Catalogue changement abondance espèces

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08/12/2022

Informations disponibles

Cette première version du catalogue donne pour 756 espèces les informations suivantes:

période passées (2005-2011) récentes (2015-2021), données IFN Arbres et certain arbustes exclus

N_past et N_recent Nombre d'occurrence dans les données passées et récentes (14167 placettes passées et 14167 placettes récentes)

N Nombre d'observations totales

Contrib_thermo Contribution de l'espèce brute à la thermophilisation. Plus la valeure absolue est grande, plus l'espece contribue a la thermophilisation (valeure positive) ou la ralentie (valeure négative)

warm or cold Pourcentage de sylvoecorégion où l'espèce est considérée comme adaptée au climat chaud (par rapport à la moyenne des optima thermiques des autres espèces de la sylvoecorégion)

Topt ClimPlant La temperature optimale de l'espèce selon ClimPlant

Cartes: Evolution de la fréquence de la présence d'une espèces dans les points de la sylvoecorégion, en pourcentage (0.2 = 20%)

Critères de selection des espèces: au moins 15 occurences dans les données passées (2005-2011) et récentes (2015-2021)

species_name	N_past	N_recent	N	$contrib_thermo$	warm_or_cold topt	_climplant
Rubus ulmifolius	1191	1679	2870	1.0	1.00	12.95
Agrostis capillaris	1154	465	1619	0.9	0.00	6.01
Festuca ovina	524	258	782	0.8	0.00	5.66
Brachypodium pinnatum	1798	1350	3148	0.7	0.00	7.19
Hieracium murorum	879	576	1455	0.4	0.00	7.27
Molinia caerulea	2186	2019	4205	0.3	0.00	6.19
Crataegus monogyna	5736	6277	12013	0.3	1.00	10.19
Solidago virgaurea	630	531	1161	0.3	0.00	5.27
Sambucus nigra	1315	1562	2877	0.3	1.00	10.48
Poa nemoralis	962	773	1735	0.3	0.00	6.26
Rubus idaeus	1516	1277	2793	0.3	0.00	5.75
Avenella flexuosa	3270	2969	6239	0.3	0.00	6.01
Juniperus communis	1422	1215	2637	0.3	0.00	6.63
Luzula pilosa	1054	917	1971	0.2	0.00	4.94
Athyrium filix-femina	1637	1342	2979	0.2	0.00	6.15
Galium mollugo	820	653	1473	0.2	0.00	7.37
Holcus lanatus	905	637	1542	-0.2	1.00	9.85
Calluna vulgaris	2010	1756	3766	0.2	0.00	6.32
Deschampsia cespitosa	1946	1837	3783	0.2	0.00	5.45

species_name	N_past	N_	recent	N	contrib_	_thermo	warm_	_or_cold top	t_climplant
Potentilla erecta	579		372	951		0.2		0.00	6.95
Glechoma hederacea	814		999	1813		-0.2		0.00	6.70
Rosa arvensis	3270		3038	6308		-0.2		1.00	10.38
Lonicera xylosteum	2351		2235	4586		0.2		0.00	5.87
Cardamine pratensis	381		275	656		0.2		0.00	4.68
Teucrium scorodonia	3311		3222	6533		-0.2		1.00	10.40
Luzula forsteri	319		198	517		-0.2		1.00	12.35
Vicia sepium	1159		930	2089		0.2		0.00	6.55
Epilobium montanum	684		461	1145		0.2		0.00	6.91
Carex pendula	524		708	1232		0.2		1.00	11.20
Anthoxanthum odoratum	242		187	429		0.2		0.00	6.02
Laurus nobilis	63		107	170		0.1		1.00	15.20
Epilobium angustifolium	313		119	432		0.1		0.00	6.46
Asplenium adiantum-nigrum	316		240	556		-0.1		0.98	9.76
Hedera helix	8982		9119	18101		0.1		1.00	10.93
Melampyrum pratense	312		214	526		0.1		0.00	5.65
Thymus serpyllum	115		81	196		0.1		0.00	5.17
Betonica officinalis	623		493	1116		0.1		0.11	7.89
Dryopteris carthusiana	1727		2045	3772		-0.1		0.00	5.85
Hippocrepis emerus	248		229	477		-0.1		1.00	12.63
Ruscus aculeatus	1580		1685	3265		0.1		1.00	13.45
Erica cinerea	933		783	1716		-0.1		1.00	10.19
Lonicera periclymenum	5620		5452	11072		-0.1		1.00	9.95
Veronica chamaedrys	666		549	1215		0.1		0.00	7.29
Daucus carota	31		171	202		0.1		1.00	10.30
Oxalis acetosella	1129		1125	2254		0.1		0.00	6.08
Agrostis canina	200		141	341		0.1		0.00	6.16
Luzula multiflora	202		119	321		0.1		0.00	5.75
Fragaria vesca	2554		2431	4985		0.1		0.00	6.71
Cytisus scoparius	2610		2432	5042		-0.1		0.99	9.88
Rumex acetosella	262		190	452		0.1		0.00	6.75
Pulmonaria longifolia	269		189	458		-0.1		1.00	11.03
Brachypodium sylvaticum	3608		4009	7617		0.1		0.92	9.47
Ranunculus repens	420		371	791		0.1		0.00	6.84
Arabis hirsuta	63		22	85		0.1		0.00	7.10
Dactylis glomerata	1728		1780	3508		0.1		0.46	8.56
Digitalis purpurea	887		893	1780		-0.1		1.00	11.04
Viola reichenbachiana	1916		1582	3498		-0.1		0.95	9.49
Cirsium oleraceum	168		43	211		0.1		0.00	6.05
Anemone nemorosa	1355		1131	2486		0.1		0.00	7.55
Heracleum sphondylium	317		330	647		-0.1		0.00	5.74
Eryngium campestre	178		137	315		-0.1		1.00	11.80
Carex digitata	737		709	1446		0.1		0.00	5.31
Silene dioica	285		248	533		0.1		0.00	6.50
Veronica officinalis	696		625	1321		0.1		0.00	7.12
Luzula sylvatica	641		586	1227		-0.1		1.00	9.72
Euphorbia amygdaloides	1741		1833	3574		-0.1		1.00	10.82
Hypericum pulchrum	989		777	1766		-0.1		0.97	9.64
Crataegus laevigata	1626		1406	3032		-0.1		0.92	9.31
Alchemilla acutiloba	113		54	167		0.1		0.00	5.10
Conopodium majus	218		178	396		-0.1		1.00	10.26
Polygonatum multiflorum	996		946	1942		0.1		0.15	8.04

species_name	N_past	N_recent	N	contrib_thermo	warm_or_cold topt	_climplant
Dioscorea communis	665	625	1290	-0.1	1.00	12.54
Teucrium chamaedrys	771	716	1487	-0.1	1.00	11.56
Rosa canina	2246	1965	4211	0.1	0.76	8.99
Campanula rotundifolia	91	83	174	0.1	0.00	4.97
Senecio hercynicus	45	65	110	-0.1	0.00	4.25
Anemone sylvestris	22	89	111	-0.1	0.00	5.82
Prunella vulgaris	290	429	719	-0.1	0.00	7.29
Clematis vitalba	1502	1567	3069	-0.1	1.00	11.30
Ranunculus acris	38	23	61	0.1	0.00	5.61
Rubus fruticosus	10564	9937	20501	0.1	0.59	8.77
Milium effusum	988	981	1969	-0.1	0.00	5.63
Ulex europaeus	1122	1063	2185	-0.1	1.00	10.14
Vaccinium myrtillus	1201	1155	2356	0.1	0.00	5.07
Viola riviniana	520	383	903	0.1	0.24	8.26
Rumex acetosa	242	228	470	0.1	0.00	6.87
Sambucus racemosa	654	514	1168	0.1	0.00	7.05
Linum suffruticosum	22	17	39	0.0	1.00	15.80
Euonymus europaeus	1548	1703	3251	0.0	0.58	8.75
Dryopteris dilatata	970	830	1800	0.0	0.89	8.99
Phleum pratense	41	22	63	0.0	0.00	7.49
Carex flacca	3030	2887	5917	0.0	1.00	10.25
Sesleria caerulea	165	140	305	0.0	0.00	7.40
Linaria repens	225	139	364	0.0	1.00	9.97
Primula vulgaris	75	76	151	0.0	1.00	10.56
Stellaria nemorum	77	46	123	0.0	0.00	5.52
Ranunculus auricomus	267	290	557	0.0	0.00	6.06
Lathyrus sylvestris	35	26	61	0.0	1.00	12.21
Lathyrus pratensis	113	89	202	0.0	0.00	6.07
Primula veris	281	151	432	0.0	0.00	7.48
Pilosella officinarum	309	269	578	0.0	0.09	7.75
Viscum album	94	159	253	0.0	1.00	9.85
Cardamine amara	13	54	67	0.0	0.00	6.07
Angelica sylvestris	285	288	573	0.0	0.00	5.87
Festuca heterophylla	871	695	1566	0.0	1.00	9.71
Paris quadrifolia	456	439	895	0.0	0.00	5.65
Carex humilis	171	88	259	0.0	0.61	8.88
Agrostis stolonifera	260	122	382	0.0	0.00	7.09
Arctostaphylos uva-ursi	41	25	66	0.0	0.00	4.19
Scrophularia nodosa	467	449	916	0.0	0.00	7.17
Jacobaea vulgaris	123	95	218	0.0	0.00	7.60
Galium palustre	67	48	115	0.0	0.00	6.31
Geranium sylvaticum	77	67	144	0.0	0.00	3.98
Cirsium arvense	300	335	635	0.0	0.00	7.43
Viola alba	137	110	247	0.0	1.00	11.92
Hieracium prenanthoides	18	12	30	0.0	0.00	5.31
Equisetum telmateia	59 700	55	114	0.0	1.00	10.73
Stachys sylvatica	722	699	1421	0.0	0.00	7.28
Euphorbia dulcis	197	171	368	0.0	1.00	9.98
Carex pallescens	110	41	151	0.0	0.00	6.38
Silene vulgaris	196	102	298	0.0	0.20	8.00
Daphne laureola	882 2470	984	1866	0.0	1.00	11.92
Carex pilulifera	2479	2449	4928	0.0	0.20	8.18

species_name	N_past	N_1	recent	N	contrib_	_thermo	warm_	_or_cold topt_	_climplant
Rubus caesius	152		337	489		0.0		0.17	7.83
Festuca rubra	12		2	14		0.0		0.00	6.65
Juncus conglomeratus	372		419	791		0.0		0.13	7.90
Dryopteris filix-mas	2590		2820	5410		0.0		0.00	7.35
Sedum rupestre	10		47	57		0.0		1.00	10.49
Crepis paludosa	35		18	53		0.0		0.00	5.73
Galium aparine	837		925	1762		0.0		0.85	9.20
Bistorta vivipara	6		1	7		0.0		0.00	2.62
Asplenium trichomanes	339		334	673		0.0		0.88	9.34
Ficaria verna	632		700	1332		0.0		0.19	8.18
Hypericum maculatum	28		27	55		0.0		0.00	5.73
Artemisia vulgaris	3		25	28		0.0		0.00	7.07
Phleum alpinum	9		4	13		0.0		0.00	3.69
Lactuca alpina	5		19	24		0.0		0.00	3.06
Achillea millefolium	266		272	538		0.0		0.00	5.64
Genista pilosa	374		283	657		0.0		0.92	9.62
Hieracium bifidum	11		0	11		0.0		0.00	5.62
Buglossoides	30		54	84		0.0		1.00	11.22
purpurocaerulea									
Leucanthemum vulgare	114		82	196		0.0		0.00	6.36
Senecio ovatus	442		365	807		0.0		0.88	8.88
Polygonatum odoratum	161		102	263		0.0		0.00	6.59
Poterium sanguisorba	320		282	602		0.0		1.00	10.74
Geranium robertianum	1596		1611	3207		0.0		0.35	8.49
Stellaria media	79		57	136		0.0		0.00	7.29
Berberis vulgaris	85		93	178		0.0		0.67	8.70
Carduus defloratus	2		21	23		0.0		0.00	5.33
Lathyrus vernus	240		211	451		0.0		0.00	6.28
Neottia ovata	105		94	199		0.0		0.00	6.74
Geum urbanum	1737		2108	3845		0.0		0.11	7.92
Frangula alnus	2350		2407	4757		0.0		0.00	6.40
Vicia cracca	115		98	213		0.0		0.00	6.81
Rubus saxatilis	99		91	190		0.0		0.00	4.19
Ceratocapnos claviculata	60		39	99		0.0		1.00	10.62
Melittis melissophyllum	275		261	536		0.0		1.00	11.71
Rumex sanguineus	286		345	631		0.0		0.75	8.80
Juncus effusus	673		684	1357		0.0		0.51	8.65
Lysimachia nemorum	188		199	387		0.0		0.98	9.45
Hydrocotyle vulgaris	24		12	36		0.0		1.00	10.27
Loncomelos pyrenaicus	287		364	651		0.0		1.00	10.97
Primula elatior	573		665	1238		0.0		0.85	9.21
Viburnum opulus	699		836	1535		0.0		0.00	6.46
Viola palustris	21		5	26		0.0		0.00	4.10
Sanicula europaea	217		274	491		0.0		0.38	8.51
Cirsium palustre	177		117	294		0.0		0.00	6.91
Silene nutans	33		47	80		0.0		0.00	7.09
Digitalis lutea	54		79	133		0.0		1.00	9.71
Ranunculus platanifolius	64		38	102		0.0		0.00	5.64
Carex arenaria	64		32	96		0.0		0.60	8.57
Gentiana lutea	90		82	172		0.0		0.94	8.98
Phragmites australis	86		92	178		0.0		0.00	7.49
Malus sylvestris	440		357	797		0.0		0.70	8.96

species_name	N_past	N_recent	N	contrib_thermo	warm_or_cold topt	_climplant
Briza media	53	36	89	0.0	0.33	8.20
Orthilia secunda	93	79	172	0.0	0.00	4.29
Geranium pratense	6	3	9	0.0	0.00	4.96
Hypericum perforatum	897	800	1697	0.0	0.87	9.25
Helleborus foetidus	863	890	1753	0.0	1.00	11.65
Origanum vulgare	202	177	379	0.0	0.00	7.60
Alliaria petiolata	217	442	659	0.0	0.33	8.41
Bromopsis erecta	234	239	473	0.0	0.92	9.50
Hippocrepis comosa	95	130	225	0.0	1.00	10.06
Lathyrus latifolius	0	7	7	0.0	1.00	11.92
Poa trivialis	279	316	595	0.0	0.19	8.14
Actaea spicata	53	57	110	0.0	0.00	5.50
Equisetum sylvaticum	9	10	19	0.0	0.00	4.52
Campanula persicifolia	50	45	95	0.0	0.00	6.41
Bupleurum falcatum	17	28	45	0.0	1.00	9.95
Campanula rapunculus	6	1	7	0.0	1.00	11.89
Rhamnus alpina	48	47	95	0.0	1.00	10.57
Erigeron canadensis	100	37	137	0.0	0.33	8.52
Senecio vulgaris	39	19	58	0.0	0.24	8.45
Carlina acanthifolia	36	22	58	0.0	1.00	10.31
Hypericum humifusum	93	40	133	0.0	0.97	9.60
Dryas octopetala	3	0	3	0.0	0.00	5.39
Bromopsis ramosa	99	78	177	0.0	1.00	9.81
Cardamine hirsuta	6	8	14	0.0	1.00	11.17
Convallaria majalis	799	780	1579	0.0	0.00	7.12
Knautia arvensis	11	25	36	0.0	0.00	6.93
Carex acutiformis	100	145	245	0.0	0.00	7.65
Galium saxatile	344	279	623	0.0	1.00	9.85
Epilobium hirsutum	52	64	116	0.0	0.92	9.32
Cotinus coggygria	33	34	67	0.0	1.00	10.72
Asparagus officinalis	7	2	9	0.0	0.00	7.38
Vincetoxicum hirundinaria	195	168	363	0.0	0.21	8.15
Campanula rhomboidalis	35	34	69	0.0	0.00	4.72
Sedum album	6	4	10	0.0	1.00	12.03
Galium odoratum	1401	1593	2994	0.0	0.00	7.60
Euphorbia cyparissias	453	427	880	0.0	0.27	8.17
Pteridium aquilinum	4557	4492	9049	0.0	0.80	9.15
Myosotis scorpioides	36	24	60	0.0	0.00	6.92
Arrhenatherum elatius	43	63	106	0.0	0.81	9.21
Moneses uniflora	4	2	6	0.0	0.00	4.01
Alchemilla xanthochlora	0	51	51	0.0	1.00	9.24
Calamagrostis varia	42	60	102	0.0	0.91	9.18
Pimpinella major	23	34	57	0.0	0.81	9.14
Urtica dioica	1375	1529	2904	0.0	0.01	7.64
Ornithogalum umbellatum	6	11	17	0.0	1.00	11.37
Melica uniflora	1071	1132	2203	0.0	1.00	9.92
Holcus mollis	1720	1168	2888	0.0	0.57	8.73
Pulmonaria obscura	0	18	18	0.0	0.00	5.70
Potentilla reptans	131	116	247	0.0	1.00	10.11
Ribes rubrum	298	286	584	0.0	0.00	6.54
Maianthemum bifolium	98	79	177	0.0	0.00	4.76
Filipendula ulmaria	191	195	386	0.0	0.00	5.58

