

**On-line Suppl. Tab. 1.**

Plant species, and their abbreviations, recorded on 80 dry, semi-natural grassland fragments in NE Goričko Nature Park.

Abbreviation	Plant species	Abbreviation	Plant species
AchMil	<i>Achillea millefolium</i>	EquArv	<i>Equisetum arvense</i>
AgrEup	<i>Agrimonia eupatoria</i>	EriAnn	<i>Erigeron annuus annuus</i>
AgroTen	<i>Agrostis tenuis</i>	EriStr	<i>Erigeron annuus strigosus</i>
AjuRep	<i>Ajuga reptans</i>	EupCyp	<i>Euphorbia cyparissias</i>
AlnGlu	<i>Alnus glutinosa</i>	EupRos	<i>Euphrasia rostkoviana</i>
AmbArt	<i>Ambrosia artemissifolia</i>	FalJap	<i>Fallopia japonica</i>
AnaArv	<i>Anagalis arvensis</i>	FesRub	<i>Festuca rubra</i>
AntArv	<i>Anthemis arvensis</i>	FesRui	<i>Festuca rupicola</i>
AntOdo	<i>Anthoxanthum odoratum</i>	FilVul	<i>Filipendula vulgaris</i>
ArrEla	<i>Arrhenatherum elatius</i>	FraVir	<i>Fragaria viridis</i>
AvePub	<i>Avenochloa pubescens</i>	GalPub	<i>Galeopsis pubescens</i>
BelPer	<i>Bellis perennis</i>	GalMol	<i>Galium mollugo</i>
BetOff	<i>Betonica officinalis</i>	GalVer	<i>Galium verum</i>
BetPen	<i>Betula pendula</i>	GymCon	<i>Gymnadenia conopsea</i>
BriMed	<i>Briza media</i>	HelOva	<i>Helianthemum ovatum</i>
CalVul	<i>Caluna vulgaris</i>	HelAnu	<i>Helianthus annuus</i>
CalSep	<i>Calystegia sepium</i>	HieBau	<i>Hieracium bauhinii</i>
CamPat	<i>Campanula patula</i>	HiePil	<i>Hieracium pilosella</i>
CarCar	<i>Carex caryophylla</i>	HieUmb	<i>Hieracium umbellatum</i>
CarHir	<i>Carex hirta</i>	HolLan	<i>Holcus lanatus</i>
CarPal	<i>Carex pallescens</i>	HolMol	<i>Holcus molis</i>
CarVul	<i>Carlina vulgaris</i>	HypPer	<i>Hypericum perforatum</i>
CarBet	<i>Carpinus betulus</i>	HypRad	<i>Hypochoeris radicata</i>
CasSat	<i>Castanea sativa</i>	InuSal	<i>Inula salicina</i>
CenCya	<i>Centaurea cyanus</i>	JasMon	<i>Jasione montana</i>
CenJac	<i>Centaurea jacea jacea</i>	JugReg	<i>Juglans regia</i>
CenEry	<i>Centaureum erythraea</i>	KnaArv	<i>Knautia arvensis</i>
CerBra	<i>Cerastium brachypetalum</i>	KnaDym	<i>Knautia drymeia</i>
CerGlo	<i>Cerastium glomeratum</i>	LeoAut	<i>Leontodon autumnalis</i>
ChaSag	<i>Chamaespartium sagittale</i>	LeoHis	<i>Leontodon hispidus</i>
CheAlb	<i>Chenopodium album</i>	LeuVul	<i>Leucanthemum vulgare agg.</i>
CicInt	<i>Cichorium intybus</i>	LinVul	<i>Linaria vulgaris</i>
CirArv	<i>Cirsium arvense</i>	LinCat	<i>Linum catharticum</i>
ConArv	<i>Convolvulus arvensis</i>	LolPer	<i>Lolium perenne</i>
ConCan	<i>Conyza canadensis</i>	LotCor	<i>Lotus corniculatus</i>
CorSan	<i>Cornus sanguinea</i>	LuzCam	<i>Luzula campestris</i>
CorAve	<i>Corylus avelana</i>	LycFlo	<i>Lychnis flos cuculi</i>
CruGla	<i>Cruciata glabra</i>	LycVis	<i>Lychnis viscaria</i>
CusEpi	<i>Cuscuta epithimum</i>	LysNum	<i>Lysimachia nummularia</i>
CynCri	<i>Cynosurus cristatus</i>	LysPun	<i>Lysimachia punctata</i>
DacGlo	<i>Dactylis glomerata</i>	LytSal	<i>Lythrum salicaria</i>
DanDec	<i>Danthonia decumbens</i>	MedLup	<i>Medicago lupulina</i>
DapCne	<i>Daphne cneorum</i>	MelArv	<i>Melampyrum arvense</i>
DauCar	<i>Daucus carota</i>	MelNem	<i>Melampyrum nemorosum</i>
DiaBar	<i>Dianthus barbatus</i>	MoeMan	<i>Moenchia mantica mantica</i>
DiaCar	<i>Dianthus carthusianorum</i>	MusCom	<i>Muscari comosum</i>
DiaDel	<i>Dianthus deltoides</i>	OphVul	<i>Ophioglossum vulgatum</i>
EchVul	<i>Echium vulgare</i>	OrcMor	<i>Orchis morio</i>

