**Remotely sensed tree height and density explain global gliding vertebrate richness**

**Appendix S1: Supplementary Figures and Data Sources**

Running title: Global patterns of gliding vertebrates

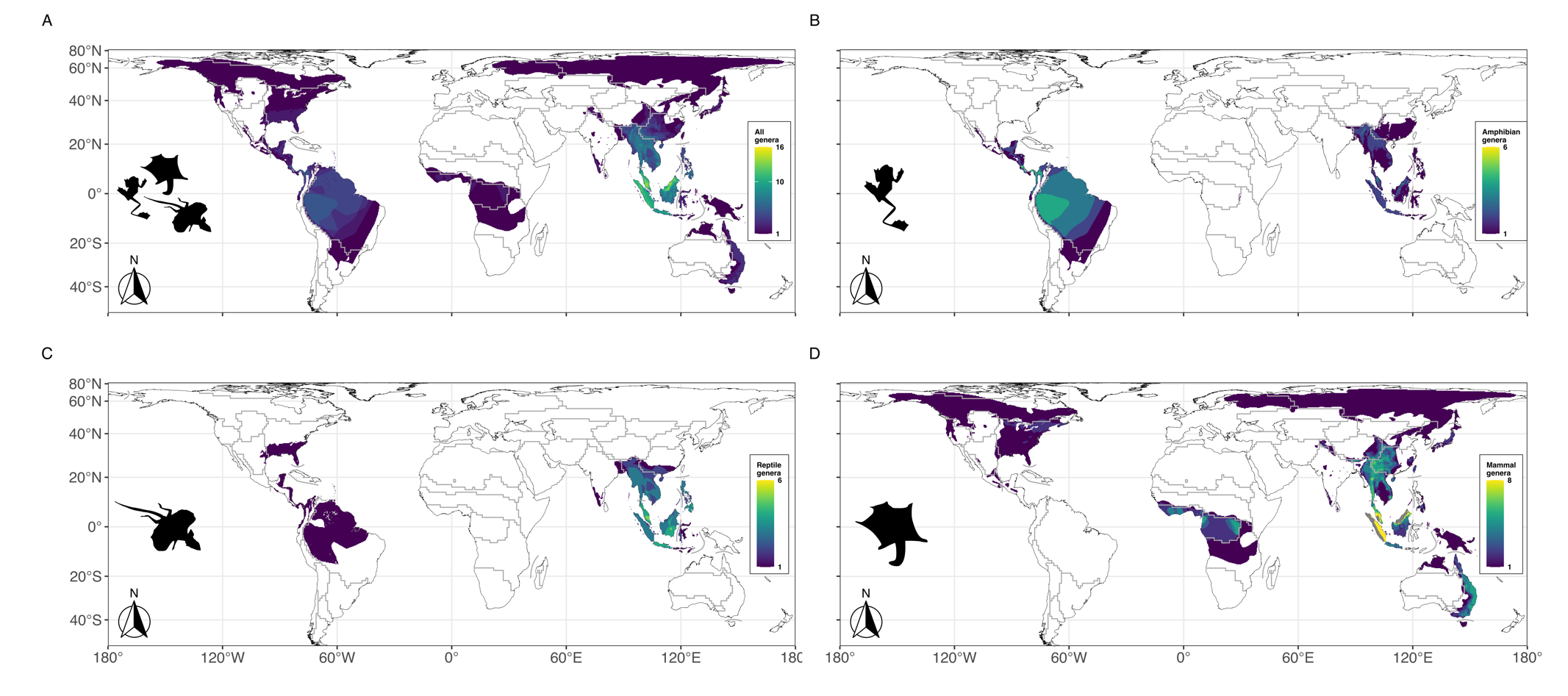


Figure S1. Global **genus** richness and distribution of all gliding vertebrates combined (A) and separated by class (B-D). Grey lines indicate biogeographical region borders according to Kreft and Jetz (2010).

