

APPENDIX

Headings and localities of relevés in Table 1: rels. 1 and 2 from Mt. Predné Jatky, 3–6 ridge between Mt. Hlúpy and Vyšné Kopské sedlo Saddle, 7–10 from Mt. Ždiarska Vidla.

Relevé nr.	Area m ²	Aspect	Slope °	Alt. m	Cover E ₁ %	Cover E ₀ %	Cover total %	Geology	Date
1	3	NNW	30–40	1950	50	30	60	marl	18. 8. 1983
2	3	SSW	20	1940	70	10	75	limestone	4. 8. 2000
3	3	SW	0–30	1983	90	10	95	horn-stone	10. 8. 1991
4	20	SW	50	1970	80	5	80	horn-stone	4. 8. 2001
5	3	ESE	30–40	1960	50	10	60	quartzite	1. 8. 1992
6	3	ESE	0–20	1972	80	20	90	quartzite	12. 8. 1991
7	8	SSE	40–60	2040	45	15	50	horn-stone	24. 7. 1990
8	3	SW	40–60	2025	50	10	60	horn-stone	1. 8. 1990
9	9	SSE	65	1950	40	20	50	horn-stone	8. 8. 1987
10	9	SE	50	1971	40	10	50	marl	13. 9. 2004

Table 1: Association *Oxytropido carpaticae-Elynetum* in the Belianske Tatry Mts (Western Carpathians). Chorological elements of vascular plants follow Dostál (1989).

Tabela 1: Asociacija *Oxytropido carpaticae-Elynetum* na gorovju Belianske Tatry (Zahodni Karpati). Horološki elementi po Dostál (1989).

Relevé number		1	2	3	4	5	6	7	8	9	10	Const. Chor.
Number of species		64	42	41	66	44	57	58	56	46	54	%
Diagnostic taxa of the association												
CK	<i>Elyna myosuroides</i>	3	3	4	1	2b	4	2a	2a	2b	2b	100 ⁶ Arct-Alp
JT, Cv	<i>Campanula tatrae</i>	+	+	+	+	+	+	.	+	+	.	80 ² Endemic
cf	<i>Dactylina madrepuriformis</i> (E ₀)	1	+	+	+	+	.	2a	.	+	1	80 ³
tf	<i>Rhodiola rosea</i>	+	+	+	+	r	.	.	r	r	+	80 ² Circumbor
oe, Sc	<i>Oxytropis halleri</i>	+	.	2b	2b	.	.	2a	1	+	+	70 ⁴ European
JT, Cc	<i>Primula minima</i>	+	.	+	+	1	2m	.	1	.	+	70 ³ European
oe, fv	<i>Ligusticum mutellinoides</i>	r	1	1	+	+	+	.	.	.	+	70 ² Arct-Alp
fv	<i>Agrostis alpina</i>	.	.	.	.	2b	1	2b	2a	1	1	60 ⁴ European
	<i>Thymus alpestris</i>	.	.	+	1	+	1	+	1	.	.	60 ³ European
oe, fv	<i>Carex fuliginosa</i>	.	+	.	1	2a	+	.	+	.	+	60 ³ Circumbor
pa	<i>Poa alpina</i>	+	+	+	+	.	+	+	.	.	.	60 ² Circumbor
oe, st	<i>Oxytropis carpatica</i>	.	+	+	+	.	+	.	.	.	+	50 ² Endemic
an, fv	<i>Luzula *mutabilis</i>	.	.	+	+	+	+	.	.	.	.	40 ² Alp-Carp
Oxytropido-Elynion, Oxytropido-Elynetalia												
cf	<i>Androsace chamaejasme</i>	+	2m	2m	1	+	1	2m	2m	+	+	100 ³ Circumbor
fv	<i>Cerastium eriophorum</i>	.	+	2a	2a	1	1	+	1	+	+	90 ³ Arct-Alp
fv, cf	<i>Minuartia sedoides</i>	1	+	1	2a	+	+	+	1	.	.	80 ³ Alp-Carp
Pc	<i>Saxifraga paniculata</i>	+	.	1	2b	.	+	2b	2b	2b	1	80 ⁴ Arct-Alp
cf	<i>Arenaria tenella</i>	+	+	.	.	.	.	2a	+	1	+	60 ³ Arct-Alp
fv	<i>Antennaria carpatica</i>	.	.	1	+	.	+	.	r	.	+	50 ² Alp-Carp
cf, pc	<i>Draba aizoides</i>	.	.	.	1	.	.	1	.	+	+	40 ³ European

