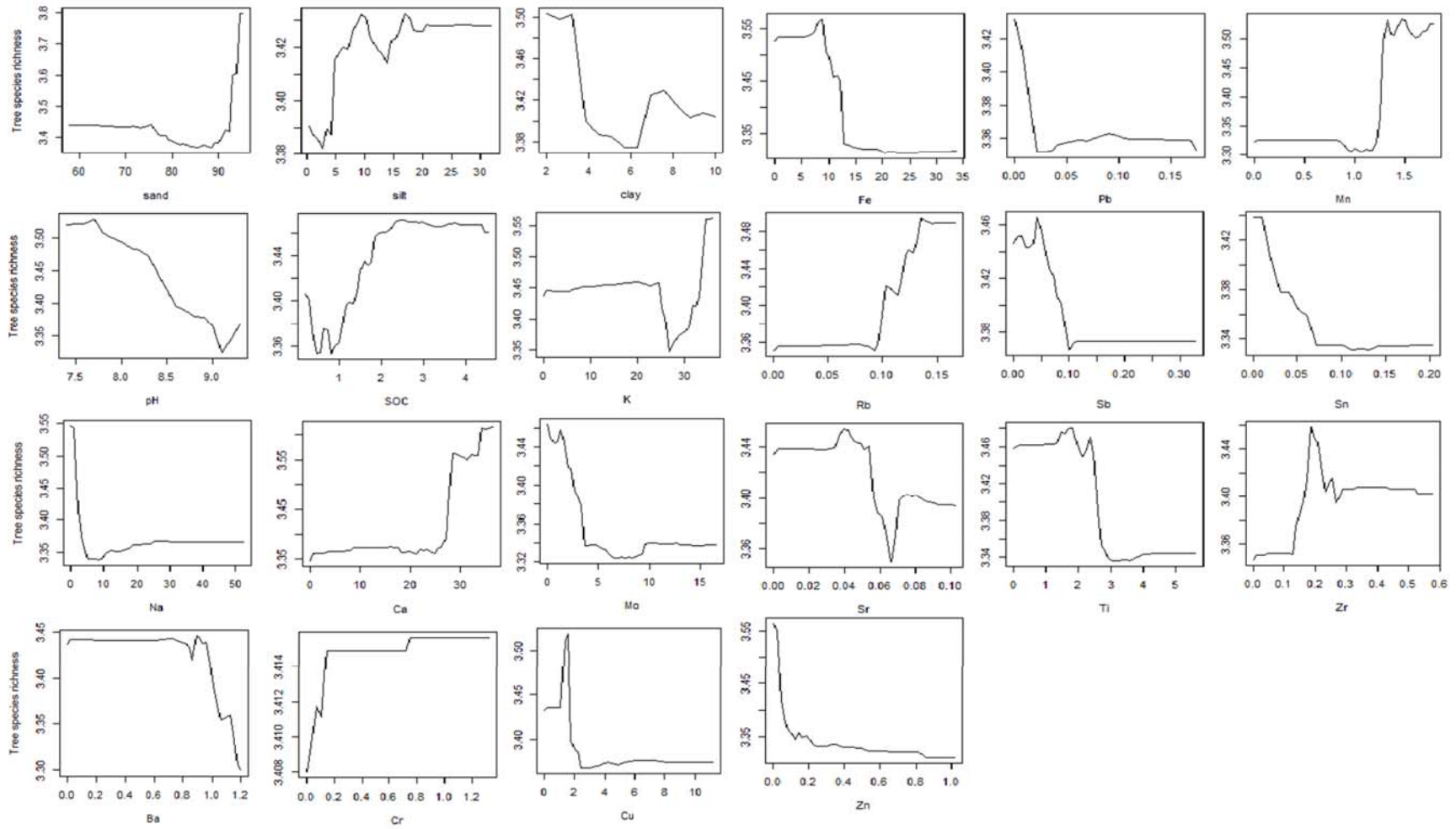
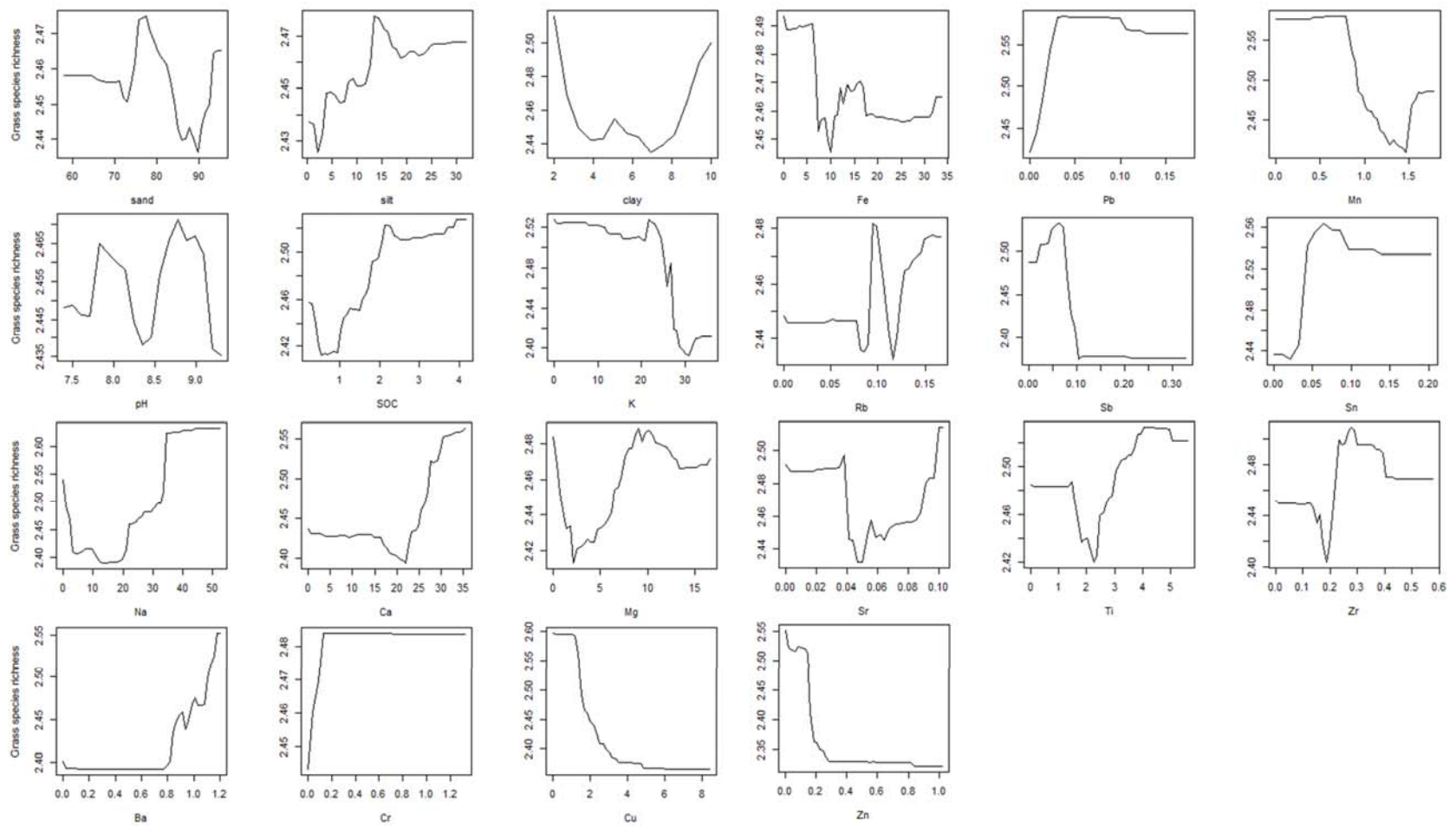


Appendix S1. Table S1 showing statistics for soil variables under dominant canopy tree species in TD10, Mufulira, Copperbelt Province Zambia. A P-value < 0.05 indicates that the soil parameter had significant