Laurent L, Mårell A, Balandier P, Holveck H, Saïd S (2017).

Understory vegetation dynamics and tree regeneration as affected by deer herbivory in temperate hardwood forests.

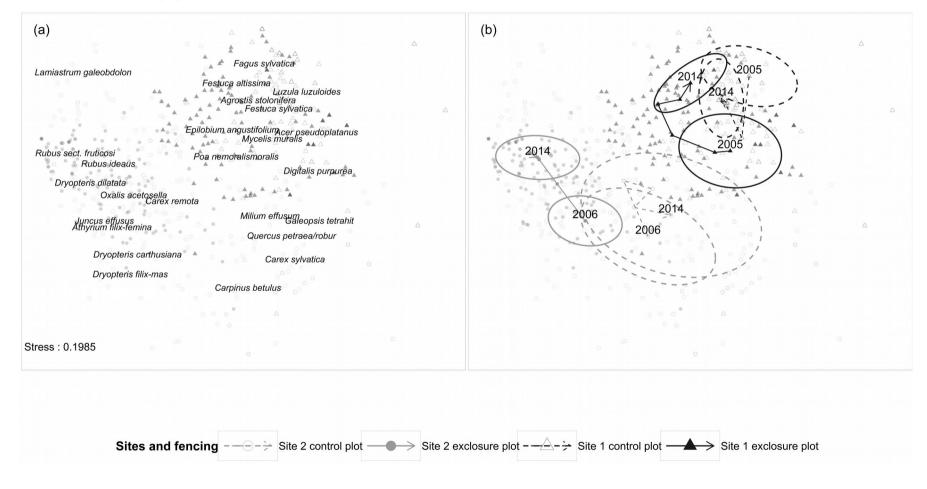
iForest – Biogeosciences and Forestry – doi: 10.3832/ifor2186-010

## **Supplementary Material**

**Tab. S1** - Summary table of herbaceous species presence/ abundance according to site and herbivory modality. Species with a cover of more than 2.5 % in more than 5 % of the subplots of at least one site. Mean abundance ± SE (frequency in %), all years taken together. Results from an in situ experiment over an eight-year period at two different sites in a temperate hardwood forest in the North-East of France ("La petite Pierre"). We used paired control plot (unfenced area, free access to deer) and exclosure (fenced area, excluding deer) at both sites.

