

Online Resource 2. Descriptive statistics of the measured environmental and understory variables.

### **Initial understory response to experimental silvicultural treatments in a temperate oak-dominated forest**

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Table A2. Descriptive statistics of the measured environmental variables on plot-level. Std. dev. = standard deviation.

	<b>Min.</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Max.</b>
<b>Relative diffuse light (DIFN, %)</b>				
Total	1.01	30.17	27.27	84.41
Control	1.01	1.27	0.33	1.75
Clear-cutting	74.64	79.53	4.22	84.41
Gap-cutting	23.14	27.53	3.77	32.13
Preparation cutting	14.60	16.16	1.20	17.52
Retention tree group	20.85	26.36	4.90	31.42
<b>Relative soil water content (SWC, V/V%)</b>				
Total	-5.05	2.41	5.40	12.78
Control	-5.05	-1.76	2.47	0.41
Clear-cutting	1.85	6.17	3.07	9.05
Gap-cutting	6.34	9.10	2.70	12.78
Preparation cutting	-0.97	2.41	2.58	5.30
Retention tree group	-4.47	-3.88	0.66	-2.94

Table A3. List of the recorded 123 understory species. Frequency is the number of occurrences from the 1620 quadrats. Forest/non-forest classification is based on the coenosystematic categories of Horváth et al. (1995).

<b>Species</b>	<b>Cover (%)</b>	<b>Frequency</b>	<b>Forest/non-forest species</b>
<i>Acer campestre</i>	0.055	25	forest
<i>Ajuga reptans</i>	1.203	182	forest
<i>Alopecurus pratensis</i>	0.003	1	non-forest
<i>Anthriscus sylvestris</i>	0.032	4	forest
<i>Artemisia vulgaris</i>	0	1	non-forest
<i>Brachypodium pinnatum</i>	0.352	16	forest
<i>Bromus benekenii</i>	0.113	15	forest
<i>Buglossoides purpureocaerulea</i>	0.001	1	forest
<i>Calamagrostis epigeios</i>	0.191	30	non-forest
<i>Campanula persicifolia</i>	0.003	1	forest
<i>Campanula rapunculoides</i>	0.017	6	forest
<i>Capsella bursa-pastoris</i>	0	1	non-forest
<i>Cardamine bulbifera</i>	0.205	107	forest
<i>Cardamine impatiens</i>	0.003	1	forest
<i>Carex pairaei</i>	0.023	6	forest
<i>Carex pallescens</i>	0.002	2	non-forest
<i>Carex pilosa</i>	34.064	1251	forest
<i>Carpinus betulus</i>	2.267	583	forest
<i>Centaurium erythraea</i>	0.004	4	non-forest
<i>Cephalanthera longifolia</i>	0.004	3	forest
<i>Cerasus avium</i>	0.009	3	forest
<i>Chaemaecytisus supinus</i>	0	1	non-forest
<i>Chenopodium album</i>	0	2	non-forest
<i>Cirsium arvense</i>	0.08	25	non-forest
<i>Cirsium eriophorum</i>	0.031	5	non-forest
<i>Cirsium palustre</i>	0.004	2	non-forest
<i>Cirsium vulgare</i>	0.002	1	non-forest
<i>Clematis vitalba</i>	0.01	3	forest
<i>Clinopodium vulgare</i>	0.061	13	forest
<i>Convallaria majalis</i>	0.055	21	forest
<i>Conyza canadensis</i>	0.494	91	non-forest
<i>Cornus sanguinea</i>	0.018	5	forest
<i>Crataegus monogyna</i>	0.046	17	forest
<i>Cruciata glabra</i>	0.005	6	forest
<i>Dactylis polygama</i>	0.976	113	forest
<i>Digitalis grandiflora</i>	0.004	2	forest
<i>Dryopteris filix-mas</i>	0.014	6	forest
<i>Epilobium montanum</i>	0.225	78	forest
<i>Epipactis helleborine</i>	0.001	1	forest

