	.	14	.	.
	<i>Minuartia cherlerioides</i>	E1	60	26	.	.	.	.	.	.	.	.
	<i>Eritrichium nanum</i>	E1	.	22	.	.	14	29	.	.	.	.
	<i>Draba tomentosa</i>	E1	.	7	.	.	.	.	.	.	.	.
	<i>Sedum atratum</i>	E1	.	4	.	.	.	29	.	.	.	.
	<i>Saxifraga crustata</i>	E1	.	.	.	28	21	.	14	.	.	.
	<i>Primula auricula</i>	E1	.	.	.	19	14	14	14	.	.	.
	<i>Campanula cochlearifolia</i>	E1	.	.	.	13	24	43	.	.	67	.
	<i>Potentilla clusiana</i>	E1	.	.	.	9	7	86	.	.	.	.
	<i>Valeriana saxatilis</i>	E1	.	.	.	6	3	43	.	.	.	.
	<i>Arabis bellidifolia</i> subsp. <i>stellulata</i>	E1	.	.	.	3	.	.	.	.	.	.
	<i>Dianthus sylvestris</i>	E1	.	.	.	3	7	.	.	.	.	.
	<i>Saxifraga burseriana</i>	E1	.	.	.	.	14	.	.	.	.	.
	<i>Draba aizoides</i>	E1	.	.	.	.	7	.	.	.	.	.
AT	<i>Asplenietea trichomanis</i>											
	<i>Draba dubia</i>	E1	100	33	.	.	3	.	.	.	.	.
	<i>Saxifraga paniculata</i>	E1	.	11	20	16	41	.	14	.	.	.
	<i>Silene rupestris</i>	E1	.	.	20	.	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>											
	<i>Carex capillaris</i>	E1	.	.	40	19	7	29	14	57	.	.
	<i>Parnassia palustris</i>	E1	.	.	20	19	.	.	14	29	.	.
	<i>Pinguicula alpina</i>	E1	.	.	.	19	.	.	14	29	.	.
	<i>Tofieldia calyculata</i>	E1	.	.	.	16	.	.	.	14	.	.
	<i>Gentiana utriculosa</i>	E1	.	.	.	3	3	.	.	.	.	.
PoT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>											
	<i>Poa alpina</i>	E1	.	4	20	6	14	100	.	14	33	+
	<i>Leontodon hispidus</i>	E1	.	.	.	9	.	.	57	.	.	.
	<i>Euphrasia picta</i>	E1	.	.	.	.	.	14	.	.	.	.
MuA	<i>Mulgedio-Aconitetea, Betulo-Alnetea</i>											
	<i>Viola biflora</i>	E1	.	.	.	22	14	14	14	86	.	+

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10
RE	Rhododendro hirsuti-Ericetalia carneae										
	<i>Rhodothamnus chamaecistus</i>	E1	.	.	.	59	14	14	.	.	.
	<i>Rhododendron hirsutum</i>	E1	.	.	.	13	.	.	14	14	67
	<i>Erica carnea</i>	E1	.	.	.	3	.	.	.	.	.
	<i>Pinus mugo</i>	E1	.	.	.	3	.	.	.	.	.
EP	Erico-Pinetea										
	<i>Carex ornithopoda</i>	E1	.	.	.	3	3	.	57	.	.
	<i>Chamaecytisus hirsutus</i>	E1	.	.	.	3	.	.	.	.	.
VP	Vaccinio-Piceetea										
	<i>Vaccinium vitis-idaea</i>	E1	.	.	.	19	3	.	.	43	.
	<i>Huperzia selago</i>	E1	.	.	.	16	.	.	.	14	33
	<i>Vaccinium myrtillus</i>	E1	.	.	.	6	.	.	.	.	67
	<i>Homogyne alpina</i>	E1	.	.	.	.	.	.	14	.	.
O	Other species (Druge vrste)										
	<i>Minuartia</i> sp.	E1	.	.	.	.	3	.	.	.	.
	<i>Festuca</i> sp.	E1	.	.	.	.	.	.	.	14	.
	<i>Euphrasia</i> sp.	E1	.	.	.	.	.	.	.	.	+
ML	Mosses and lichens (Mahovi in lišaji)										
	<i>Tortella tortuosa</i>	E0	20	37	20	9	10	.	.	.	.
	<i>Solorina crocea</i>	E0	20	4	.	.	.	.	.	.	.
	<i>Cetraria nivalis</i>	E0	.	37	80	.	.	.	.	.	.
	<i>Thamnolia vermicularis</i>	E0	.	30	20	.	21	14	.	.	.
	<i>Cetraria islandica</i>	E0	.	19	20	3	.	.	.	29	.
	<i>Cladonia pyxidata</i>	E0	.	19	.	.	.	.	.	.	.
	<i>Schistidium apocarpum</i>	E0	.	15	.	.	.	.	.	.	.
	<i>Cetraria cucullata</i>	E0	.	15	.	.	.	.	.	.	.
	<i>Cladonia convoluta</i>	E0	.	15	.	.	.	.	.	.	.
	<i>Squamarina gypsacea</i>	E0	.	15	.	.	.	.	.	.	.