Relevé number		1	2	3	4	5	6	7	8	9	10	Const. Chor.
	<i>Carex capillaris</i>	.	.	.	.	.	.	1	2a	+	1	40 ³ Arct-Alp
an, fv	<i>Saxifraga oppositifolia</i>	2m	+	.	1	.	+	.	.	.	.	40 ³ Circumbor
ac	<i>Myosotis alpestris</i>	.	+	+	+	.	.	.	.	.	.	30 ² European
	<i>Kobresia simpliciuscula</i>	+	1	.	.	.	.	.	.	.	.	20 ³ Arct-Alp
JT	<i>Carex atrata</i>	.	+	.	.	.	.	.	.	.	.	10 ² Arct-Alp
	<i>Sedum atratum</i>	.	.	.	.	.	.	+	.	.	.	10 ² European
Carici rupestris-Kobresietea												
fv	<i>Lloydia serotina</i>	1	1	2m	2m	1	1	1	2m	.	+	90 ³ Arct-Alp
fv	<i>Comastoma tenellum</i>	+	+	+	+	.	+	.	r	.	+	70 ² Arct-Alp
cf, fv	<i>Pedicularis oederi</i>	+	.	1	+	.	.	.	+	.	.	40 ² Arct-Alp
cf	<i>Minuartia gerardii</i>	+	.	+	1	.	+	.	.	.	.	40 ² Arct-Alp
Sc, pc	<i>Aster alpinus</i>	.	.	.	.	.	.	1	2b	1	1	40 ⁴ Eurosas
	<i>Gentiana nivalis</i>	.	.	.	.	.	.	.	+	.	+	20 ² Arct-Alp
	<i>Draba fladnizensis</i>	.	.	.	+	.	.	.	+	.	.	20 ² Arct-Alp
	<i>Erigeron hungaricus</i>	.	.	.	+	.	.	.	.	.	.	10 ² Endemic
fv	<i>Saussurea alpina</i>	.	.	.	1	.	.	.	.	.	.	10 ³ Circumbor
	<i>Astragalus alpinus</i>	.	.	.	.	.	2a	.	.	.	.	10 ⁵ Arct-Alp
cf	<i>Dryas octopetala</i>	.	.	.	.	.	.	.	.	.	r	10 ¹ Arct-Alp
Caricion firmae												
fv	<i>Bistorta vivipara</i>	+	+	2b	2a	1	1	+	1	+	+	100 ³ Arct-Alp
fv	<i>Silene acaulis</i>	2b	2a	2a	3	2b	2b	2a	.	2a	1	90 ⁵ Arct-Alp
lv	<i>Thamnotia vermicularis</i> (E ₀)	+	.	+	+	+	2a	1	+	+	+	90 ²
	<i>Rhodax alpestris</i>	.	+	.	+	.	.	1	+	.	+	50 ² European
	<i>Vulpicida tubulosus</i> (E ₀)	+	.	+	+	+	.	.	.	.	+	50 ²
	<i>Alectoria ochroleuca</i> (E ₀)	+	.	.	.	+	1	.	.	.	.	30 ²
pc	<i>Carex firma</i>	+	+	.	.	.	.	.	.	.	.	20 ² Alp-Carp