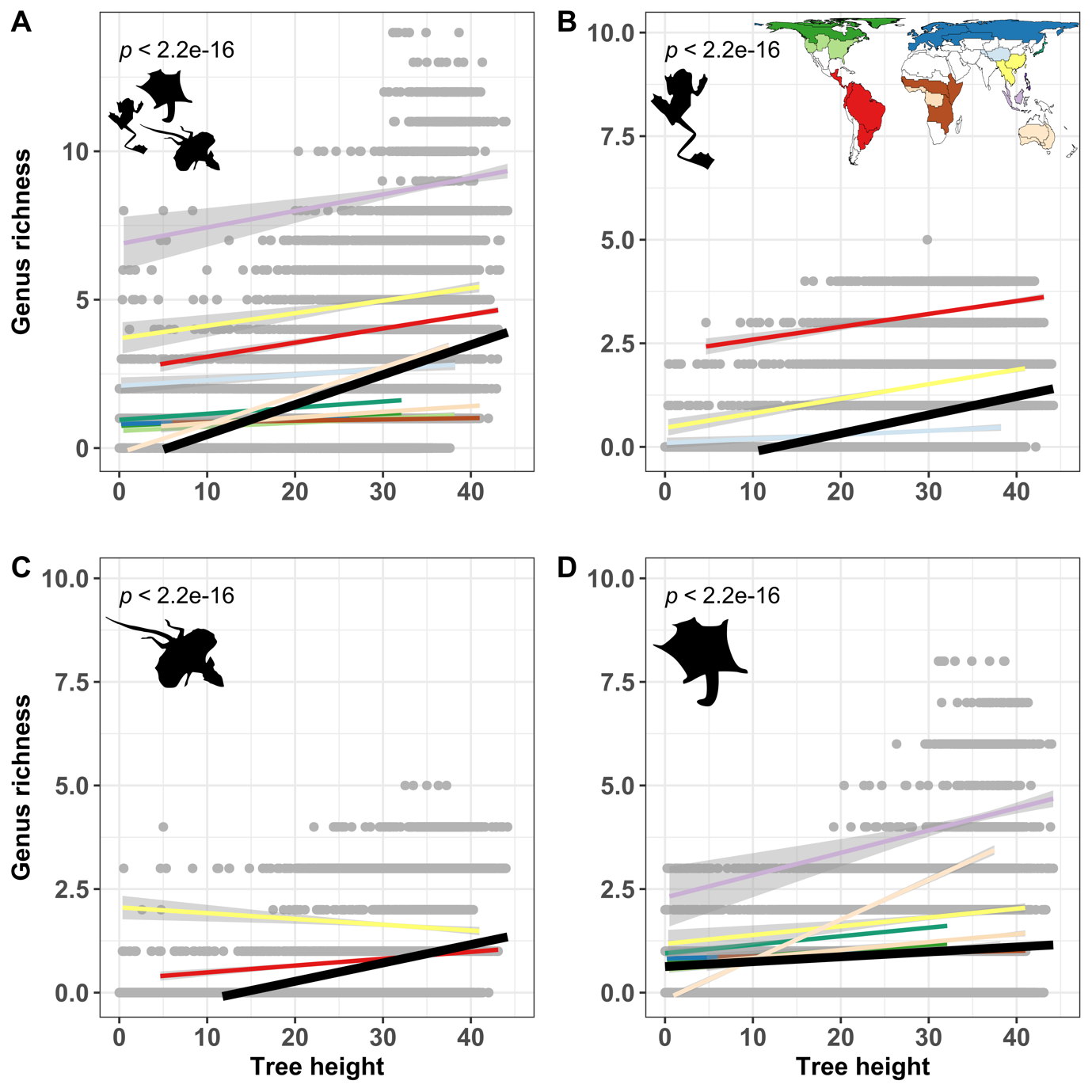


Figure S2. Relationship between tree height and **genus** richness for all gliding vertebrate **genera** (A) and separate classes (B-D). Black lines illustrate linear regressions for all species pooled together. Regressions for separate biogeographic regions (coloured lines, see map in top right corner as legend) were only considered when they were significant.