influence on the dominant tree species.

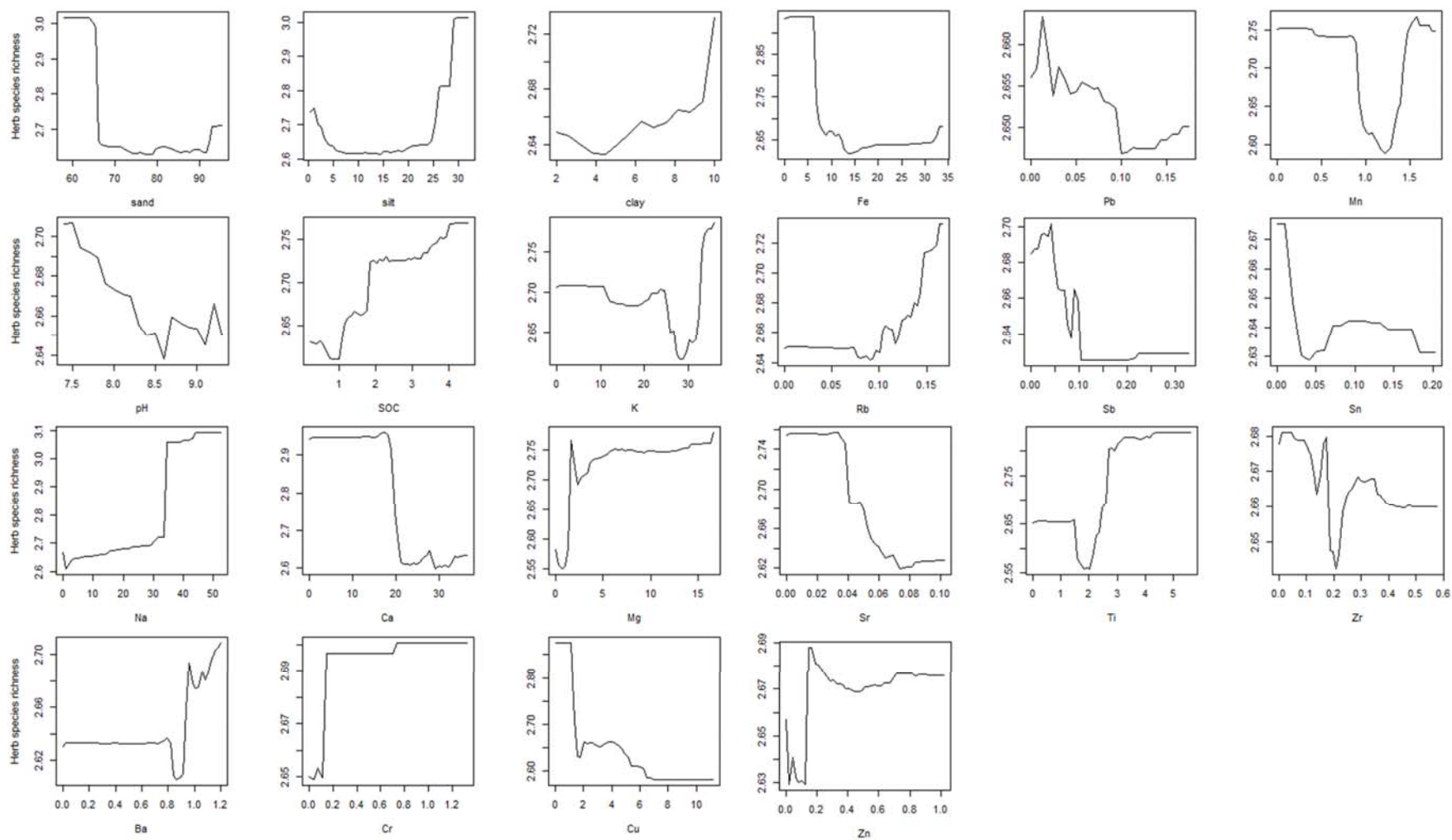
Soil parameters	Kruskal-Wallis sum test	rank	P-value
Textural parameters			
Sand	12.277		0.3432
Silt	10.805		0.4597
Clay	8.7054		0.6491
Chemical parameters			
Ca	22.478		0.02092
SOC	14.824		0.1907