	<i>Toninia coeruleonigricans</i>	E0	.	15	.	.	.	.	.	.	.
	<i>Bryum inclinatum</i>	E0	.	4	.	.	.	.	.	.	.
	<i>Cirriphyllum cirrhosum</i>	E0	.	4	.	.	.	.	.	.	.
	<i>Cetraria tilesii</i>	E0	.	4	.	.	.	.	.	.	+
	<i>Tortella</i> sp.	E0	.	.	.	22	10	29	14	14	.
	<i>Ctenidium molluscum</i>	E0	.	.	.	6	.	.	.	.	.
	<i>Dicranum scoparium</i>	E0	.	.	.	3	.	.	.	.	.
	<i>Polytrichum alpinum</i>	E0	.	.	.	3	.	.	.	.	.
	<i>Dicranum</i> sp.	E0	.	.	.	.	.	.	.	14	.
	<i>Rhytidiadelphus triquetrus</i>	E0	.	.	.	.	.	.	.	14	.

- 1 Cr-Do *Caricetum rupestris* var. *Androsace hausmanii*, South Tyrol Dolomites (Pignatti E. & S. 1985, Table 1, relevés 1–5)
- 2 Cr-DoJA Do *Caricetum rupestris* var. *typica*, South Tyrol Dolomites (Pignatti E. & S. 1985, Table 1, relevés 6–29) and 3 relevés from the Julian Alps.
- 3 Cr-JT *Caricetum rupestris*, South Tyrol Dolomites, Eggentaler Alm (Vorhauser & Erschbamer 2000, Table 1, column 1)
- 4 SpCrdo *Saussurea pygmaeae-Caricetum rupestris* var. *Dryas octopetala*, Julian Alps, Karavanke
- 5 SpCron *Saussurea pygmaeae-Caricetum rupestris* var. *Oxytropis neglecta*, Julian Alps
- 6 SpCrpc *Saussurea pygmaeae-Caricetum rupestris* var. *Potentilla clusiana*, Julian Alps
- 7 SpCrhd *Saussurea pygmaeae-Caricetum rupestris* var. *Homogyne discolor*, Julian Alps
- 8 SpCrsr *Saussurea pygmaeae-Caricetum rupestris* var. *Salix retusa*, Julian Alps, Karavanke
- 9 AsCr *Arabido scopolianae-Caricetum rupestris*, Snežnik (T. Wraber, in litt.)
- 10 *Caricetum rupestris*, Hochschwab, Styria, Austria (Dirnböck et al. 1999: 138), one relevé.

Appendix 3: Synthetic table of communities with dominant *Elyna myosuroides*.

Priloga 3: Sintezna tabela združb s prevladujočo vrsto *Elyna myosuroides*.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Number of relevés (Število popisov)		12	22	10	18	18			12	15	10	16	5	4	15	5
Author (Avtor)		IDTW	ID	IDTW	GO	PP	GO	GO	BBJ	AL	PEg	AL	PH	Ph	PH	AL
Sign for syntaxa (Oznaka sintaksonov)		AcEmvg	AcEmcf	AcEmty	E - FVJ	E-Do	E -Eng	E-Dosin	E-BB	Esvcf	E-AmA	EsvIm	Evv	Esr	Ety	Ehv
OE	Oxytropido-Elynon															
	<i>Elyna myosuroides</i>	E1	100	100	100	100	94	100	100	100	100	100	100	100	100	100
	<i>Erigeron uniflorus</i>	E1	58	27	10	39	44	58	52	92	.	.	43	.	25	53
	<i>Carex atrata</i>	E1	50	5	40	11	.	42	.	75	.	.	.	.	50	.
	<i>Antennaria carpatica</i>	E1	42	32	20	67	67	39	67	75	7	.	69	80	.	.
	<i>Gentiana nivalis</i>	E1	25	18	10	11	44	36	18	75	.	40	.	60	100	73
	<i>Lloydia serotina</i>	E1	17	14	20	11	.	22	.	50	20	.	.	80	100	27
	<i>Festuca sp.</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Arenaria ciliata</i>	E1	.	18	20	.	28	39	46	83	47	.	6	.	.	20
	<i>Gentiana tenella</i>	E1	.	.	.	.	17	.	.	58	.	.	.	.	.	40
	<i>Gentiana prostrata</i>	E1	.	.	.	.	11	.	.	8	.	.	.	.	.	.
	<i>Carex curvula</i> subsp. <i>rosea</i>	E1	.	.	.	.	6	.	.	.	.	100	.	.	.	.
	<i>Saussurea alpina</i>	E1	.	.	.	.	.	39	.	83	67	.	6	.	.	.
	<i>Draba siliquosa</i>	E1	.	.	.	.	.	28	.	50	.	.	.	.	.	13
	<i>Cerastium alpinum</i>	E1	.	.	.	.	.	.	.	33	.	.	.	.	.	.
	<i>Dianthus glacialis</i>	E1	.	.	.	.	.	.	.	8	.	.	.	.	25	27
	<i>Minuartia biflora</i>	E1	.	.	.	.	.	.	.	8	.	.	.	.	.	.
