

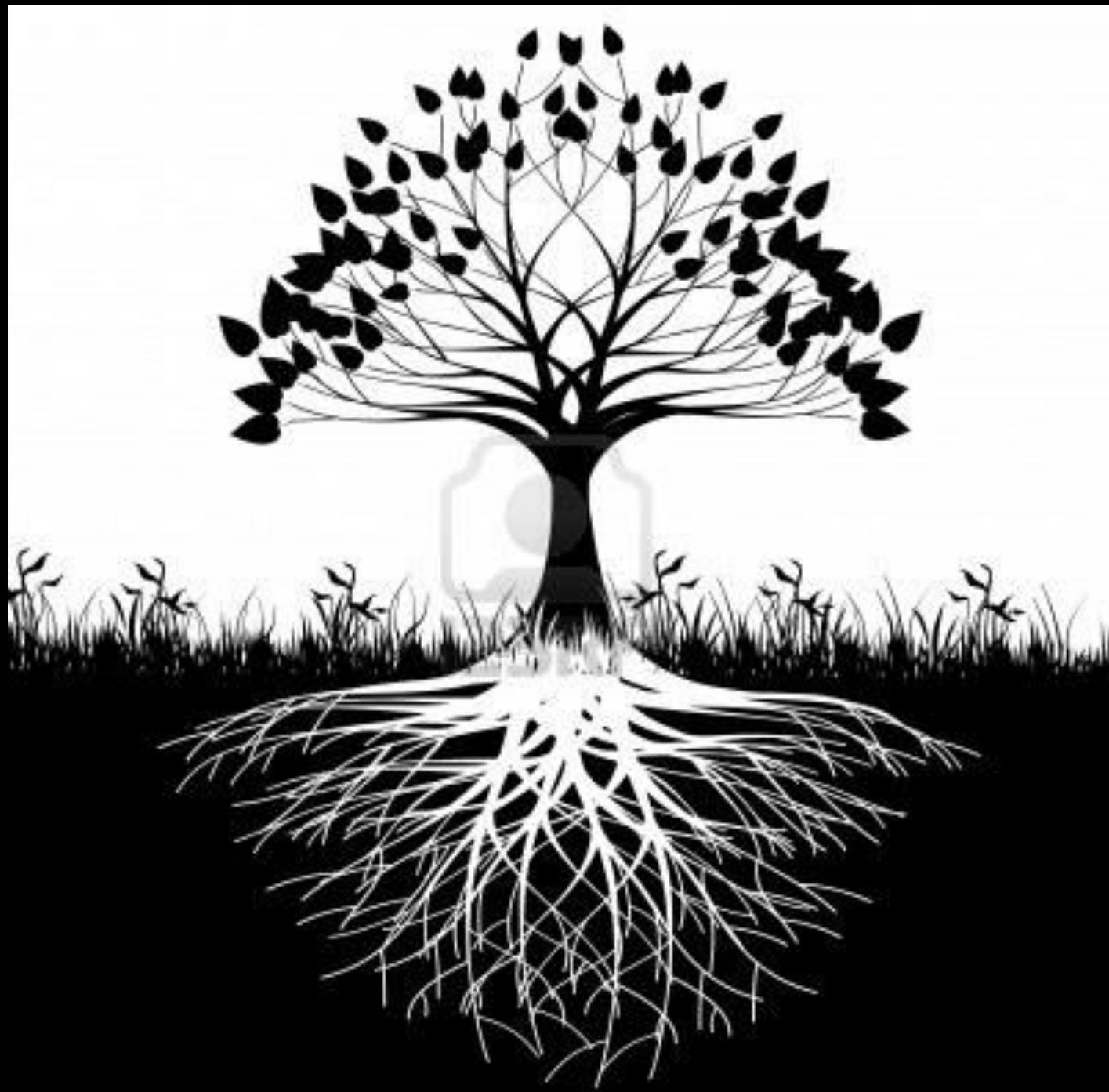


LES RELATIONS CACHÉES DES ARBRES

Annie DesRochers, PhD
Professeure-chercheure







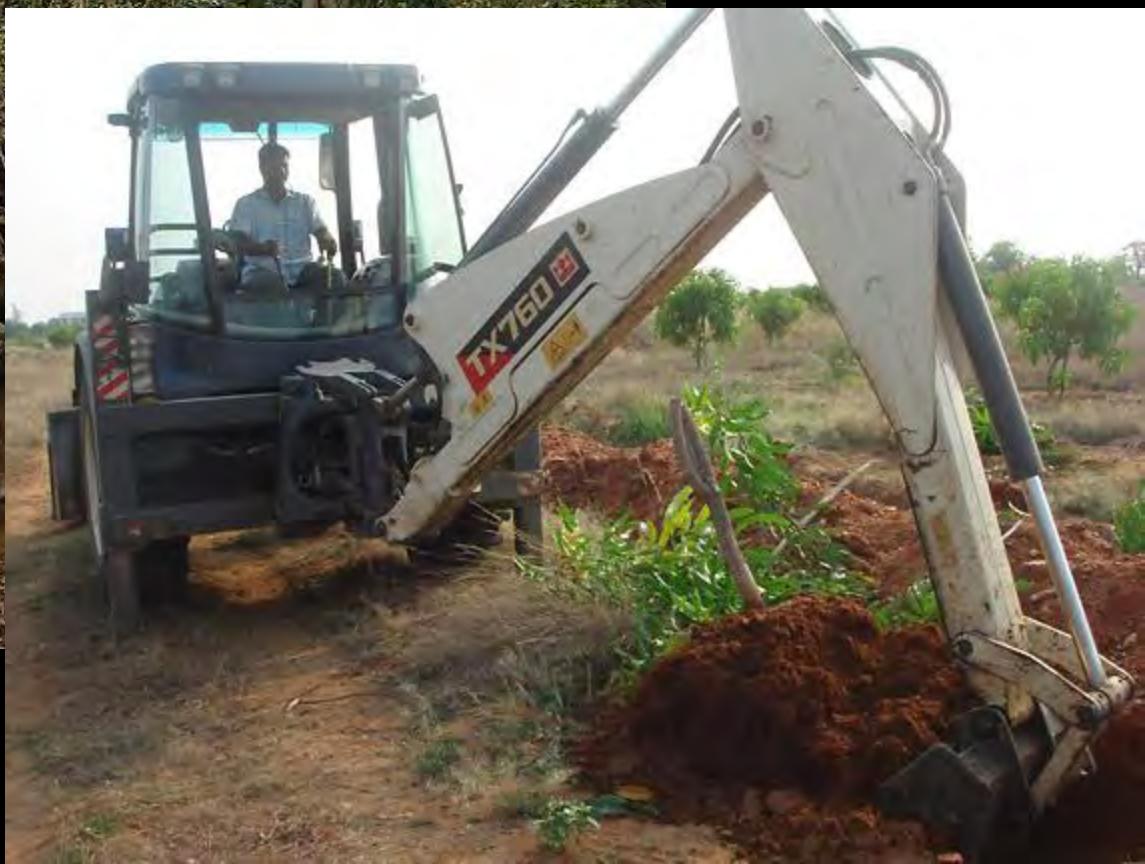


Peuplier baumier (photo: Kokouvi Adonsou)

Forêt = ensemble d'arbres, individus en compétition les uns avec les autres

- Lumière
- Espace
- Eau
- Minéraux





Populus tremuloides



Populus tremuloides



DesRochers et Lieffers 2001 J. Veg. Sci.