Mg	8.1292		0.7017
Na	9.0017		0.6217
K	8.1937		0.6959
pH	21.256		0.03081
Heavy metal parameters			
Mn	14.096		0.2277
Ba	14.956		0.1845
Rb	7.4215		0.764
Cr	12.243		0.3456
Cu	5.4337		0.9084
Sb	6.7569		0.8184
Fe	12.056		0.3595
Sn	10.344		0.4997
Ti	12.647		0.317
Zn	6.3127		0.8517
Pb	15.078		0.1789
Sr	26.487		0.005488
Zr	5.9516		0.8766



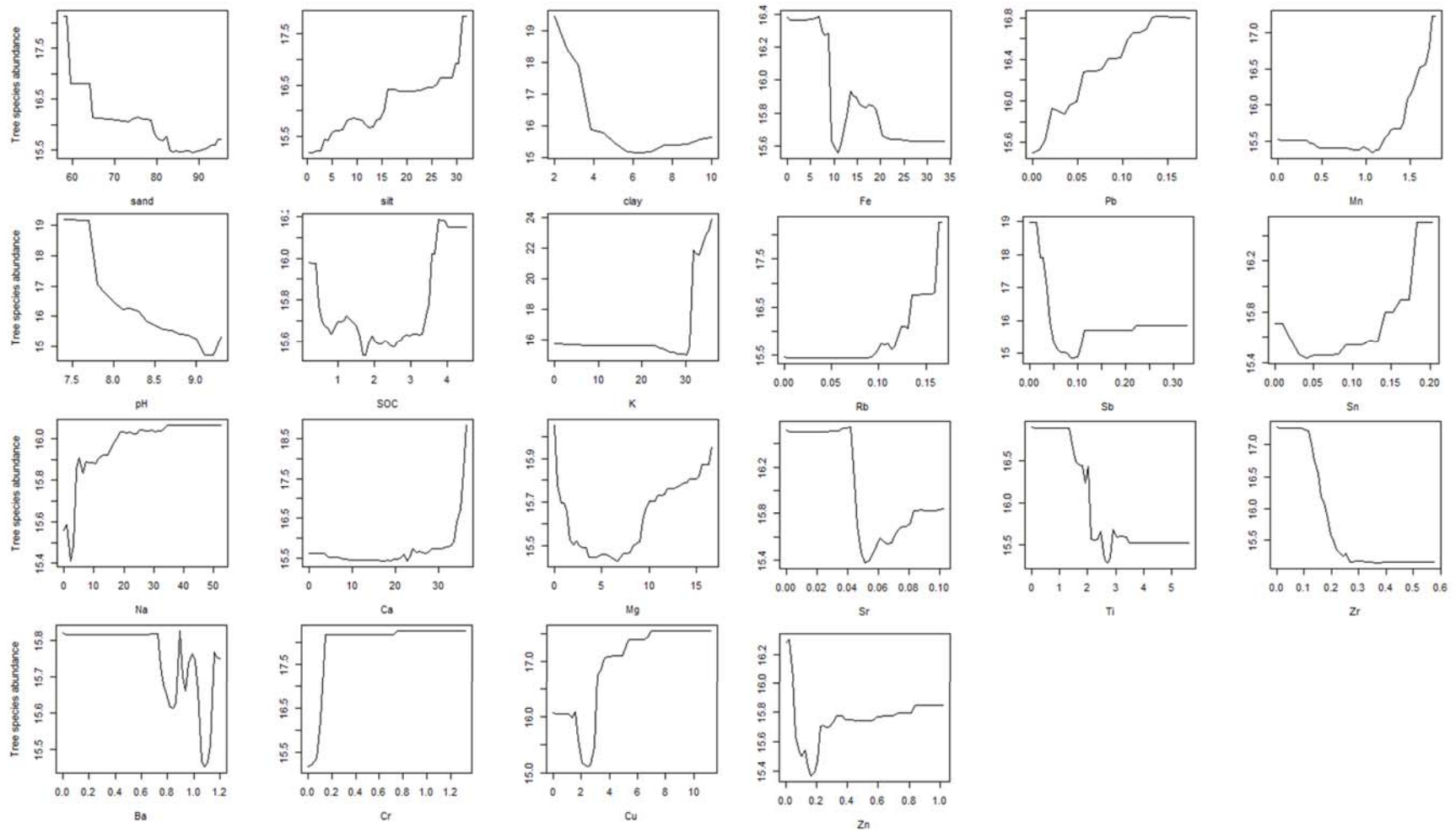
Appendix S2. Influence variation of soil properties on tree species richness



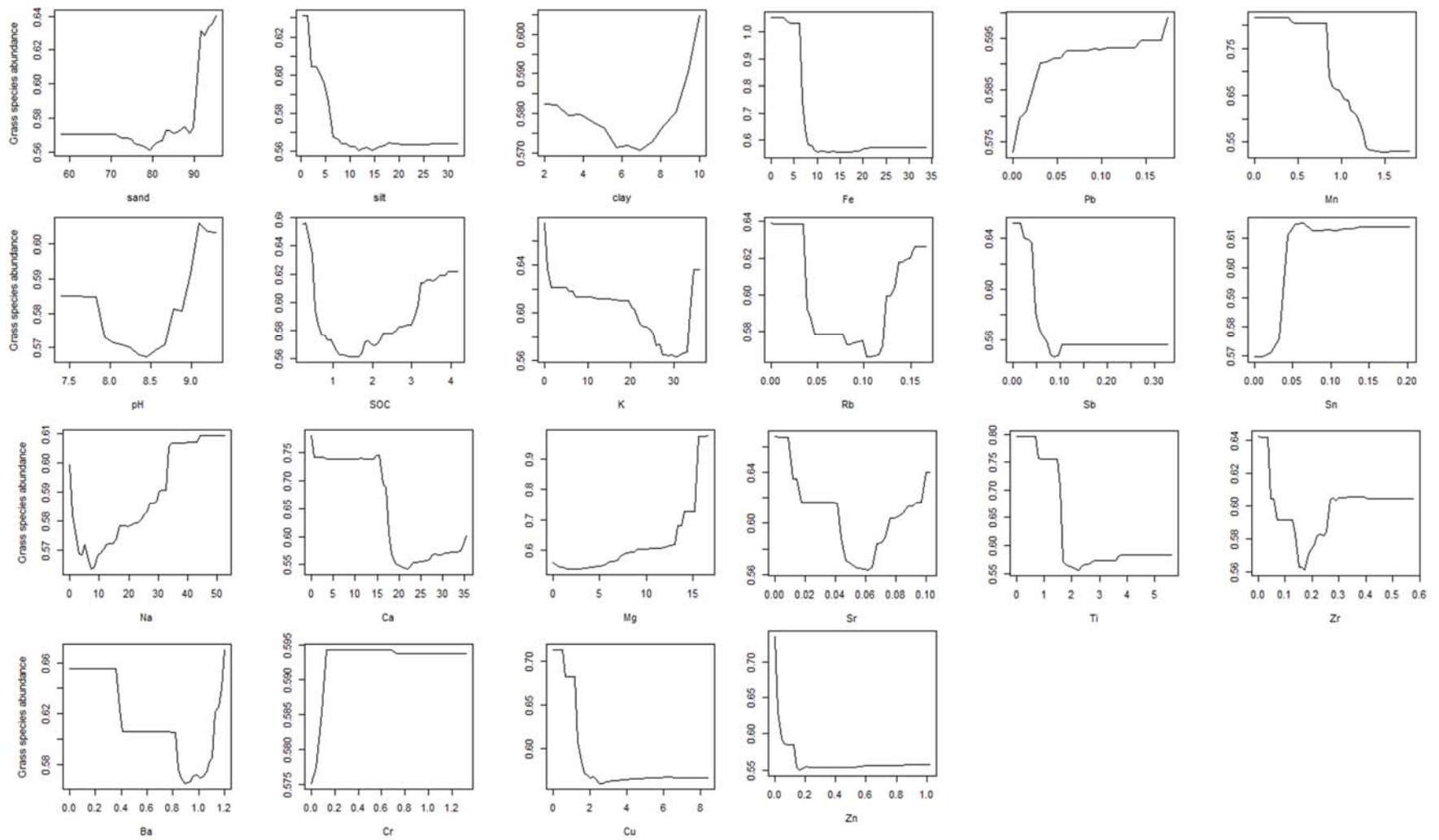
Appendix S3. Influence variation of soil properties on grass species richness