	<i>Ranunculus alpestris</i>	+	.	.	.	.	.	.	.	.	.	10 ² Arct-Alp
	<i>Saxifraga aizoides</i>	+	.	.	.	.	.	.	.	.	.	10 ² Arct-Alp
	<i>Saussurea pygmaea</i>	.	.	.	.	r	.	.	.	.	.	10 ¹ Arct-Alp
	<i>Chamorchis alpina</i>	.	.	.	.	.	.	.	.	.	+	10 ² Arct-Alp
Seslerietalia coerulae, Elyno-Seslerietea												
Sc	<i>Ranunculus breyninus</i>	+	2b	+	1	+	+	1	1	1	+	100 ³ European
	<i>Galium anisophyllum</i>	+	1	+	+	+	+	.	+	+	.	80 ² European
pc	<i>Trisetum alpestre</i>	+	+	.	.	.	.	2b	1	2a	1	60 ⁴ Alp-Carp
st	<i>Bupleurum ranunculoides</i>	.	+	.	1	.	.	1	1	.	1	50 ³ Alp-Carp
	<i>Euphrasia salisburgensis</i>	+	.	.	.	.	.	+	1	r	.	40 ² European
st	<i>Astragalus australis</i>	.	.	.	.	.	.	1	1	1	.	30 ³ Eurosas
	<i>Gentianella *tatrae</i>	.	.	.	.	.	.	.	r	r	+	30 ¹ Endemic
Sc, st	<i>Carex *tatrorum</i>	1	.	.	+	.	.	.	.	.	.	20 ³ Endemic
	<i>Phyteuma orbiculare</i>	.	.	.	+	+	.	.	.	.	.	20 ² European
st	<i>Tephroseris capitata</i>	.	.	r	+	.	.	.	.	.	.	20 ² European
st	<i>Astragalus frigidus</i>	.	+	.	.	.	.	.	.	.	.	10 ² Alp-Carp
st	<i>Sesleria tatrae</i>	.	.	.	+	.	.	.	.	.	.	10 ² Endemic
ES	<i>Selaginella selaginoides</i>	.	.	.	.	.	.	.	.	.	r	10 ¹ Alp-Carp
Sc, Pc	<i>Thymus *sudeticus</i>	.	.	.	.	.	.	.	.	.	+	10 ² Endemic
Festucion versicoloris												
	<i>Festuca versicolor</i>	2b	2a	2b	2a	1	2a	2a	2b	2a	2a	100 ⁵ European
cf	<i>Hedysarum hedysaroides</i>	+	+	.	+	.	1	.	.	.	.	40 ² Arct-Alp
an	<i>Saxifraga moschata</i>	+	.	.	+	.	.	.	+	.	.	30 ² Eurosas
cf	<i>Bartsia alpina</i>	.	.	.	.	.	.	.	.	.	+	10 ² Arct-Alp
ac	<i>Leontodon pseudotaraxaci</i>	.	.	.	.	.	.	.	.	.	+	10 ² Endemic