Species	Plant function group	Site 1		Site 2	
		control	exclosure	control	exclosure
Agrostis stolonifera	graminoids	$0.4 \pm 0.2 \ (4.8)$	$1.9 \pm 0.7 \ (10.8)$	$0\pm0\;(0.7)$	$0\pm0$ (0)
Athyrium filix-femina	ferns	$0\pm0~(0)$	$0\pm0$ (0)	$1 \pm 0.2  (14.9)$	$0.4 \pm 0.2 \ (6.7)$
Carex remota	graminoids	$1.6 \pm 0.5 \ (15.2)$	$4.5 \pm 0.7  (40.5)$	$3.7 \pm 0.6 (32.4)$	$5.3 \pm 0.9 \ (34.7)$
Carex sylvatica	graminoids	$0 \pm 0 \ (3.8)$	$4.6 \pm 0.9 \ (37.8)$	$0.4 \pm 0.1 \ (13.5)$	$0.6 \pm 0.2 \ (8.7)$
Digitalis purpurea	forbs	$0.7 \pm 0.3 \ (7.6)$	$2 \pm 0.5 \ (16.2)$	$0.1 \pm 0.1 (1.1)$	$0\pm0$ (0)
Dryopteris carthusiana	ferns	$0\pm0~(0)$	$0\pm0~(0.9)$	$0.9 \pm 0.2 \ (16.7)$	$1.2 \pm 0.3 \; (19.3)$
Dryopteris dilatata	ferns	$0\pm0~(0)$	$0\pm0$ (0)	$1 \pm 0.2 (14.2)$	$0.3 \pm 0.1 \ (7.3)$
Dryopteris filix-mas	ferns	$0\pm0~(0)$	$0\pm0$ (0)	$2.2 \pm 0.5 \ (20.4)$	$2.4 \pm 0.5 \ (27.3)$
Epilobium angustifolium	forbs	$0\pm0~(0)$	$1.7 \pm 0.7  (16.2)$	$0\pm0$ (0)	$0\pm0~(0)$
Festuca altissima	graminoids	$0.8 \pm 0.3 \ (12.4)$	$1 \pm 0.3 \ (12.6)$	$0 \pm 0 \ (1.5)$	$0.3 \pm 0.2$ (4)
Festuca sylvatica	graminoids	$0.8 \pm 0.3 \ (9.5)$	$5.9 \pm 0.9  (44.1)$	$0 \pm 0 \ (1.5)$	$0 \pm 0 \ (1.3)$
Galeopsis tetrahit	forbs	$0.9 \pm 0.3 \ (46.7)$	$4.6 \pm 1.1 \ (45)$	$0.3 \pm 0 \ (23.3)$	$0.3 \pm 0.1 \ (7.3)$
Juncus effusus	graminoids	$0\pm0~(0)$	$0.3 \pm 0.2 \ (4.5)$	$2.1 \pm 0.4 (22.5)$	$5.5 \pm 1 \ (33.3)$
Lamiastrum galeobdolon	forbs	$0 \pm 0 \ (2.9)$	$0\pm0$ (0)	$1.3 \pm 0.3$ (8)	$0\pm0~(0)$
Luzula luzuloides	graminoids	$2.3 \pm 0.5 (53.3)$	$4 \pm 0.7 \ (32.4)$	$0.3 \pm 0.1 \ (7.6)$	$0\pm0$ (4)
Milium effusum	graminoids	$0.2 \pm 0.1 \ (4.8)$	$1.4 \pm 0.4  (17.1)$	$0.1 \pm 0.1 \ (4.4)$	$0.1 \pm 0.1$ (6)
Mycelis muralis	forbs	$0.1 \pm 0 \ (5.7)$	$1.8 \pm 0.4  (37.8)$	$0\pm0$ (0)	$0\pm0~(0.7)$
Oxalis acetosella	forbs	$0 \pm 0 \ (1)$	$0\pm0~(0.9)$	$0.7 \pm 0.2 \ (9.8)$	$0.6 \pm 0.2$ (8)
Poa nemoralis	graminoids	$0.6 \pm 0.3 \ (9.5)$	$0.8 \pm 0.3$ (9)	$0.3 \pm 0.1 \ (3.3)$	$0.1 \pm 0.1 \; (2.7)$
Rubus idaeus	rubus	$0.5 \pm 0.4 \ (3.8)$	$6.5 \pm 1.4(39.6)$	$2.5 \pm 0.4$ (24)	$8.9 \pm 1.2 \ (48)$
Rubus sect. fruticosi	rubus	$0.2 \pm 0.1$ (6.7)	$6.7 \pm 1.4  (46.8)$	$16.3 \pm 1.6 (51.6)$	$60.5 \pm 2.5$ (98)

**Fig.S1** - NMDS ordination of plant community cover recorded in the presence of deer (control plots - dotted line) and in the absence of deer (exclosures - solid line) for sites 1 and 2 from 2005 to 2014. a) Species centroid plots. b) Ellipse per year for Site/Fencing. A global solution was reached with two dimensions: 20 iterations achieved a minimum stress of 0.19.



**Fig. S2** - Julve plant community light index for sites 1 and 2 from 2005 to 2014. Error bars indicate standard errors of the mean. Wilcoxon tests were used to estimate differences between control and exclosure plots at each given year; the results of the tests are displayed at the top of each panel: ns = non-significant; \* = p-value<0.05; \*\* = p-value<0.01; \*\*\* = p-value<0.001. Letters next to points indicate differences between successive years at a 5% probability (Kruskal-Wallis): lower and upper case letters are for control and exclosure plots, respectively.