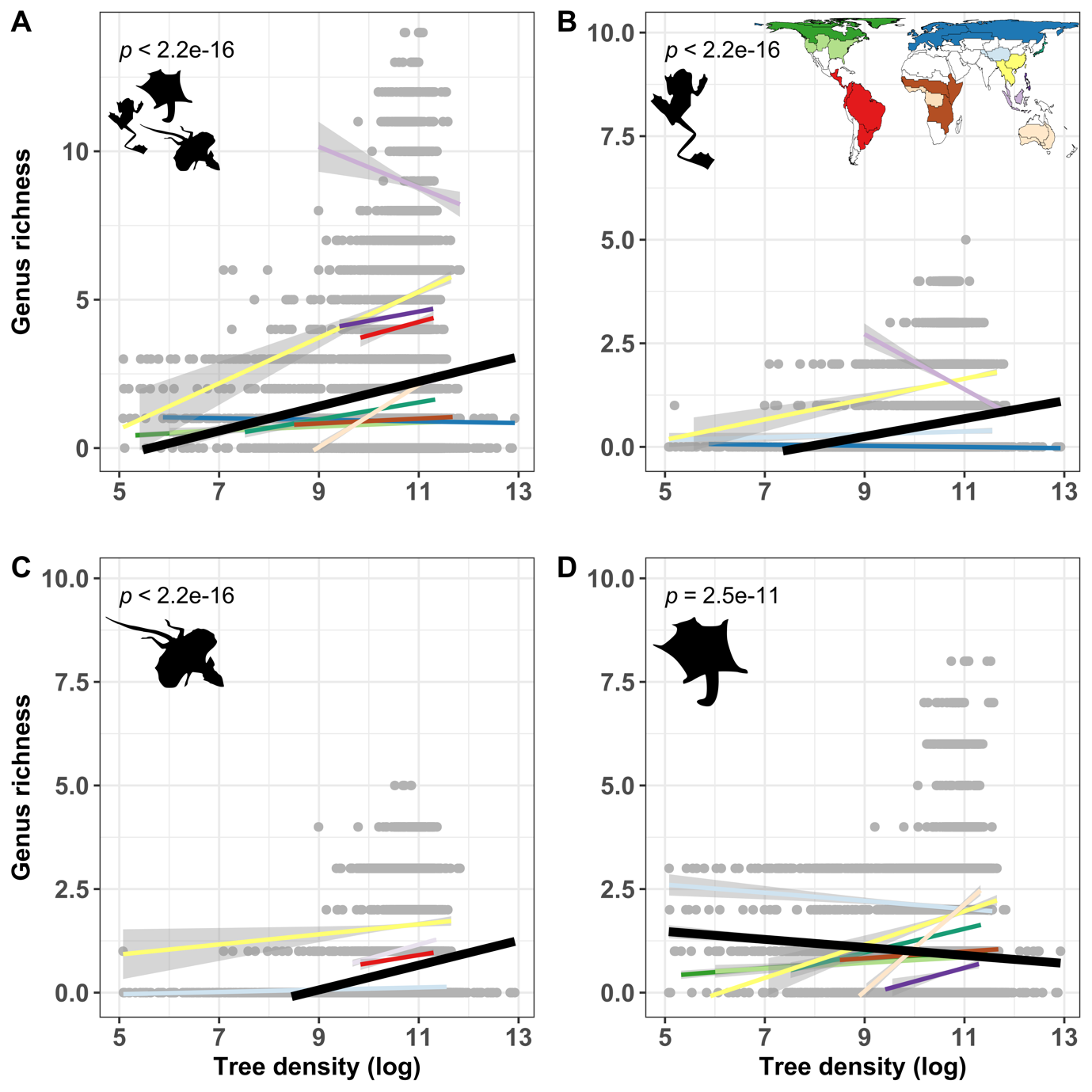


Figure S3. Relationship between tree density (log-transformed) and **genus** richness for all gliding vertebrate **genera** (A) and separate classes (B-D). Black lines illustrate linear regressions for all species pooled together. Regressions for separate biogeographic regions (BGRs, coloured lines, see map in top right corner as legend) were only considered when they were significant.