	<i>Oxytropis laponica</i>	E1	.	.	.	.	.	.	.	8	.	.	.	.	.	.
	<i>Taraxacum reichenbachii</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	20
CFir	Caricion firmae															
	<i>Dryas octopetala</i>	E1	67	91	70	67	33	67	21	33	13	50	56	60	50	20
	<i>Silene acaulis</i>	E1	67	82	70	72	61	61	88	92	73	10	75	80	25	80
	<i>Festuca quadriflora</i>	E1	50	32	20	.	67	72	58	100	93	70	94	60	50	93
	<i>Helianthemum alpestre</i>	E1	50	68	80	39	56	22	79	25	88	50	.	80	50	47
	<i>Minuartia sedoides</i>	E1	50	45	20	.	33	22	52	25	67	10	31	20	100	47
	<i>Oxytropis neglecta</i>	E1	33	41	70	22	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis rostratocapitata</i>	E1	17	45	.	39	11	8	11	.	73	30	94	.	25	7
	<i>Primula halleri</i>	E1	17	5	10	11	.	.	.	.	.	.	.	.	.	.
	<i>Sesleria sphaerocephala</i>	E1	17	50	20	11	.	3	12	.	.	.	.	.	.	.
	<i>Carex firma</i>	E1	8	64	40	56	22	31	15	25	93	70	25	.	.	.
	<i>Chamorchis alpina</i>	E1	8	14	10	11	11	3	21	8	20	10	.	.	.	.
	<i>Saussurea pygmaea</i>	E1	8	32	40	.	.	.	.	.	.	.	.	.	.	.
	<i>Cerastium subtriflorum</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix alpina</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Phyteuma sieberi</i>	E1	.	27	30	11	.	.	9	.	.	.	.	.	.	.
	<i>Carex rupestris</i>	E1	.	18	30	11	6	42	73	83	60	.	13	.	.	20
	<i>Minuartia verna</i> subsp. <i>verna</i> (<i>M. gerardii</i>)	E1	.	9	10	17	67	53	58	75	67	20	25	.	.	33
	<i>Gentiana terglouensis</i>	E1	.	9	.	.	.	3	3	.	.	.	.	.	.	.
	<i>Veronica aphylla</i>	E1	.	5	10	.	.	.	.	17	.	50	.	.	.	27
	<i>Ranunculus hybridus</i>	E1	.	5	.	.	.	.	.	.	.	.	.	.	.	.
CA	Caricion austroalpinae															
	<i>Koeleria eriostachya</i>	E1	33	14	50	.	.	.	.	.	.	.	.	.	.	.
	<i>Arabis vochinensis</i>	E1	25	9	.	.	.	.	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CF	Caricion ferrugineae															
	<i>Hedysarum hedysaroides</i>	E1 17	5	40	39	11	33	3	50	.	10	.	60	100	27	.
	<i>Gentiana pumila</i>	E1 8	45	30	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Pedicularis rostratospicata</i>	E1 .	.	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Callianthemum coriandrifolium</i>	E1 .	.	.	.	6	.	.	.	.	.	.	.	.	.	.
	<i>Astragalus frigidus</i>	E1 .	.	.	.	.	.	.	.	7	.	.	.	.	.	.
	<i>Trifolium thalii</i>	E1 .	.	.	.	.	.	.	.	.	.	.	.	.	.	20
SV	Seslerietalia coeruleae															
	<i>Achillea clavennae</i>	E1 92	41	40	56	.	3	52	.	20	.	88	.	.	.	.
	<i>Potentilla crantzii</i>	E1 75	50	40	6	.	33	36	75	7	.	38	.	25	.	20
	<i>Galium anisophyllum</i>	E1 33	9	.	44	44	33	9	42	7	30	.	100	75	67	.
	<i>Juncus monanthos</i>	E1 33	14	10	28	.	.	12	.	.	.	.	.	.	.	.
	<i>Gentiana clusii</i>	E1 17	32	20	11	.	25	3	8	40	80	44	.	.	.	.
	<i>Leontopodium alpinum</i>	E1 17	32	60	28	61	11	42	.	67	.	25	.	.	.	.
	<i>Ranunculus carinthiacus</i>	E1 17	18	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Erigeron glabratus</i>	E1 8	23	40	.	.	3	3	.	.	10	.	.	.	.	.
	<i>Festuca norica</i>	E1 8	5	.	.	.	.	30	.	.	.	.	.	.	.	.
	<i>Saussurea discolor</i>	E1 8	5	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Thesium alpinum</i>	E1 8	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Gentiana orbicularis</i>	E1 .	5	.	.	.	.	.	.	33	.	75	.	.	.	.
	<i>Nigritella miniata</i> s. lat. (inc. <i>N. bicolor</i>)	E1 .	5	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Astragalus australis</i>	E1 .	.	20	6	.	3	58	.	.	.	.	.	.	.	20
	<i>Oxytropis campestris</i>	E1 .	.	.	.	50	28	6	67	87	.	94	20	.	20	40
	<i>Oxytropis jacquinii</i>	E1 .	.	.	.	33	8	82	.	.	30	.	.	.	.	.