species_name	N_past	N_recent	N	contrib_thermo	o warm_or_cold topt	_climplant
Equisetum hyemale	16	7	23	0.0	0.00	4.86
Teucrium montanum	79	62	141	0.0	1.00	10.15
Euphorbia peplus	0	2	2	0.0	1.00	10.42
Luzula campestris	73	33	106	0.0	0.92	9.28
Campanula scheuchzeri	30	13	43	0.0	0.00	6.90
Arum maculatum	1212	1144	2356	0.0	0.80	9.06
Galium rotundifolium	203	237	440	0.0	0.66	8.63
Epipactis atrorubens	24	7	31	0.0	0.00	6.17
Vaccinium uliginosum	4	2	6	0.0	0.00	4.34
Succisa pratensis	42	31	73	0.0	0.00	7.14
Lathyrus aphaca	14	3	17	0.0	1.00	12.92
Galeopsis tetrahit	817	823	1640	0.0	0.10	7.77
Chelidonium majus	38	22	60	0.0	0.15	8.05
Rhamnus cathartica	213	202	415	0.0	0.12	7.81
Galium uliginosum	11	6	17	0.0	0.00	5.06
Adoxa moschatellina	69	67	136	0.0	0.00	6.42
Centaurea scabiosa	5	9	14	0.0	0.00	7.00
Aconitum lycoctonum	17	14	31	0.0	0.00	1.75
Fragaria viridis	23	5	28	0.0	0.00	7.33
Ribes alpinum	936	938	1874	0.0	0.00	6.78
Cruciata laevipes	65	51	116	0.0	1.00	10.10
Cephalanthera longifolia	57	53	110	0.0	0.92	9.31
Anthyllis vulneraria	46	23	69	0.0	0.33	8.00
Lysimachia vulgaris	39	62	101	0.0	0.00	7.05
Galium verum	56	46	102	0.0	0.00	7.56
Alchemilla alpina	20	10	30	0.0	0.00	6.31
Plantago media	41	60	101	0.0	0.00	6.08
Libanotis pyrenaica	0	7	7	0.0	0.00	5.97
Homogyne alpina	26	17	43	0.0	0.00	6.17
Potentilla sterilis	1294	1336	2630	0.0	0.99	9.76
Clinopodium vulgare	224	226	450	0.0	0.73	8.93
Anemone hepatica	308	299	607	0.0	0.00	6.56
Lysimachia arvensis	2	11	13	0.0	1.00	11.30
Trollius europaeus	13	13	26	0.0	0.00	4.14
Pyrus communis	438	360	798	0.0	0.77	9.11
Lathyrus niger	35	17	52	0.0	0.21	7.89
Blechnum spicant	457	494	951	0.0	0.77	8.79
Phalaris arundinacea	49	64	113	0.0	0.00	6.58
Saxifraga rotundifolia	51	39	90	0.0	1.00	9.65
Mentha arvensis	25	19	44	0.0	0.00	6.29
Asplenium scolopendrium	151	177	328	0.0	1.00	9.83
Lythrum salicaria	13	37	50	0.0	0.00	7.76
Anthericum liliago	8	8	16	0.0	0.92	9.51
Hieracium umbellatum	18	12	30	0.0	0.00	6.04
Carex riparia	47	49	96	0.0	0.11	8.00
Aegopodium podagraria	33	59	92	0.0	0.00	6.71
Filipendula vulgaris	53	40	93	0.0	0.00	7.87
Lamium galeobdolon	1748	1721	3469	0.0	0.39	8.44
Rosa pendulina	175	171	346	0.0	0.92	8.94
Orchis mascula	46	41	87	0.0	1.00	9.57
Trifolium pratense	29	17	46	0.0	0.18	7.72
Cardamine flexuosa	160	121	281	0.0	0.89	9.26
Cardamino nexuosa	100	121	201	0.0	0.09	9.40

Pimpinella saxifraga	species_name	N_past	N_rec	ent	N	contrib_	_thermo	warm_	_or_	_cold topt_	_climplant
Mercurialis perennis	Pimpinella saxifraga	53		28	81		0.0		0.	.00	6.70
Ajuga pyramidalis 1 4 5 0.0 0.00 5.97 Equisctum arvense 15 17 32 0.0 0.00 6.26 Heiracium lacvigatum 20 8 28 0.0 0.00 5.09 Galium aristatum 3 11 14 0.0 0.00 5.28 Agrimonia cupatoria 156 172 328 0.0 0.052 8.68 Sedum acre 27 9 36 0.0 0.00 6.77 Bactylorhiza maculata 63 80 143 0.0 0.00 6.07 Erica tetralix 88 72 160 0.0 1.00 9.5 Scabiosa columbaria 25 54	Danthonia decumbens	111	1	.04	215		0.0		0.	.08	8.06
Equisetum arvense 15 17 32 0.0 0.00 6.26 Galium aristatum 20 8 28 0.0 0.00 5.09 Galium aristatum 3 11 14 0.0 0.00 7.30 Agrimonia cupatoria 156 172 328 0.0 0.52 8.68 Sedhum acre 27 9 36 0.0 0.08 7.79 Dactylorhiza maculata 63 80 143 0.0 0.00 6.07 Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 1.00 9.54 Lapsana communis 183 204 387 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 1.00 9.05 Pieris hieracioides 5 5 10 0.0 0.12 7.71 Tissilago farfara 53	Mercurialis perennis	804	8	869	1673		0.0		0.	.14	7.87
Héroacium laevigatum 20 88 28 0.0 0.00 5.09 7.30 Agrimonia eupatoria 156 172 328 0.0 0.00 7.30 Agrimonia eupatoria 156 172 328 0.0 0.00 7.30 Negrimonia eupatoria 158 172 328 0.0 0.00 7.00 6.07 Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 1.00 9.54 Lapsana communis 183 204 387 0.0 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.00 0.00 4.58 Scabiosa columbaria 53 64 117 0.0 0.00 6.71 This sligo furfara 53 64 117 0.0 0.00 6.51 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 88 11 0.0 0.00 5.52 Serratula tinctoria 39 32 71 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.35 Solvia glutinosa 19 21 40 0.0 0.99 9.55 Salvia glutinosa 19 21 40 0.0 0.99 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Nelviga serpyllifolia 21 6 27 0.0 0.00 0.00 9.53 Salvia glutinosa 19 21 40 0.0 0.99 9.59 Salvia glutinosa 19 21 40 0.0 0.90 0.00 0.00 0.00 0.00 0.00 0.	Ajuga pyramidalis	1		4	5		0.0		0.	.00	5.97
Galium aristatum 3 11 14 0.0 0.00 7.30 Agrimonia eupatoria 156 172 328 0.0 0.52 8.68 Sedum acre 27 9 36 0.0 0.08 7.79 Dactylorhiza maculata 63 80 143 0.0 0.00 6.07 Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 0.0 0.00 4.58 Geum rivale 25 24 49 0.0 0.00 4.58 Seabiosa columbaria 64 45 109 0.0 0.0 0.02 8.13 Geum rivale 25 24 49 0.0 0.0 0.00 4.58 Seabiosa columbaria 64 45 109 0.0 0.0 0.10 9.95 Picris hieracioides 5 5 5 10 0.0 0.0 0.12 7.71 Tussilago farfara 53 64 117 0.0 0.0 0.0 6.76 Platanthera bifolia 32 21 53 0.0 0.0 0.0 6.76 Sonchus arvensis 6 1 7 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 0.532 Serratula tinctoria 39 32 71 0.0 1.00 9.65 Sonchus arvensis 6 7 13 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.0 0.6 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Goodyera repens 44 46 90 0.0 0.0 0.90 9.59 Carex ornithopoda 22 37 59 0.0 0.0 0.0 6.28 Polygala vulgaris 55 36 91 0.0 0.0 0.0 2.73 Serratula rivale de 4 46 90 0.0 0.0 0.0 2.73 Serratula rivale de 5 7 12 0.0 0.0 0.0 5.29 Carex ornithopoda 22 37 59 0.0 0.0 0.0 0.529 Carex ornithopoda 22 37 59 0.0 0.0 0.0 2.73 Persicaria hydropiper 6 38 44 0.0 0.0 0.98 9.34 Cynosurus cristatus 5 7 12 0.0 0.71 8.57 Calamagrostis arundinacea 24 12 36 0.0 0.0 0.0 2.73 Persicaria hydropiper 6 38 44 0.0 0.0 0.0 0.73 Persicaria hydropiper 6 38 44 0.0 0.0 0.0 0.73 Persicaria hydropiper 6 38 44 0.0 0.0 0.0 7.38 Sambucus cobulus 14 19 33 0.0 1.00 1.35 Carex colongata 25 18 43 0.0 0.0 0.0 0.73 Persicaria naglica 21 9 30 0.0 0.0 0.0 0.73 Persicaria naglica 21 9 30 0.0 0.0 0.0 0.73 Persicaria naglica 21 9 30 0.0 0.0 0.0 0.73 Persicaria naglica 21 9 30 0.0 0.0 0.0 0.77 Potentilla recta 25 10 35 0.0 0.0 0.0 0.0 7.77 Persicaria vulgaris 6 14 20 0.0 0.0 0.0 0.77 Persicaria vulgaris 6 6 6 6 6 12 0.0 0.0 0.0 0.77 Persicaria vulgaris 6 6 14 20 0.0 0.0 0.0 0.77 Carex eumbrosa 139 79 218 0.0 0.0 0.0 0.0 0.77 Carex eumbrosa 139 79 218 0.0 0.0 0.0 0.0 0.77 Carex eumbrosa 139 79 21	Equisetum arvense	15		17	32		0.0		0.	.00	6.26
Agrimonia cupatoria 156 172 328 0.0 0.52 8.68 Sedum acre 27 9 36 0.0 0.08 7.79 Dactylorbiza maculata 63 80 143 0.0 0.00 6.07 Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 0.00 9.54 Lapsana communis 183 204 387 0.0 0.20 8.13 Geum rivale 25 24 49 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.00 0.02 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platathera bifolia 32 21 53 0.0 0.00 6.51 Riba arrea <t< td=""><td>Hieracium laevigatum</td><td>20</td><td></td><td>8</td><td>28</td><td></td><td>0.0</td><td></td><td>0.</td><td>.00</td><td>5.09</td></t<>	Hieracium laevigatum	20		8	28		0.0		0.	.00	5.09
Sedum acre 27 9 36 0.0 0.08 7.79 Dactylorhiza maculata 63 80 143 0.0 0.00 6.07 Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 1.00 9.54 Lapsana communis 183 204 387 0.0 0.00 4.58 Geum rivale 25 24 49 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 1.00 9.95 Picris hieracioides 5 5 10 0.0 0.12 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 6.51 Ribes nigrum 3 8	Galium aristatum	3		11	14		0.0		0.	.00	7.30
Dactylorhiza maculata	Agrimonia eupatoria	156	1	72	328		0.0		0.	.52	8.68
Ribes uva-crispa 189 200 389 0.0 0.17 7.87 Erica tetralix 88 72 160 0.0 1.00 1.00 9.54 Lapsana communis 183 204 387 0.0 0.20 8.13 Geum rivale 25 24 49 0.0 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.1 0.0 9.95 Picris hieracioides 5 5 5 10 0.0 0.01.2 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.67 Platanthera bifolia 32 21 53 0.0 0.00 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 1.00 9.65 Sonchus arvensis 6 1 7 7 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.00 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Goodyera repens 44 46 90 0.0 0.00 5.29 Sistorta officinalis 38 33 71 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.00 5.29 Bartsia alpina 1 0 1 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 7.71 8.57 Calamagrostis arundinacea 24 12 36 0.0 0.00 7.71 8.57 Calamagrostis arundinacea 25 18 43 0.0 0.00 7.18 Sambucus ebulus 14 19 33 0.0 0.00 7.73 Sambucus ebulus 14 19 33 0.0 0.00 7.73 Sambucus ebulus 14 19 33 0.0 0.00 7.73 Schedonorus giganteus 13 15 290 0.0 0.00 7.94 Potentilla recta 25 10 35 0.0 0.00 7.94 Potentilla recta 25 10 35 0.0 0.0 0.00 7.94 Daphne mezereum 339 316 655 0.0 0.0 0.00 6.29 Eupatorium cannabinum 663 563 1226 0.0 0.00 0.00 6.29 Eupatorium cannabinum 663 563 1226 0.0 0.00 0.00 6.29 Eupatorium cannabinum 663 563 1226 0.0 0.00 0.00 6.70 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.93 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.93 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.93 Canpanula rapunculoides 6 6 6 6 12 0.0 0.00 0.00 7.93 Calamanula rapunculoides 6 6 6 6 12 0.0 0.00 0.00 7.97 Viola mirabilis 13 61 74 0.0 0.00 0.00 7.07 Wool mirabilis 13 61 74 0.0 0.00 7.00 7.07	Sedum acre	27		9	36		0.0		0.	.08	7.79
Erica tetralix 88 72 160 0.0 1.00 9.54 Lapsana communis 183 204 387 0.0 0.20 8.13 Geum rivale 25 24 49 0.0 0.00 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.0 0.00 9.95 Picris hieracioides 5 5 5 10 0.0 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 0.0 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 1.00 9.65 Sonchus arvensis 6 1 7 0.0 0.00 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.00 9.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.65 Sistorta officinalis 38 33 71 0.0 0.00 4.35 Bistorta officinalis 38 33 71 0.0 0.00 0.00 4.35 Bistorta officinalis 38 33 71 0.0 0.00 0.00 4.35 Bistorta officinalis 38 33 71 0.0 0.00 0.00 5.29 Carex ornithopoda 22 37 59 0.0 0.00 6.28 Polygala serpisis 55 36 91 0.0 0.00 6.29 Polygala serpisis at 1 0 0 1 0.0 0.00 5.29 Polygala vulgaris 55 36 91 0.0 0.00 6.29 Polygala vulgaris 1 0 0 1 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 5.35 Sambucus civilatus 14 19 33 0.0 0.00 6.28 Sambucus civilatus 14 67 181 40 0.0 0.00 5.37 Sambucus civilatus 14 67 181 40 0.0 0.00 7.33 Scarca nythropiper 6 38 44 0.0 0.0 0.00 7.33 Scarca laydropiper 6 38 44 0.0 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 5.37 Sambucus civilatus 14 67 181 40 0.0 0.00 7.37 Scarca longata 25 18 43 0.0 0.0 0.00 6.04 Myosotis sylvatica 114 67 181 49 30 0.0 0.00 7.37 Arctium lappa 1 8 9 0.0 0.0 0.00 7.37 Arctium lappa 1 8 9 0.0 0.0 0.00 7.37 Arctium lappa 1 8 9 0.0 0.0 0.00 6.29 Eupatorium cannabinum 663 563 1226 0.0 0.0 0.00 6.29 Eupatorium cannabinum 663 563 1226 0.0 0.0 0.00 6.76 Carex umbrosa 139 79 218 0.0 0.0 0.00 6.76 Carex umbrosa 139 79 218 0.0 0.0 0.00 7.77 Viola mirabilis 13 61 74 0.0 0.00 7.77 Moehringia trinervia 562 602 1164 0.0 0.0 0.00 5.22 8.08	Dactylorhiza maculata	63		80	143		0.0		0.	.00	6.07
Lapsana communis 183 204 387 0.0 0.20 8.13 Geum rivale 25 24 49 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 0.00 9.95 Picris hieracioides 5 5 5 10 0.0 0.02 6.71 Tussilago farfara 53 64 117 0.0 0.00 6.56 Platanthera bifolia 32 21 53 0.0 0.00 6.56 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 0.00 7.07 Sonchus arvensis 6 1 7 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.00 9.93 Lathyrus linifolius 455 <td>Ribes uva-crispa</td> <td>189</td> <td>2</td> <td>200</td> <td>389</td> <td></td> <td>0.0</td> <td></td> <td>0.</td> <td>.17</td> <td>7.87</td>	Ribes uva-crispa	189	2	200	389		0.0		0.	.17	7.87
Geum rivale 25 24 49 0.0 0.00 4.58 Scabiosa columbaria 64 45 109 0.0 1.00 9.95 Picris hieracioides 5 5 10 0.0 0.12 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 0.00 5.32 Serratula tinctoria 39 32 71 0.0 0.00 7.07 Sonchus arvensis 6 1 7 0.0 0.00 7.07 Pyropla rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.00 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.06 8.85 Dolygala serpyllifol	Erica tetralix	88		72	160		0.0		1.	.00	9.54
Scabiosa columbaria 64 45 109 0.0 1.00 9.95 Picris hieracioides 5 5 10 0.0 0.12 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula timetoria 39 32 71 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Lathyrus linifolius 44 46 90 0.0 0.0 0.00 4.35 Bistorta officinalis </td <td>Lapsana communis</td> <td>183</td> <td>2</td> <td>204</td> <td>387</td> <td></td> <td>0.0</td> <td></td> <td>0.</td> <td>.20</td> <td>8.13</td>	Lapsana communis	183	2	204	387		0.0		0.	.20	8.13
Picris hieracioides 5 5 10 0.0 0.12 7.71 Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 0.00 7.07 Sonchus arvensis 6 1 7 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.03 Godyera repens 44 46 90 0.0 0.00 5.29 Carex enithhopoda 22	Geum rivale	25		24	49		0.0		0.	.00	4.58
Tussilago farfara 53 64 117 0.0 0.00 6.76 Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 0.00 0.73 Bistorta officinalis 38 33 71 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 2.73 Persicaria hydropiper 6 38 44 0.0 0.00 0.71 8.57 Calamagrostis arundinacea 24 12 36 0.0 0.00 0.73 Sambucus ebulus 14 19 33 0.0 0.00 6.24 Potentilla recta 25 10 35 0.0 0.00 0.77 Potentilla recta 25 10 35 0.0 0.00 0.73 Daphne mezereum 339 316 655 0.0 0.00 6.29 Eupatorium canabinum 663 563 1226 0.0 0.00 0.00 6.29 Eupatorium canabinum 663 563 1226 0.0 0.00 0.00 6.29 Eupatorium canabinum 663 563 1226 0.0 0.00 0.00 6.29 Eupatorium canabinum 663 563 1226 0.0 0.00 0.00 6.76 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.93 Carex dongata 29 204 413 0.0 0.00 0.00 7.93 Carex dongata 209 204 413 0.0 0.00 0.00 7.93 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 66 12 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 7.97 Carex umbrosa 139 79 218 0.0 0.00 0.00 0.00 Carex umbrosa 130 79 218 0.0 0.0	Scabiosa columbaria	64		45	109		0.0		1.	.00	9.95
Platanthera bifolia 32 21 53 0.0 0.00 6.51 Ribes nigrum 3 8 11 0.0 0.00 5.32 Serratula tinctoria 39 32 71 0.0 1.00 9.65 Sonchus arvensis 6 1 7 0.0 0.00 7.07 Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Goodyera repens 44 46 90 0.0 0.00 4.35 Bistorta officinalis 38 33 71 0.0 0.00 5.29 Carex ornithopoda 22 37 59 0.0 0.00 6.28 Polygala vulgaris 55 <				5							
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Pyrola rotundifolia 6 7 13 0.0 0.00 4.38 Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Goodyera repens 44 46 90 0.0 0.00 5.29 Carex ornithopoda 22 37 59 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.89 9.34 Cynosurus cristatus 5 7 12 0.0 0.71 8.57 Calamagrostis arundinacea 24 12 36 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 5.20 Bersicaria hydropiper 6 38 44 0.0 0.00 7.38 Sambucus ebulus 14											
Salvia glutinosa 19 21 40 0.0 0.90 9.59 Lathyrus linifolius 455 243 698 0.0 0.66 8.85 Polygala serpyllifolia 21 6 27 0.0 1.00 9.73 Goodyera repens 44 46 90 0.0 0.00 4.35 Bistorta officinalis 38 33 71 0.0 0.00 5.29 Carex ornithopoda 22 37 59 0.0 0.00 6.28 Polygala vulgaris 55 36 91 0.0 0.89 9.34 Cynosurus cristatus 5 7 12 0.0 0.71 8.57 Calamagrostis arundinacea 24 12 36 0.0 0.00 5.20 Bartsia alpina 1 0 1 0.0 0.00 2.73 Persicaria hydropiper 6 38 44 0.0 0.00 0.0 1.35 Carex elongata											
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Saxifraga aizoides	*	15		16	31		0.0		0.	54	8.51
Iris pseudacorus	Veronica montana	248		278	526		0.0		0.	93	9.26
Iris pseudacorus 98	Saxifraga aizoides	1		0	1		0.0		0.	00	5.20
Juncus bufonius	9	98		77	175		0.0		0.	90	9.27
Hypericum montanum		24		36	60		0.0		0.	28	8.43
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species_name	N_past	N_r	recent	N	contrib_	_thermo	warm_	_or_	_cold topt_	_climplant
Viburnum lantana	1807		1879	3686		0.0		0.	.98	9.82
Knautia dipsacifolia	157		136	293		0.0		0.	.00	7.18
Potentilla verna	19		29	48		0.0		0.	.83	9.45
Carlina vulgaris	114		107	221		0.0		0.	.68	9.16
Carex sylvatica	3477		3744	7221		0.0		0.	.24	8.29
Mentha aquatica	25		32	57		0.0		0.	.96	9.32
Epilobium palustre	4		4	8		0.0		0.	.00	4.85
Clematis recta	5		0	5		0.0		0.	.00	7.99
Lychnis flos-cuculi	11		15	26		0.0		0.	.00	7.33
Luzula luzulina	20		24	44		0.0		0.	.44	8.06
Antennaria dioica	0		1	1		0.0		0.	.00	4.47
Cystopteris fragilis	21		10	31		0.0		0.	.00	6.30
Viola canina	10		14	24		0.0		0.	.00	6.69
Lotus corniculatus	100		109	209		0.0		0.	.93	9.38
Phyteuma spicatum	337		291	628		0.0		0.	.47	8.31
Cypripedium calceolus	2		0	2		0.0		0.	.00	5.77
Chrysosplenium	65		76	141		0.0		1.	.00	9.81
oppositifolium										
Asplenium ruta-muraria	6		15	21		0.0		1.	.00	9.52
Campanula cervicaria	2		0	2		0.0		0.	.00	5.65
Campanula patula	16		10	26		0.0		0.	.00	5.79
Lycopus europaeus	67		98	165		0.0		0.	.41	8.51
Malva sylvestris	2		7	9		0.0		1.	.00	12.08
Dianthus superbus	12		7	19		0.0		0.	.00	5.14
Muscari botryoides	3		0	3		0.0		1.	.00	10.72
Petasites albus	36		39	75		0.0		0.	.62	8.27
Cardamine pentaphyllos	51		38	89		0.0		0.	.00	7.02
Hylotelephium telephium	19		22	41		0.0		0.	.00	7.11
Vinca minor	221		231	452		0.0		1.	.00	10.13
Polygala comosa	3		0	3		0.0		0.	.00	6.86
Dianthus carthusianorum	5		3	8		0.0		1.	.00	9.67
Cephalanthera rubra	38		26	64		0.0		0.	.76	9.17
Myosotis stricta	0		1	1		0.0		0.	.00	6.46
Vaccinium vitis-idaea	39		38	77		0.0		0.	.00	4.35
Juncus tenuis	16		22	38		0.0			.65	8.69
Achillea macrophylla	0		1	1		0.0		0.	.00	4.34
Arctium nemorosum	59		83	142		0.0		0.	.53	8.64
Carex vesicaria	1		1	2		0.0		0.	.00	5.45
Campanula glomerata	11		7	18		0.0			.00	6.86
Bromopsis benekenii	109		147	256		0.0			.00	7.29
Campanula latifolia	2		2	4		0.0			.00	6.36
Cirsium vulgare	7		28	35		0.0			.14	7.97
Cotoneaster integerrimus	28		23	51		0.0		0.	.14	7.67
Neottia nidus-avis	281		253	534		0.0			.37	8.39
Viola biflora	6		7	13		0.0			.00	4.53
Scrophularia auriculata	0		1	1		0.0			.00	13.16
Polygonatum verticillatum	331		359	690		0.0			.00	6.80
Cardamine impatiens	60		63	123		0.0			.21	7.87
Hypericum hirsutum	310		427	737		0.0			.00	7.49
Asplenium septentrionale	5		6	11		0.0			.00	7.31
Valeriana dioica	26		6	32		0.0			.85	8.93
Circaea alpina	5		3	8		0.0		0.	.00	5.34