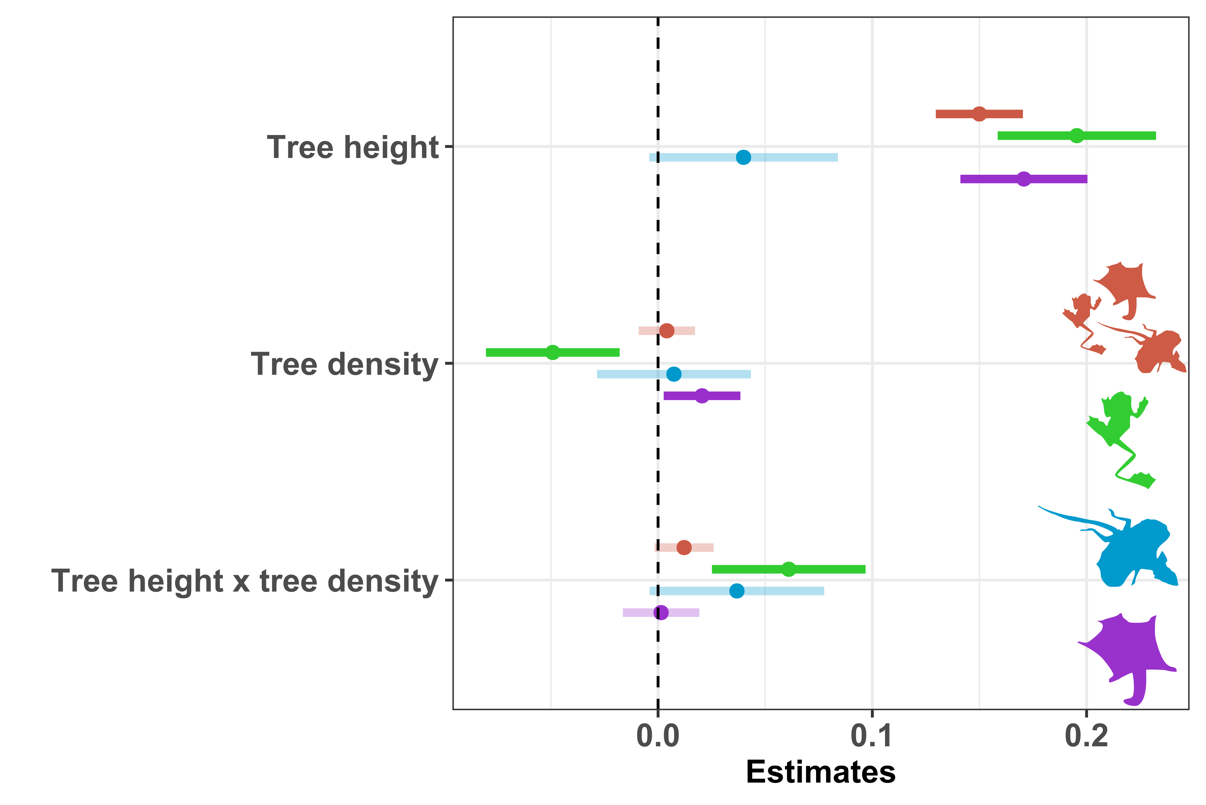


Figure S4. Standardized parameter estimates and confidence intervals from linear mixed effect models of gliding vertebrate **genus** richness for all **genera** pooled together (brown) and separated by class (green = amphibians, blue = reptiles and purple = mammals) at a **1x1** km spatial resolution.