	<i>Gentiana engadinensis</i>	E1 .	.	.	.	39	.	.	.	.	.	.	.	.	.	.
	<i>Carex mucronata</i>	E1 .	.	.	.	11	6	.	.	.	20	.	.	.	.	.
	<i>Saxifraga adscendens</i>	E1 .	.	.	.	.	.	.	17	.	.	.	.	.	.	.
	<i>Saxifraga exarata</i> subsp. <i>moschata</i>	E1 .	.	.	.	.	.	.	.	.	.	.	.	.	7	60
ES	Elyno-Seslerietea															
	<i>Thymus praecox</i> subsp. <i>polytrichus</i>	E1 83	55	40	56	44	11	39	.	47	40	100	100	50	47	.
	<i>Agrostis alpina</i>	E1 75	86	60	56	72	58	82	75	20	50	44	.	.	.	20
	<i>Polygonum viviparum</i>	E1 75	82	80	100	94	75	94	83	73	50	75	100	100	87	100
	<i>Gentiana anisodonta</i>	E1 67	55	20	.	.	.	.	.	.	.	.	60	75	53	.
	<i>Aster bellidiastrum</i>	E1 50	55	.	56	.	3	.	.	.	.	.	.	.	7	.
	<i>Pedicularis verticillata</i>	E1 50	41	20	.	.	28	49	50	.	.	.	.	.	.	.
	<i>Sesleria caerulea</i>	E1 50	45	60	72	78	72	94	100	53	80	94	40	100	73	20
	<i>Cerastium strictum</i>	E1 42	23	20	.	.	.	.	25	.	.	.	.	.	.	.
	<i>Gentiana verna</i>	E1 42	27	.	11	50	39	49	75	.	30	.	80	100	53	20
	<i>Bartsia alpina</i>	E1 33	32	20	78	39	3	73	8	20	10	66	100	75	40	.
	<i>Selaginella selaginoides</i>	E1 25	41	10	72	22	19	6	50	.	10	.	80	75	27	.
	<i>Rhinanthus glacialis</i>	E1 17	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Alchemilla exigua</i>	E1 17	23	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Euphrasia salisburgensis</i>	E1 17	9	10	6	33	19	39	.	.	70	.	.	.	.	.
	<i>Alchemilla vulgaris</i> s. str.	E1 8	.	.	.	.	.	.	8	.	.	.	.	.	.	.
	<i>Anemone baldensis</i>	E1 8	5	.	.	.	.	18	.	.	.	6	.	.	.	.
	<i>Anthyllis vulneraria</i> subsp. <i>alpestris</i>	E1 8	36	30	33	44	14	24	.	.	40	.	.	.	.	.
	<i>Carex sempervirens</i>	E1 8	23	.	17	.	36	67	17	26	50	13	100	100	40	20
	<i>Hieracium pilosum</i>	E1 8	5	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Hieracium villosum</i>	E1 8	5	.	6	.	.	24	.	.	.	.	.	.	.	.
	<i>Myosotis alpestris</i>	E1 8	23	20	.	.	3	12	.	.	.	.	40	25	20	20
	<i>Nigritella nigra</i> agg. (inc. <i>N. rbellicani</i>)	E1 8	.	10	.	.	.	.	8	.	.	.	.	25	.	.

Successive number (Zaporedna številka)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
<i>Alchemilla glaucescens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Homogyne discolor</i>	E1	.	55	10	22	.	.	.	.	.	.	.	.	.	.
<i>Astrantia bavarica</i>	E1	.	18	.	.	.	.	.	.	.	.	.	.	.	.
<i>Phyteuma orbiculare</i>	E1	.	5	10	.	.	11	.	.	.	40	.	.	25	.	
<i>Aster alpinus</i>	E1	.	.	30	22	.	31	69	60	20	10	.	.	.	20	
<i>Daphne striata</i>	E1	.	.	.	17	.	.	3	.	.	.	.	.	.	.
<i>Ranunculus montanus</i>	E1	.	.	.	.	.	8	82	.	7	10	.	.	.	7	
<i>Scabiosa lucida</i>	E1	.	.	.	.	.	3	3	.	.	10	.	.	.	.
<i>Polygala alpestris</i>	E1	.	.	.	.	.	2	.	.	.	10	.	.	.	.
<i>Carduus defloratus</i>	E1	.	.	.	.	.	.	3	.	.	.	.	.	.	.
<i>Alchemilla colorata</i>	E1	.	.	.	.	.	.	.	50	.	.	.	.	.	.
<i>Thalictrum alpinum</i>	E1	.	.	.	.	.	.	.	17	.	.	.	.	.	.
<i>Androsace chamaejasme</i>	E1	.	.	.	.	.	.	8	.	.	20	.	.	.	.
<i>Astragalus alpinus</i>	E1	.	.	.	.	.	.	8	.	.	.	.	.	.	.
<i>Viola calcarata</i>	E1	.	.	.	.	.	.	8	.	.	.	.	.	.	.
<i>Pedicularis oederi</i>	E1	.	.	.	.	.	.	.	7	20	.	.	.	.	40	
<i>Gentiana aspera</i>	E1	.	.	.	.	.	.	.	.	30	.	.	.	.	.