Greffes racinaires présentes chez plus de 150 espèces
(Bormann 1966)

- Spécialement chez les différentes espèces de pin



Picea mariana



Abies alba





Pinus sylvestris



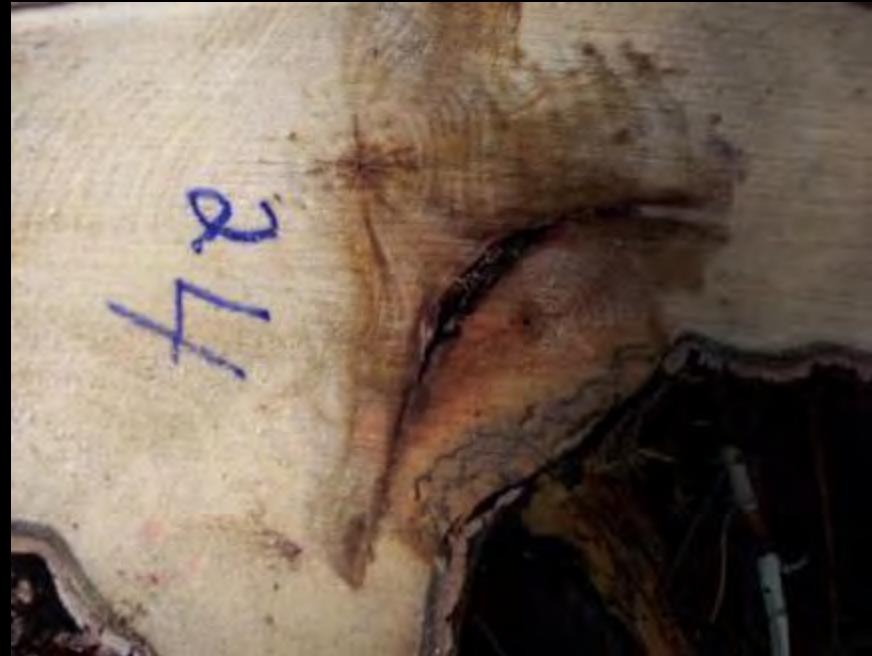
Pinus nigra

Greffé racinaire



Emilie Tarroux, UQAT

Greffes entre clones différents ou non