species_name	N_past	N_recent	N	contrib_therm	o warm_or_cold topt	_climplant
Viola hirta	211	182	393	0.0	0.00	7.11
Coronilla minima	76	77	153	0.0	1.00	12.63
Chenopodium album	0	1	1	0.0	1.00	11.49
Torilis japonica	46	61	107	0.0	0.56	8.78
Stellaria holostea	1307	1368	2675	0.0	0.00	7.01
Luzula luzuloides	377	298	675	0.0	0.18	7.76
Dipsacus pilosus	7	11	18	0.0	0.46	8.52
Valeriana tripteris	28	14	42	0.0	1.00	7.99
Lactuca muralis	622	622	1244	0.0	0.62	8.76
Trifolium arvense	9	9	18	0.0	0.33	8.35
Stachys arvensis	1	0	1	0.0	1.00	12.21
Daphne alpina	0	1	1	0.0	1.00	11.11
Inula salicina	1	2	3	0.0		6.88
Melica ciliata	9	9	18	0.0		11.03
Carex echinata	2	6	8	0.0		6.39
Calamagrostis canescens	1	0	1	0.0	0.00	5.28
Euphorbia esula	2	1	3	0.0		6.71
Carex caryophyllea	10	6	16	0.0	0.12	8.27
Trifolium repens	4	17	21	0.0	0.20	7.88
Polygaloides chamaebuxus	21	34	55	0.0	0.62	8.18
Silene latifolia	4	3	7	0.0	0.00	6.34
Anemone ranunculoides	39	13	52	0.0	0.00	6.94
Ligustrum vulgare	3240	3278	6518	0.0	1.00	9.93
Jasione montana	22	12	34	0.0		8.14
Pinguicula vulgaris	0	1	1	0.0		5.25
Bellidiastrum michelii	14	17	31	0.0	0.00	7.22
Gymnocarpium dryopteris	31	35	66	0.0	0.00	4.63
Lotus pedunculatus	48	44	92	0.0	1.00	10.53
Knautia arvernensis	2	9	11	0.0	0.80	9.29
Veronica urticifolia	69	69	138	0.0	0.38	7.77
Equisetum palustre	$\frac{3}{2}$	0	2	0.0		5.39
Laserpitium latifolium	41	47	88	0.0		8.80
Carlina acaulis	31	22	53	0.0		7.72
Bromus racemosus	11	1	12	0.0		9.83
Juncus inflexus	3	1	4	0.0		10.66
Phleum nodosum	0	2	2	0.0		10.99
Melampyrum nemorosum	39	$\frac{2}{22}$	61	0.0		6.20
Oxalis corniculata	3	2	5	0.0		11.96
Artemisia campestris	$\frac{3}{2}$	0	$\frac{3}{2}$	0.0		7.53
Cruciata glabra	41	52	93	0.0		9.87
Genista germanica	13	8	21	0.0		8.57
Saxifraga granulata	19	12	31	0.0		9.54
Globularia cordifolia	27	18	45	0.0		9.51
Ranunculus bulbosus	138	152	290	0.0		9.80
Thesium alpinum	2	1	3	0.0		8.45
Symphytum tuberosum	$\frac{2}{23}$	$\frac{1}{26}$	49	0.0		11.56
Colchicum autumnale	0	3	3	0.0		11.30 10.07
Elymus caninus	34	30	64	0.0		6.18
Potentilla alba	2	0	2	0.0		7.37
Trifolium aureum	3	0	3	0.0		6.49
Geranium sanguineum	26	18	3 44	0.0		8.99
Ranunculus flammula	18	22	44	0.0		7.31
ranunculus namiffula	10	22	40	0.0	0.00	16.1

species_name	N_past	N_recent	N	contrib_the	ermo warn	n_or_cold topt	_climplant
Epilobium ciliatum	1	2	3		0.0	0.00	4.49
Alyssum alyssoides	13	3	16		0.0	1.00	9.83
Turritis glabra	3	2	5		0.0	0.00	7.25
Carex rostrata	2	5	7		0.0	0.00	5.45
Lamium purpureum	46	33	79		0.0	0.26	8.25
Papaver rhoeas	1	0	1		0.0	1.00	11.10
Veronica beccabunga	9	9	18		0.0	0.22	7.79
Carex canescens	2	1	3		0.0	0.00	5.04
Alchemilla glaucescens	0	1	1		0.0	0.00	6.32
Geranium pyrenaicum	0	3	3		0.0	1.00	9.52
Carex brizoides	126	148	274		0.0	0.29	8.12
Verbascum thapsus	8	13	21		0.0	0.00	7.33
Sonchus oleraceus	1	0	1		0.0	0.00	8.42
Petasites hybridus	3	4	7		0.0	1.00	9.43
Corydalis solida	6	10	16		0.0	0.00	7.40
Myosoton aquaticum	4	1	5		0.0	0.00	7.59
Solanum nigrum	0	11	11		0.0	0.10	8.21
Lamium album	9	8	17		0.0	0.00	6.61
Trifolium medium	11	17	28		0.0	0.00	6.28
Veronica hederifolia	0	2	2		0.0	1.00	10.63
Ajuga reptans	1170	1138	2308		0.0	0.19	8.07
Circaea lutetiana	549	676	1225		0.0	0.37	8.40
Carex divulsa	8	3	11		0.0	1.00	10.24
Solidago gigantea	11	5	16		0.0	0.20	7.71
Adenostyles alliariae	83	79	162		0.0	0.00	7.53
Plantago lanceolata	165	157	322		0.0	0.98	9.87
Prunella laciniata	21	8	29		0.0	1.00	11.64
Argentina anserina	2	0	2		0.0	0.00	6.80
Galeopsis ladanum	5	7	12		0.0	0.00	6.86
Juneus filiformis	1	0	1		0.0	0.00	3.80
Cervaria rivini	28	18	46		0.0	0.81	9.52
Hypericum tetrapterum	5	5	10		0.0	1.00	9.95
Convolvulus sepium	89	74	163		0.0	0.34	8.34
Huperzia selago	0	2	2		0.0	0.00	4.21
Carex paniculata	24	26	50		0.0	0.89	9.03
Campanula trachelium	143	126	269		0.0	0.69	8.59
Poa pratensis	5	4	9		0.0	0.00	6.20
Bellis perennis	25	26	51		0.0	0.95	9.86
Anacamptis pyramidalis	8	8	16		0.0	1.00	10.81
Geranium lucidum	1	7	8		0.0	1.00	12.64
Parnassia palustris	1	1	2		0.0	0.00	6.01
Tanacetum vulgare	1	3	4		0.0	0.00	5.88
Calamagrostis villosa	0	1	1		0.0	0.00	6.65
Coronilla varia	17	15	32		0.0	0.64	8.96
Gentianopsis ciliata	3	1	4		0.0	1.00	10.08
Leontodon hispidus	4	7	11		0.0	0.40	8.01
Doronicum austriacum	14	11	25		0.0	0.00	7.23
Cardamine bulbifera	1	0	1		0.0	1.00	8.63
Draba muralis	0	2	2		0.0	1.00	10.68
Lonicera nigra	280	299	579		0.0	0.00	7.42
Coronilla coronata	10	11	21		0.0	1.00	9.26
Carex montana	356	361	717		0.0	0.00	7.61

species_name	N_past	N_	recent	N	contrib_	_thermo	warm_	_or_cold topt_	_climplant
Rumex arifolius	9		9	18		0.0		1.00	8.68
Echinops ritro	28		30	58		0.0		0.00	7.52
Astragalus glycyphyllos	13		5	18		0.0		0.00	7.61
Cyanus triumfettii	0		1	1		0.0		1.00	9.75
Dictamnus albus	1		1	2		0.0		1.00	10.66
Verbascum lychnitis	1		4	5		0.0		0.00	7.31
Anthriscus caucalis	1		0	1		0.0		1.00	10.42
Aruncus dioicus	28		19	47		0.0		0.75	8.35
Comarum palustre	3		5	8		0.0		0.00	4.61
Veronica serpyllifolia	3		0	3		0.0		0.00	6.78
Blitum bonus-henricus	2		1	3		0.0		1.00	9.40
Carex alba	132		144	276		0.0		0.50	8.09
Pyrola chlorantha	2		1	3		0.0		0.00	5.12
Phegopteris connectilis	6		10	16		0.0		0.00	5.02
Cardamine heptaphylla	187		203	390		0.0		0.50	8.38
Carex panicea	7		6	13		0.0		0.00	7.03
Arabis alpina	8		3	11		0.0		0.33	8.11
Xanthoselinum alsaticum	2		1	3		0.0		1.00	8.46
Medicago lupulina	24		16	40		0.0		0.63	8.73
Centaurea jacea	9		11	20		0.0		0.00	6.56
Veronica alpina	0		3	3		0.0		0.00	2.58
Buphthalmum salicifolium	5		3	8		0.0		0.00	7.49
Lycopodium annotinum	3		2	5		0.0		0.00	4.06
Humulus lupulus	41		52	93		0.0		0.00	7.21
Veronica spicata	1		0	1		0.0		0.00	6.48
Cyanus montanus	29		28	57		0.0		0.22	7.67
Anthriscus sylvestris	38		47	85		0.0		0.00	6.13
Rhinanthus minor	2		1	3		0.0		0.00	6.62
Rumex conglomeratus	0		1	1		0.0		1.00	10.83
Carex leporina	10		6	16		0.0		0.00	6.67
Barbarea vulgaris	1		3	4		0.0		0.00	7.16
Polypodium vulgare	637		588	1225		0.0		0.12	7.95
Anisantha sterilis	3		0	3		0.0		1.00	9.82
Conium maculatum	1		0	1		0.0		1.00	9.96
Epilobium tetragonum	0		8	8		0.0		1.00	9.15
Astragalus danicus	1		0	1		0.0		0.00	4.07
Tanacetum parthenium	0		1	1		0.0		1.00	11.12
Aconitum anthora	1		0	1		0.0		0.00	6.92
Bromus hordeaceus	0		1	1		0.0		1.00	9.43
Polygonum aviculare	4		6	10		0.0		0.14	7.74
Gentiana asclepiadea	3		1	4		0.0		0.00	6.80
Thalictrum minus	3		3	6		0.0		0.00	7.56
Persicaria maculosa	16		15	31		0.0		0.67	8.40
Trifolium montanum	5		3	8		0.0		0.00	7.13
Drymochloa sylvatica	292		297	589		0.0		0.00	6.01
Senecio sylvaticus	0		9	9		0.0		1.00	8.73
Vaccinium oxycoccos	3		0	3		0.0		0.00	4.64
Viola odorata	23		14	37		0.0		0.72	8.98
Orchis purpurea	23		25	48		0.0		1.00	10.01
Ajuga genevensis	6		8	14		0.0		0.57	8.21
Polygala amarella	$\overset{\circ}{2}$		2	4		0.0		0.00	4.89
Euphrasia stricta	0		1	1		0.0		0.00	7.04
±	9		_	_		0.0			

Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 2 0.0 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.88 9.10 Pulicaria dysenterica 2 4 6 0.0 1.00 11.70 Pucinelia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.88 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 <t< th=""><th>species_name</th><th>N_pas</th><th>t N_</th><th>_recent</th><th>N</th><th>contrib_</th><th>_thermo</th><th>warm_</th><th>_or_</th><th>_cold topt_</th><th>_climplant</th></t<>	species_name	N_pas	t N_	_recent	N	contrib_	_thermo	warm_	_or_	_cold topt_	_climplant
Viola tricolor 3 2 5 0.0 0.00 5.99 Euphorbia helioscopia 1 0 1 0.0 1.00 9.90 Echium vulgare 11 8 19 0.0 0.00 6.45 Alopecurus pratensis 0 3 3 0.0 0.00 6.46 Alopecurus pratensis 0 3 3 0.0 0.00 6.64 Carex lepidocarpa 12 4 16 0.0 1.00 11.00 11.51 Sparganium erectum 0 2 2 0.0 0.00 7.39 Solidago canadensis 12 12 12 4 0.0 1.00 9.07 Lactuca serricla 3 4 7 0.0 1.00 9.91 Chaerophyllum termulum 4 3 7 0.0 1.00 6.00 Digitalis gradiflors 13 11 2 0.0 0.00 7.35 Vicia tenuifolia	Eriophorum vaginatum	1		2	3		0.0		0.	.00	4.57
Euphorbia helioscopia	Epilobium parviflorum	4		6	10		0.0		0.	.86	9.26
Echium vulgare 11 8 19 0.0 0.62 8.56 Alopecurus pratensis 0 3 3 0.0 0.00 6.45 Carex lepidocarpa 12 4 16 0.0 1.00 1.10 Sparganium crectum 0 2 2 0.0 0.00 7.39 Solidago canadensis 12 12 24 0.0 0.60 8.29 Lactuca serriola 3 4 7 0.0 1.00 9.91 Chaerophyllum temulum 4 3 7 0.0 1.00 9.91 Draba alzoides 1 1 2 0.0 0.00 6.98 Bigitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 2 0.0 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.88 9.10 Pulicaria dysatericia 2 4	Viola tricolor	3			5		0.0		0.	.00	5.99
Alopecurus pratensis 0 3 3 3 0.0 0.00 6.45 8.66 Microthlaspi perfoliatum 1 0 1 0.0 1.00 1.00 1.51 Sparganium erectum 0 2 2 2 0.0 0.00 7.39 Solidago canadensis 12 12 12 24 0.0 0.60 8.29 Lactuca serriola 3 4 7 0.0 1.00 9.67 Chaerophyllum temulum 4 3 7 0.0 1.00 9.67 Chaerophyllum temulum 4 3 7 0.0 0.00 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 0 2 0.0 0.00 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 0 2 0.0 0.00 7.35 Vicia temuifolia 23 26 49 0.0 0.00 0.88 9.10 Pulicaria dysenterica 2 4 6 0.0 1.00 1.00 1.70 1.70 1.70 Pulicaria dysenterica 2 4 6 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.55 Salvia pratensis 10 7 17 0.0 0.50 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 0.00 7.24 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0 0.00 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.00 7.24 Gagea rivitians 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.00 6.82 Senecio viscosus 3 1 4 0.0 0.00 6.82 Senecio viscosus 3 1 4 0.0 0.00 6.83 Senecio viscosus 1 1 0 1 0.0 0.00 6.84 Senecio viscosus 1 1 0 1 0.0 0.00 6.84 Senecio viscosus 1 1 0 1 0.0 0.00 6.84 Senecio viscosus 1 1 0 1 0.0 0.00 6.84 Senecio viscosus 1 1 0 1 0.0 0.00 6.84 Senecio viscosus 1 1 0 1 0.0 0.00 6.98 Senecio viscosus 1 1 0 1 0.0 0.00 6.98 Senecio viscosus 1 1 0 1 0.0 0.00 6.98 Senecio viscosus 1 1 0 1 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 2 0.0 0.00 6.98 Senecio viscosus 1 1 1 1 0.0 0.00 0.00 6.98 Senecio viscosus 1 1 1 1 0	Euphorbia helioscopia	1			1		0.0		1.	.00	9.90
Carex lepidocarpa 12 4 16 0.0 0.64 8.66 Microthlaspi perfoliatum 1 0 1 1 0.0 1.00 1.1.51 Sparganium erectum 0 2 2 2 0.0 0.00 0.7.39 Solidago canadensis 12 12 12 24 0.0 0.66 8.29 Lactuca serriola 3 4 7 0.0 1.00 9.67 Chaerophyllum temulum 4 3 7 0.0 1.00 9.91 Draba aizoides 1 1 1 2 0.0 0.00 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juneus compressus 2 0 2 0 0 0.00 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.00 0.88 9.10 Pulicaria dysenterica 2 4 6 0.0 1.00 11.70 Puccinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.00 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.88 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 0.00 8.8 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.55 8.29 Senecio viscosus 3 1 4 0.0 0.0 0.0 9.31 Oreopteris limbosperma 4 6 10 0.0 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 0.0 0.0 6.98 Allium ursimum 58 54 112 0.0 0.00 6.98 Allium ursimum 58 54 112 0.0 0.00 6.98 Allium ursimum 58 54 112 0.0 0.00 6.99 Allium perenne 1 1 0 2 0.0 0.00 6.99 Persicaria lapathifolia 2 3 5 0.0 0.00 6.99 Persicaria lapathifolia 2 3 5 0.0 0.00 6.99 Persicaria lapathifolia 2 1 0 1 0.0 0.00 6.99 Persicaria lapathifolia 2 1 0 0 0.00 0.00 7.59 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 0 0 1 0.0 0.00 0.00 7.59 Poa chaixii 329 309 638 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.00 7.39 Andromoda polifolia 1 0 1 0.0 0.00 0.00 7.39											
Microthlaspi perfoliatum 1 0 1 0.0 1.00 1.151 Sparganium crectum 0 2 2 0.0 0.00 7.39 Solidago canadensis 12 12 24 0.0 0.00 9.67 Chacrophyllum temulum 4 3 7 0.0 1.00 9.91 Draba aizoides 1 1 2 0.0 0.00 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 2 0.0 0.00 7.82 Juncus compressus 2 0 2 0.0 0.00 7.82 Juncus colladistans 1 0 1 0.0 0.0 6.88 9.10 Pulicaria dysenterica 2 4 6 0.0 0.0 0.0 6.83 Puccinella distans 1 0 1 0.0 0.0 0.0 6.8 <t< td=""><td>Alopecurus pratensis</td><td></td><td></td><td>3</td><td></td><td></td><td>0.0</td><td></td><td>0.</td><td>.00</td><td>6.45</td></t<>	Alopecurus pratensis			3			0.0		0.	.00	6.45
Sparganjum erectum	Carex lepidocarpa	12		4	16		0.0		0.	.64	8.66
Solidago canadensis	Microthlaspi perfoliatum	1		0			0.0		1.	.00	
Lactuca serriola 3	Sparganium erectum	0		2	2		0.0		0.	.00	7.39
Chaerophyllum temulum 4 3 7 0.0 1.00 9.91 Draba aizoides 1 1 2 0.0 0.00 6.98 Digitalis grandiifora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 2 0.0 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.88 9.10 Pulciaria dysenterica 2 4 6 0.0 1.00 1.10 11.70 Puccinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.80 8.57 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 0.83 9.56 Filago arvensis 1	Solidago canadensis	12		12	24		0.0		0.	.60	8.29
Draba alzoides 1 1 2 0.0 0.00 6.98 Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Unucus compressus 2 0 2 0.0 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.88 9.10 Pulicaria dysenterica 2 4 6 0.0 1.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Draba verna 1 1 2 0.0 1.00 10.01 Gallum glaucum 5 4 9 0.0 0.83 9.56 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112	Lactuca serriola	3		4	7		0.0		1.	.00	9.67
Digitalis grandiflora 13 11 24 0.0 0.50 7.82 Juncus compressus 2 0 2 0.0 0.00 7.35 Vicia tenuifolia 23 26 49 0.0 0.88 9.10 Pucineria dysenterica 2 4 6 0.0 1.00 11.70 Pucinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Lamium maculatum 74 112	Chaerophyllum temulum	4		3	7		0.0		1.	.00	9.91
Juncus compressus 2	Draba aizoides	1		1	2		0.0		0.	.00	6.98
Vicia temuifolia 23 26 49 0.0 0.88 9.10 Pulicaria dysenterica 2 4 6 0.0 1.00 11.70 Puccinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10	Digitalis grandiflora	13		11	24		0.0		0.	.50	7.82
Pulicaria dysenterica 2 4 6 0.0 1.00 11.70 Puccinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senccio viscosus 3 1 4 0.0 0.00 6.94 Polystichum braunii 1 0 <td< td=""><td>Juneus compressus</td><td>2</td><td></td><td>0</td><td>2</td><td></td><td>0.0</td><td></td><td>0.</td><td>.00</td><td>7.35</td></td<>	Juneus compressus	2		0	2		0.0		0.	.00	7.35
Puccinellia distans 1 0 1 0.0 0.00 6.63 Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 0.00 0.25 8.29 Senecio viscosus 3 1 4 0.0 0.0 0.25 8.29 Senecio viscosus 3 </td <td>Vicia tenuifolia</td> <td>23</td> <td></td> <td>26</td> <td>49</td> <td></td> <td>0.0</td> <td></td> <td>0.</td> <td>.88</td> <td>9.10</td>	Vicia tenuifolia	23		26	49		0.0		0.	.88	9.10
Adenostyles alpina 6 8 14 0.0 0.00 7.54 Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10 0.0 0.00 6.09 Senecio viscosus 3 1 4 0.0 0.00 6.09 Senecio viscosus 3 1 4 <td>Pulicaria dysenterica</td> <td>2</td> <td></td> <td>4</td> <td>6</td> <td></td> <td>0.0</td> <td></td> <td>1.</td> <td>.00</td> <td>11.70</td>	Pulicaria dysenterica	2		4	6		0.0		1.	.00	11.70
Chaerophyllum hirsutum 23 21 44 0.0 0.80 8.57 Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Epipactis helleborine 141 116	Puccinellia distans	1		0	1		0.0		0.	.00	6.63
Salvia pratensis 10 7 17 0.0 0.50 8.71 Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Orcopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.00 6.98 Rolium spraccox 0 1 1 <t< td=""><td>Adenostyles alpina</td><td>6</td><td></td><td>8</td><td>14</td><td></td><td>0.0</td><td></td><td>0.</td><td>.00</td><td>7.54</td></t<>	Adenostyles alpina	6		8	14		0.0		0.	.00	7.54
Draba verna 1 1 2 0.0 1.00 10.01 Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.09 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1	Chaerophyllum hirsutum	23		21	44		0.0		0.	.80	8.57
Galium glaucum 5 4 9 0.0 0.83 9.56 Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 0.50 8.56 Thymus praecox 0 1 <td>Salvia pratensis</td> <td>10</td> <td></td> <td>7</td> <td>17</td> <td></td> <td>0.0</td> <td></td> <td>0.</td> <td>.50</td> <td>8.71</td>	Salvia pratensis	10		7	17		0.0		0.	.50	8.71
Filago arvensis 1 0 1 0.0 0.00 7.24 Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Orcopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Juncus bulbosus 1 1 2 <td>Draba verna</td> <td>1</td> <td></td> <td>1</td> <td>2</td> <td></td> <td>0.0</td> <td></td> <td>1.</td> <td>.00</td> <td>10.01</td>	Draba verna	1		1	2		0.0		1.	.00	10.01
Glyceria fluitans 7 36 43 0.0 0.50 8.26 Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Orcopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 <t< td=""><td>Galium glaucum</td><td>5</td><td></td><td>4</td><td>9</td><td></td><td>0.0</td><td></td><td>0.</td><td>.83</td><td>9.56</td></t<>	Galium glaucum	5		4	9		0.0		0.	.83	9.56
Lamium maculatum 74 112 186 0.0 0.25 8.29 Senecio viscosus 3 1 4 0.0 1.00 9.31 Orcopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 7.52 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 7.75 Tanacetum corymbosum 13 10		1		0	1		0.0		0.	.00	7.24
Senecio viscosus 3 1 4 0.0 1.00 9.31 Oreopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10	Glyceria fluitans	7		36	43		0.0		0.	.50	8.26
Oreopteris limbosperma 4 6 10 0.0 0.40 8.41 Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 7.52 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2	Lamium maculatum	74		112	186		0.0		0.	.25	8.29
Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 0.50 8.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 0.0 1.00 11.24 Calla palustris	Senecio viscosus	3		1	4		0.0		1.	.00	9.31
Polystichum braunii 1 0 1 0.0 0.00 6.09 Gagea lutea 0 2 2 0.0 0.00 6.98 Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 0.50 8.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 0.0 1.00 11.24 Calla palustris	Oreopteris limbosperma	4		6	10		0.0		0.	.40	8.41
Allium ursinum 58 54 112 0.0 0.78 8.97 Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 6.92 Montia fontana 1 0 1 0.0 0.00 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1		1		0	1		0.0		0.	.00	6.09
Epipactis helleborine 141 116 257 0.0 0.50 8.56 Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 7.52 Montia fontana 1 0 1 0.0 0.00 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 <t< td=""><td>Gagea lutea</td><td>0</td><td></td><td>2</td><td>2</td><td></td><td>0.0</td><td></td><td>0.</td><td>.00</td><td>6.98</td></t<>	Gagea lutea	0		2	2		0.0		0.	.00	6.98
Thymus praecox 0 1 1 0.0 0.00 6.92 Juncus bulbosus 1 1 2 0.0 0.00 7.52 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8	Allium ursinum	58		54	112		0.0		0.	.78	8.97
Juncus bulbosus 1 1 2 0.0 0.00 7.52 Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 <td< td=""><td>Epipactis helleborine</td><td>141</td><td></td><td>116</td><td>257</td><td></td><td>0.0</td><td></td><td>0.</td><td>.50</td><td>8.56</td></td<>	Epipactis helleborine	141		116	257		0.0		0.	.50	8.56
Montia fontana 1 0 1 0.0 0.00 6.29 Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.10 7.77 Tragopogon pratensis 5 3	Thymus praecox	0		1	1		0.0		0.	.00	6.92
Persicaria lapathifolia 2 3 5 0.0 0.40 8.14 Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3	Juncus bulbosus	1		1	2		0.0		0.	.00	7.52
Lonicera alpigena 56 46 102 0.0 0.40 7.75 Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 <		1									
Tanacetum corymbosum 13 10 23 0.0 0.14 8.21 Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 0.00 7.39 Andromeda polifolia 1 0 <td< td=""><td>Persicaria lapathifolia</td><td></td><td></td><td>3</td><td>5</td><td></td><td>0.0</td><td></td><td>0.</td><td>.40</td><td>8.14</td></td<>	Persicaria lapathifolia			3	5		0.0		0.	.40	8.14
Trifolium campestre 5 2 7 0.0 1.00 11.24 Calla palustris 0 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1	Lonicera alpigena	56		46	102		0.0		0.	.40	7.75
Calla palustris 0 2 2 2 0.0 0.00 4.75 Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 7.82 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Tanacetum corymbosum	13		10	23		0.0		0.	.14	8.21
Poa chaixii 329 309 638 0.0 0.28 8.12 Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 7.82 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Trifolium campestre	5			7		0.0		1.	.00	11.24
Lolium perenne 1 1 2 0.0 0.50 9.42 Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Calla palustris	0		2	2		0.0		0.	.00	4.75
Veronica persica 0 1 1 0.0 1.00 10.18 Epilobium lanceolatum 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Poa chaixii	329		309	638		0.0		0.	.28	8.12
Epilobium lanceolatum 4 4 4 8 0.0 1.00 11.69 Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Lolium perenne	1		1	2		0.0		0.	.50	9.42
Scorzonera humilis 2 1 3 0.0 0.00 7.68 Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Veronica persica	0		1	1		0.0		1.	.00	10.18
Carex hirta 19 39 58 0.0 0.10 7.77 Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Epilobium lanceolatum	4		4	8		0.0		1.	.00	11.69
Tragopogon pratensis 5 3 8 0.0 0.29 7.91 Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Scorzonera humilis	2		1			0.0		0.	.00	7.68
Cerastium glomeratum 2 1 3 0.0 1.00 10.17 Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Carex hirta	19					0.0		0.	.10	7.77
Monotropa hypopitys 8 7 15 0.0 0.00 7.39 Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Tragopogon pratensis	5		3	8		0.0		0.	.29	7.91
Andromeda polifolia 1 0 1 0.0 0.00 3.24 Oreoselinum nigrum 1 1 2 0.0 0.00 7.82				1			0.0		1.	.00	10.17
Oreoselinum nigrum 1 1 2 0.0 0.00 7.82	Monotropa hypopitys	8			15		0.0		0.	.00	7.39
	Andromeda polifolia	1		0	1		0.0		0.	.00	3.24
Melilotus officinalis 3 1 4 0.0 0.00 7.48		1		1	2		0.0		0.	.00	7.82
	Melilotus officinalis	3		1	4		0.0		0.	.00	7.48