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Abbreviation	Plant species	Abbreviation	Plant species
OrcUst	<i>Orchis ustulata</i>	SanMin	<i>Sanguisorba minor</i>
OxaFon	<i>Oxalis fontana</i>	SanOff	<i>Sanguisorba officinalis</i>
PasSat	<i>Pastinaca sativa</i>	ScaCol	<i>Scabiosa columbaria</i>
PeuOro	<i>Peucedanum oreoselinum</i>	SclAnn	<i>Scleranthus annuus</i>
PhiPrat	<i>Phleum pratense</i>	SadSex	<i>Sedum sexangulare</i>
PimMaj	<i>Pimpinella major</i>	SelCar	<i>Selinum carvifolia</i>
PimSax	<i>Pimpinella saxifraga</i>	SenJac	<i>Senecio jacobea</i>
PinSyl	<i>Pinus sylvestris</i>	SetPum	<i>Settaria pumila</i>
PlaLan	<i>Plantago lanceolata</i>	SetVir	<i>Settaria viridis</i>
PlaMed	<i>Plantago media</i>	SilNut	<i>Silene nutans</i>
PlaMaj	<i>Plantago major</i>	SilLat	<i>Silene latifolia</i>
PolAma	<i>Polygala amarella</i>	SilVul	<i>Silene vulgaris</i>
PolCom	<i>Polygala comosa</i>	SolGig	<i>Solidago gigantea</i>
PolVul	<i>Polygala vulgaris</i>	SpiSpi	<i>Spiranthes spiralis</i>
PolPer	<i>Polygonum persicaria</i>	SteGra	<i>Stellaria graminea</i>
PotAlb	<i>Potentilla alba</i>	SucPra	<i>Succisa pratensis</i>
PotArg	<i>Potentilla argentea</i>	TanVul	<i>Tanacetum vulgare</i>
PotEre	<i>Potentilla erecta</i>	TarOff	<i>Taraxacum officinale</i> agg.
PotRep	<i>Potentilla reptans</i>	TheLin	<i>Thesium linophyllum</i>
PotRup	<i>Potentilla rupestris</i>	ThyPul	<i>Thymus pulegioides</i>
PriVul	<i>Primula vulgaris</i>	TraOri	<i>Tragopogon orientalis</i>
PruLac	<i>Prunella laciniata</i>	TriCam	<i>Trifolium campestre</i>
PruVul	<i>Prunella vulgaris</i>	TriMon	<i>Trifolium montanum</i>
PruDom	<i>Prunus domestica</i>	TriPra	<i>Trifolium pratense</i>
PruSpi	<i>Prunus spinosa</i>	TriRep	<i>Trifolium repens</i>
PyrCom	<i>Pyrus communis</i>	TriFla	<i>Trisetum flavescens</i>
QuePat	<i>Quercus patrea</i>	UrtDio	<i>Urtica dioica</i>
RanAcr	<i>Ranunculus acris</i>	VerAus	<i>Verbascum austriacum</i>
RanArv	<i>Ranunculus arvensis</i>	VerPho	<i>Verbascum phoeniceum</i>
RanBul	<i>Ranunculus bulbosus</i>	VerArv	<i>Veronica arvensis</i>
RanPol	<i>Ranunculus polyanthemus</i>	VerCha	<i>Veronica chamaedrys</i>
RhiMin	<i>Rhinanthus minor</i>	VerOff	<i>Veronica officinalis</i>
RobPse	<i>Robinia pseudacacia</i>	VicCra	<i>Vicia cracca</i>
RosSp	<i>Rosa</i> sp.	VioArv	<i>Viola arvensis</i>
RubSp	<i>Rubus</i> sp.	VioCan	<i>Viola canina</i>
RumAce	<i>Rumex acetosa</i>	VioHir	<i>Viola hirta</i>
RumAct	<i>Rumex acetosella</i>		