<i>Ligusticum mutellina</i>	E1	.	.	.	.	.	.	.	.	30	.	.	.	.	.
<i>Helianthemum nummularium</i> subsp. <i>grandiflorum</i>	E1	.	.	.	.	.	.	.	.	10	.	.	.	.	.
CC <i>Caricetalia curvulae</i>																
<i>Festuca vivipara</i>	E1	.	.	10	.	.	.	.	.	.	.	.	.	.	.
<i>Primula minima</i>	E1	.	.	.	56	.	56	8	.	93	.	19	100	100	73	80
<i>Ligusticum mutellinoides</i>	E1	.	.	.	17	.	39	33	83	13	.	94	100	100	87	100
<i>Androsace obtusifolia</i>	E1	.	.	.	.	6	.	.	42	.	.	13	.	.	20	.
<i>Gentiana brachyphylla</i>	E1	.	.	.	.	.	.	.	67	.	.	.	.	.	27	40
<i>Oreochloa disticha</i>	E1	.	.	.	.	.	.	.	50	.	.	.	.	.	13	60
<i>Carex curvula</i> subsp. <i>curvula</i>	E1	.	.	.	.	.	.	.	33	.	.	.	100	75	47	60
<i>Festuca halleri</i>	E1	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.
<i>Hieracium piliferum</i> (<i>H. glanduliferum</i>)	E1	.	.	.	.	.	.	.	17	.	.	13	.	.	.	.
<i>Hieracium alpinum</i>	E1	.	.	.	.	.	.	.	8	.	.	.	.	.	.	.
<i>Phyteuma globulariifolium</i>	E1	.	.	.	.	.	.	.	.	33	.	.	80	75	73	20
<i>Silene excapa</i>	E1	.	.	.	.	.	.	.	.	.	.	80	75	47	.	.
<i>Primula glutinosa</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20
NS <i>Nardion strictae</i>																
<i>Alchemilla flabellata</i>	E1	25	.	20	22	.	.	.	8	.	.	.	.	.	.	.
<i>Antennaria dioica</i>	E1	17	.	.	.	.	3	.	8	.	.	.	.	.	.	.
<i>Coeloglossum viride</i>	E1	17	32	10	.	.	.	.	.	.	.	.	.	.	13	.
<i>Luzula exspectata</i> (<i>L. multiflora</i> agg.)	E1	8	45	10	.	.	.	.	17	.	.	.	.	.	.	.
<i>Gentiana kochiana</i>	E1	.	.	.	28	.	.	9	.	.	.	.	.	.	.	.
<i>Gentiana campestris</i>	E1	.	.	.	.	.	.	.	33	.	50	.	.	.	.	.
<i>Pulsatilla alpina</i> subsp. <i>apiifolia</i>	E1	.	.	.	.	.	.	.	.	.	.	.	60	.	.	.
JT <i>Juncetea trifidi, Festucion variae</i>																
<i>Euphrasia minima</i> (inc. <i>E. pulchella</i>)	E1	92	41	40	50	.	39	9	67	40	20	.	.	.	.	40
<i>Campanula scheuchzeri</i>	E1	50	36	70	17	.	69	33	83	47	80	87	100	100	73	40
<i>Anthoxanthum nipponicum</i>	E1	33	18	.	.	.	3	3	.	.	.	.	.	.	13	.
<i>Juncus jacquinii</i>	E1	33	.	20	.	.	.	.	.	7	.	.	20	50	27	.
<i>Juncus trifidus</i>	E1	33	.	10	.	.	.	.	.	.	.	.	100	75	.	.
<i>Luzula spicata</i>	E1	33	32	.	6	.	.	.	67	.	.	.	.	.	.	80
<i>Agrostis rupestris</i>	E1	17	5	.	11	.	.	.	17	.	.	.	60	50	53	.
<i>Leontodon helveticus</i>	E1	17	.	10	44	.	14	.	17	.	30	.	.	.	7	.
FV <i>Carex fuliginosa</i>	E1	8	9	10	.	.	.	.	.	7	.	.	.	.	7	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	<i>Botrychium lunaria</i>	E1	8	18	10	.	.	17	9	33	.	20	38	.	.	27	.
	<i>Potentilla aurea</i>	E1	.	23	10	56	.	11	.	25	.	10	.	.	25	7	.
	<i>Helictotrichon versicolor</i>	E1	.	.	30	50	.	44	39	58	.	30	.	100	50	20	80
	<i>Phyteuma hemisphericum</i>	E1	.	.	.	17	.	.	.	50	.	.	6	40	.	.	20
	<i>Erigeron alpinus</i>	E1	.	.	.	.	17	.	.	.	.	.	.	.	.	.	.
	<i>Veronica bellidioides</i>	E1	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.
	<i>Pulsatilla vernalis</i>	E1	.	.	.	.	.	.	.	25	.	.	6	.	.	.	.
	<i>Veronica fruticans</i>	E1	.	.	.	.	.	.	.	17	.	20	.	.	.	.	.
	<i>Silene suecica</i>	E1	.	.	.	.	.	.	.	8	.	.	.	.	.	.	.
