

Appendix

Table A1 Different cases of describing negligibility effects of the variables

richness	$\geq 95\%$ probability	abundance	effects
> exp(0.2)	> exp(0.5)		strongly positive
> exp(0.1)	> exp(0.25)		positive
$\in [\exp(-0.2); \exp(0.2)]$	$\in [\exp(-0.5); \exp(0.5)]$		weak
$\in [\exp(-0.1); \exp(0.1)]$	$\in [\exp(-0.25); \exp(0.25)]$		very weak
< exp(0.2)	< exp(0.5)		strongly negative
< exp(0.1)	< exp(0.25)		negative
-	-		uncertain

Table A2-1 Multiplicative effect of a substantial variation in ecological variables on individual species abundance

Models	Variables	<i>Cabe</i>	<i>Capi</i>	<i>Defl</i>	<i>Fehe</i>	<i>Hehe</i>	<i>Homo</i>	<i>Hypu</i>
Subplot*	COtoBO, STP30	0.16 [0;10.53]		0.03 [0;38.51]	0.89 [0.2;10.4]		2.14 [1.00;5.08]	0 [0;3453499.66]
	COtoTR, STP30	0.15 [0;101.2]		0.52 [0.08;14.63]	0.75 [0.13;13.81]		2.11 ⁺ [1.15;4.93]	0.51 [0;39875478.2]
	COtoBE, STP30	0.44 [0;32.53]		1.09 [0.08;12.02]	0.66 [0.19;12.62]		1.67 [0.81;4.51]	0.13 [0;4205720.54]
	COtoBO, STP50	8.16 [0.39;73.98]		0.03 [0;314329.43]	1.48 [0.02;10.44]		3.99 [0;3698603.72]	0.00 [0.00;1.00]
	COtoTR, STP50	0.82 [0.01;32.46]		0.00 [0;2360506.51]	0.4 [0.01;4.89]		210.28 [0.00;1577505.31]	119.12 [0;2277796.68]
	COtoBE, STP50	5.91 [0.01;50.47]		0.34 [0;3.25]	1.8 [0.12;16.79]		558.7 [0.00;2374051.28]	896.06 [0;23581180.29]
	COtoBO, STP63	1.14 [0.01;11.6]		509.36 [0;1433733.67]	103.55 [0.45;4997944.41]		0.27 [0.02;2084011.1]	3761829.49 ⁺⁺ [1500931.63;204875274.57]
	COtoTR, STP63	0.10 [0.01;2.34]		143.18 [0;1615470.41]	29.82 [0;1550266.29]		0.02 [0.00;1361095.47]	41402185.49 ⁺⁺ [7499550.71;235998507.75]
	COtoBE, STP63	0.72 [0.05;9.43]		1522.26 [0;3221966.57]	257.10 ⁺⁺ [2.83;5118021.62]		1.08 [0.03;49.07]	25781073.34 ⁺⁺ [3399414.88;181376487.07]
	COtoBO		3.63 [0.13; 3.11E+29]					
Subplot * G	COtoTR		21.00 [0.16; 479781.16]					
	COtoBE		44.82 [0.42; 1513645.01]					
	G (CO)		0.03 [0.00;36.51]					
	G (BO)		1.49 [0.00;4.11]					

G (BE)		2.64 [0.37;638.91]
G (TR)		1.61 [0.17;205.87]
PR	PR	0.67 [0.53; 0.85] 0.67 [0.53; 0.85]
PR + STP	STP30to5 0 STP50to6 3	5.99 ⁺⁺ [2.92;9.37] 1.42 [0.87;1.94]

Variations were: 0.5 MPa for PR increment , 1 for Nsam, 10.5 cm for MaxD, 0.25 g.cm⁻³ for BD, 6.5 % for moisture, 6 m³.cm⁻³for WCS and 5 m².ha⁻¹ for basal area. For stand type (STP), we calculated the associated multiplicative coefficient by supposing the stand changed from one type to the successive type: STP30 to STP50 stands (STP_{30to50}), and STP50 to STP63 stands (STP_{50to63}). The multiplicative coefficient for subplot location was obtained by calculating the difference between the subplot locations and the paired control (COtoBE, COtoTR and COtoBO). For quadratic models, we obtained the multiplicative coefficient for the same variation as above but calculated at first, second and third quartiles of the explanatory variable. The multiplicative coefficient for subplot location was obtained by calculating the difference between the subplot locations and the paired control (COtoBE, COtoTR and COtoBO). “0” and “00” indicate that the effect has a *p*-value of at least 0.95 of being negligible at two different levels (see text). “+” and “-” indicate that the effect has a *p*-value of at least 0.95 of being negative and non-negligible at two different levels. “⁺” and “⁺⁺” indicate that the effect has a *p*-value of at least 0.95 of being positive and non-negligible at two different levels. Values in brackets are the 95% confidence intervals of the coefficients. *Cabe*: *Carpinus betulus*, *Capi*:*Carex pilulifera*, *Defl*: *Deschampsia flexuosa*, *Fehe*: *Festuca heterophylla*, *Hehe*:*Hedera helix*, *Homo*:*Holcus mollis*, *Hypu*:*Hypericum pulchrum*, *Lope*:*Lonicera periclymenum*, *Meun*:*Melica uniflora*, *Pone*: *Poa nemoralis*, *Post*: *Potentilla sterilis*, *Qusp*: *Quercus* sp, *Rufr*: *Rubus fruticosus*, *Tesc*: *Teucrium scorodonia*, *Vire*: *Viola riviniana* & *reichenbachiana*. Some species aggregates were defined (*Viola riviniana* & *reichenbachiana*) due to identification problems. Oak was determined only at the genus level due to lack of information to identify the species at seedling stage (*Quercus* sp).