Jelinkova et al. 2009, Am J Bot; Adonsou et al. Ecol Evol 2016







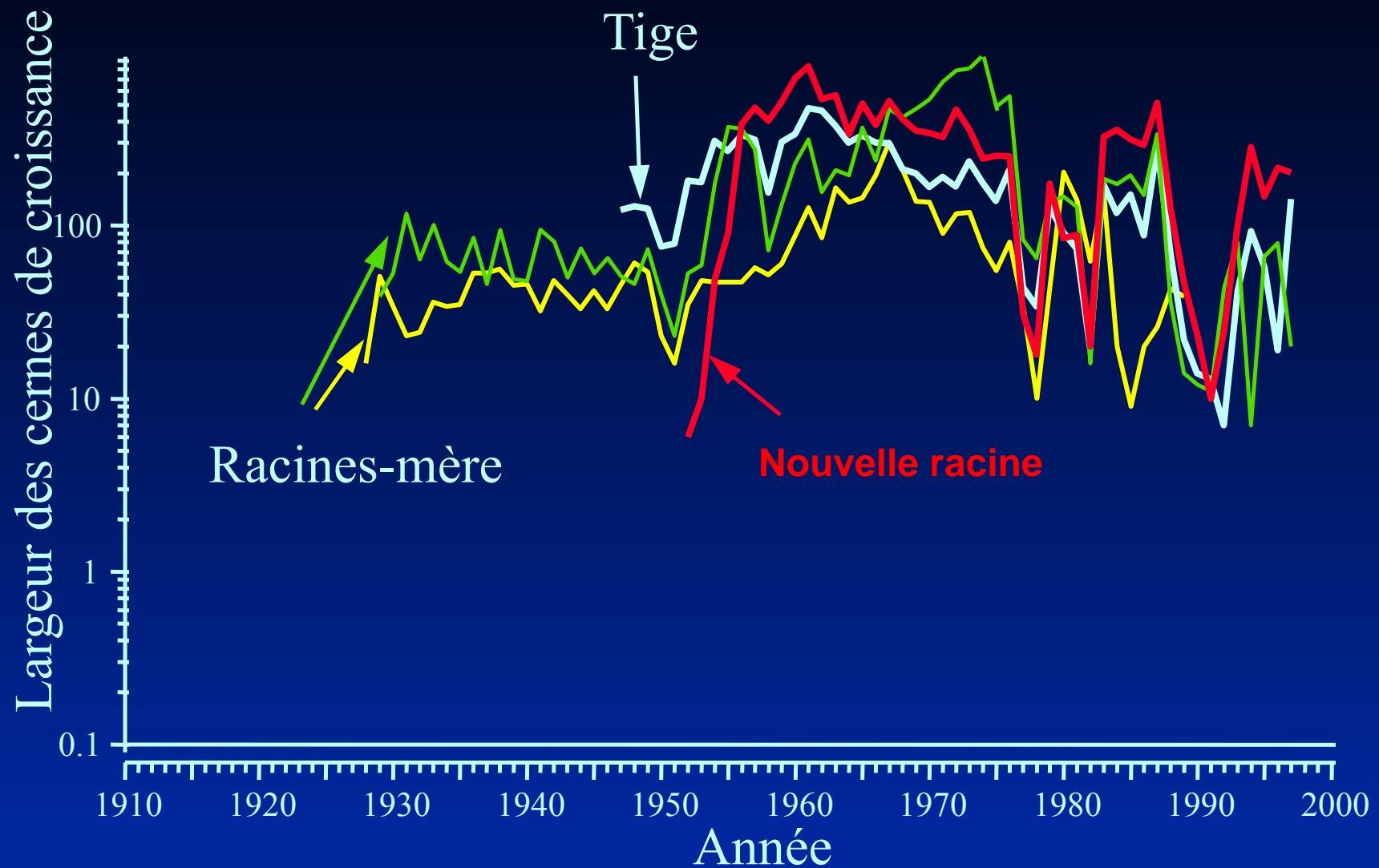






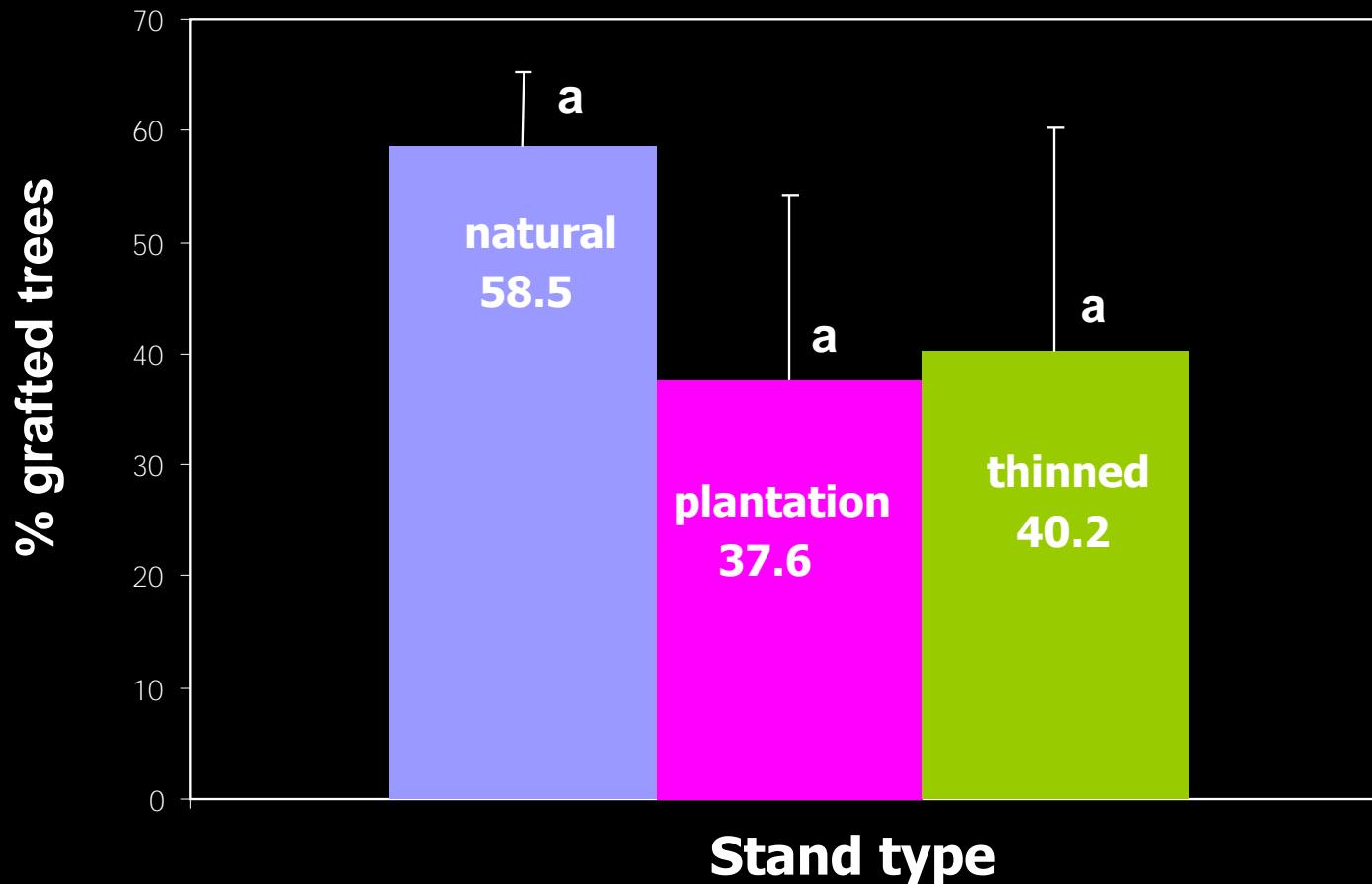




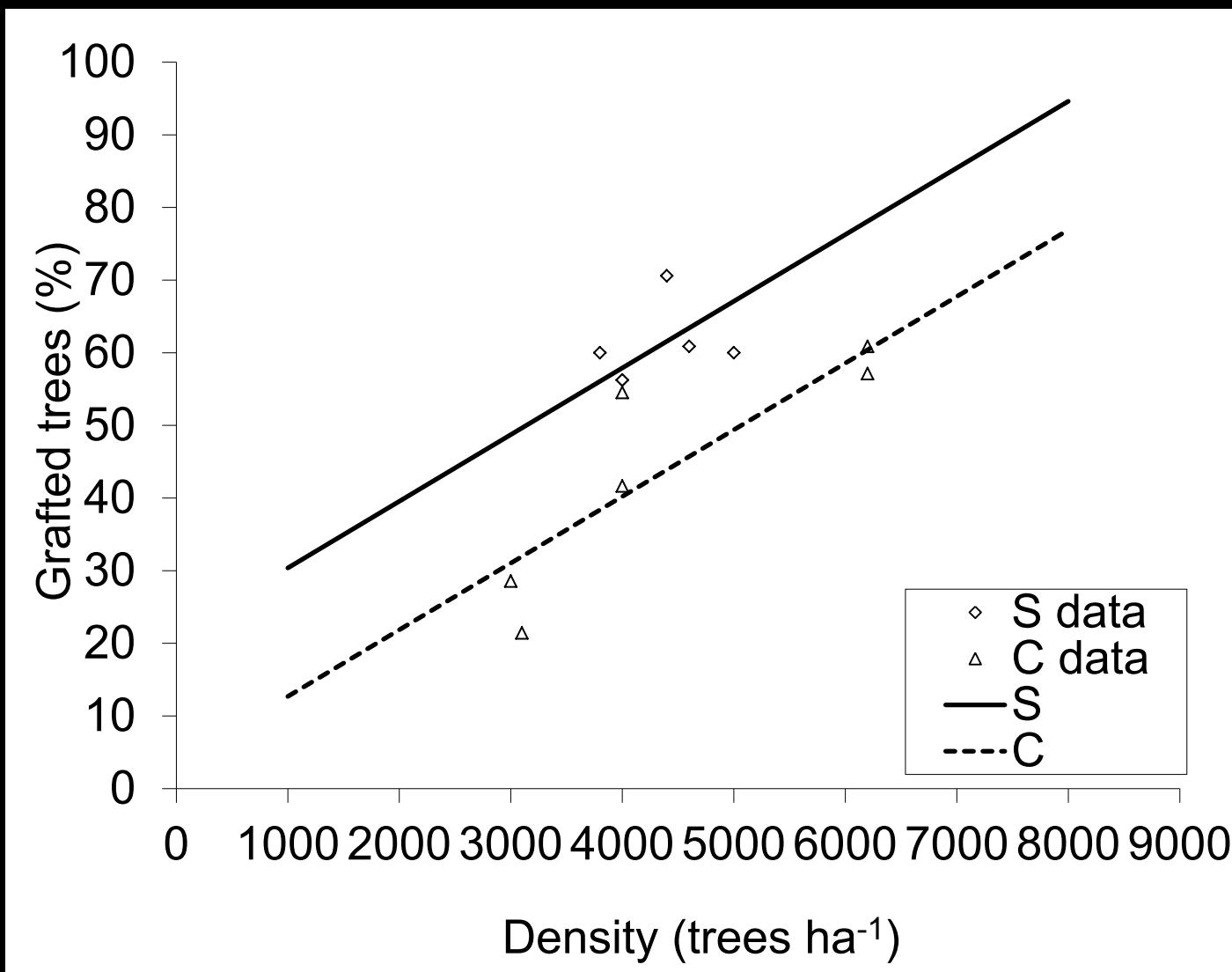


Chez le pin gris:

- 21-71% d'arbres greffés (pas de différence entre peuplements naturels et plantations)



