

Speed, J. D. M., Austrheim, G., Hester, A. J., Meisingset, E. L., Mysterud, A., Tremblay, J.-P., Øien, D.-I. and Solberg, E. J. 2014. General and specific responses of understory vegetation to cervid herbivory across a range of boreal forests. – *Oikos* doi: 10.1111/oik.01373

Appendix 1

Table A1. The productivity of different forest types in each of the regions. Forest productivity was extracted from maps produced by the Norwegian Forest and Landscape Institute (Björdal and Bjørkelo 2006), as the lower range limit in each productivity class. Productivity is given in units of timber production ($\text{m}^3 \text{1000 m}^{-2} \text{year}^{-1}$). Standard errors are given in parentheses. Note that productivity varies between regions due to regional conditions.

Region	Pine	Spruce	Deciduous
Gloppen	NA 0.71 (0.11)	NA	>1 (0)
Tingvoll	0.25 (0.09)	NA 0.35 (0.09)	>1 (0)
Telemark	0.21 (0.11)	0.40 (0.10)	NA
Trøndelag			NA

Björdal I. and Bjørkelo K. 2006. AR5 klassifikasjonssystem. Klassifikasjon av arealressurser. Håndbok fra Skog og landskap 01/2006: 25 p. – Norwegian Forest and Landscape Institute, Ås, Norway.

Table A2. Change in relative density of species over four years within and outside of exclosures in (a) moose-dominated spruce forests, (b) moose-dominated pine forests, (c) red deer-dominated deciduous forests and (d) red deer-dominated pine forests. In each forest type only species that constituted at least 0.5% of point intercepts in the baseline year are shown (corresponding to Fig. 5). Mean and standard errors are shown.

(a) Moose spruce	Unexclosed	Exclosed
<i>Avenella flexuosa</i>	-3.84 ± 1.91	-6.47 ± 1.87
<i>Blechnum spicant</i>	0.02 ± 0.12	-0.52 ± 0.35
<i>Calamagrostis sp</i>	-1.47 ± 0.75	-0.49 ± 0.26
<i>Chamaepericlymenum suecicum</i>	-1.11 ± 0.50	0.19 ± 0.10
<i>Deschampsia cespitosa</i>	-0.39 ± 0.62	0.39 ± 0.86
<i>Dryopteris expansa</i>	-0.39 ± 0.40	-0.26 ± 0.26
<i>Epilobium angustifolium</i>	-0.03 ± 0.15	1.55 ± 0.51
<i>Gymnocarpium dryopteris</i>	-0.41 ± 0.53	-1.61 ± 0.62
<i>Linnaea borealis</i>	-1.06 ± 0.77	0.19 ± 0.28
<i>Luzula pilosa</i>	-0.28 ± 0.19	-0.40 ± 0.24
<i>Melampyrum pratense</i>	-0.13 ± 0.40	-0.12 ± 0.27
<i>Populus tremula</i>	0.78 ± 0.40	-1.15 ± 0.61
<i>Pteridium aquilinum</i>	0.11 ± 0.49	0.65 ± 0.61
<i>Rubus idaeus</i>	-3.98 ± 1.21	-1.93 ± 1.25
<i>Sorbus aucuparia</i>	0.04 ± 0.34	1.88 ± 0.52
<i>Trientalis europaea</i>	-1.33 ± 0.47	-1.03 ± 0.64
<i>Vaccinium myrtillus</i>	1.89 ± 1.58	0.29 ± 1.20
<i>Vaccinium vitis-idaea</i>	1.70 ± 1.04	0.59 ± 0.71

(b) Moose pine	Unexclosed	Exclosed
<i>Avenella flexuosa</i>	-1.91 ± 1.24	1.45 ± 1.09
<i>Betula pubescens</i>	0.58 ± 0.35	0.95 ± 0.42
<i>Calluna vulgaris</i>	0.92 ± 1.55	7.19 ± 1.87
<i>Chamaepericlymenum suecicum</i>	-0.09 ± 0.24	0.38 ± 0.17
<i>Empetrum nigrum</i>	-0.26 ± 0.76	0.98 ± 0.62
<i>Linnaea borealis</i>	0.09 ± 0.18	-0.35 ± 0.44
<i>Melampyrum pratense</i>	0.95 ± 0.67	-0.70 ± 0.74
<i>Rubus idaeus</i>	-1.33 ± 0.69	-0.97 ± 0.74
<i>Vaccinium myrtillus</i>	1.93 ± 1.98	-8.74 ± 2.12
<i>Vaccinium uliginosum</i>	-0.62 ± 0.69	0.58 ± 0.62
<i>Vaccinium vitis-idaea</i>	-2.53 ± 1.54	-3.75 ± 1.62

