Biotic Homogenization or a biodiversity reservoir? Secondary succession in highly fragmented landscapes in the Colombian Andean-Amazonian transition

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Supplementary Figures
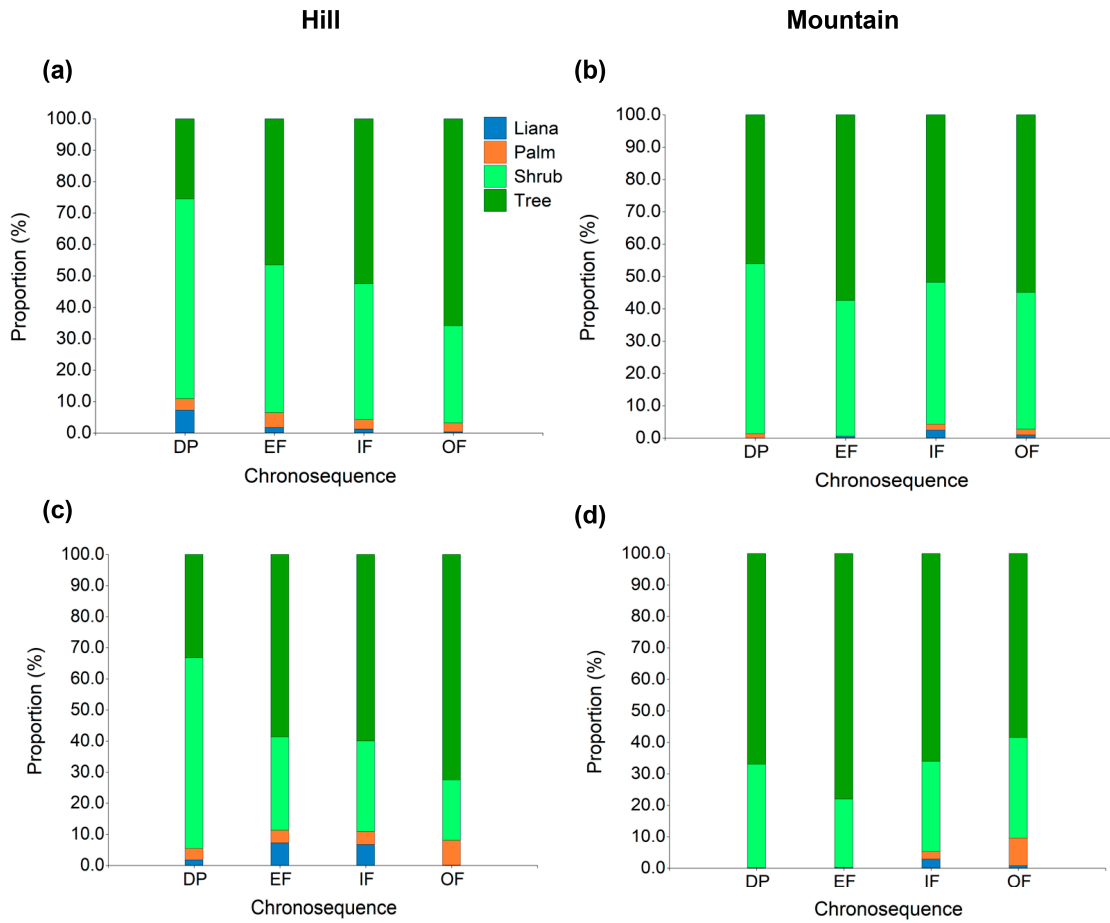
Figure S1. Proportion (%) of different growth habits along the chronosequence (DP, degraded pasture; EF, early forest; IF, Intermediate forest; OF, Old-growth forest or mature forest) in two landscape units. (**a**, **b**), richness-based calculation; (**c**, **d**) abundance-based calculation; (**a**, **c**), hill; (**b**, **d**), mountain.