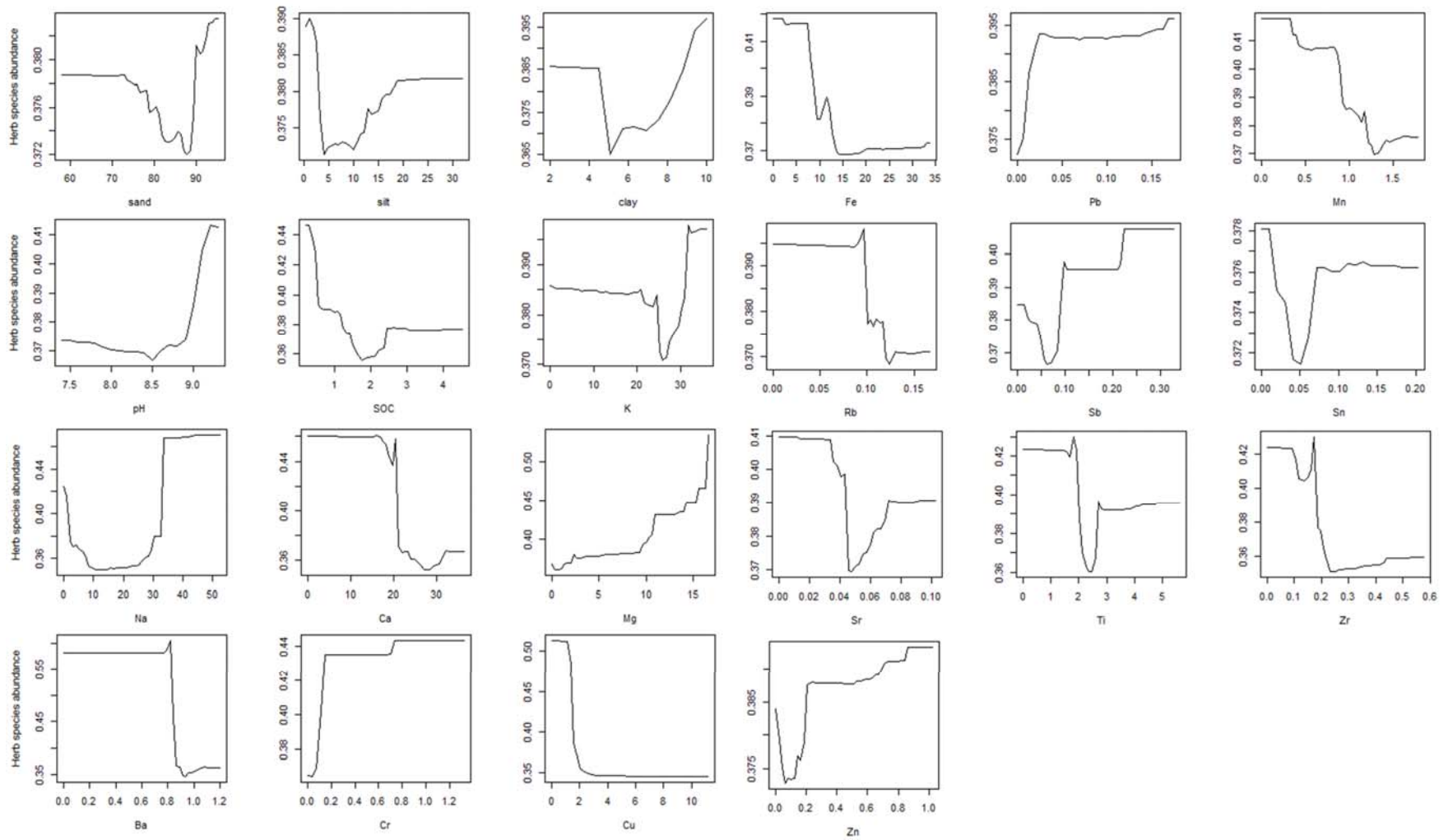
Appendix S4. Influence variation of soil properties on herb species richness



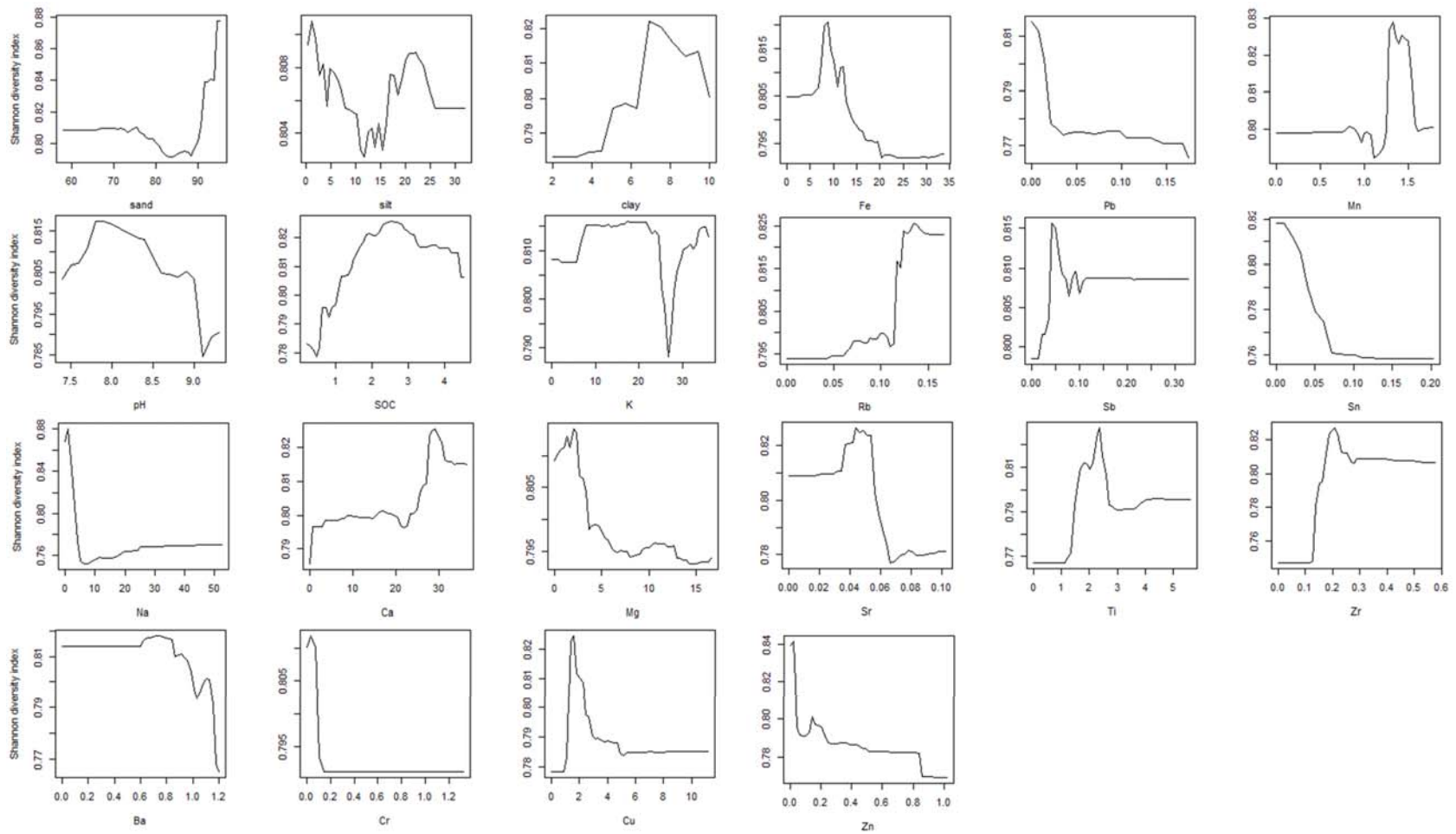
Appendix S5. Influence variation of soil properties on tree abundance



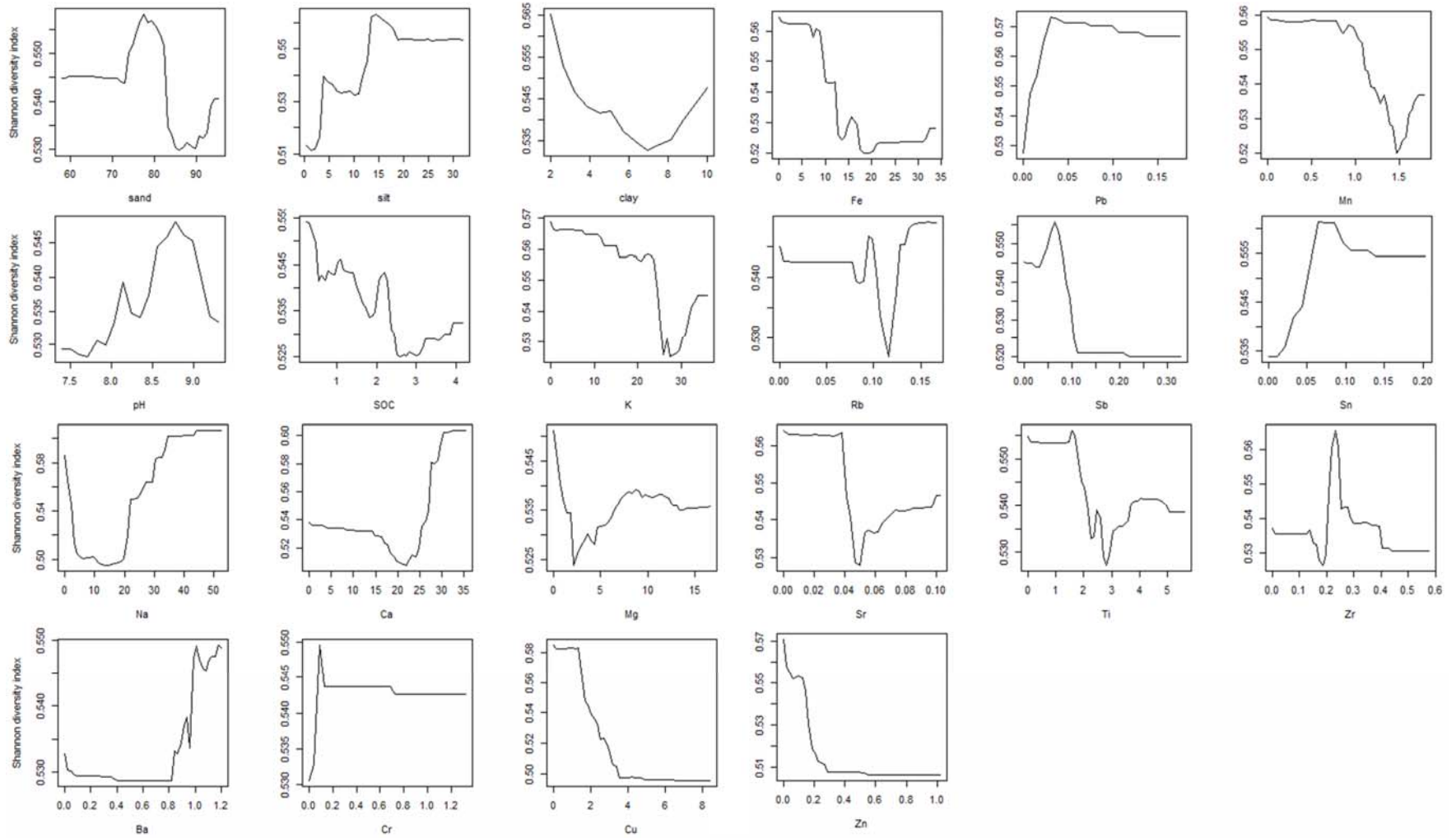