	<i>Geum montanum</i>	E1	.	.	.	.	.	.	.	.	.	.	20	.	7	.	.
FV	<i>Potentilla grandiflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20
LV	Loiseleurio-Vaccinietea																
	<i>Vaccinium gaultherioides</i>	E1	92	36	20	94	.	6	12	8	.	10	.	20	69	7	.
	<i>Arctostaphylos alpinas</i>	E1	42	14	10	39	.	.	.	.	.	.	.	.	.	.	.
	<i>Juniperus sibirica</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Loiseleuria procumbens</i>	E1	.	.	.	17	.	.	.	8	.	.	.	60	.	.	.
SH	Salicetea herbaceae																
	<i>Alchemilla fissa</i>	E1	8	18	40	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Salix herbacea</i>	E1	.	.	.	.	.	.	.	17	.	10	.	.	.	47	.
	<i>Arenaria biflora</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.
	<i>Cardamine alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.
DH	Drabion hoppeanae																
	<i>Doronicum glaciale</i>	E1	.	18	.	.	.	.	.	.	.	.	60	100	53	.	.
	<i>Trisetum spicatum</i>	E1	.	.	.	.	.	.	8	.	.	.	.	.	7	60	.
	<i>Draba fladnizensis</i>	E1	.	.	.	.	.	.	8	7	.	6	.	.	.	40	.
	<i>Pedicularis asplenifolia</i>	E1	.	.	.	.	.	.	.	33	.	6	.	.	.	40	.
	<i>Sesleria ovata</i>	E1	.	.	.	.	.	.	.	7	.	.	.	.	20	.	.
AC	Arabidetalia caeruleae (inc. Androsacetalia alpinae)																
	<i>Salix retusa</i>	E1	75	45	30	11	.	8	27	.	13	30	6	.	75	33	.
	<i>Trifolium pallescens</i>	E1	42	41	10	.	.	3	.	.	.	.	.	.	.	.	.
	<i>Carex parviflora</i>	E1	33	68	10	17	.	3	12	.	10	19	.	50	73	.	.
	<i>Salix reticulata</i>	E1	33	.	20	.	.	.	9	25	13	.	.	.	100	27	.
	<i>Salix serpyllifolia</i>	E1	17	9	20	39	39	25	80	17	53	20	44	100	25	73	.
	<i>Galium noricum</i>	E1	.	23	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus traunfellneri</i>	E1	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Soldanella alpina</i>	E1	.	9	.	11	.	.	.	.	.	.	.	.	.	.	.
	<i>Carex ornithopodoides</i>	E1	.	5	10	39	.	.	.	.	.	.	.	.	.	.	.
	<i>Ranunculus alpestris</i>	E1	.	.	.	11	.	11	.	8	73	40	13	.	25	27	20
	<i>Saxifraga oppositifolia</i> subsp. <i>rudolphiana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.
	<i>Sagina procumbens</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.
	<i>Veronica alpina</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.
	<i>Saxifraga androsacea</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.
	<i>Cerastium uniflorum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.
	<i>Potentilla brauneana</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.
	<i>Saxifraga bryoides</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	100
TR	Thlaspietea rotundifolii																
	<i>Rhodiola rosea</i>	E1	42	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Heliosperma alpestre</i>	E1	25	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Petrocallis pyrenaica</i>	E1	.	23	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Taraxacum alpinum</i>	E1	.	9	.	.	.	.	.	17	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
MC	<i>Gypsophila repens</i>	E1	.	5	20	.	.	8	6	.	7	30	81	.	.	7	.
	<i>Saxifraga aizoides</i>	E1	.	.	10	.	.	3	.	.	7	10	.	.	75	13	.
	<i>Festuca nitida</i>	E1	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Achillea oxyloba</i>	E1	.	.	.	.	56	.	3	.	.	.	.	.	.	.	.
	<i>Saxifraga oppositifolia</i>	E1	.	.	.	.	.	11	9	8	47	10	31	.	.	40	20
	<i>Athamantha cretensis</i>	E1	.	.	.	.	.	3	.	.	.	10	.	.	.	.	.
	<i>Biscutella laevigata</i>	E1	.	.	.	.	.	.	12	.	.	.	13	.	.	.	.
	<i>Saxifraga caesia</i>	E1	.	.	.	.	.	.	3	.	13	.	.	.	.	.	.
	<i>Sedum atratum</i>	E1	.	.	.	.	.	.	.	25	.	.	81	.	.	7	.
	<i>Festuca rupicaprina</i>	E1	.	.	.	.	.	.	.	.	.	40	.	.	.	.	.
	<i>Leontodon montanus</i>	E1	.	.	.	.	.	.	.	.	.	.	88	.	.	.	.
PS	<i>Phyteumato-Saxifragion petraeae</i>																
	<i>Saxifraga crustata</i>	E1	8	18	10	17	.	3	.	.	.	.	.	.	.	.	.
	<i>Paederota lutea</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla nitida</i>	E1	.	9	10	.	.	3	12	.	.	.	.	.	.	.	.
	<i>Saxifraga squarrosa</i>	E1	.	.	20	.	.	3	9	.	.	.	.	.	.	.	.