**2a**

<i>Orchis morio</i>	Estimate	SE	z	P		<i>Thymus pulegioides</i>	Estimate	SE	z	P
(Intercept)	-1.9460	1.9217	-1.0130	0.3145		(Intercept)	0.6633	2.0262	0.3270	0.7440
HASL	0.0083	0.0059	1.3970	0.1666		HASL	-0.0006	0.0064	-0.0960	0.9240
House	-0.0017	0.0015	-1.1160	0.2678		DIS2H	0.0022	0.0007	3.0670	0.0030 **
NofHT	-0.0272	0.0631	-0.4320	0.6673		NofHT	0.0406	0.0596	0.6810	0.4980
SHAPE	0.0660	0.0279	2.3710	0.0203 *		SHAPE	-0.0151	0.0309	-0.4900	0.6250

  

<i>Centaureum erythraea</i>	Estimate	SE	z	P
(Intercept)	7.2807	5.0192	1.4510	0.1511
HASL	-0.0316	0.0172	-1.8430	0.0693 .
DIS2H	0.0011	0.0016	0.7370	0.4636
NofHT	0.1766	0.0968	1.8240	0.0722 .
SHAPE	-0.0211	0.0682	-0.3100	0.7574

**2b**

<i>Sedum sexangulare</i>	Estimate	SE	z	P		<i>Trifolium montanum</i>	Estimate	SE	z	P
(Intercept)	-1.7389	3.7792	-0.4600	0.6454		(Intercept)	-3.1292	8.3296	-0.3760	0.7072
HASL	0.0046	0.0118	0.3910	0.6959		HASL	-0.0046	0.0271	-0.1690	0.8654
DIS2H	0.0003	0.0023	0.1410	0.8879		DIS2H	-0.0003	0.0032	-0.1080	0.9140
NofHT	0.0825	0.1283	0.6440	0.5199		NofHT	0.5773	0.1599	3.6110	0.0003 ***
SHAPE	-0.1825	0.0753	-2.4240	0.0154 *		SHAPE	-0.2089	0.1414	-1.4770	0.1397

  

<i>Potentilla argentea</i>	Estimate	SE	z	P		<i>Polygala vulgaris</i>	Estimate	SE	z	P
(Intercept)	-13.3160	5.2687	-2.5270	0.0115 *		(Intercept)	3.9029	5.3223	0.7330	0.4630
HASL	0.0405	0.0153	2.6400	0.0083 **		HASL	-0.0146	0.0177	-0.8240	0.4100
DIS2H	0.0050	0.0017	3.0010	0.0027 **		DIS2H	0.0007	0.0032	0.2290	0.8190
NofHT	0.0016	0.1740	0.0090	0.9925		NofHT	-0.0233	0.2004	-0.1160	0.9080
SHAPE	-0.1360	0.0829	-1.6390	0.1011		SHAPE	-0.2207	0.1183	-1.8660	0.0620 .

  

<i>Carex caryophylla</i>	Estimate	SE	z	P		<i>Spiranthes spiralis</i>	Estimate	SE	z	P
(Intercept)	-1.1268	5.8609	-0.1920	0.8475		(Intercept)	-27.0939	14.2657	-1.8990	0.0575 .
HASL	0.0020	0.0184	0.1060	0.9152		HASL	0.0725	0.0409	1.7740	0.0760 .
DIS2H	0.0043	0.0021	2.0200	0.0434 *		DIS2H	0.0031	0.0045	0.6930	0.4882
NofHT	-0.1343	0.2380	-0.5640	0.5725		NofHT	1.0607	0.4036	2.6280	0.0086 **
SHAPE	-0.1844	0.1179	-1.5640	0.1178		SHAPE	-0.6070	0.2602	-2.3330	0.0196 *

**On-line Suppl. Fig. 1.** Results from QuasiPoisson (a) and Poisson (b) regression; the effect of landscape variables (HASL, DIS2H, NofHT and shape index) on specialist species. HASL – height above sea level; SHAPE – shape index; NofHT – number of bordering habitat types, DIS2H – distance from the settlements/houses, SE – standard error. \*\*\* <0.001, \*\* <0.01, \* <0.05, “. represent marginal statistical significance.