Table A2-2 Multiplicative effect of a substantial variation in ecological variables on individual species abundance

Models	Variables	<i>Lope</i>	<i>Meun</i>	<i>Pone</i>	<i>Post</i>	<i>Qusp</i>	<i>Rufr</i>	<i>Tesc</i>	<i>Vire</i>
Subplot.locati on	COtoBO		0.65 [0.24; 3.46]			9.23 ⁺⁺ [6.29;19.19]		3.40 ⁺⁺ [1.52; 27.24]	
	COtoTR		2.42 [0.84; 5.16]			1.33 [0.94;1.91]		27.17 ⁺⁺ [11.13; 62.8]	
	COtoBE		2.28 [0.85; 4.61]			1.70 [1.18;2.46]		26.48 ⁺⁺ [10.53; 62.36]	
Subplot* STP	COtoBO, STP30						1.28 [0;57426880.53]		
	TRtoCO, STP30						47.29 ⁺⁺ [0.2;300.9]		
	COtoBE, STP30						27.69 [0.19;327.09]		
	COtoBO, STP50						0.29 [0;2199965.86]		
	COtoTR, STP50						0 [0;616579.51]		
	COtoBE, STP50						0.63 [0;518042.58]		
	COtoBO, STP63						27.62 [0;1408914.58]		
	COtoTR, STP63						466.59 [0;13590209.3]		
	COtoBE, STP63						349.99 [0;13083888.5]		
	COtoBO		17.96 [0.06; 88.03]	204.45 [0;764525.14]					
Subplot * G	COtoTR		26.15 [0.24; 180.04]	2402.33 [0;4215.23]					
	COtoBE		45.36 [0.64; 63.05]	869.5 [0.25;1650596.65]					

	G (CO)	0.02 [0.01;7.55]	0.18 [9.03;2507.85]
	G (BO)	1.52 [0.06;4.00]	1.51 [0.10;5.52]
	G (BE)	0.51 [0.12;9.69]	1.56 [0.38;85.99]
	G (TR)	0.70 [0.08;7.48]	1.71 [0.17;14.28]
PR	PR	0.76 ⁰ [0.66; 0.92]	
	Nsam		0.60 [0.36; 0.96]
Nsam + STP	STP30to50		8.76 ⁺⁺ [4.39; 12.02]
	STP50to63		1.01 ⁰ [0.72; 1.39]

The legend is the same as for Table A4-1.

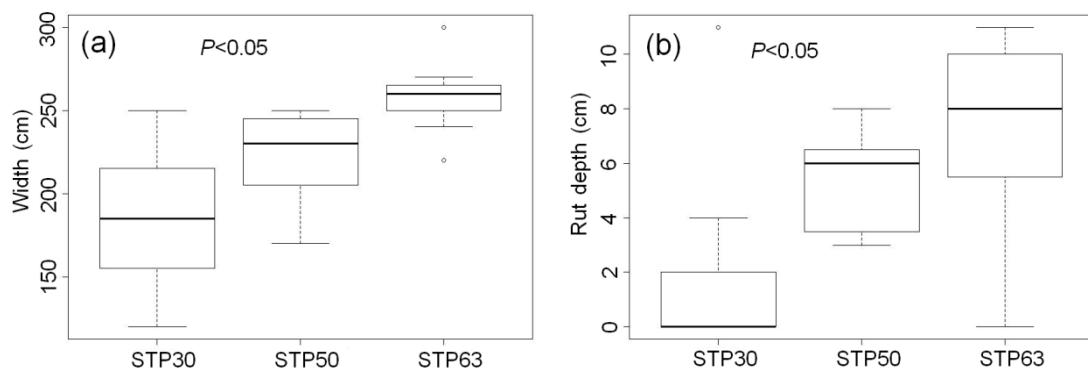


Fig. A1 Differences in skid trail width (a) and rut depth (b) among the three stand types (STP30, STP50 and STP63).