PC	<i>Potentilletalia caulescentis</i>																
	<i>Primula auricula</i>	E1	33	.	20	.	.	11	.	.	.	30	.	.	.	.	.
	<i>Dianthus sylvestris</i>	E1	8	9	40	.	28	.	.	.	.	.	.	.	.	.	.
	<i>Festuca alpina</i>	E1	.	14	.	17	.	6	.	.	.	.	.	.	.	.	.
AV	<i>Eritrichium nanum</i>	E1	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Campanula cochleariifolia</i>	E1	.	5	.	.	.	14	12	.	26	50	.	80	.	.	.
	<i>Saxifraga burseriana</i>	E1	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Potentilla clusiana</i>	E1	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Draba aizoides</i>	E1	.	.	.	.	50	25	12	50	.	.	75	.	.	.	20
	<i>Minuartia cherlerioides</i>	E1	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.
	<i>Saxifraga mutata</i>	E1	.	.	.	.	.	.	.	.	7	.	.	.	.	.	.
AT	<i>Asplenetia trichomanis</i>																
	<i>Saxifraga paniculata</i>	E1	25	36	50	.	.	6	67	17	7	.	6	20	25	27	20
	<i>Asplenium viride</i>	E1	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CD	<i>Caricetalia davallianae</i>																
	<i>Parnassia palustris</i>	E1	67	23	10	28	.	3	6	8	47	.	.	40	50	27	.
	<i>Carex capillaris</i>	E1	50	27	40	11	.	42	39	75	40	.	.	40	75	53	.
	<i>Pinguicula alpina</i>	E1	17	.	.	.	.	.	3	.	.	.	.	.	.	.	.
	<i>Gentiana utriculosa</i>	E1	.	5	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Kobresia simpliciuscula</i>	E1	.	.	.	.	11	.	.	.	27	.	.	.	.	.	.
	<i>Carex nigra</i>	E1	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.
	<i>Primula farinosa</i>	E1	.	.	.	.	.	.	.	8	40	60	.	.	.	.	.
PoT	<i>Poo alpinae-Trisetetalia, Molinio-Arrhenatheretea</i>																
	<i>Poa alpina</i>	E1	75	59	60	56	56	61	36	75	.	80	.	60	25	67	40
	<i>Trifolium repens</i>	E1	42	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Leontodon hispidus</i>	E1	25	18	20	6	.	14	6	8	.	30	.	40	.	.	.
	<i>Euphrasia picta</i>	E1	17	18	.	22	.	.	.	.	.	.	.	100	100	100	.
	<i>Trollius europaeus</i>	E1	17	.	.	.	.	.	.	.	.	.	.	80	25	.	.
	<i>Cerastium fontanum</i>	E1	.	5	.	.	.	.	.	.	.	20	.	.	.	.	.
	<i>Trifolium pratense</i>	E1	.	5	10	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Lotus corniculatus</i> (inc. <i>L. alpinus</i>)	E1	.	.	.	.	.	.	.	8	.	10	.	.	.	.	.
	<i>Agrostis capillaris</i>	E1	.	.	.	.	.	.	.	.	.	10	.	100	75	73	.
FB	<i>Festuco-Brometea</i>																
FB	<i>Carex caryophylla</i>	E1	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.

Successive number (Zaporedna številka)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<i>Silene vulgaris</i>	E1	.	.	.	.	.	.	.	.	.	6	.	.	.	.
MuA	Mulgedio-Aconitetea, Betulo-Alnetea															
	<i>Viola biflora</i>	E1	17	18	10	.	.	.	.	.	10	.	.	.	.	.
	<i>Aconitum tauricum</i>	E1	.	.	.	.	.	.	.	.	.	.	.	.	47	.
RE	Rhododendro hirsuti-Ericetalia carneae															
	<i>Rhodothamnus chamaecistus</i>	E1	33	5	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Rhododendron hirsutum</i>	E1	17	.	.	.	.	.	.	.	.	.	.	.	.	.
EP	Erico-Pinetea															
	<i>Carex ornithopoda</i>	E1	25	23	.	.	.	.	.	.	.	.	.	.	7	.
	<i>Carex ericetorum</i>	E1	.	.	.	67	33	.	92	.	.	.	.	.	.	.
	<i>Viola rupestris</i>	E1	.	.	.	.	.	.	8	.	.	.	.	.	.	.
VP	Vaccinio-Piceetea															
	<i>Homogyne alpina</i>	E1	25	.	.	33	.	8	9	8	.	30	13	40	.	13
	<i>Vaccinium vitis-idaea</i>	E1	17	5	.	44	.	.	.	.	.	.	100	.	.	.
	<i>Vaccinium myrtillus</i>	E1	8	.	.	.	.	.	.	.	10	.	.	.	.	.
O	Other species (Druge vrste)															
	<i>Alchemilla</i> sp.	E1	8	.	.	.	.	.	17	.	.	.	.	.	.	.
ML	Mosses and lichens (Mahovi in lišaji)															
	<i>Tortella tortuosa</i>	E0	8	9	.	.	44	47	9	75	40	100	.	.	25	7
	<i>Thamnia vermicularis</i>	E0	8	.	10	.	50	23	.	83	60	30	13	40	.	40
	<i>Rhytidiadelphus triquetrus</i>	E0	8	.	.	.	.	.	.	.	.	.	.	.	.	.