(c) Red deer deciduous	Unexclosed	Exclosed
<i>Agrostis capillaris</i>	-4.62 ± 1.36	-6.15 ± 1.30
<i>Anthoxanthum odoratum</i>	0.39 ± 0.45	-0.26 ± 0.33
<i>Avenella flexuosa</i>	5.12 ± 1.66	0.87 ± 1.62
<i>Deschampsia cespitosa</i>	3.36 ± 1.28	2.40 ± 1.35
<i>Galium odoratum</i>	-0.54 ± 0.33	0.03 ± 0.72
<i>Galium saxatile</i>	-0.60 ± 0.25	-0.63 ± 0.33
<i>Gymnocarpium dryopteris</i>	-0.67 ± 0.40	-0.55 ± 0.41
<i>Holcus mollis</i>	-1.11 ± 0.47	0.14 ± 0.36
<i>Luzula pilosa</i>	0.17 ± 0.39	0.23 ± 0.33
<i>Molinia caerulea</i>	1.08 ± 0.84	-0.54 ± 0.44
<i>Oxalis acetosella</i>	0.08 ± 0.75	-0.30 ± 1.06
<i>Phegopteris connectilis</i>	-0.03 ± 0.32	0.53 ± 0.35
<i>Potentilla erecta</i>	-0.57 ± 0.21	0.15 ± 0.19
<i>Rubus idaeus</i>	-1.22 ± 0.74	-0.68 ± 0.54
<i>Rumex acetosa</i>	-0.05 ± 0.13	-0.33 ± 0.21
<i>Sorbus aucuparia</i>	0.07 ± 0.18	0.00 ± 0.29
<i>Stellaria nemorum</i>	-1.14 ± 0.84	-0.05 ± 1.28
<i>Trientalis europaea</i>	-0.03 ± 0.12	0.49 ± 0.35
<i>Vaccinium myrtillus</i>	0.38 ± 0.80	2.96 ± 0.99
<i>Vaccinium vitis-idaea</i>	-0.15 ± 0.08	-0.45 ± 0.23
<i>Viola sp.</i>	-0.93 ± 0.51	-0.51 ± 0.28

(d) Red deer pine	Unexclosed	Exclosed
<i>Agrostis capillaris</i>	-1.46 ± 0.66	-2.11 ± 0.95
<i>Avenella flexuosa</i>	-4.61 ± 1.61	-0.55 ± 1.50
<i>Blechnum spicant</i>	0.00 ± 0.23	-0.84 ± 0.52
<i>Calluna vulgaris</i>	-1.53 ± 0.74	-1.19 ± 0.96
<i>Carex sp</i>	-0.65 ± 0.43	-0.76 ± 0.45
<i>Chamaepericlymenum suecicum</i>	-0.08 ± 0.53	-1.69 ± 0.69
<i>Deschampsia cespitosa</i>	-0.08 ± 0.08	-1.17 ± 0.94
<i>Gymnocarpium dryopteris</i>	0.28 ± 0.53	0.42 ± 0.29
<i>Juniperus communis</i>	-1.16 ± 0.63	-0.05 ± 0.06
<i>Linnaea borealis</i>	-0.70 ± 0.36	-1.25 ± 0.40
<i>Maianthemum bifolium</i>	-0.16 ± 0.13	0.12 ± 0.41
<i>Melampyrum</i>	0.39 ± 0.34	0.86 ± 0.47
<i>Melampyrum sylvaticum</i>	-0.81 ± 0.26	-0.80 ± 0.35
<i>Molinia caerulea</i>	0.50 ± 0.32	-2.01 ± 1.05
<i>Oxalis acetosella</i>	0.77 ± 0.79	0.50 ± 0.36
<i>Phegopteris connectilis</i>	1.29 ± 0.53	1.23 ± 0.93
<i>Potentilla erecta</i>	-0.47 ± 0.25	-0.45 ± 0.36
<i>Pteridium aquilinum</i>	0.21 ± 0.75	-0.32 ± 0.30
<i>Vaccinium myrtillus</i>	12.71 ± 2.08	10.60 ± 2.22
<i>Vaccinium uliginosum</i>	0.18 ± 0.40	-0.11 ± 0.63
<i>Vaccinium vitis-idaea</i>	-4.32 ± 1.18	-0.74 ± 1.11
<i>Viola sp.</i>	-0.41 ± 0.60	-0.30 ± 0.30