Plus de greffes dans le sable que dans l'argile



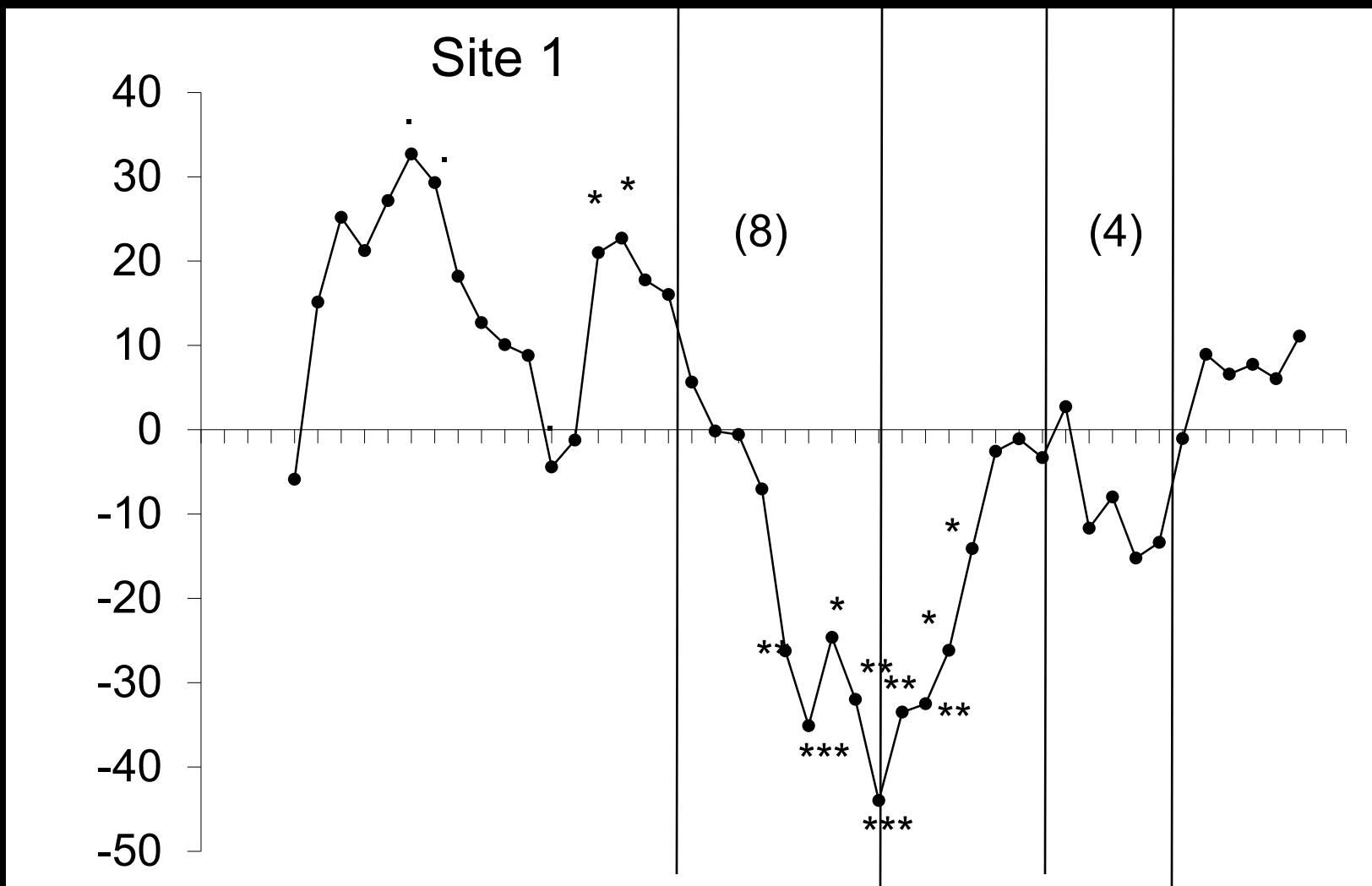
Distance (m)

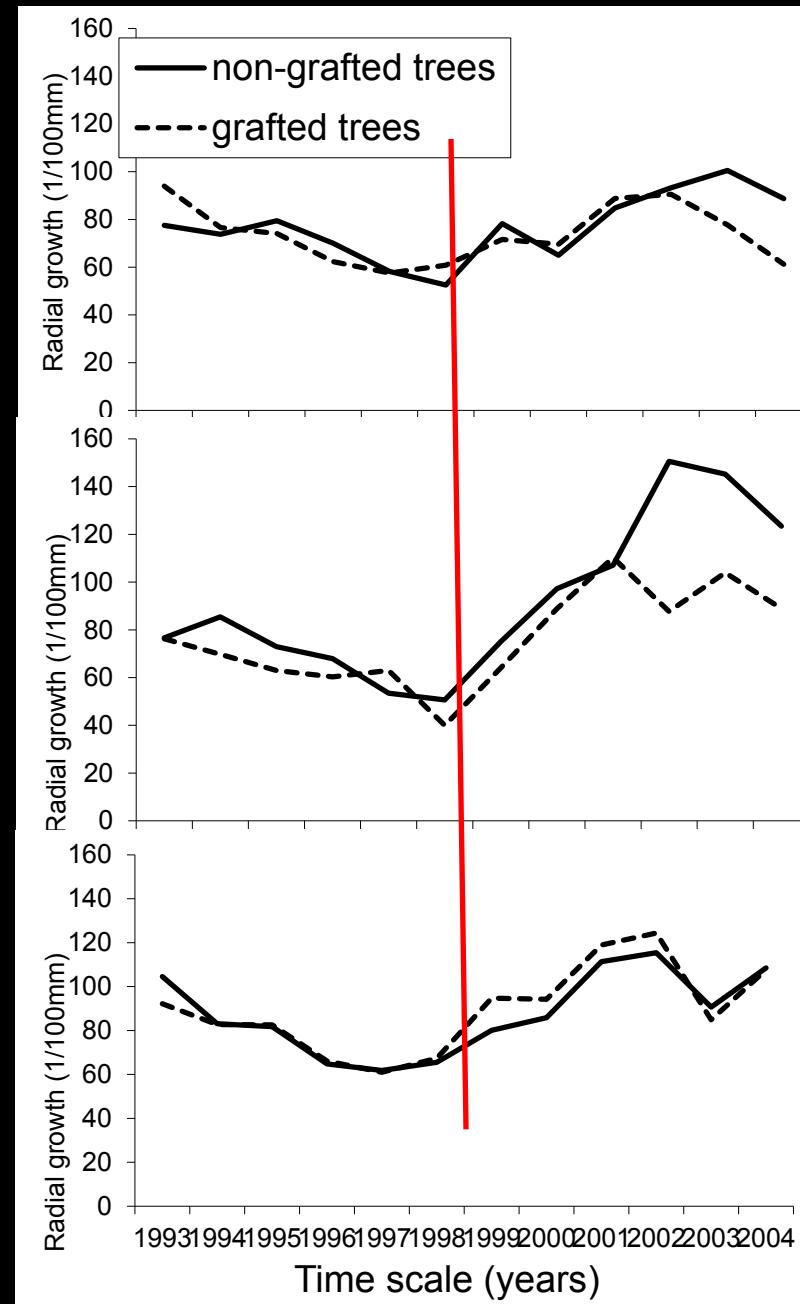
90% des
greffes

Percent	Percentile	Conf.	Li
0 , 1	3 , 8 8 7 4 3	3 , 3 1	
0 , 5	3 , 2 5 3 2 8	2 , 8 2	
1 , 0	2 , 9 7 8 8 7	2 , 6 1	
2 , 0	2 , 7 0 2 4 5	2 , 3 9	
3 , 0	2 , 5 3 9 0 5	2 , 2 6	
4 , 0	2 , 4 2 1 9 1	2 , 1 6	
5 , 0	2 , 3 3 0 0 9	2 , 0 8	
6 , 0	2 , 2 5 4 2 7	2 , 0 2	
7 , 0	2 , 1 8 9 4 8	1 , 9	
8 , 0	2 , 1 3 2 7 5	1 , 9	
9 , 0	2 , 0 8 2 1 6	1 , 8 7	
10 , 0	2 , 0 3 6 4 1	1 , 8	
15 , 0	1 , 8 5 4 5 8	1 , 6	
20 , 0	1 , 7 1 7 6 8	1 , 5 2	
25 , 0	1 , 6 0 4 6 1	1 , 3 9	
30 , 0	1 , 5 0 5 8 4	1 , 2 8	
35 , 0	1 , 4 1 6 1 2	1 , 1 7	
40 , 0	1 , 3 3 2 1 8	1 , 0 7	
45 , 0	1 , 2 5 1 6 9	0 , 9 6 7	
50 , 0	1 , 1 7 2 8 2	0 , 8 6 4	
55 , 0	1 , 0 9 3 9 5	0 , 7 5 9	
60 , 0	1 , 0 1 3 4 6	0 , 6 5 0	
65 , 0	0 , 9 2 9 5 1 4	0 , 5 3	
70 , 0	0 , 8 3 9 8	0 , 4 1 0	
75 , 0	0 , 7 4 1 0 2 5	0 , 2 7 3	
80 , 0	0 , 6 2 7 9 5 5	0 , 1 1 3	
85 , 0	0 , 4 9 1 0 5 8	- 0 , 0 7 9 9	
90 , 0	0 , 3 0 9 2 3	- 0 , 3 3 9	
91 , 0	0 , 2 6 3 4 7 7	- 0 , 4 0	
92 , 0	0 , 2 1 2 8 8 8	- 0 , 4 7 6	
93 , 0	0 , 1 5 6 1 5 6	- 0 , 5 5 8	
94 , 0	0 , 0 9 1 3 6 5 8	- 0 , 6 5 1	
95 , 0	0 , 0 1 5 5 4 7 6	- 0 , 7 6 0	