	<i>Tortella</i> sp.	E0	.	23	30	.	.	.	.	.	.	.	.	.	.	.
	<i>Cetraria islandica</i>	E0	.	5	.	17	56	64	.	100	33	30	63	.	.	33
	<i>Cetraria</i> sp. (inc. <i>C. nivalis</i>)	E0	.	.	10	6	44	33	49	83	53	.	6	.	.	13
	<i>Cladonia arbuscula</i>	E0	.	.	10	.	.	.	.	.	.	.	.	.	.	.
	<i>Cladonia endiviaefolia</i>	E0	.	.	.	.	22	.	.	.	.	.	.	.	.	.
	<i>Cetraria cucullata</i>	E0	.	.	.	17	39	24	67	7	.	.	40	.	7	.
	<i>Cladonia pyxidata</i>	E0	.	.	.	.	33	3	92	.	.	.	60	.	7	.
	<i>Rhytidium rugosum</i>	E0	.	.	.	.	.	.	83	20	40	.	.	.	.	.
	<i>Cetraria juniperina</i>	E0	.	.	.	.	.	.	58	13	.	25	.	.	.	40
	<i>Polytrichum juniperinum</i>	E0	.	.	.	.	.	.	50	.	10	.	.	.	.	.
	<i>Pseudostereocaulon procerrimum</i>	E0	.	.	.	.	.	.	.	.	20	.	.	.	.	.
	<i>Alectoria ochroleuca</i>	E0	.	.	.	.	.	.	.	.	13	.	13	.	.	20
	<i>Cladonia</i> sp.	E0	.	.	.	.	.	.	.	.	13	.	6	.	.	.
	<i>Distichium capillaceum</i>	E0	.	.	.	.	.	.	.	.	13	20	.	.	.	.
	<i>Ispterigium pulchellum</i>	E0	.	.	.	.	.	.	.	.	13	.	.	.	.	.
	<i>Abietinella abietina</i>	E0	.	.	.	.	.	.	.	.	13	.	.	.	.	.
	<i>Bryum caespitosum</i>	E0	.	.	.	.	.	.	.	.	7	.	.	.	.	.
	<i>Cladonia symphylicarpa</i>	E0	.	.	.	.	.	.	.	.	.	60	.	.	.	.
	<i>Encalypta rhaptocarpa</i>	E0	.	.	.	.	.	.	.	.	.	20	.	.	.	.
	<i>Dicranum scoparium</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	20
	<i>Cetraria tilesii</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Desmatodon latifolius</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Hypnum vucheri</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Barbula reflexa</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Hylocomium pyrenaicum</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Sanonia uncinata</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Ditrichum flexicaule</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Barbilophozia lycopodioides</i>	E0	.	.	.	.	.	.	.	.	.	10	.	.	.	.
	<i>Comostoma tenella</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	20	.
	<i>Cladonia rangiferina</i>	E0	.	.	.	.	.	.	.	.	.	.	.	.	.	20

- 1 AcEmvg *Achilleo clavennae-Elynetum myosuroidis* var. *Vaccinium gaultherioides*
- 2 AcEmcf *Achilleo clavennae-Elynetum myosuroidis* var. *Carex firma*
- 3 AcEmty *Achilleo clavennae-Elynetum myosuroidis* var. *typica*
- 4 E-FVJ *Elynetum myosuroidis*, Friuli Venezia Giulia (Oriolo 2001, Table 2)
- 5 E-Do *Elynetum myosuroidis*, Dolomites (Pignatti E. & S. 2014, Synoptic Association Table 11, column 8)
- 6 E-Eng *Elynetum myosuroidis*, Engadin (Oriolo 2001: column 6 in Table 1)
- 7 E-Dosin *Elynetum myosuroidis*, Dolomites (Oriolo 2001, column 7 in Table 1)
- 8 E-BB *Elynetum myosuroidis*, Central Alps (Braun-Blanquet & Jenny 1926, table 10, columns 1–12)
- 9 Esvcf *Elynetum myosuroidis seslerietosum variae* var. *Carex firma* (Albrecht 1969, Table 3, columns 1–6, 8–15, 17)
- 10 E-AmA *Elynetum myosuroides*, Ammergauer Alps (Eggensberger, 1994, Table 18)
- 11 Esvlm *Elynetum myosuroidis seslerietosum variae* var. *Leontodon montanus* (Albrecht 1969, Table 3, columns 16–33)
- 12 Evv *Elynetum myosuroidis* var. *Vaccinium vitis-idaea*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, columns 1–5)
- 13 Esr *Elynetum myosuroidis* var. *Salix retusa*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, columns 6–9)
- 14 Ety *Elynetum myosuroidis* var. *typica*, Hohe Tauern / High Tauern, Sonnblickgebiet, Heiselmayer (2004, Table 2, columns 10–24)
- 15 Ehv *Elynetum myosuroidis helictotrichetosum versicoloris* (Albrecht 1969, Table 3, columns 111–115)