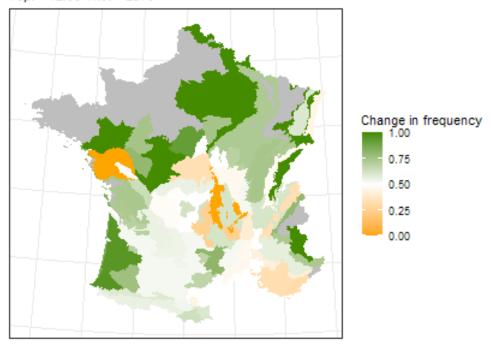
species_name	N_past	N_recent	N	contrib_thern	no warm_or_	_cold topt_climpla	ant
Gymnocarpium robertianum	26	26	52	0.0	0.	46 8.	.09
Rhododendron hirsutum	1	0	1	0.0	0.	00 6.	.00
Odontites vernus	0	1	1	0.0	0.	00 8.	10
Aethusa cynapium	29	13	42	0.0	0.	00 8.	.04
Juneus acutiflorus	4	1	5	0.0	1.	00 9.	92
Hyacinthoides non-scripta	272	283	555	0.0	1.	00 10.	14
Plantago major	68	103	171	0.0	0.	85 9.	12
Carex demissa	0	1	1	0.0	0.	00 7.	64
Helleborus niger	1	0	1	0.0	0.	00 8.	13
Carex flava	0	1	1	0.0	0.	00 7.	15
Carex vulpina	3	1	4	0.0	0.	00 8.	81
Euphorbia angulata	4	1	5	0.0	0.	50 8.	91
Pulmonaria officinalis	55	5	60	0.0	0.	40 8.	31
Tripleurospermum inodorum	1	2	3	0.0	0.	00 6.	20
Centaurium erythraea	14	13	27	0.0	0.	80 9.	20
Anthericum ramosum	8	6	14	0.0	0.	14 8.	.02
Bromus arvensis	0	2	2	0.0	0.	00 7.	97
Apera spica-venti	1	0	1	0.0	0.	00 6.	26
Cynoglossum germanicum	1	2	3	0.0	1.	00 9.	44
Sonchus asper	0	2	2	0.0) 1.	00 9.	59
Fallopia convolvulus	0	1	1	0.0	0.	00 7.	76
Dianthus deltoides	0	1	1	0.0	0.	00 6.	32
Stellaria alsine	1	0	1	0.0	0.	00 7.	10
Galium album	15	10	25	0.0	0.	00 7.	61
Scirpus sylvaticus	8	14	22	0.0	0.	00 6.	84
Malva moschata	2	4	6	0.0) 1.	00 9.	24
Verbascum nigrum	24	8	32	0.0	0.	00 7.	20
Allium vineale	2	3	5	0.0	1.	00 10.	28
Carex diandra	0	1	1	0.0	0.	00 5.	70
Cyclamen purpurascens	11	7	18	0.0	0.	50 8.	49
Cirsium erisithales	7	3	10	0.0	0.	00 7.	34
Stachys recta	33	34	67	0.0	0.	47 8.	.68
Mentha longifolia	2	5	7	0.0	1.	00 8.	72
Artemisia absinthium	0	1	1	0.0	0.	00 7.	42
Stellaria graminea	16	17	33	0.0			14
Corynephorus canescens	0	1	1	0.0	1.	00 9.	57
Eriophorum angustifolium	1	0	1	0.0	0.	00 4.	95
Rumex crispus	0	1	1	0.0	0.	00 8.	42
Fallopia dumetorum	0	1	1	0.0	0.		74
Astrantia major	23	16	39	0.0	0.	70 8.	20
Bothriochloa ischaemum	1	0	1	0.0	1.	00 10.	64
Dactylorhiza sambucina	2	1	3	0.0	1.	00 9.	89
Valeriana officinalis	253	205	458	0.0	0.	00 6.	83
Stellaria palustris	1	0	1	0.0	0.	00 6.	18
Prenanthes purpurea	401	410	811	0.0			96
Amaranthus retroflexus	1	0	1	0.0			.01
Lamium amplexicaule	1	0	1	0.0			44
Cynoglossum officinale	0	3	3	0.0			93
Convolvulus arvensis	2	2	4	0.0			58
Lunaria rediviva	9	6	15	0.0			17
Teesdalia nudicaulis	1	1	2	0.0			70
Typha latifolia	0	2	2	0.0	0.	50 8.	.04

species_name	N_pas	t N	_recent	N	contrib_	_thermo	warm_	_or_	_cold topt_	_climplant
Corydalis cava	11		2	13		0.0		0.	.29	8.26
Hieracium racemosum	0		1	1		0.0		1.	.00	10.79
Dianthus armeria	3		3	6		0.0		1.	.00	9.34
Astragalus sempervirens	4		1	5		0.0		0.	.33	8.00
Vicia sativa	1		2	3		0.0		0.	.67	8.46
Lathraea squamaria	2		5	7		0.0		0.	.00	7.53
Physalis alkekengi	0		1	1		0.0		1.	.00	10.09
Potentilla crantzii	1		0	1		0.0		0.	.00	4.82
Avenula pubescens	1		0	1		0.0		0.	.00	7.04
Datura stramonium	1		0	1		0.0		1.	.00	9.60
Fragaria moschata	1		0	1		0.0		0.	.00	6.98
Scilla bifolia	70		80	150		0.0		1.	.00	9.24
Trichophorum cespitosum	1		0	1		0.0		0.	.00	4.99
Genista sagittalis	36		28	64		0.0		0.	.95	9.71
Melampyrum cristatum	7		3	10		0.0		0.	.00	7.00
Matricaria chamomilla	0		1	1		0.0			.00	8.46
Veronica anagallis-aquatica	0		1	1		0.0			.00	9.69
Lipandra polysperma	1		1	2		0.0			.50	8.07
Helictochloa pratensis	2		0	2		0.0			.50	8.63
Sisymbrium officinale	0		1	1		0.0			.00	9.55
Phelipanche purpurea	0		1	1		0.0			.00	10.15
Thelypteris palustris	1		1	2		0.0			.00	7.25
Galanthus nivalis	5		6	11		0.0			.00	10.30
Asplenium viride	41		46	87		0.0			.00	6.77
Thlaspi arvense	0		1	1		0.0			.00	6.64
Geranium pusillum	0		1	1		0.0			.00	8.53
Carex disticha	2		1	3		0.0			.00	7.77
Oxalis dillenii	1		0	1		0.0			.00	8.98
Ornithopus perpusillus	1		0	1		0.0			.00	9.82
Drymocallis rupestris	1		0	1		0.0			.00	8.69
Ranunculus lanuginosus	18		19	37		0.0			.00	9.20
Cyanus segetum	0		1	1		0.0			.00	6.96
Equisetum pratense	5		3	8		0.0			.00	3.80
Lilium martagon	39		38	77		0.0			.00	6.79
Carex spicata	0		2	2		0.0			.00	8.64
Trisetum flavescens	1		1	2		0.0			.50	9.26
Poa palustris	0		1	1		0.0			.00	4.75
Trifolium hybridum	0		1	1		0.0			.00	7.33
Leucojum vernum	8		9	17		0.0			.57	8.55
Caltha palustris	52		56	108		0.0			.00	5.38
Vicia dumetorum	13		6	19		0.0			.36	8.16
Rubus hirtus	3		0	3		0.0			.00	8.77
Geranium molle	4		4	8		0.0			.00	10.82
Aposeris foetida	2		3	5		0.0			.00	8.01
Melampyrum sylvaticum	47 0		$\begin{array}{c} 58 \\ 2 \end{array}$	$105 \\ 2$		0.0			.00	3.14
Crepis capillaris						0.0			.00	9.81
Galium pumilum	16		10 6	$\frac{26}{7}$		$0.0 \\ 0.0$.33 .60	8.25 8.12
Impatiens parviflora	$\frac{1}{2}$		2	7		0.0			.00	5.36
Thysselinum palustre	0		$\frac{2}{3}$	$\frac{4}{3}$		0.0			.00	$\begin{array}{c} 5.30 \\ 8.35 \end{array}$
Lithospermum officinale Potentilla heptaphylla	0		3 1	3 1		0.0			.00	8.35 8.77
Elytrigia repens	1		0	1		0.0			.00	7.28
Enyungia repens	1		U	1		0.0		U.	.00	1.40

species_name	N_past	N_recent	N	contrib_thermo	warm_or_cold topt_	_climplant
Clinopodium acinos	1	2	3	0.0	0.00	8.31
Ranunculus monspeliacus	1	0	1	0.0	0.00	9.33
Thymus pulegioides	0	1	1	0.0	0.00	8.32
Arabidopsis arenosa	1	2	3	0.0	0.00	6.65
Juncus squarrosus	1	1	2	0.0	0.00	8.85
Crepis biennis	2	0	2	0.0	0.50	8.11
Fumaria officinalis	0	1	1	0.0	1.00	9.34
Sedum sexangulare	0	1	1	0.0	1.00	9.33
Thalictrum aquilegiifolium	14	19	33	0.0	0.00	7.49
Cerastium fontanum	2	2	4	0.0	0.00	6.34
Galium boreale	1	1	2	0.0	0.00	4.54
Streptopus amplexifolius	1	1	2	0.0	1.00	8.09