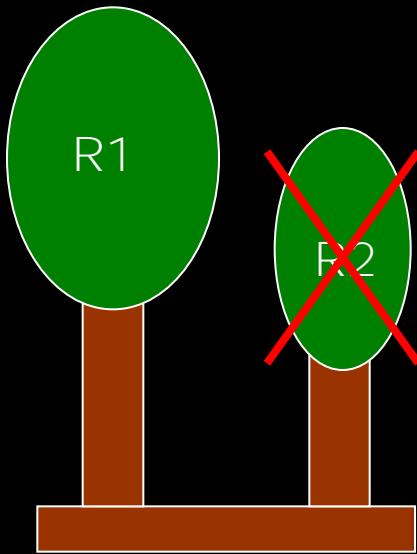
DesRochers and Lieffers 2001 JV



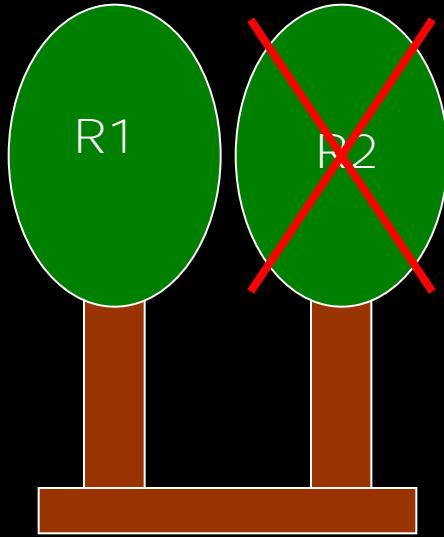




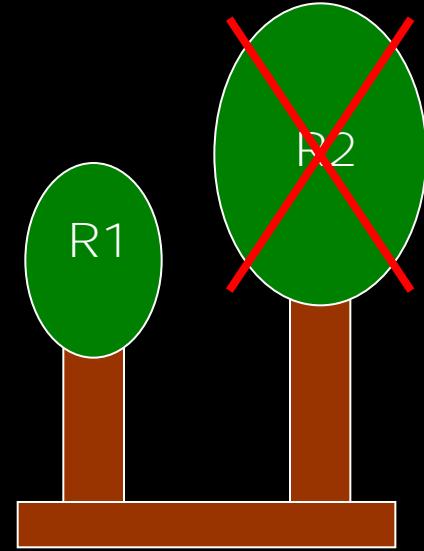
In situ defoliation experiment in aspen