Relevé number		1	2	3	4	5	6	7	8	9	10	Const. Chor.
<i>Caricetalia curvulae</i>, <i>Juncetea trifidi</i>												
JT	<i>Festuca supina</i>	.	1	1	.	+	1	.	.	.	.	40 ³ Circumbor
	<i>Oreochloa disticha</i>	.	.	+	.	.	1	.	.	.	.	20 ³ Alp-Carp
	<i>Cetraria cucullata</i> (E ₀)	.	.	+	.	.	.	.	+	.	.	20 ²
	<i>Cetraria islandica</i> (E ₀)	.	.	.	+	.	+	.	.	.	.	20 ²
	<i>Cladonia gracilis</i>	.	.	.	+	.	.	.	.	.	.	10 ²
jt	<i>Juncus trifidus</i>	.	.	.	+	.	.	.	.	.	.	10 ² Circumbor
	<i>Cetraria nivalis</i> (E ₀)	.	.	.	.	.	1	.	.	.	.	10 ³
	<i>Avenula versicolor</i>	.	.	.	.	.	+	.	.	.	.	10 ² Alp-Carp
	<i>Campanula alpina</i>	.	.	.	.	.	+	.	.	.	.	10 ² European
<i>Potentillion caulescentis</i>												
	<i>Primula *hungarica</i>	.	+	.	.	.	.	2b	+	1	1	50 ³ Endemic
	<i>Artemisia eriantha</i>	.	.	+	+	+	.	.	.	1	.	40 ² Alp-Carp
	<i>Campanula cochlearifolia</i>	.	.	.	.	+	.	.	.	+	+	30 ² Alp-Carp
Sc	<i>Leontopodium alpinum</i>	.	.	.	.	.	.	1	.	1	+	30 ³ Euroas
	<i>Androsace lactea</i>	+	.	.	.	.	.	.	.	r	.	20 ² European
	<i>Draba tomentosa</i>	.	.	.	+	.	.	.	.	.	.	10 ² European
<i>Potentilletalia caulescentis</i>, <i>Asplenietea trichomanis</i>												
AT	<i>Tortella tortuosa</i> (E ₀)	1	+	+	+	.	+	+	+	+	.	80 ²
Pc	<i>Ditrichum flexicaule</i> (E ₀)	2b	+	1	+	.	.	.	.	.	+	50 ³
Other taxa												
	<i>Viola biflora</i>	.	+	.	.	1	.	.	.	.	.	20 ³ European
	<i>Draba siliquosa</i>	.	.	.	.	.	.	1	1	.	.	20 ³ Mont-Med
	<i>Draba dubia</i>	.	.	.	.	.	.	1	.	+	.	20 ³ European
pt	<i>Saxifraga wahlenbergii</i>	+	.	.	.	.	.	.	.	.	.	10 ² Endemic
	<i>Anthoxanthum alpinum</i>	.	.	.	+	.	.	.	.	.	.	10 ² Arct-Alp
pt	<i>Delphinium oxysepalum</i>	.	.	.	+	.	.	.	.	.	.	10 ² Endemic
	<i>Draba *sturii</i> Strobel	.	.	.	r	.	.	.	.	.	.	10 ¹
an	<i>Poa laxa</i>	.	.	.	.	+	.	.	.	.	.	10 ² European
	<i>Poa *carpatica</i>	.	.	.	.	.	+	.	.	.	.	10 ² Endemic
ac	<i>Salix retusa</i>	.	.	.	.	.	1	.	.	.	.	10 ³ Alp-Carp
an	<i>Saxifraga bryoides</i>	.	.	.	.	.	1	.	.	.	.	10 ³ European
	<i>Salix</i> sp.	.	.	.	.	.	.	.	.	.	r	10 ¹
<i>Bryophytes & Lichens</i> (E₀)												
	<i>Cladonia pyxidata</i> s. l.	1	+	+	1	1	1	1	+	+	.	90 ³
	<i>Physconia muscigena</i>	+	+	.	+	1	1	+	+	+	.	80 ²
	<i>Myurella julacea</i>	.	.	+	.	+	+	+	+	.	.	50 ²
	<i>Mycobilimbia lobulata</i>	+	.	.	.	.	.	+	+	+	+	50 ²
	<i>Encalypta alpina</i>	+	.	.	.	.	.	+	+	1	+	50 ²
	<i>Psora decipiens</i>	.	.	.	.	.	.	+	+	+	1	40 ²
	<i>Ochrolechia upsaliensis</i>	+	+	+	.	.	.	.	+	.	.	40 ²
	<i>Ctenidium procerrimum</i>	+	+	.	1	.	.	.	.	.	+	40 ²
	<i>Fulgensia bracteata</i>	+	.	.	.	.	.	.	+	+	+	40 ²
	<i>Hypnum vaucheri</i>	1	.	.	.	.	.	1	.	+	+	40 ³
	<i>Caloplaca ammiospila</i>	+	.	.	.	1	+	+	.	.	.	40 ²
	<i>Rhytidium rugosum</i>	1	1	.	+	.	.	.	.	.	.	30 ³
	<i>Entodon concinnus</i>	1	+	.	+	.	.	.	.	.	.	30 ²
	<i>Hypnum revolutum</i>	+	.	.	+	.	+	.	.	.	.	30 ²
	<i>Mnium thomsonii</i>	+	.	.	+	.	.	.	.	+	.	30 ²
	<i>Distichium inclinatum</i>	+	.	.	.	.	+	+	.	.	.	30 ²
	<i>Phaeorrhiza nimbosea</i>	+	.	.	.	.	.	+	.	+	.	30 ²