Appendix S6. Influence variation of soil properties on grass species abundance



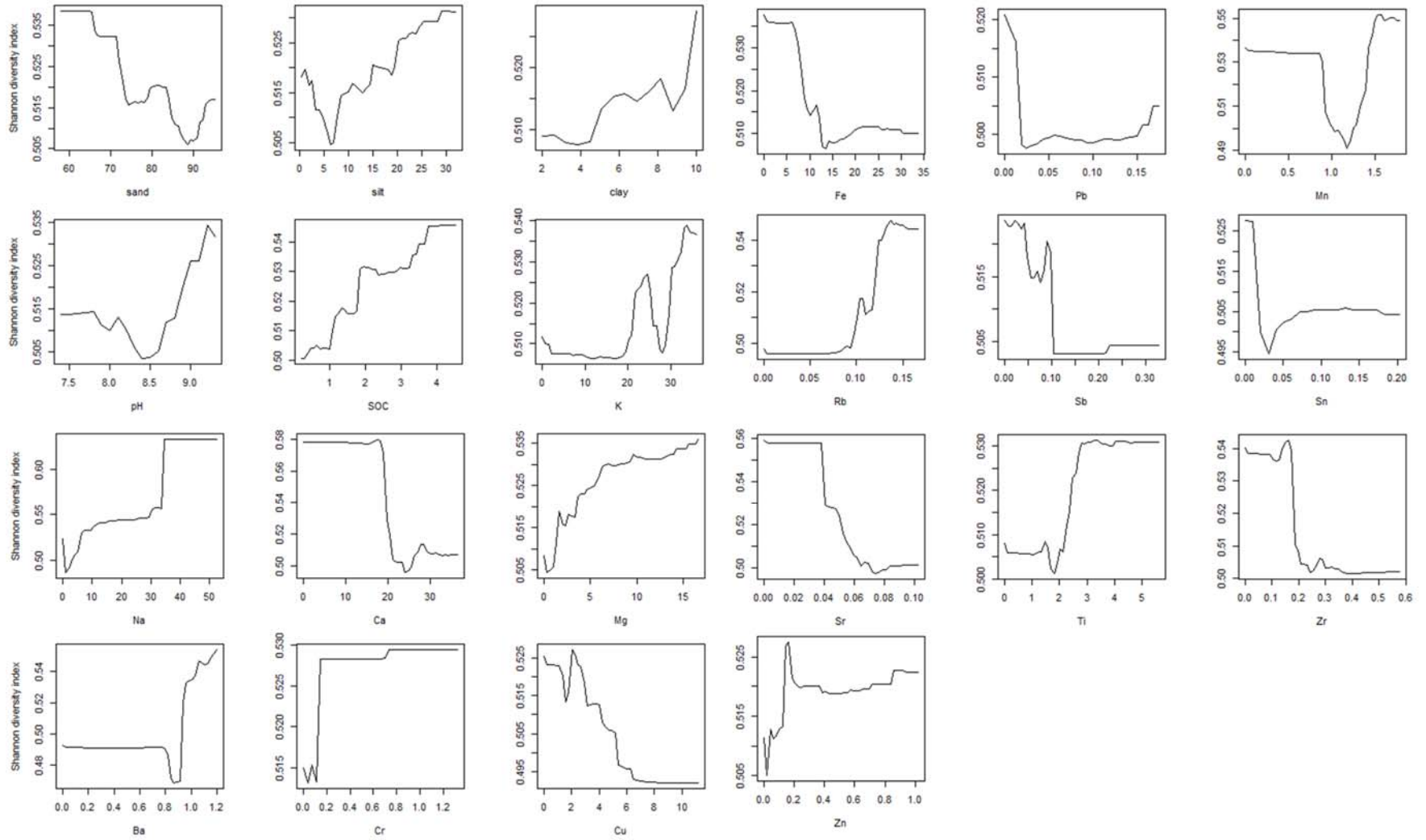
Appendix S7. Influence variation of soil properties on herb species abundance



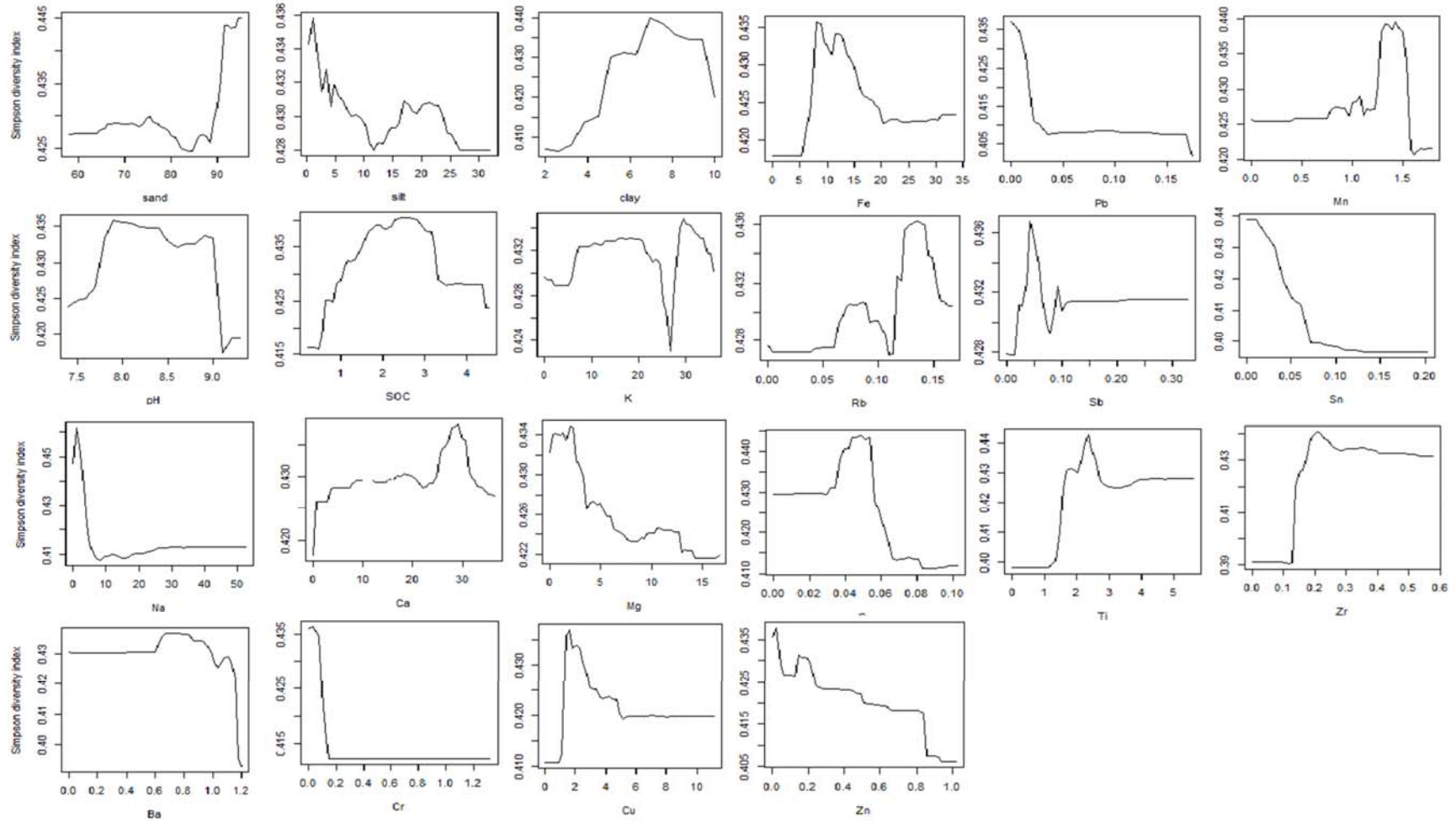
Appendix S8. Influence variation of soil properties on Shannon-Wiener index of tree species