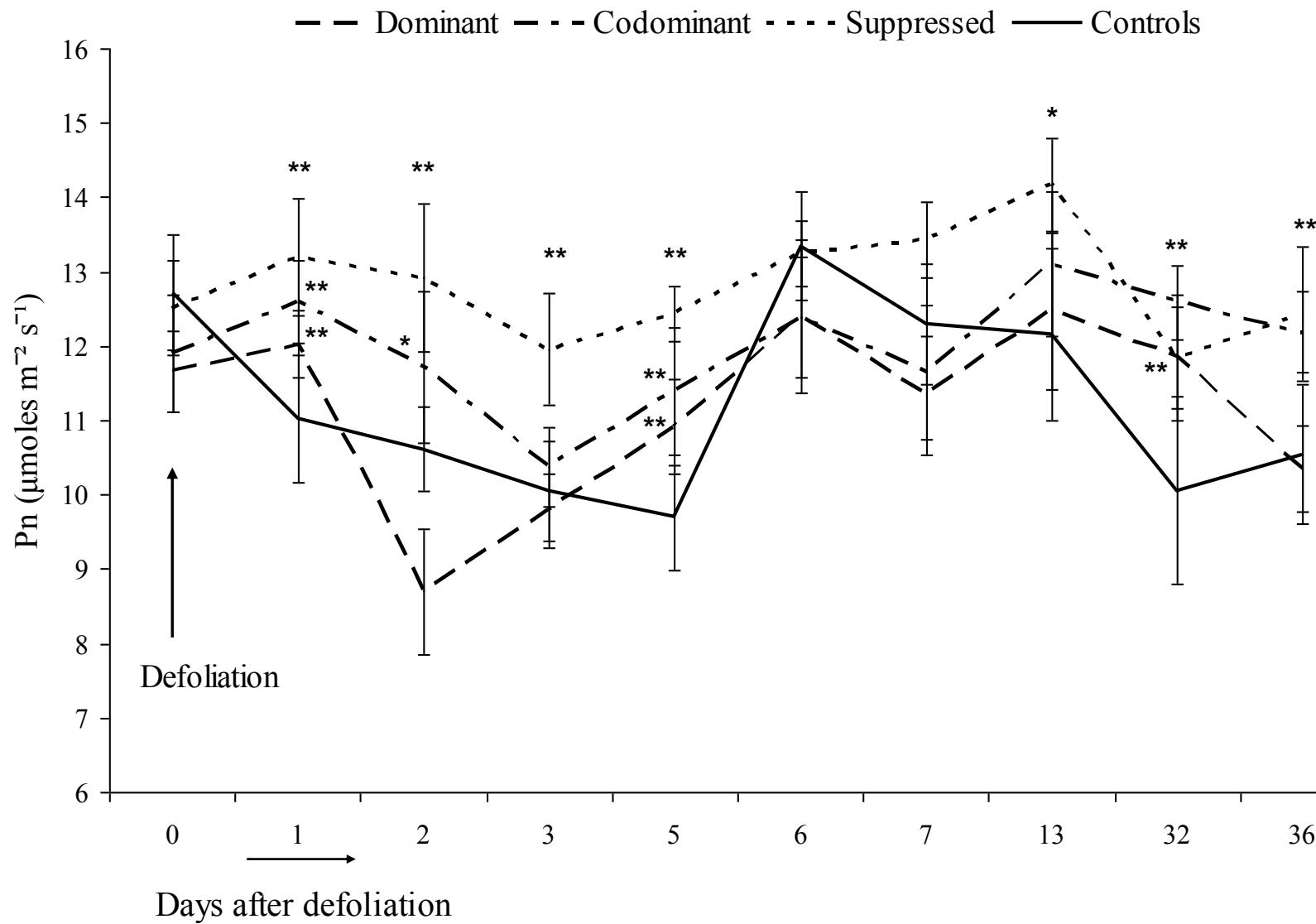
Dominant



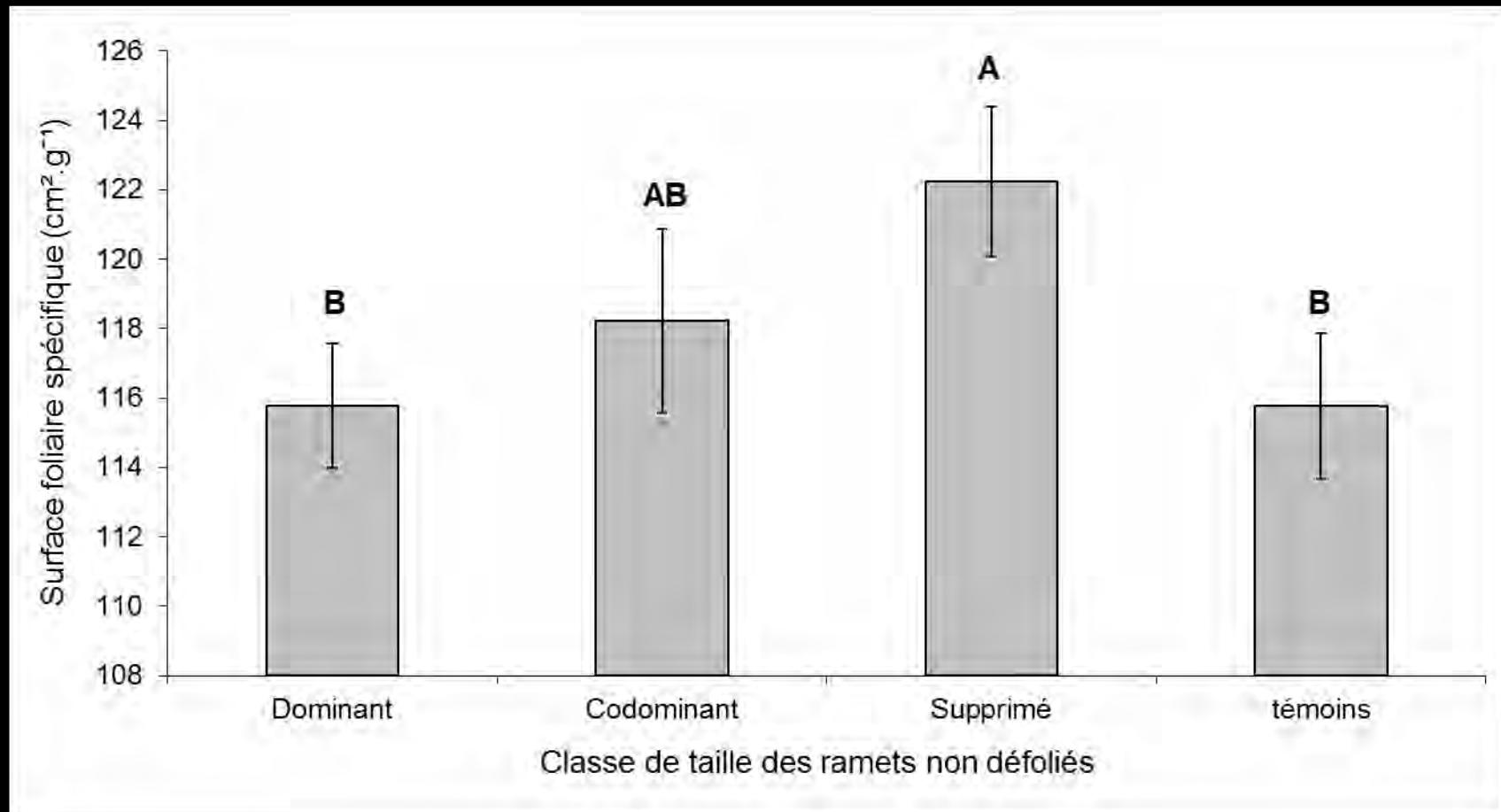
Codominant



Suppressed

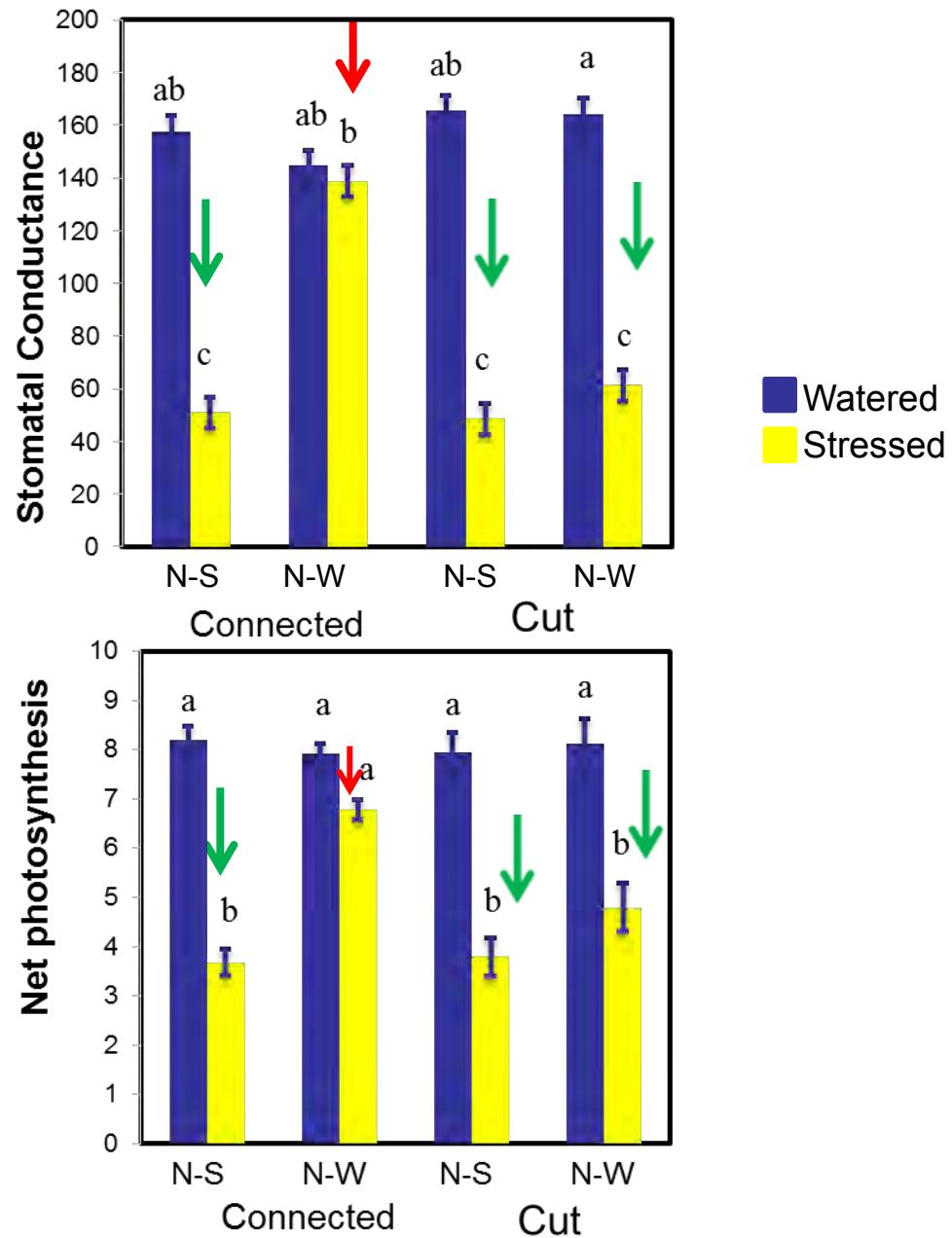
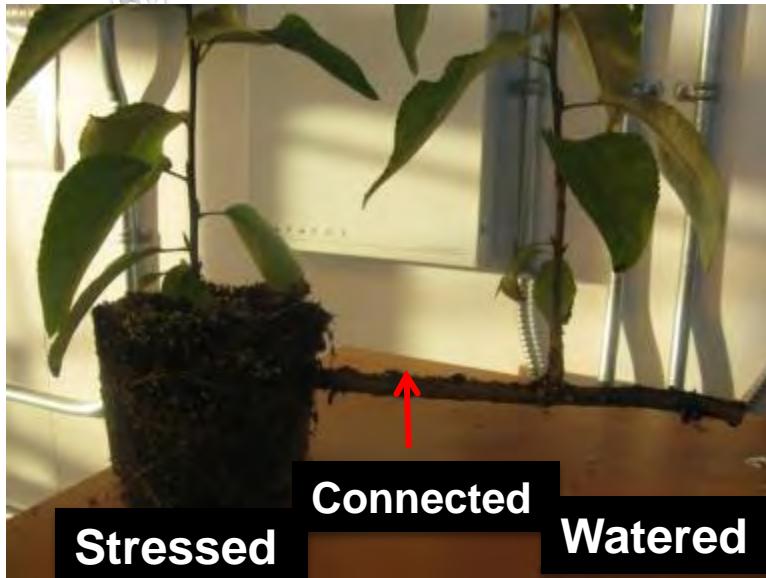