Relevé number	1	2	3	4	5	6	7	8	9	10	Const. Chor.
<i>Grimmia</i> sp.	+	.	.	.	+	+	30 ²
<i>Squamarina gypsacea</i>	1	.	2b	+	30 ⁴
<i>Encalypta ciliata</i>	.	.	+	+	+	30 ²
<i>Plagiochila porelloides</i>	.	.	.	+	+	+	30 ²
<i>Cetraria aculeata et muricata</i>	+	+	+	.	.	.	30 ²
<i>Campylium stellatum</i>	+	+	20 ²
<i>Lecanora epibryon</i>	+	+	.	.	.	20 ²
<i>Solorina</i> sp.	+	+	.	20 ²
<i>Toninia</i> sp.	+	1	.	20 ³
<i>Cladonia coccifera</i>	.	.	+	.	.	+	20 ²
<i>Caloplaca</i> sp.	.	.	.	+	.	.	.	+	.	.	20 ²
<i>Cladonia furcata</i>	.	.	.	+	.	+	20 ²
<i>Anaptychia bryorum</i>	+	+	20 ²
<i>Hypogymnia physodes</i>	+	1	.	.	.	.	20 ³
<i>Polytrichum alpinum</i>	+	1	.	.	.	.	20 ³
<i>Pseudevernia furfuracea</i>	1	.	+	.	.	.	20 ³
<i>Grimmia funalis</i>	+	.	.	1	.	.	20 ³
<i>Hypnum cupressiforme</i>	+	.	.	.	+	.	20 ²
<i>Anaptychia</i> sp.	2a	+	.	.	20 ⁴
<i>Leptogium</i> sp.	+	+	.	.	20 ²
<i>Megaspora verrucosa</i>	+	.	.	+	20 ²
<i>Schistidium apocarpum</i>	+	.	+	20 ²
<i>Stegonia latifolia</i>	1	1	.	.	20 ³
<i>Ctenidium molluscum</i>	+	10 ²
<i>Didymodon giganteus</i>	+	10 ²
<i>Hypogymnia</i> sp.	+	10 ²
<i>Lecidea lurida</i>	+	10 ²
<i>Encalypta streptocarpa</i>	+	10 ²
<i>Racomitrium canescens</i>	+	10 ²
<i>Thelopsis melathelia</i>	+	10 ²
<i>Hypnum</i> sp.	.	+	10 ²
<i>Lecidoma demissum</i>	.	.	+	10 ²
<i>Caloplaca *chloroleuca</i>	.	.	.	+	10 ²
<i>Peltigera rufescens</i>	.	.	.	+	10 ²
<i>Protoblastenia terricola</i>	.	.	.	+	10 ²
<i>Pertusaria glomerata</i>	+	10 ²
<i>Bryoria bicolor</i>	1	.	.	.	.	10 ³
<i>Polytrichum piliferum</i>	1	.	.	.	.	10 ³
<i>Bryoria</i> sp.	+	10 ²
<i>Cladonia bellidiflora</i>	+	10 ²
<i>Parmelia omphalodes</i>	+	10 ²
<i>Sphaerophorus fragilis</i>	+	10 ²
<i>Toninia opuntoides</i>	1	.	.	.	10 ³
<i>Caloplaca epiphyta</i>	+	.	.	.	10 ²
<i>Dermatocarpon miniatum</i>	+	.	.	.	10 ²
<i>Diploschistes gypsaceus</i>	+	.	.	.	10 ²
<i>Encalypta rhaptocarpa</i>	+	.	.	.	10 ²
<i>Marsupella</i> sp.	+	.	.	.	10 ²
<i>Schistidium atrofusum</i>	+	.	.	.	10 ²
<i>Umbilicaria cylindrica</i>	+	.	.	.	10 ²
<i>Xanthoria soorediata</i>	+	.	.	.	10 ²