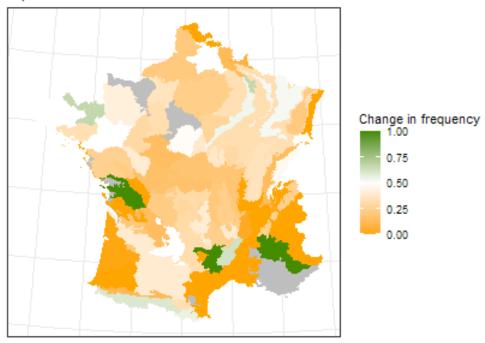
Rubus ulmifolius

Topt = 12.95 Ntot = 2870



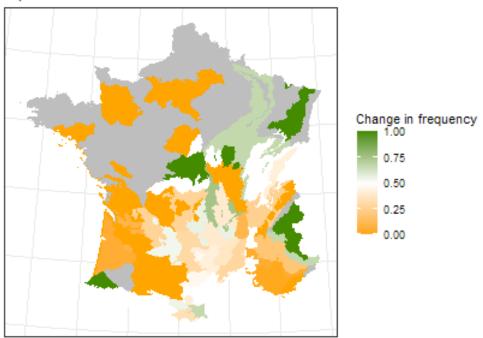
Agrostis capillaris

Topt = 6.01 Ntot = 1619



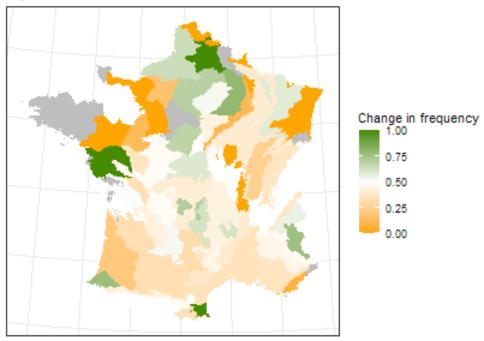
Festuca ovina

Topt = 5.66 Ntot = 782



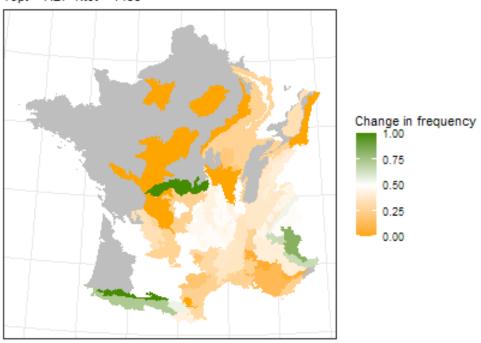
Brachypodium pinnatum

Topt = 7.19 Ntot = 3148



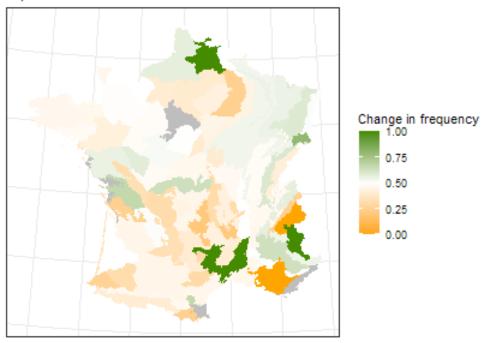
Hieracium murorum

Topt = 7.27 Ntot = 1455



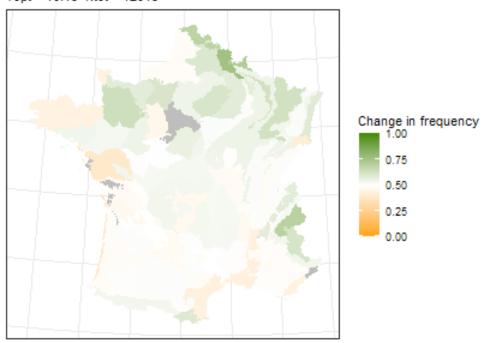
Molinia caerulea

Topt = 6.19 Ntot = 4205



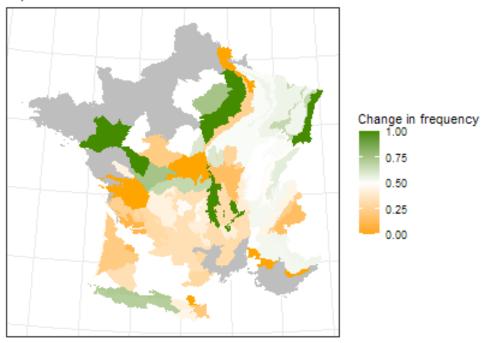
Crataegus monogyna

Topt = 10.19 Ntot = 12013



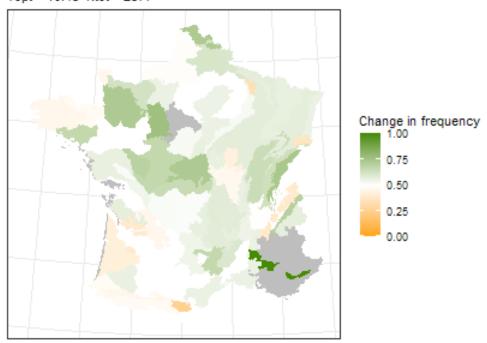
Solidago virgaurea

Topt = 5.27 Ntot = 1161



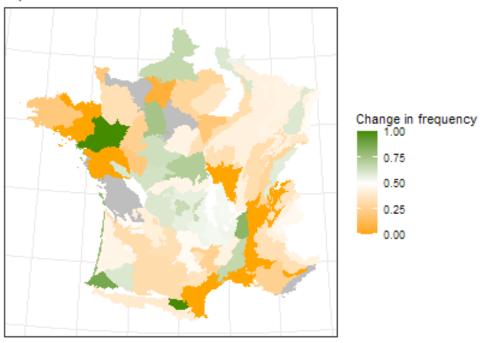
Sambucus nigra

Topt = 10.48 Ntot = 2877



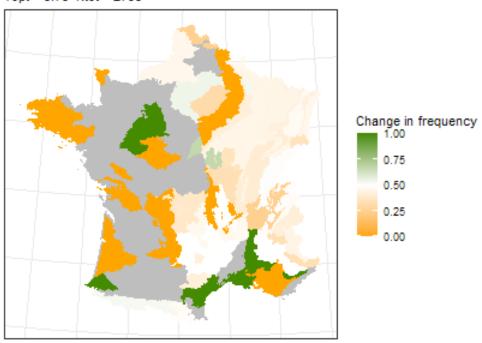
Poa nemoralis

Topt = 6.26 Ntot = 1735



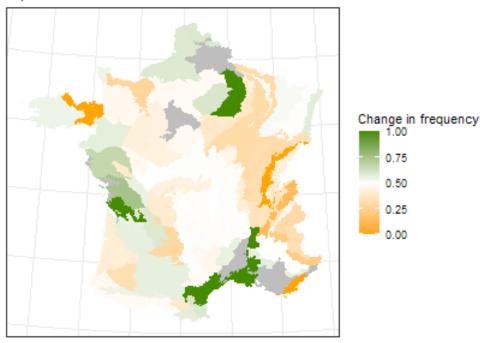
Rubus idaeus

Topt = 5.75 Ntot = 2793



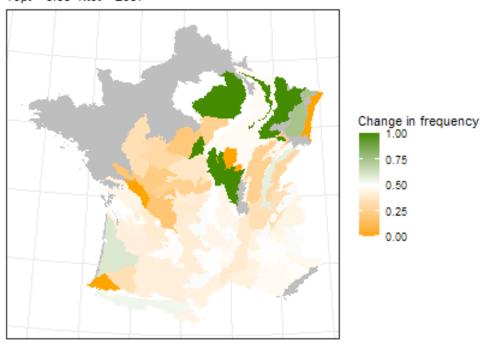
Avenella flexuosa

Topt = 6.01 Ntot = 6239



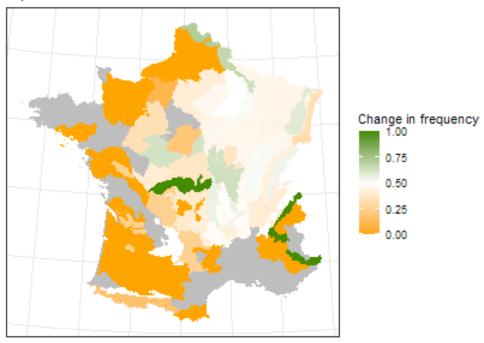
Juniperus communis

Topt = 6.63 Ntot = 2637



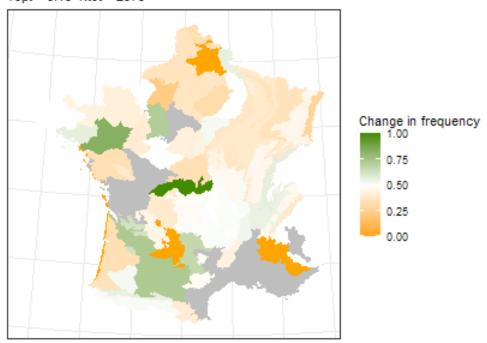
Luzula pilosa

Topt = 4.94 Ntot = 1971



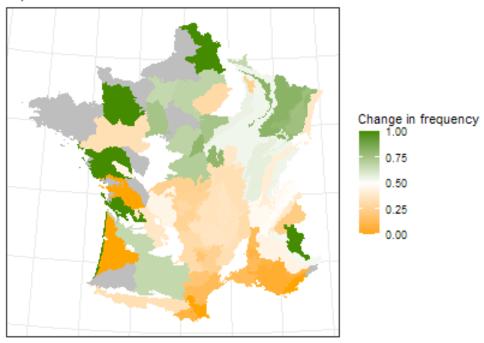
Athyrium filix-femina

Topt = 6.15 Ntot = 2979



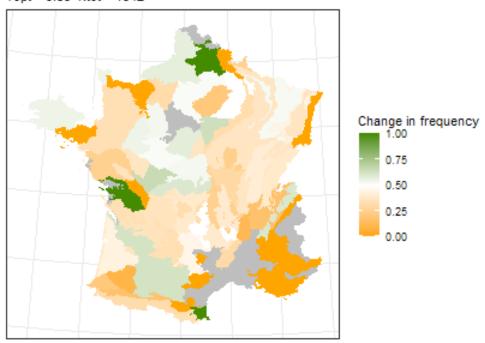
Galium mollugo

Topt = 7.37 Ntot = 1473



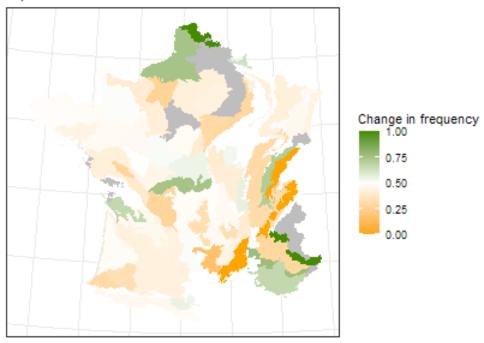
Holcus lanatus

Topt = 9.85 Ntot = 1542



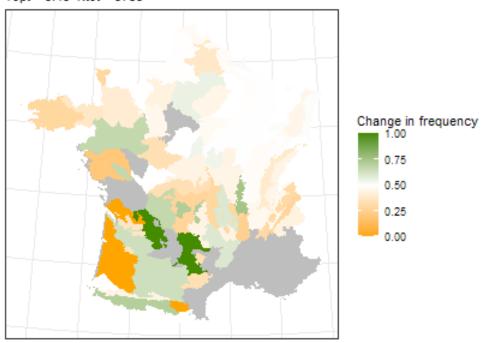
Calluna vulgaris

Topt = 6.32 Ntot = 3766



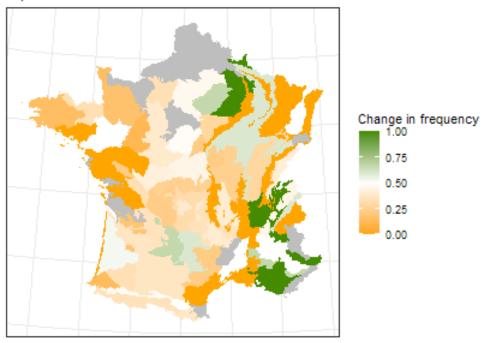
Deschampsia cespitosa

Topt = 5.45 Ntot = 3783



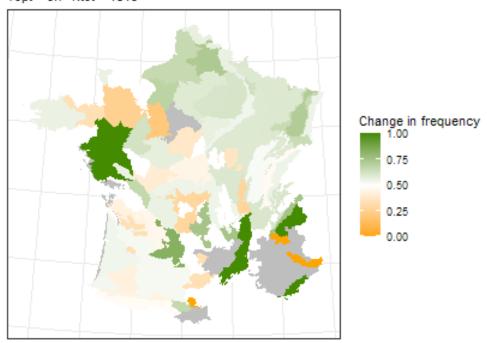
Potentilla erecta

Topt = 6.95 Ntot = 951



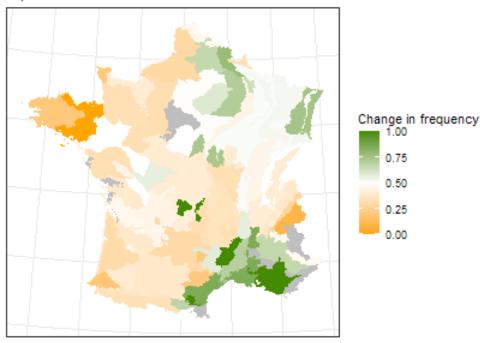
Glechoma hederacea

Topt = 6.7 Ntot = 1813



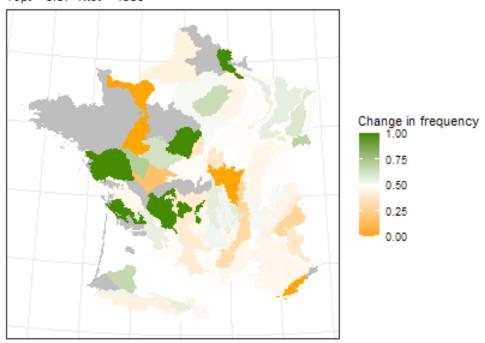
Rosa arvensis

Topt = 10.38 Ntot = 6308



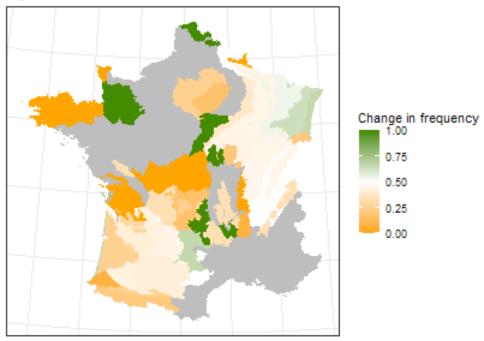
Lonicera xylosteum

Topt = 5.87 Ntot = 4586



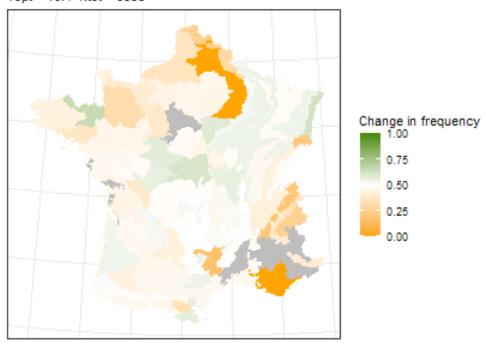
Cardamine pratensis

Topt = 4.68 Ntot = 656



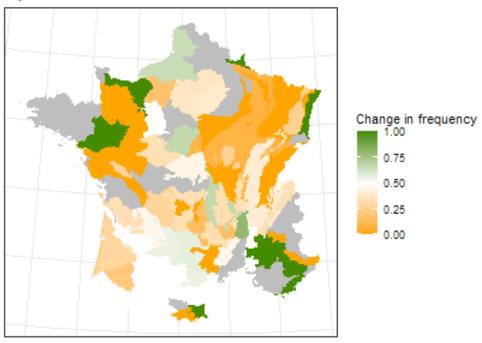
Teucrium scorodonia

Topt = 10.4 Ntot = 6533



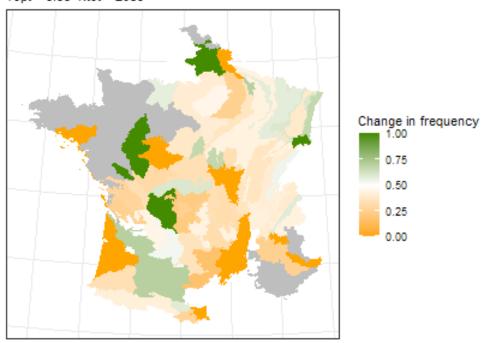
Luzula forsteri

Topt = 12.35 Ntot = 517



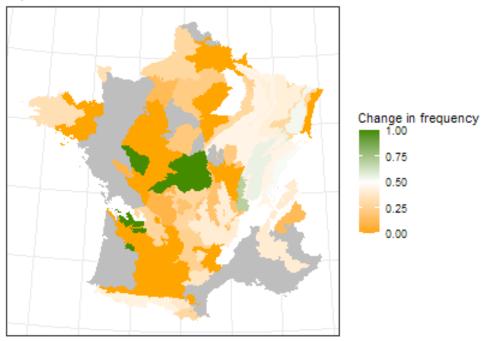
Vicia sepium

Topt = 6.55 Ntot = 2089



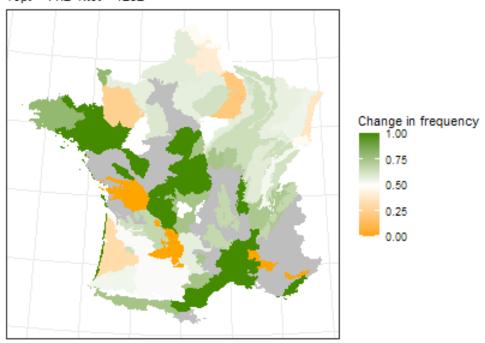
Epilobium montanum

Topt = 6.91 Ntot = 1145



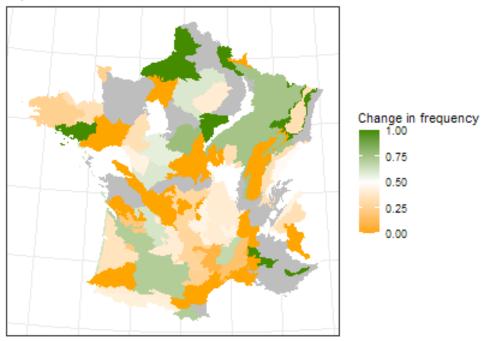
Carex pendula

Topt = 11.2 Ntot = 1232



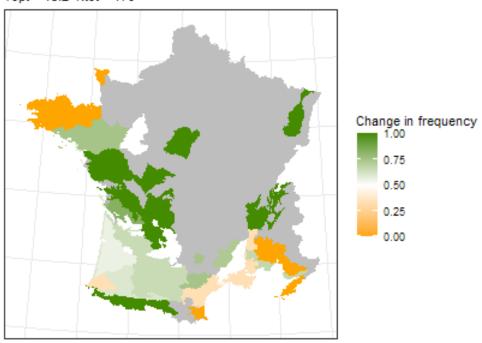
Anthoxanthum odoratum

Topt = 6.02 Ntot = 429



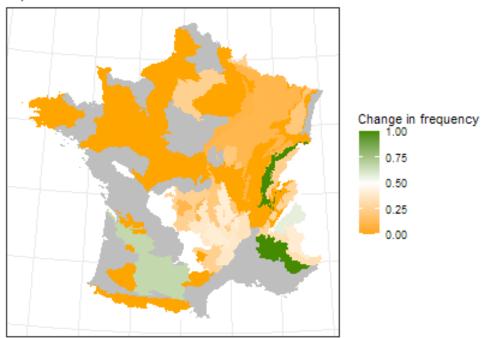
Laurus nobilis

Topt = 15.2 Ntot = 170



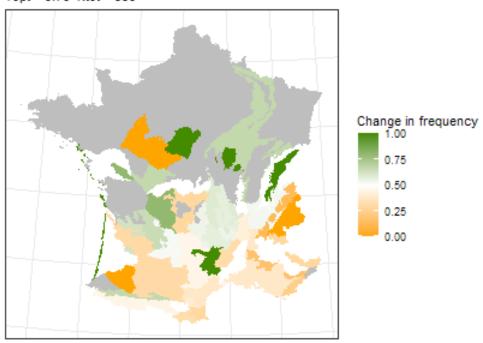
Epilobium angustifolium

Topt = 6.46 Ntot = 432



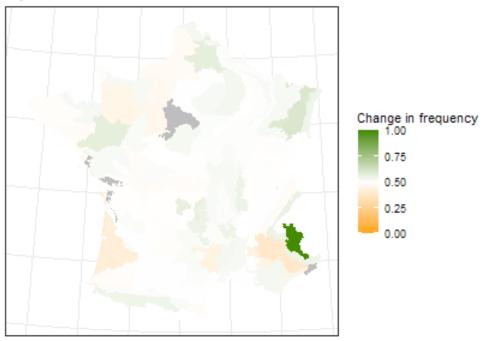
Asplenium adiantum-nigrum

Topt = 9.76 Ntot = 556