<b>Species</b>	<b>Cover (%)</b>	<b>Frequency</b>	<b>Forest/non-forest species</b>
<i>Erigeron annuus</i>	0.18	49	non-forest
<i>Euonymus europaeus</i>	0.001	5	forest
<i>Euonymus verrucosus</i>	0.002	2	forest
<i>Euphorbia amygdaloides</i>	0.432	84	forest
<i>Fagus sylvatica</i>	0.008	5	forest
<i>Fallopia dumetorum</i>	0.016	14	non-forest
<i>Festuca gigantea</i>	0.025	1	forest
<i>Festuca heterophylla</i>	0.025	3	forest
<i>Filago arvensis</i>	0.001	1	non-forest
<i>Filago vulgaris</i>	0.006	1	non-forest
<i>Fragaria vesca</i>	0.128	54	forest
<i>Fraxinus ornus</i>	0.148	144	forest
<i>Galium aparine</i>	0.832	145	indifferent
<i>Galium odoratum</i>	2.561	474	forest
<i>Galium schultesii</i>	3.386	289	forest
<i>Genista tinctoria</i>	0.001	1	non-forest
<i>Geum urbanum</i>	0.067	32	forest
<i>Hedera helix</i>	0.325	118	forest
<i>Heracleum sphondylium</i>	0.006	1	indifferent
<i>Hieracium lachenalii</i>	0.003	3	forest
<i>Hieracium murorum</i>	0.015	13	forest
<i>Hieracium sabaudum</i>	0.032	11	forest
<i>Hypericum hirsutum</i>	0.093	34	forest
<i>Hypericum maculatum</i>	0.001	1	forest
<i>Hypericum perforatum</i>	0.346	100	indifferent
<i>Lactuca saligna</i>	0.005	2	non-forest
<i>Lactuca serriola</i>	0.015	5	non-forest
<i>Lapsana communis</i>	0.002	2	forest
<i>Lathyrus niger</i>	0.056	7	forest
<i>Lathyrus vernus</i>	0.075	29	forest
<i>Ligustrum vulgare</i>	0.028	10	forest
<i>Linaria vulgaris</i>	0.002	1	non-forest
<i>Luzula campestris</i>	0.001	1	non-forest
<i>Luzula luzuloides</i>	0.181	19	forest
<i>Lysimachia nummularia</i>	0.015	3	forest
<i>Lysimachia vulgaris</i>	0.017	5	non-forest
<i>Melampyrum pratense</i>	0.148	29	forest
<i>Melandrium album</i>	0.019	1	non-forest
<i>Melica uniflora</i>	25.3	1425	forest
<i>Melittis melissophyllum</i>	0.215	65	forest
<i>Moehringia trinervia</i>	0.016	22	forest
<i>Mycelis muralis</i>	0.09	74	forest
<i>Plantago major</i>	0.007	4	non-forest

<b>Species</b>	<b>Cover (%)</b>	<b>Frequency</b>	<b>Forest/non-forest species</b>
<i>Poa nemoralis</i>	2.345	154	forest
<i>Polygonatum multiflorum</i>	0.227	70	forest
<i>Populus canescens</i>	0	1	forest
<i>Prunella vulgaris</i>	0.042	12	indifferent
<i>Prunus spinosa</i>	0.002	1	forest
<i>Pulmonaria officinalis</i>	0.059	10	forest
<i>Quercus cerris</i>	0.088	24	forest
<i>Quercus petraea</i>	0.311	230	forest
<i>Ranunculus auricomus</i>	0.005	5	forest
<i>Rosa canina</i> agg.	0.043	22	forest
<i>Rubus fruticosus</i> agg.	1.111	64	indifferent
<i>Rumex acetosa</i>	0	1	non-forest
<i>Rumex sanguineus</i>	0.024	6	forest
<i>Salix capraea</i>	0.008	6	forest
<i>Sambucus ebulus</i>	0.015	1	non-forest
<i>Scrophularia nodosa</i>	0.317	54	forest
<i>Senecio jacobaea</i>	0	1	indifferent
<i>Senecio sylvaticus</i>	0.002	2	forest
<i>Solidago gigantea</i>	0.033	10	non-forest
<i>Sonchus arvensis</i>	0.005	1	non-forest
<i>Sorbus aucuparia</i>	0.001	1	forest
<i>Sorbus torminalis</i>	0.015	10	forest
<i>Stachys sylvatica</i>	0.045	4	forest
<i>Stellaria holostea</i>	0.673	151	forest
<i>Stellaria media</i>	0.03	57	indifferent
<i>Symphytum officinale</i>	0.002	1	non-forest
<i>Symphytum tuberosum</i>	0.004	3	forest
<i>Tanacetum corymbosum</i>	0.026	8	forest
<i>Taraxacum officinale</i>	0.028	17	non-forest
<i>Trifolium arvense</i>	0.003	4	non-forest
<i>Trifolium campestre</i>	0.002	2	non-forest
<i>Trifolium pratense</i>	0.001	3	non-forest
<i>Urtica dioica</i>	0.04	5	indifferent
<i>Veronica chamaedrys</i>	0.301	90	forest
<i>Veronica officinalis</i>	0.51	100	forest
<i>Vicia hirsuta</i>	0.473	167	non-forest
<i>Vicia sepium</i>	0.004	3	forest
<i>Vicia tetrasperma</i>	0.005	9	non-forest
<i>Viola alba</i>	0.065	96	forest
<i>Viola reichenbachiana</i>	0.239	134	forest
<i>Waldsteinia geoides</i>	0	2	forest

Table A4. Descriptive statistics of the understory species richness, total cover and average height on quadrat level. Std. dev. = standard deviation.

	<b>Min.</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Max.</b>
<b>Species richness</b>				
Total	0	4.6	2.2	15
Control	0	2.5	1.2	7
Clear-cutting	1	6.1	2.3	15
Gap-cutting	1	5.5	2.0	12
Preparation cutting	1	4.6	1.7	13
Retention tree group	1	4.3	1.5	10
<b>Total cover</b>				
Total	0.00	82.51	52.38	284.00
Control	0.00	33.45	25.60	113.00
Clear-cutting	7.00	127.3	34.16	284.00
Gap-cutting	16.20	111.79	40.78	241.00
Preparation cutting	0.10	86.05	51.36	251.00
Retention tree group	0.10	53.96	38.85	140.00
<b>Average height</b>				
Total	0.0	32.2	16.4	170.0
Control	0.0	19.2	7.3	45.0
Clear-cutting	10.0	42.7	13.9	120.0
Gap-cutting	5.0	45.3	16.8	170.0
Preparation cutting	5.0	32.3	11.5	70.0
Retention tree group	0.1	21.6	10.8	55.0