Surface foliaire spécifique



Tranfert d'eau par les liens racinaires





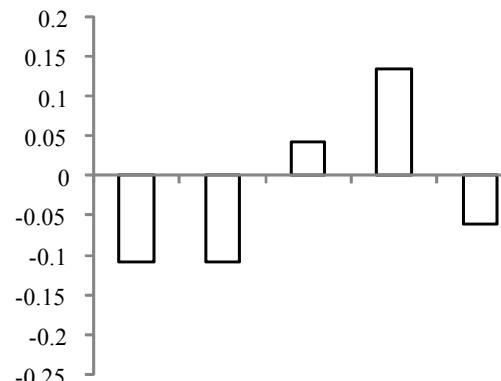
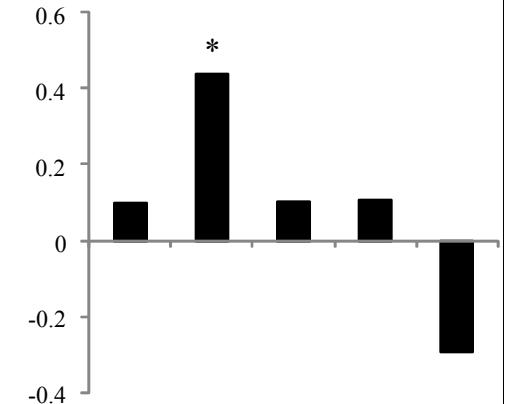
Adonsou et al. 2016, *Tree Physiol*



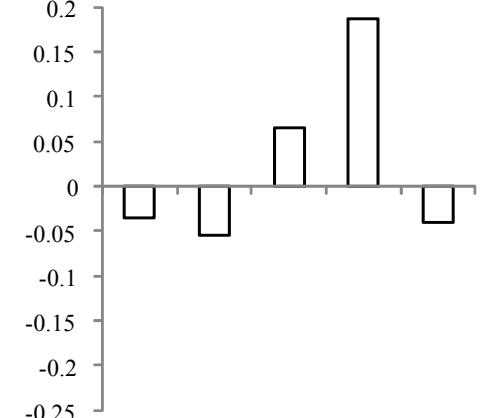
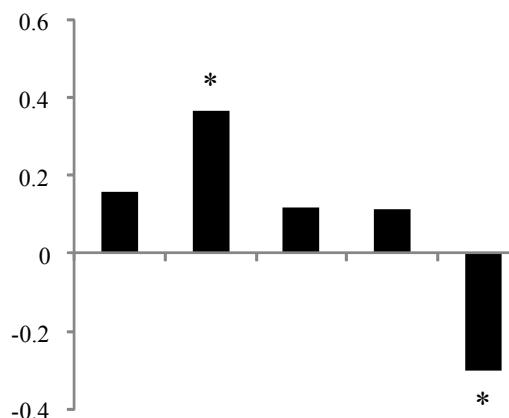
Température

Précipitations

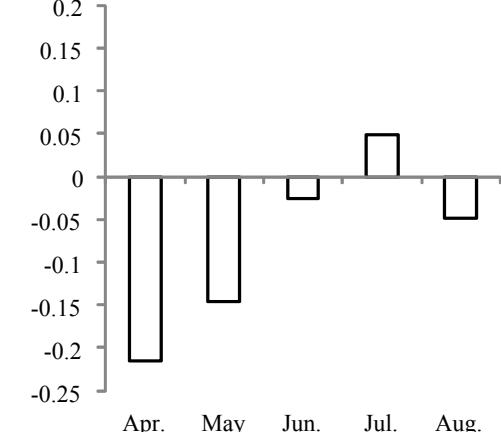
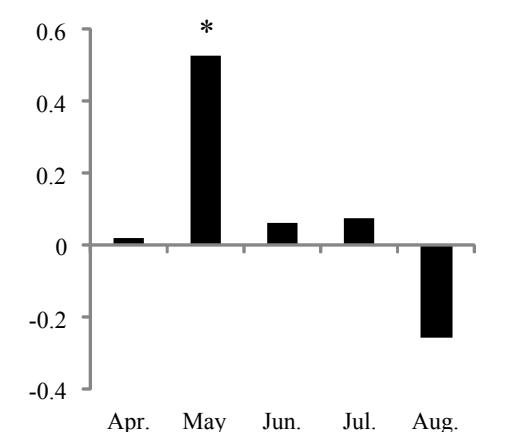
Tous