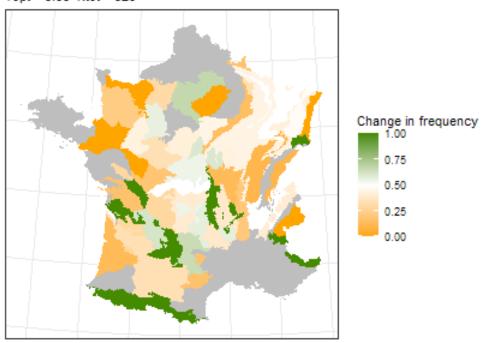
Hedera helix

Topt = 10.93 Ntot = 18101



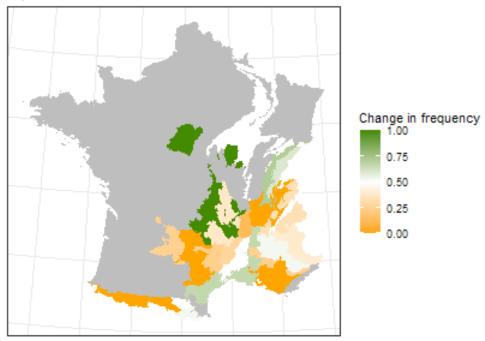
Melampyrum pratense

Topt = 5.65 Ntot = 526



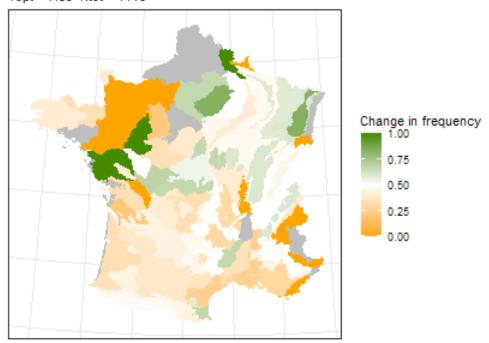
Thymus serpyllum

Topt = 5.17 Ntot = 196



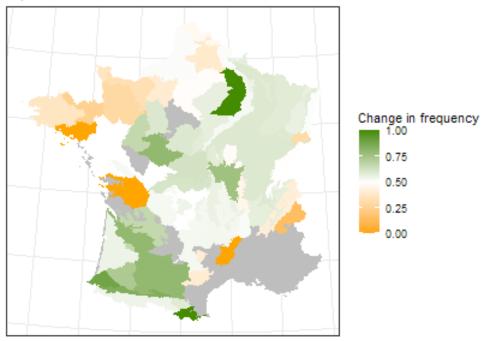
Betonica officinalis

Topt = 7.89 Ntot = 1116



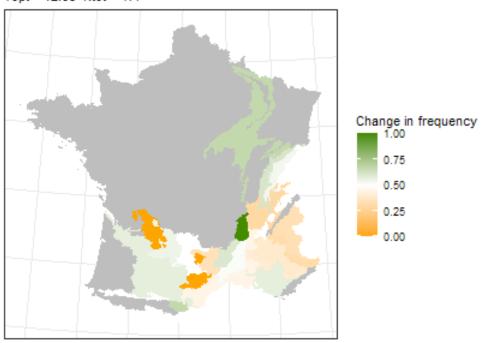
Dryopteris carthusiana

Topt = 5.85 Ntot = 3772



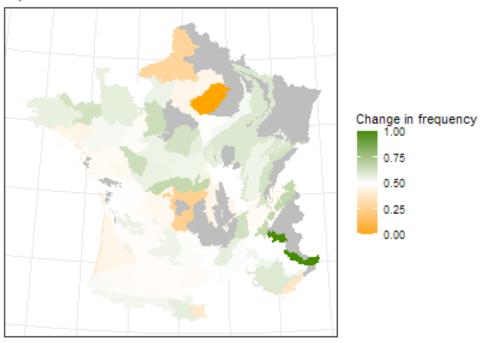
Hippocrepis emerus

Topt = 12.63 Ntot = 477



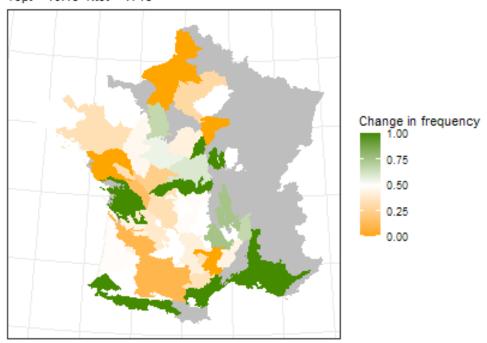
Ruscus aculeatus

Topt = 13.45 Ntot = 3265



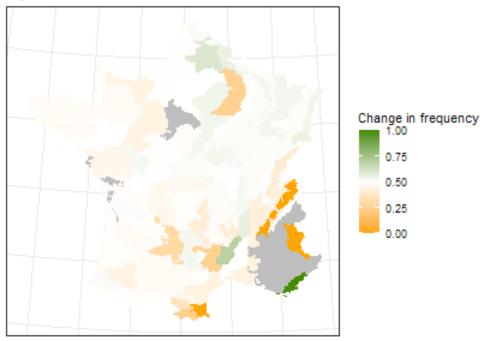
Erica cinerea

Topt = 10.19 Ntot = 1716



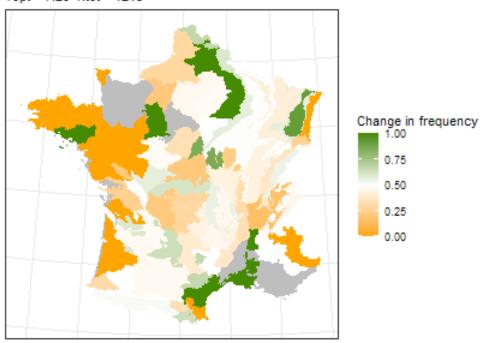
Lonicera periclymenum

Topt = 9.95 Ntot = 11072



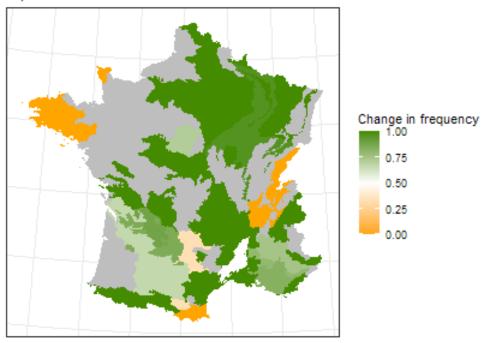
Veronica chamaedrys

Topt = 7.29 Ntot = 1215



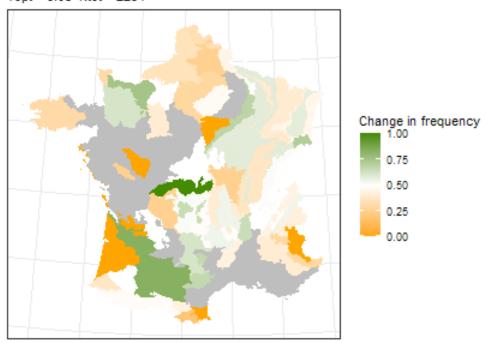
Daucus carota

Topt = 10.3 Ntot = 202



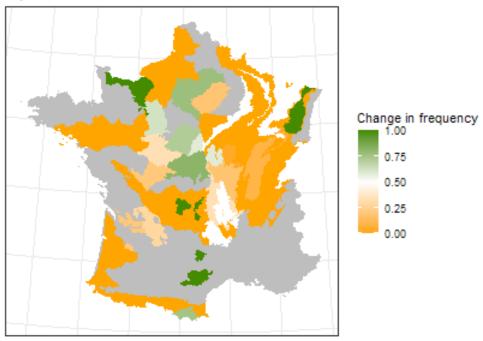
Oxalis acetosella

Topt = 6.08 Ntot = 2254



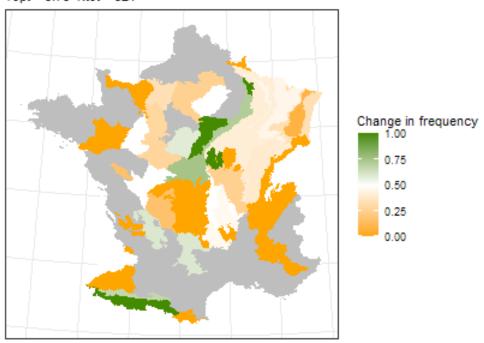
Agrostis canina

Topt = 6.16 Ntot = 341



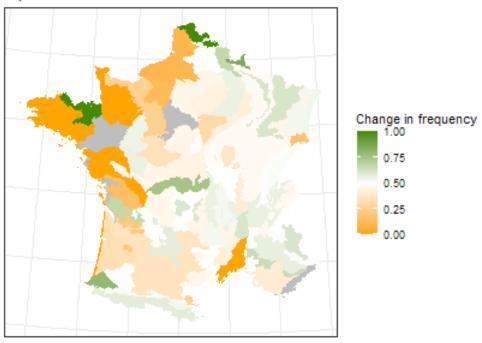
Luzula multiflora

Topt = 5.75 Ntot = 321



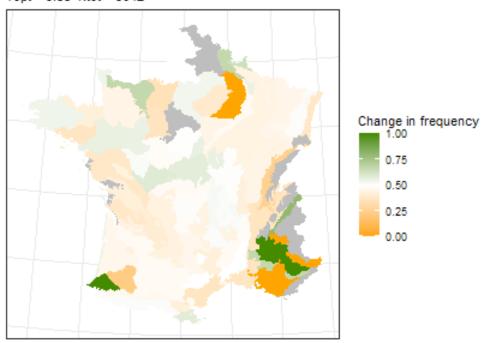
Fragaria vesca

Topt = 6.71 Ntot = 4985



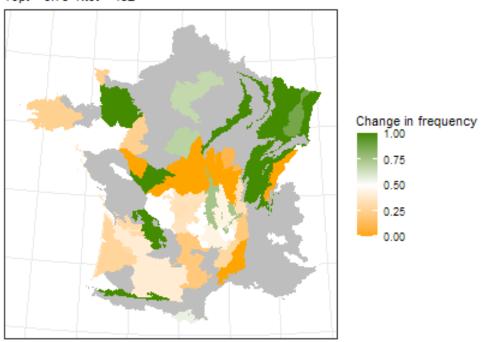
Cytisus scoparius

Topt = 9.88 Ntot = 5042



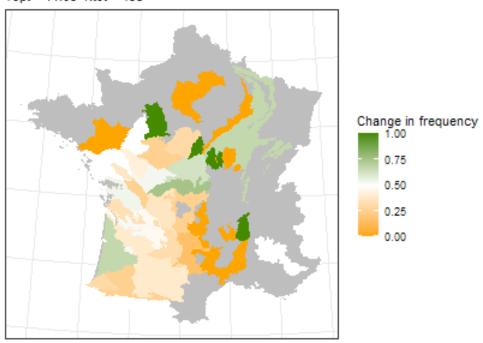
Rumex acetosella

Topt = 6.75 Ntot = 452



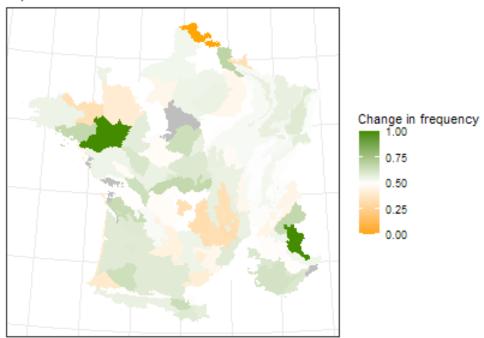
Pulmonaria longifolia

Topt = 11.03 Ntot = 458



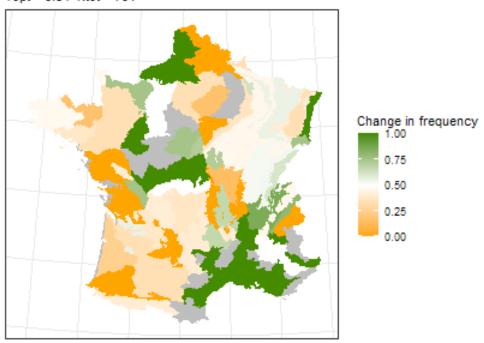
Brachypodium sylvaticum

Topt = 9.47 Ntot = 7617



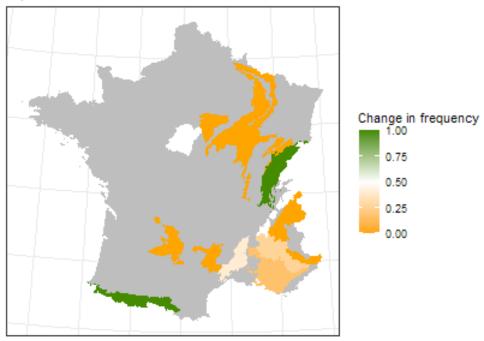
Ranunculus repens

Topt = 6.84 Ntot = 791



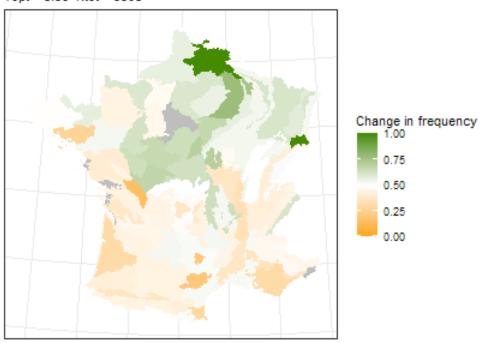
Arabis hirsuta

Topt = 7.1 Ntot = 85



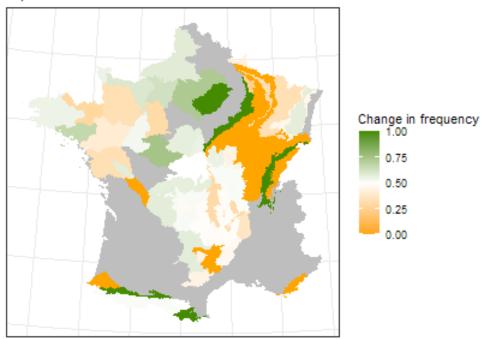
Dactylis glomerata

Topt = 8.56 Ntot = 3508



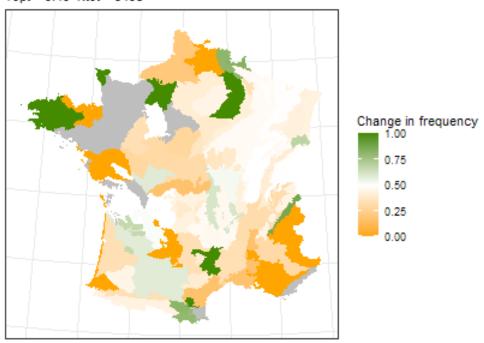
Digitalis purpurea

Topt = 11.04 Ntot = 1780



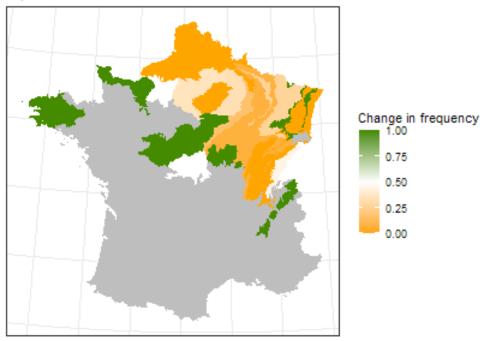
Viola reichenbachiana

Topt = 9.49 Ntot = 3498



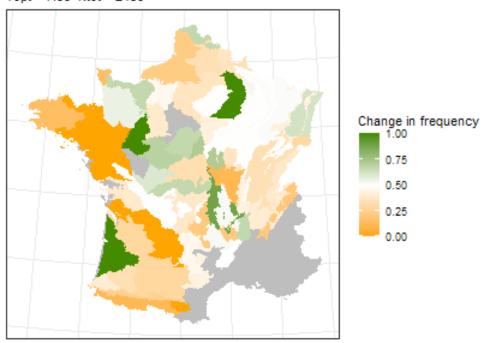
Cirsium oleraceum

Topt = 6.05 Ntot = 211



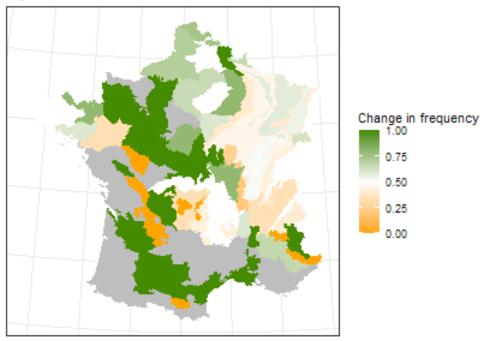
Anemone nemorosa

Topt = 7.55 Ntot = 2486



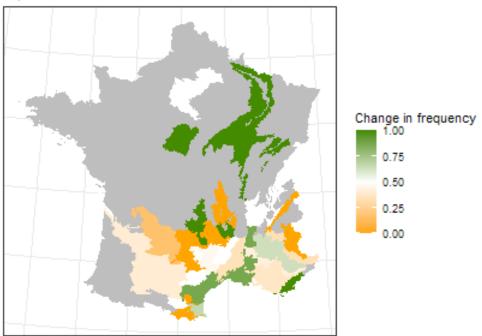
Heracleum sphondylium

Topt = 5.74 Ntot = 647



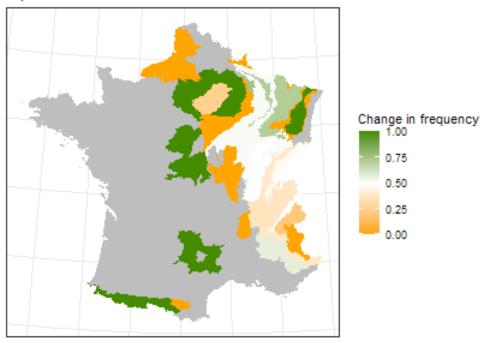
Eryngium campestre

Topt = 11.8 Ntot = 315



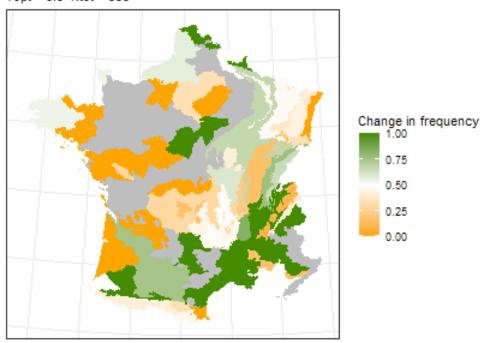
Carex digitata

Topt = 5.31 Ntot = 1446



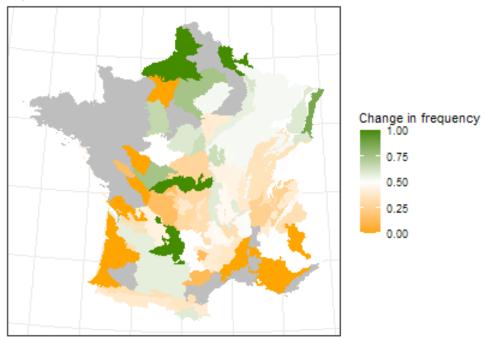
Silene dioica

Topt = 6.5 Ntot = 533



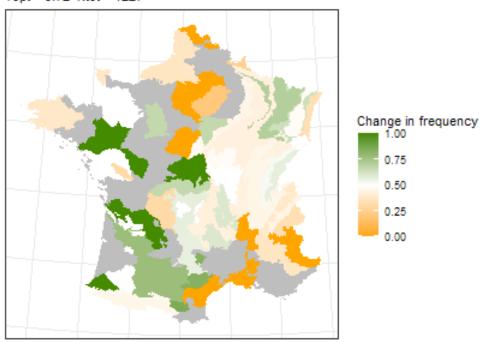
Veronica officinalis

Topt = 7.12 Ntot = 1321



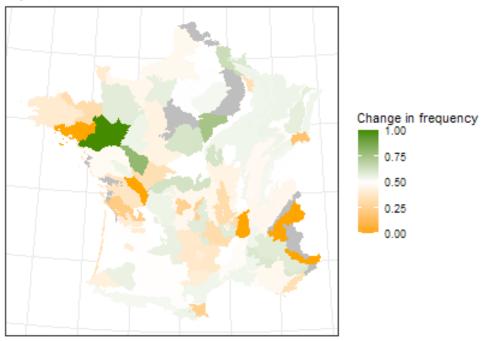
Luzula sylvatica

Topt = 9.72 Ntot = 1227



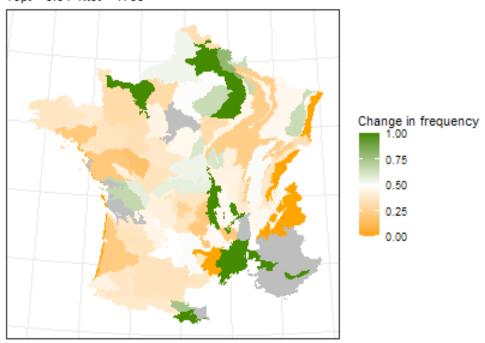
Euphorbia amygdaloides

Topt = 10.82 Ntot = 3574