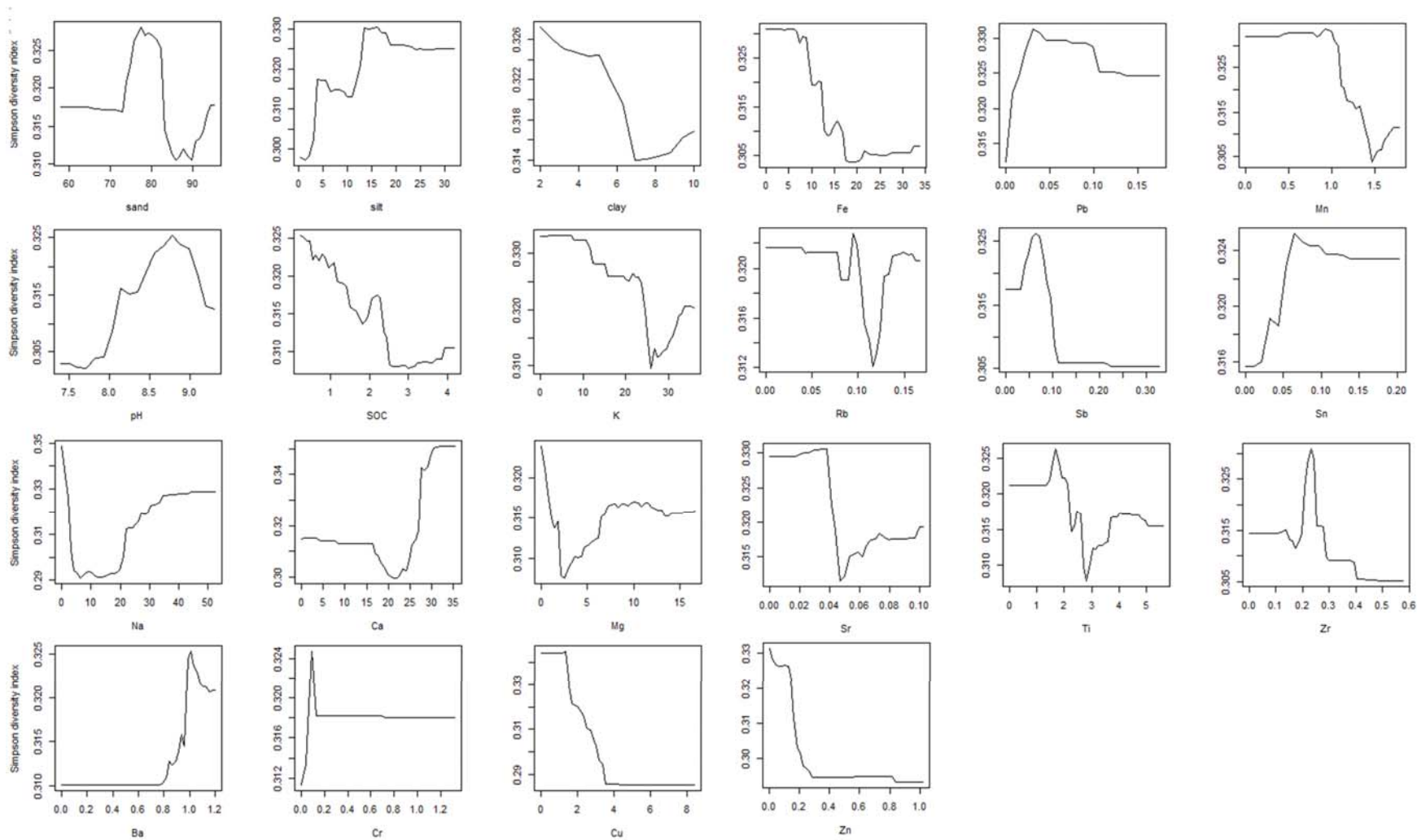
Appendix S9. Influence variation of soil properties on Shannon-Wiener index of grass species



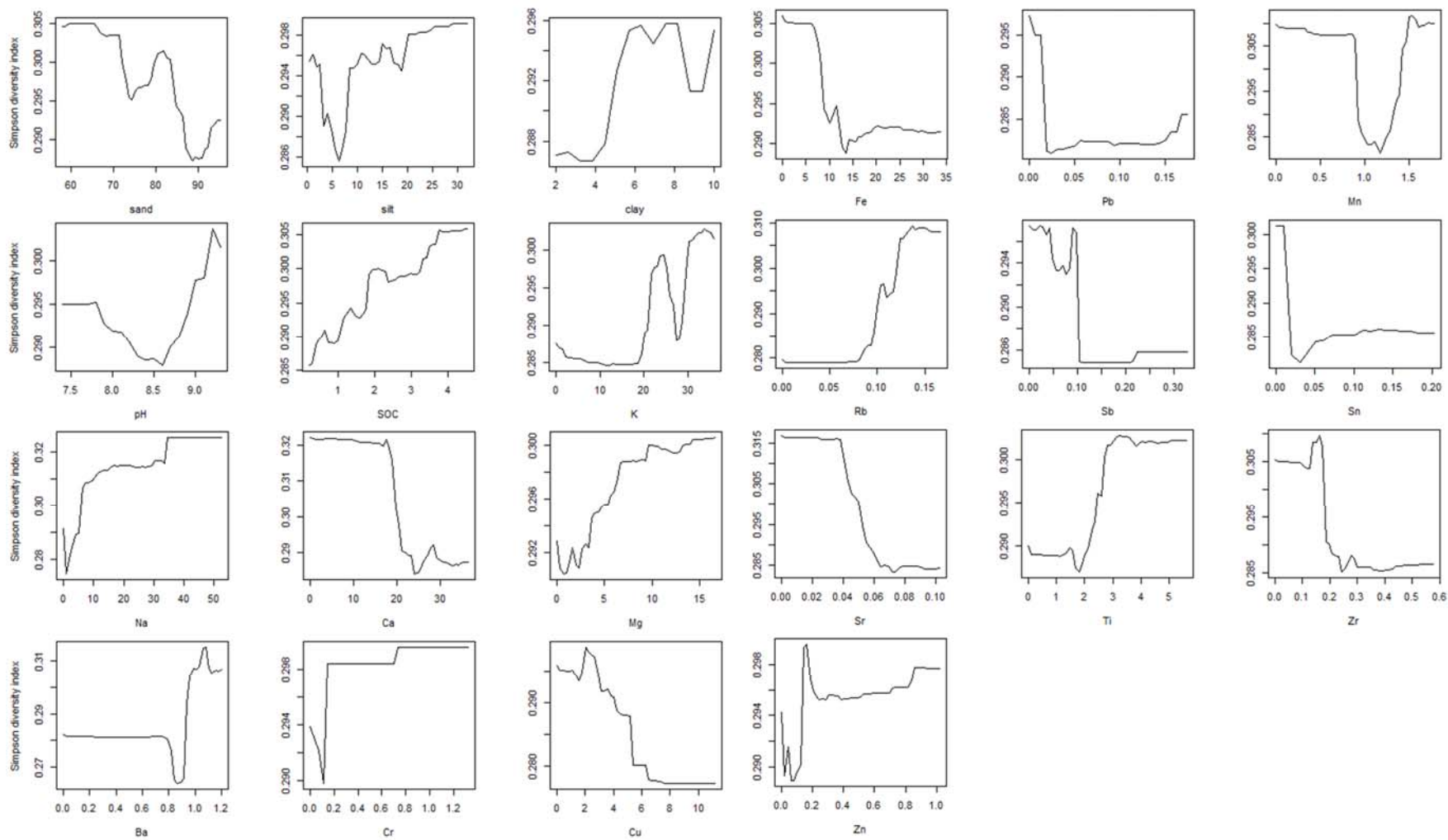
Appendix S10. Influence variation of soil properties on Shannon-Wiener index of herb species



Appendix S11. Influence variation of soil properties on Simpson index of tree species



Appendix S12. Influence variation of soil properties on Simpson index of grass species



Appendix S13. Influence variation of soil properties on Simpson index of herbs species