

**Appendix B. Spatial aggregation of actual crossings points.
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We characterized spatial aggregation of actual crossings for each species s with the pair-correlation function $\Omega_s(d)$ (Wiegand and Moloney 2004) to investigate the degree to which potential ‘hotspots’ of selected crossing locations occurred. We defined spatial aggregation as a decrease in density with spatial scale (Réjou-Méchain et al. 2011). Applied to our data, $\Omega_s^A(d)$ is the linear density of actual crossings of species s at a distance d from actual crossing A along the unpaved road divided by the linear density of actual crossings of species s over the whole length of the unpaved road (MD_s). For each actual crossing, we calculated $\Omega_s^A(d)$ for 20 evenly-spaced d ranging from $1/MD_s$ to one fourth of the unpaved road length (9243 m). Under a uniform spatial distribution, $\Omega_s(d)$ is approximately equal to 1 for all d . When aggregation occurs, $\Omega_s(d) > 1$ for low d and $\Omega_s(d) \leq 1$ for large d . We thus assessed spatial aggregation of actual crossings by testing if the slope of the regression of Ω_s on d was significantly (t-test; $P \leq 0.05$) negative.

The slopes of the regressions of Ω_s on d were significantly negative for all species in all seasons and for seasons combined, showing that actual crossings were spatially aggregated along the road, except for elephant in the wet season (Table A2).

LITERATURE CITED

- Réjou-Méchain, M., O. Flores, N. Bourland, J.-L. Doucet, R. F. Fétéké, A. Pasquier, and O. J. Hardy. 2011. Spatial aggregation of tropical trees at multiple spatial scales. *Journal of Ecology* 99:1373–1381.

Wiegand, T., and K. Moloney. 2004. Rings, circles, and null-models for point pattern analysis in ecology. *Oikos* 104:209–229.

TABLE B1. Results of spatial aggregation testing of actual crossing points. Values in bold show significant ($P \leq 0.05$) results.

Species	Season	Number of actual crossings	Spatial aggregation	
			Within seasons	Across seasons
Elephant	Dry	18	-1.38×10^{-4} (<0.001)	-1.35×10^{-4} (<0.001)
	Wet	13	-5.45×10^{-5} (0.214)	<0.001
Buffalo	Dry	34	-1.91×10^{-4} (<0.001)	-1.17×10^{-4} (<0.001)
	Wet	12	-4.53×10^{-4} (<0.001)	<0.001
Sitatunga	Dry	12	-1.68×10^{-4} (<0.001)	-1.06×10^{-4} (<0.001)
	Wet	34	-1.56×10^{-4} (<0.001)	<0.001

Notes: for spatial aggregation, slopes of the regression of Ω_s on d (t test P) are shown.