Relevé number	1	2	3	4	5	6	7	8	9	10	Const. Chor.
<i>Anoetangium</i> sp.	+	.	.	10 ²
<i>Physcia caesia</i>	+	.	.	10 ²
<i>Plagiobryum demissum</i>	+	.	.	10 ²
<i>Pseudoleskeella catenulata</i>	+	.	.	10 ²
<i>Myurella tenerrima</i>	+	.	.	10 ²
<i>Collema</i> sp.	+	.	10 ²
<i>Dermatocarpon</i> sp.	+	.	10 ²
<i>Cladonia</i> * <i>pocillum</i>	1	10 ³
<i>Toninia sedifolia</i>	+	10 ²
<i>Xanthoria elegans</i>	+	10 ²

Table 2: Comparison of the Western Carpathian plant community of the association *Oxytropido carpaticae-Elynetum* (class *Carici rupestris-Kobresietea bellardii*) with other relevant associations from Carpathians and Alps (a brief synoptic table)

A–E *Carici rupestris-Kobresietea* (*Oxytropido-Elynion*), F *Elyno-Seslerietea* (*Caricion firmae*)

A *Oxytropido carpaticae-Elynetum* (Western Carpathians), B *Oxytropido carpaticae-Elynetum* (Southern Carpathians), C *Achilleo schurii-Dryadetum* (Eastern Carpathians), D *Elynetum myosuroides* (Eastern Alps), E *Elynetum myosuroides* (Southern Alps), F *Arenario tenellae-Caricetum firmae* (Western Carpathians)

Tabela 2: Primerjava sestojev asociacije *Oxytropido carpaticae-Elynetum* (razred *Carici rupestris-Kobresietea bellardii*) z Zahodnih Karpatov z primerljivimi asociacijami z Karpatov in Alp (skrajšana sinoptična tabela)

A–E *Carici rupestris-Kobresietea* (*Oxytropido-Elynion*), F *Elyno-Seslerietea* (*Caricion firmae*)

A *Oxytropido carpaticae-Elynetum* (zahodni Karpati), B *Oxytropido carpaticae-Elynetum* (južni Karpati), C *Achilleo schurii-Dryadetum* (vzhodni Karpati), D *Elynetum myosuroides* (vzhodne Alpe), E *Elynetum myosuroides* (južne Alpe), F *Arenario tenellae-Caricetum firmae* (zahodni Karpati)

Community	A	B	C	D	E	F
Number of relevés	10	14	13	58	18	182
Average species number	53	29	26	23	24	39

Differential taxa of the associations

oe	<i>Elyna myosuroides</i>	99 ⁶	99 ⁵	.	98 ⁶	99 ⁶	.
JT, Cc	<i>Primula minima</i>	70 ³	86 ³	23 ²	57 ³	56 ³	13 ²
oe, Sc	<i>Oxytropis halleri</i>	70 ⁴	43 ²	.	2 ³	.	3 ²
pa	<i>Poa alpina</i>	60 ²	50 ²	8 ²	28 ²	56 ³	19 ²
oe, st	<i>Oxytropis carpatica</i>	50 ²	14 ²	.	.	.	18 ³
an, fv	<i>Luzula spicata</i>	40 ²	36 ²	.	2 ²	6 ²	1 ²
JT, Cv	<i>Campanula polymorpha</i> s. l.	80 ²	.	38 ²	.	.	15 ²
cf	<i>Dactylina madreporiformis</i> (E ₀)	80 ³	.	.	5 ²	.	23 ³
tf	<i>Rhodiola rosea</i>	80 ²	.	8 ²	.	.	23 ²
oe, fv	<i>Ligusticum mutellinoides</i>	70 ²	.	.	33 ²	17 ²	8 ²
	<i>Thymus alpestris</i>	60 ³	.	.	.	.	5 ²
oe, fv	<i>Agrostis alpina</i>	60 ⁴	.	.	34 ³	56 ³	1 ³
fv	<i>Carex fuliginosa</i>	60 ³	.	.	12 ⁴	.	13 ²
	<i>Armeria alpina</i>	.	50 ²	.	.	.	.
oe, cf	<i>Dryas octopetala</i>	10 ¹	79 ³	99 ⁸	14 ²	67 ³	74 ⁵
oe	<i>Achillea</i> * <i>schurii</i>	.	36 ²	85 ²	.	.	.
fs	<i>Sesleria bielzii</i>	.	.	85 ²	.	.	.
fv, cf	<i>Bartsia alpina</i>	10 ²	7 ²	77 ²	.	78 ³	37 ²
	<i>Rhytidiadelphus triquetrus</i> (E ₀)	.	.	69 ³	.	.	16 ²
	<i>Hylocomium splendens</i> (E ₀)	.	.	54 ³	.	.	19 ³