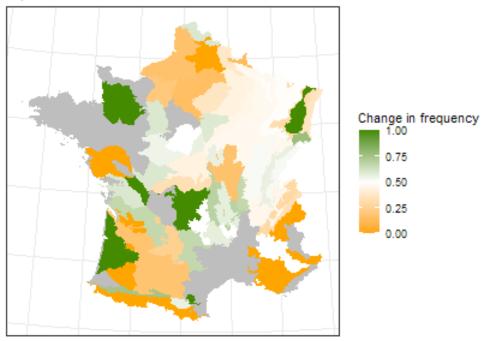
Hypericum pulchrum

Topt = 9.64 Ntot = 1766



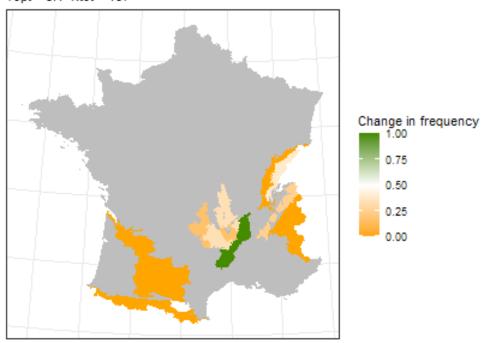
Crataegus laevigata

Topt = 9.31 Ntot = 3032



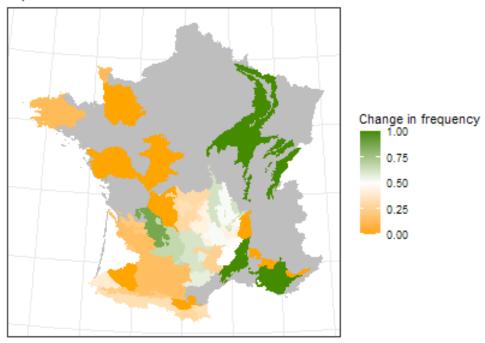
Alchemilla acutiloba

Topt = 5.1 Ntot = 167



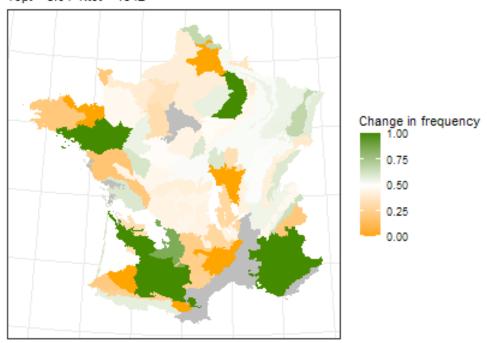
Conopodium majus

Topt = 10.26 Ntot = 396



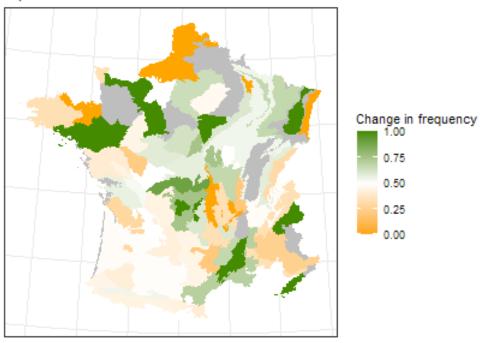
Polygonatum multiflorum

Topt = 8.04 Ntot = 1942



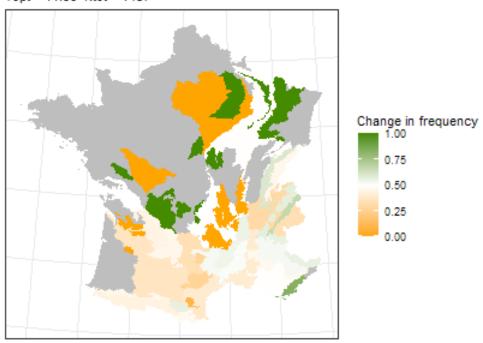
Dioscorea communis

Topt = 12.54 Ntot = 1290



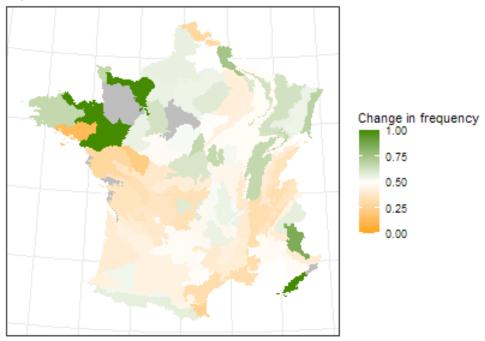
Teucrium chamaedrys

Topt = 11.56 Ntot = 1487



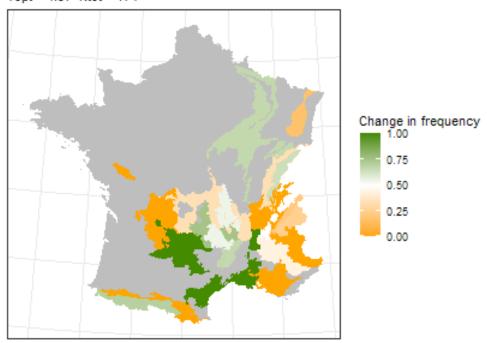
Rosa canina

Topt = 8.99 Ntot = 4211



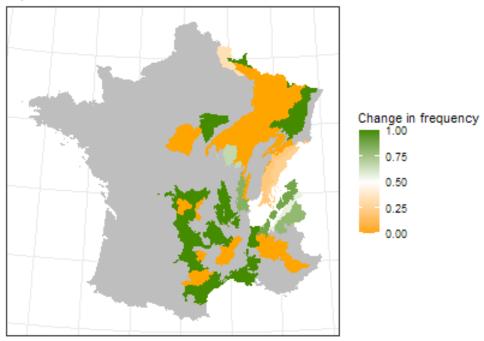
Campanula rotundifolia

Topt = 4.97 Ntot = 174



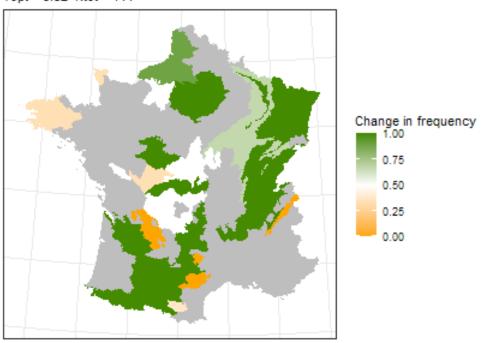
Senecio hercynicus

Topt = 4.25 Ntot = 110



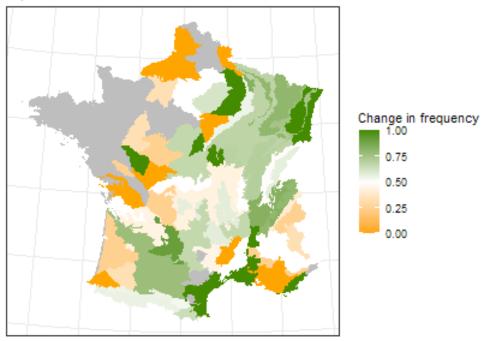
Anemone sylvestris

Topt = 5.82 Ntot = 111



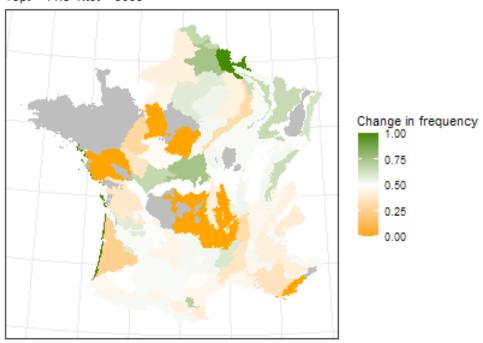
Prunella vulgaris

Topt = 7.29 Ntot = 719



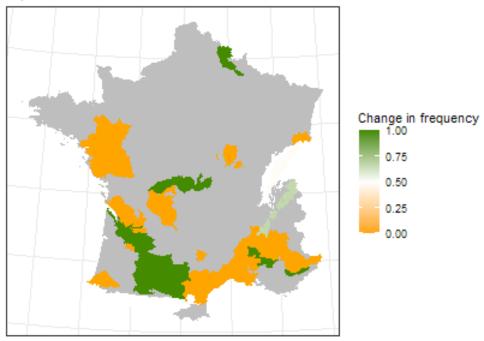
Clematis vitalba

Topt = 11.3 Ntot = 3069



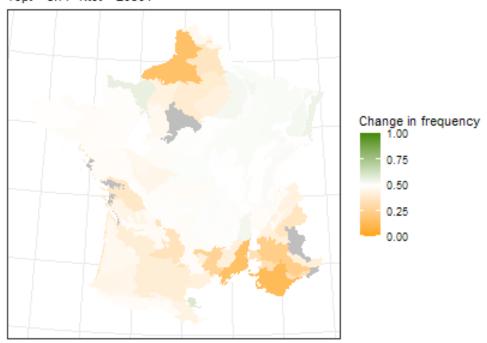
Ranunculus acris

Topt = 5.61 Ntot = 61



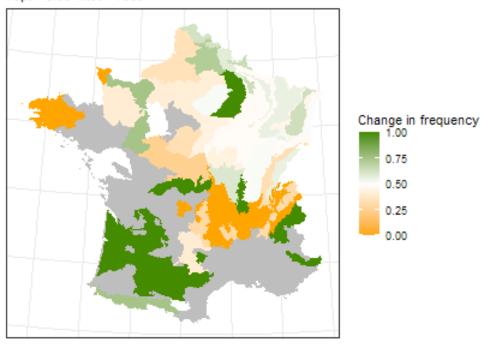
Rubus fruticosus

Topt = 8.77 Ntot = 20501



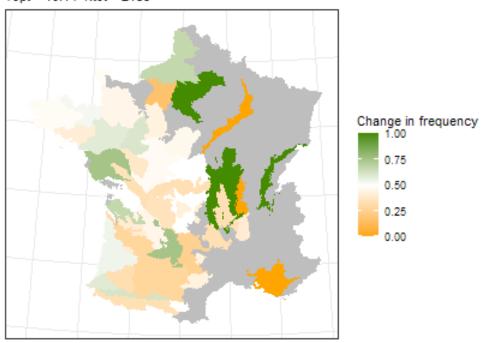
Milium effusum

Topt = 5.63 Ntot = 1969



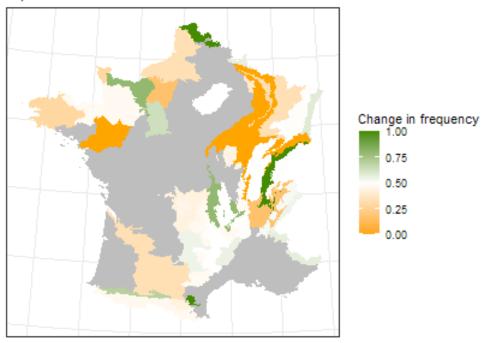
Ulex europaeus

Topt = 10.14 Ntot = 2185



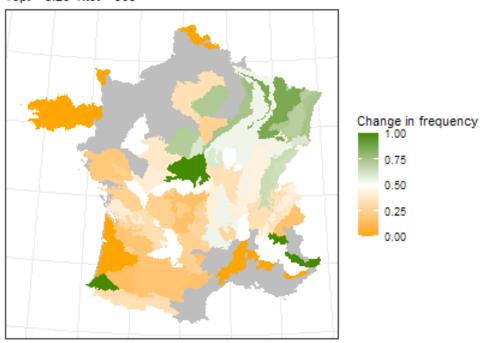
Vaccinium myrtillus

Topt = 5.07 Ntot = 2356



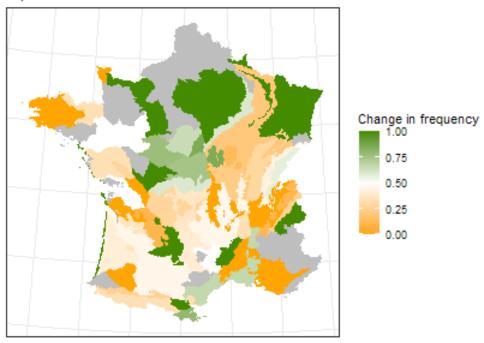
Viola riviniana

Topt = 8.26 Ntot = 903



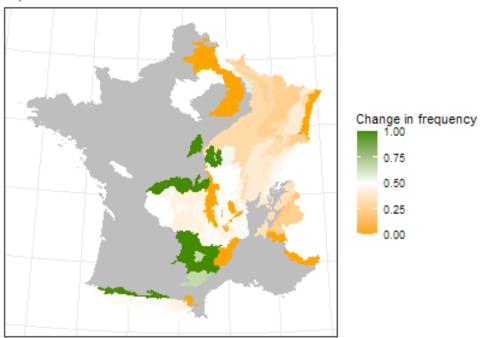
Rumex acetosa

Topt = 6.87 Ntot = 470



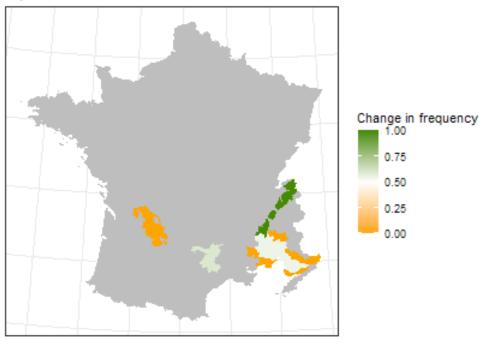
Sambucus racemosa

Topt = 7.05 Ntot = 1168



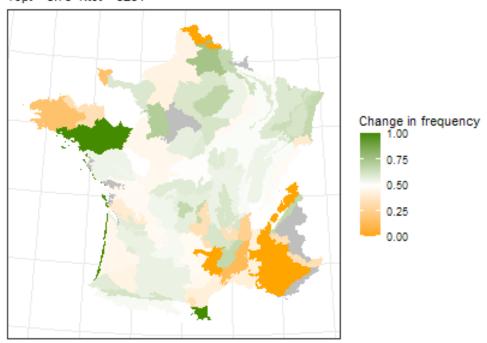
Linum suffruticosum

Topt = 15.8 Ntot = 39



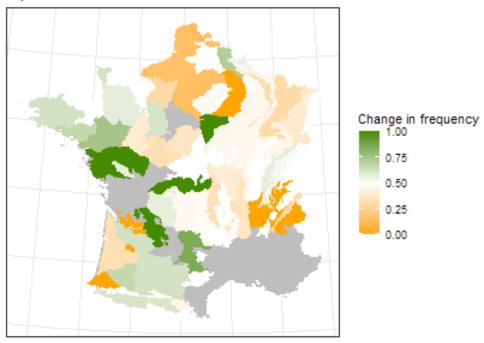
Euonymus europaeus

Topt = 8.75 Ntot = 3251



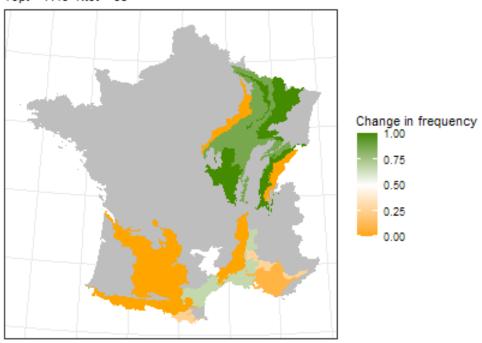
Dryopteris dilatata

Topt = 8.99 Ntot = 1800



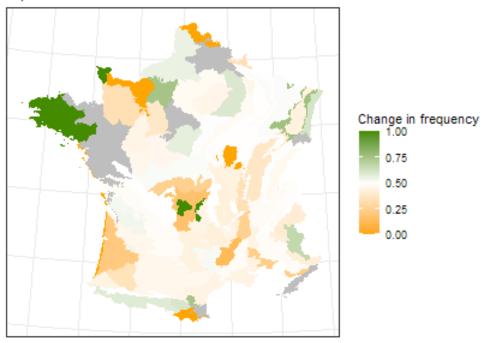
Phleum pratense

Topt = 7.49 Ntot = 63



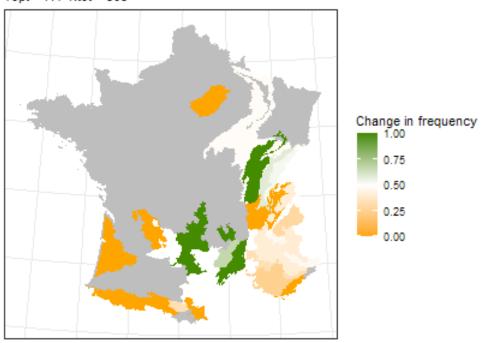
Carex flacca

Topt = 10.25 Ntot = 5917



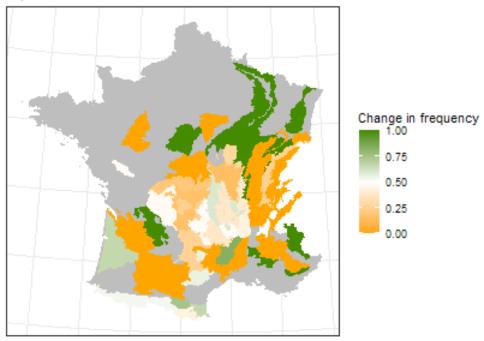
Sesleria caerulea

Topt = 7.4 Ntot = 305



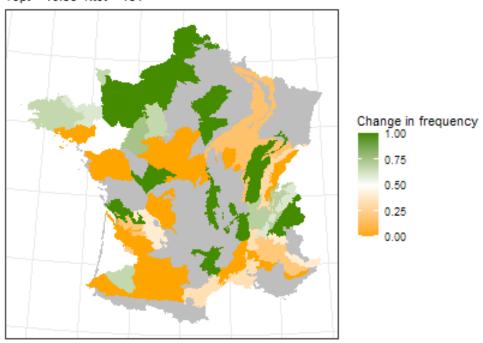
Linaria repens

Topt = 9.97 Ntot = 364



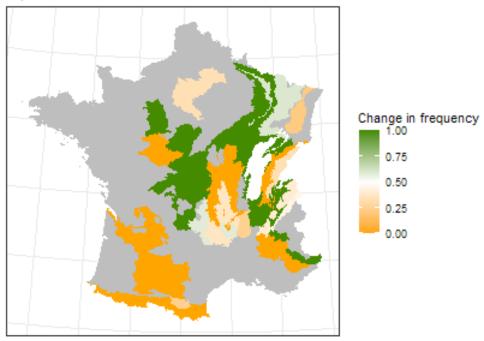
Primula vulgaris

Topt = 10.56 Ntot = 151



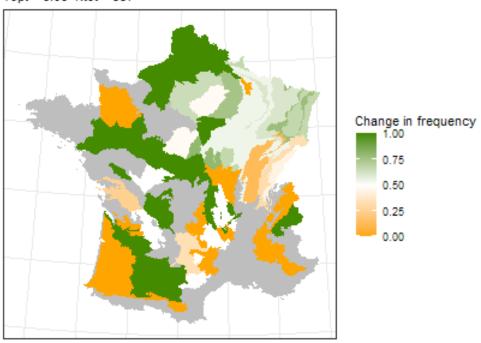
Stellaria nemorum

Topt = 5.52 Ntot = 123



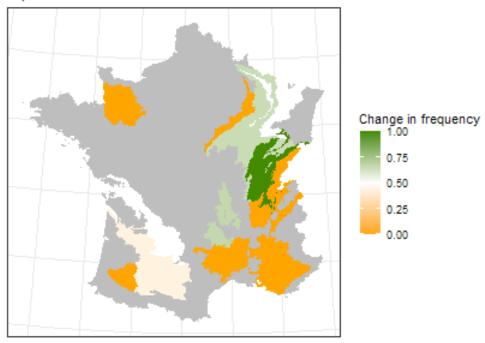
Ranunculus auricomus

Topt = 6.06 Ntot = 557



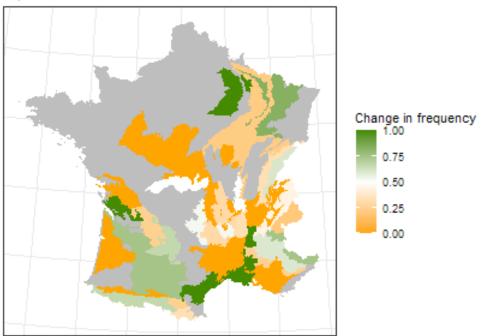
Lathyrus sylvestris

Topt = 12.21 Ntot = 61



Lathyrus pratensis

Topt = 6.07 Ntot = 202



Primula veris

Topt = 7.48 Ntot = 432