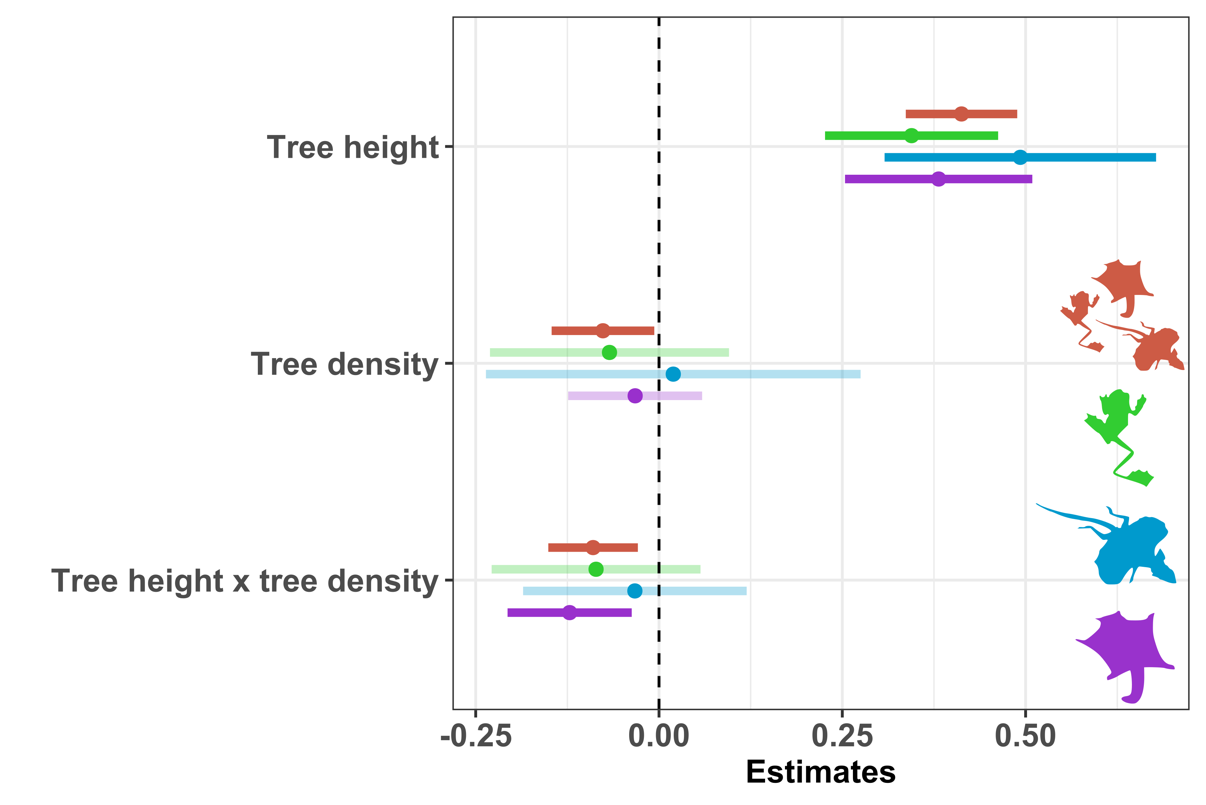


Figure S5. Standardized parameter estimates and confidence intervals from linear mixed effect models of gliding vertebrate **species** richness for all **species** pooled together (brown) and separated by class (green = amphibians, blue = reptiles and purple = mammals) at a **100x100** km spatial resolution.