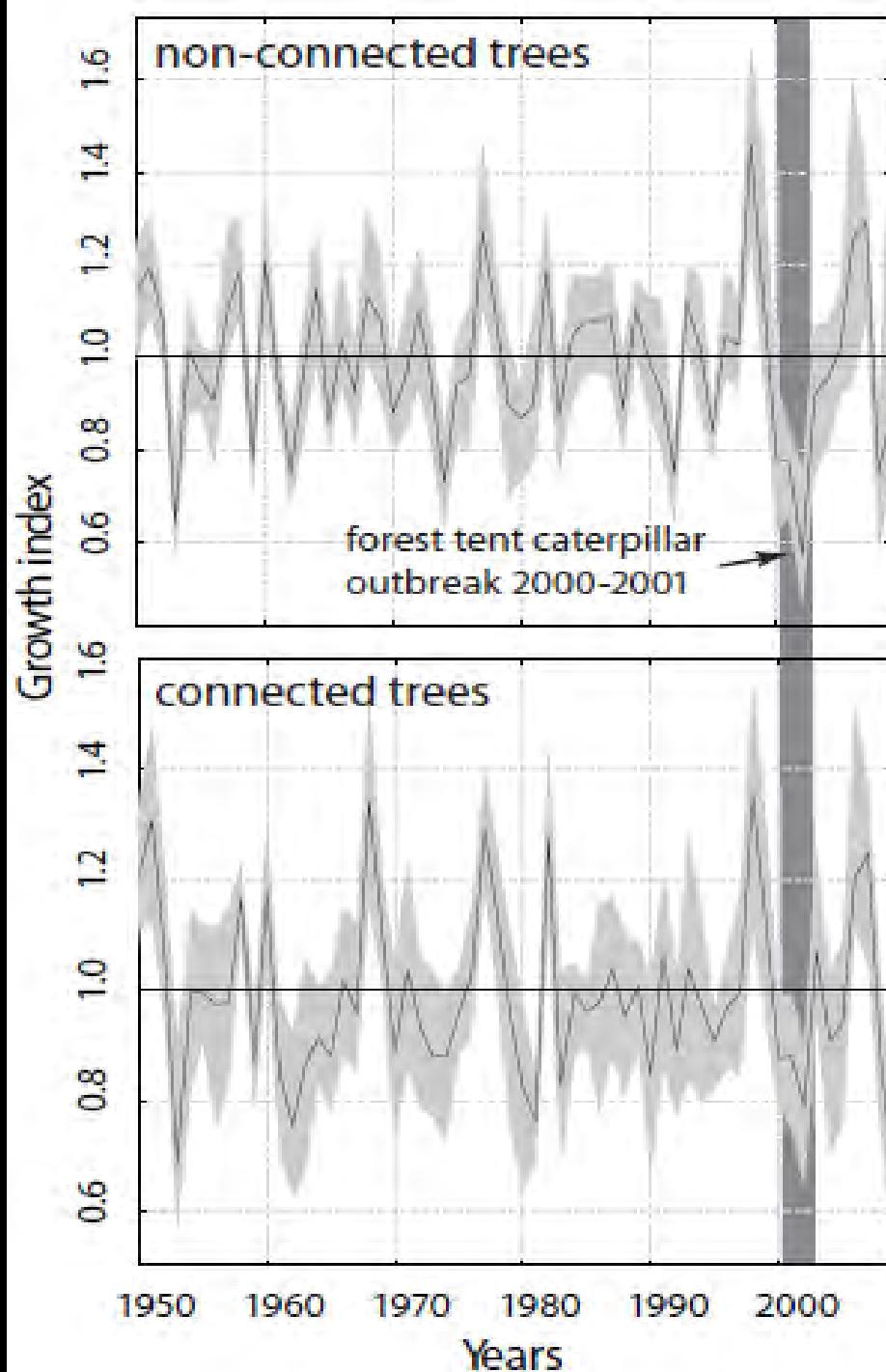


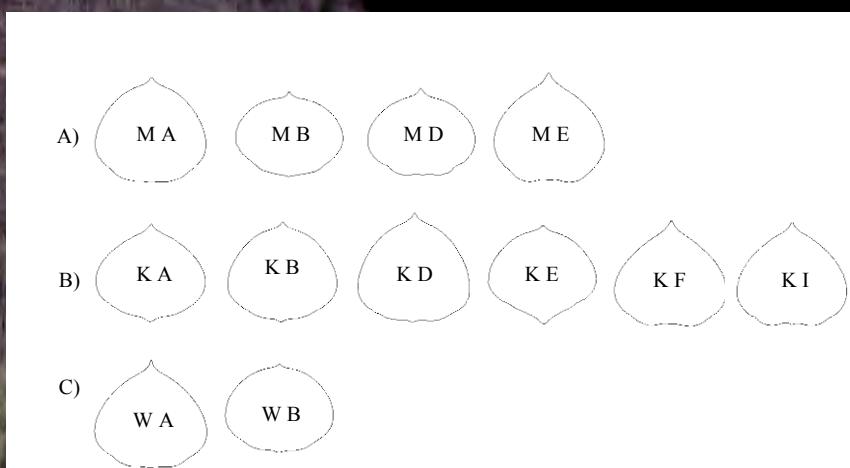
Non-connectés



Connectés







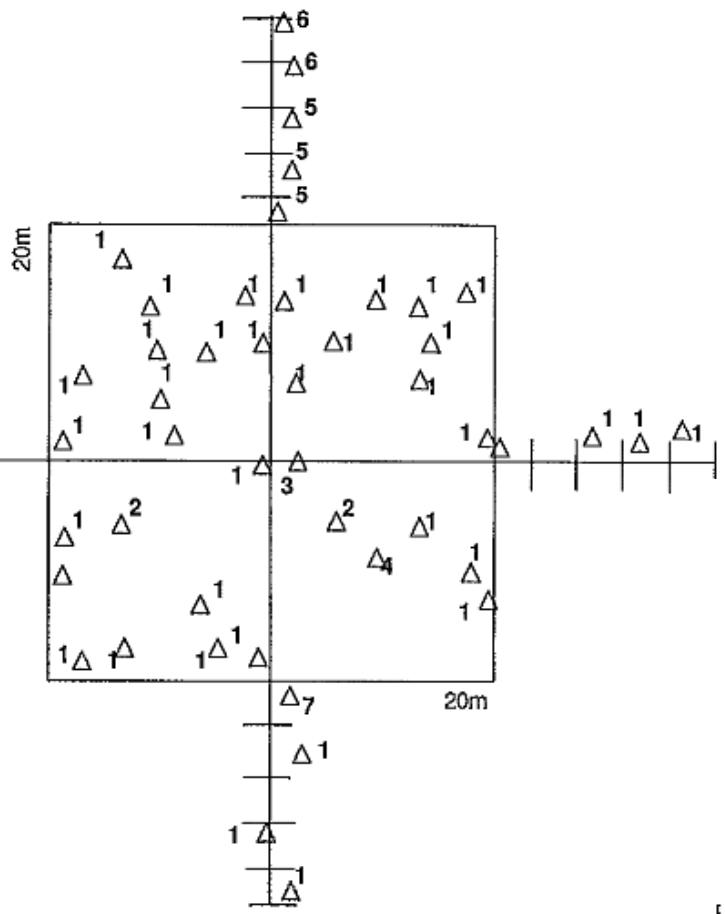
Végétative



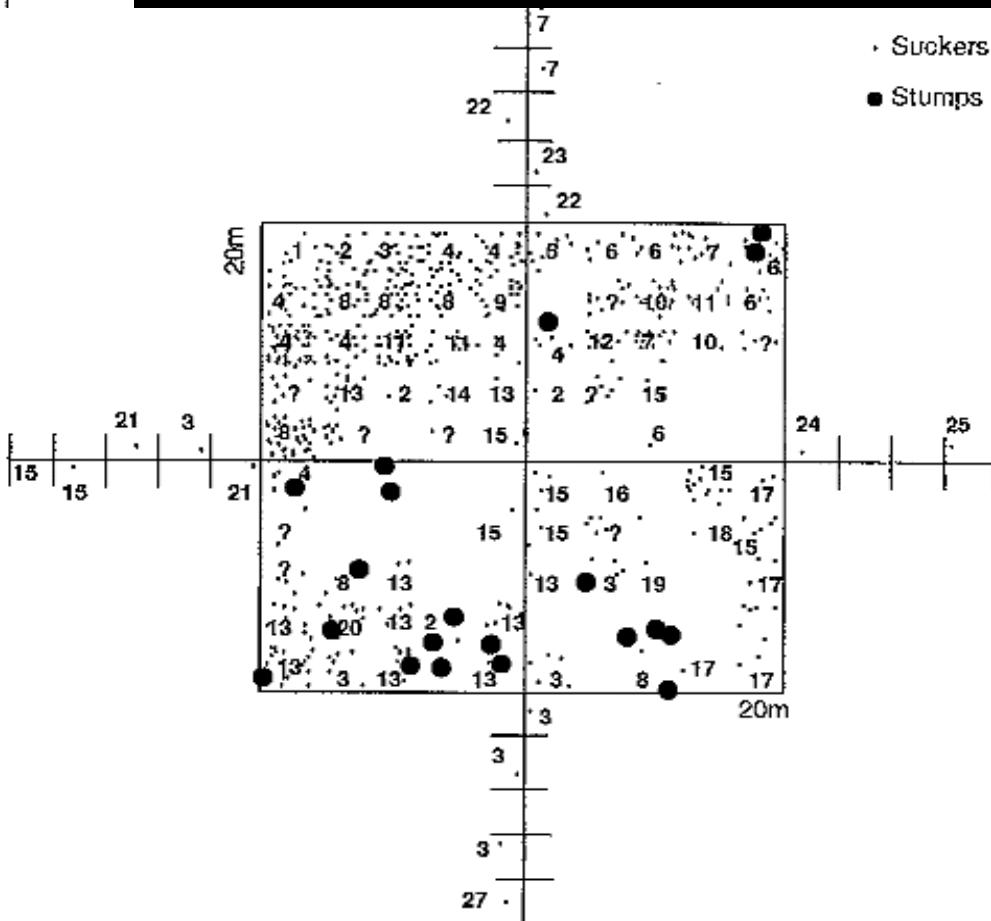
Sexuée







△ Trees



“Genotype Bank” Hypothesis

















A

B

Merci!