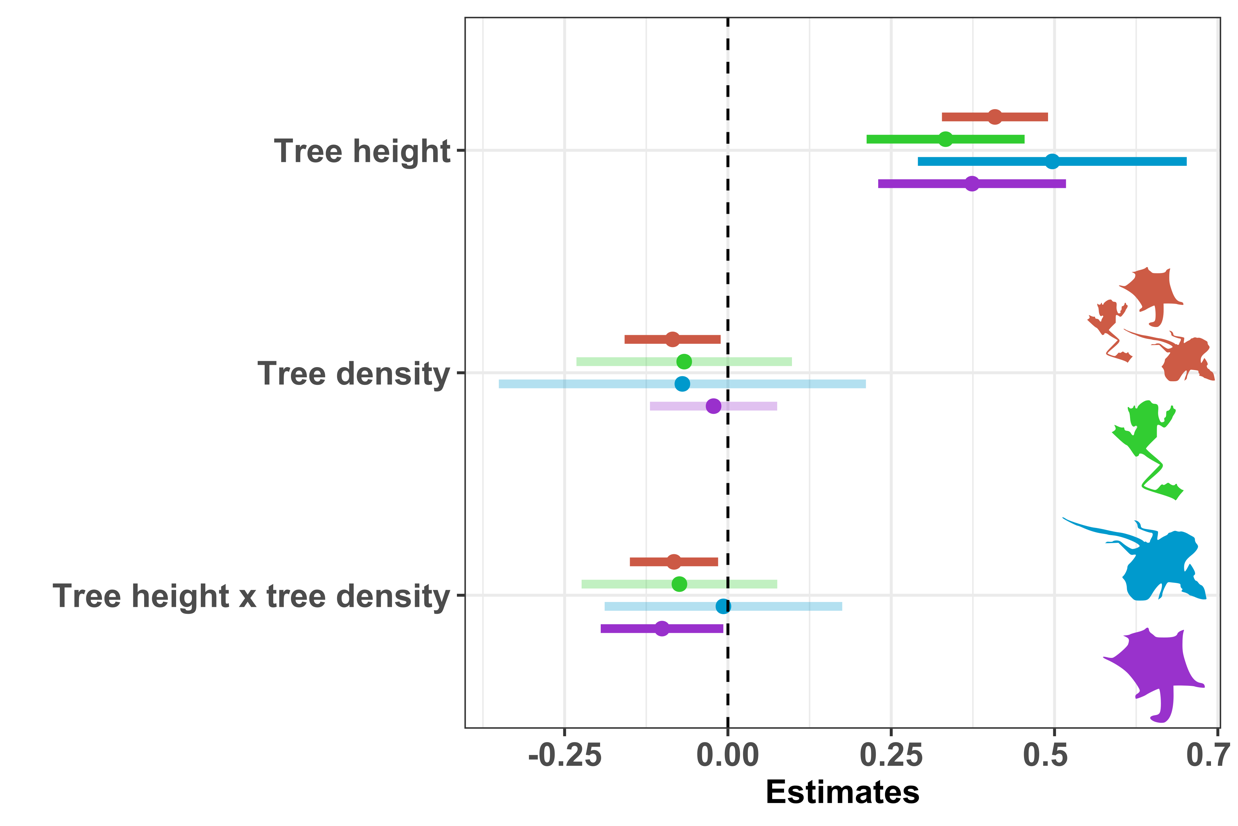


Figure S6. Standardized parameter estimates and confidence intervals from linear mixed effect models of gliding vertebrate **genus** richness for all **genera** pooled together (brown) and separated by class (green = amphibians, blue = reptiles and purple = mammals) at a **100x100** km spatial resolution.

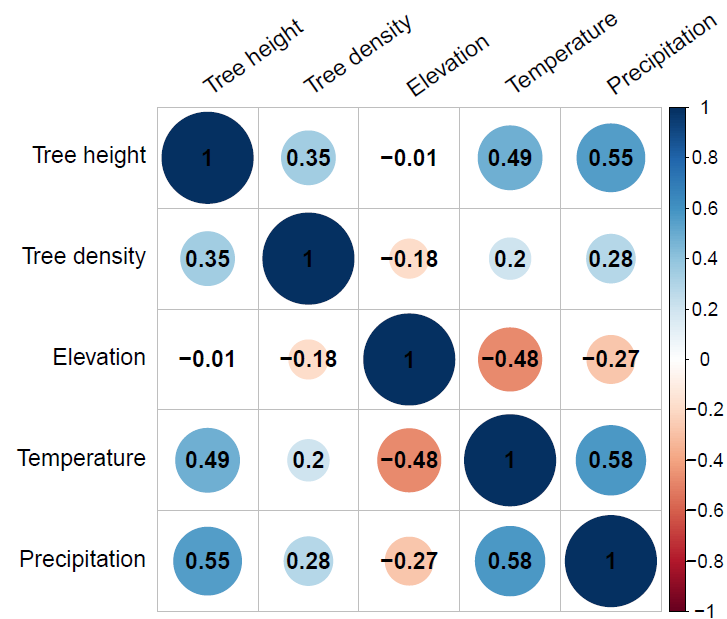


Figure S7. Correlation plot of five predictor variables used in generalised linear mixed effect models. All variables were scaled to unit variance and mean prior to analyses.

**List S8: Data Sources used for compiling the checklist of gliding vertebrates**

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Emerson, S. B., & Koehl, M. R. (1990). The Interaction of Behavioral and Morphological Change in the Evolution of a Novel Locomotor Type: “Flying” Frogs. Evolution, 44(8), 1931–1946.

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Higham, T. E., Russell, A. P., & Niklas, K. J. (2017). Leaping lizards landing on leaves: Escape-induced jumps in the rainforest canopy challenge the adhesive limits of geckos. Journal of the Royal Society Interface, 14(131). doi:10.1098/rsif.2017.0156

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McCay, M. G. (2001). Aerodynamic stability and maneuverability of the gliding frog Polypedates dennysi. Journal of Experimental Biology, 204(16), 2817–2826.

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Oliver, J. A. (1951). “Gliding” in Amphibians and Reptiles, with a Remark on an Arboreal Adaptation in the Lizard, Anolis carolinensis carolinensis Voigt. The American Naturalist, 85(822), 171–176. doi:10.1086/281666

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