Standard rank curve

(a)

(c)

Cumulative curve

(b)

(d)
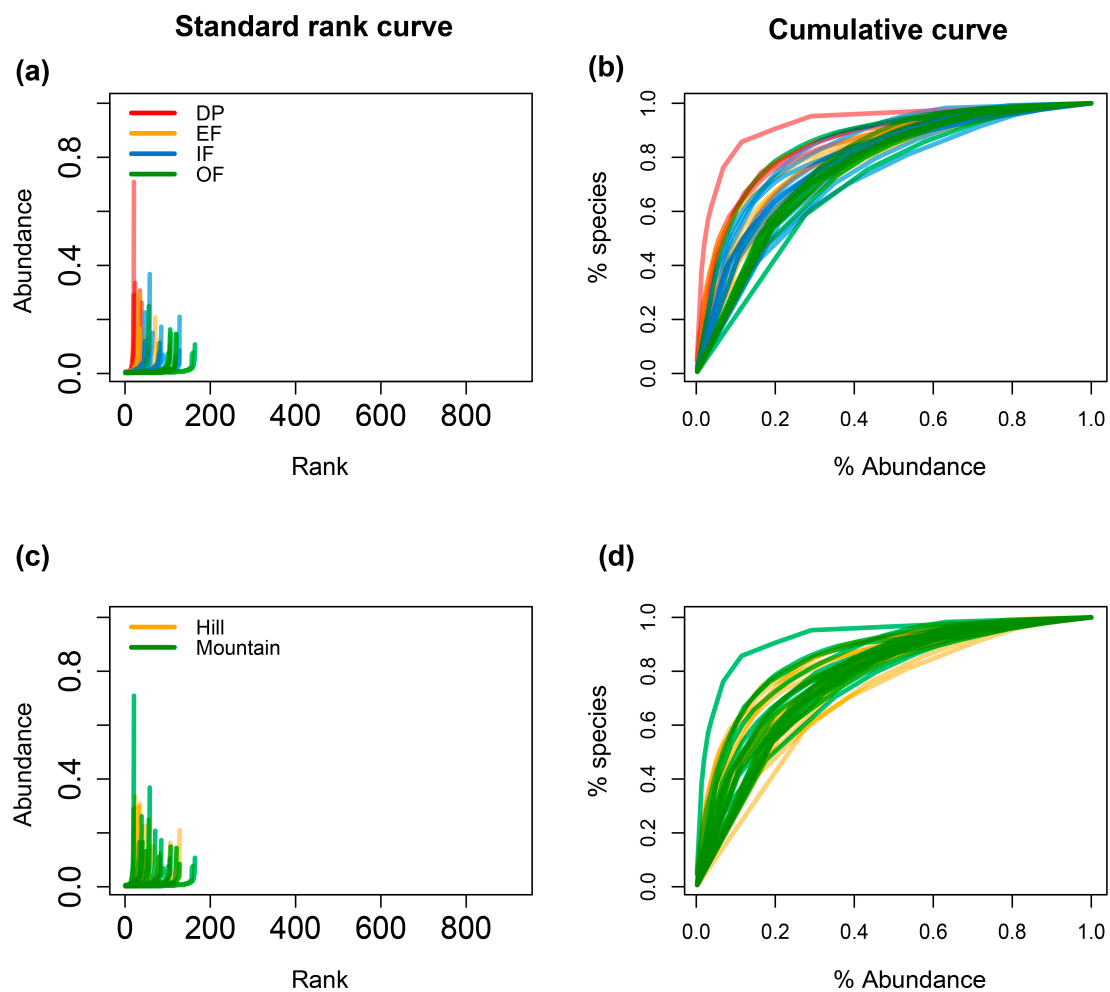
Figure S2. Species abundance distribution (SAD) curves. (**a**, **c**) Standard rank curves; (**b**, **d**) cumulative curve; (**a**, **b**) successional categories (DP, degraded pasture; EF, early forest; IF, Intermediate forest; OF, Old-growth forest or mature forest); (**c**, **d**) landscapes.
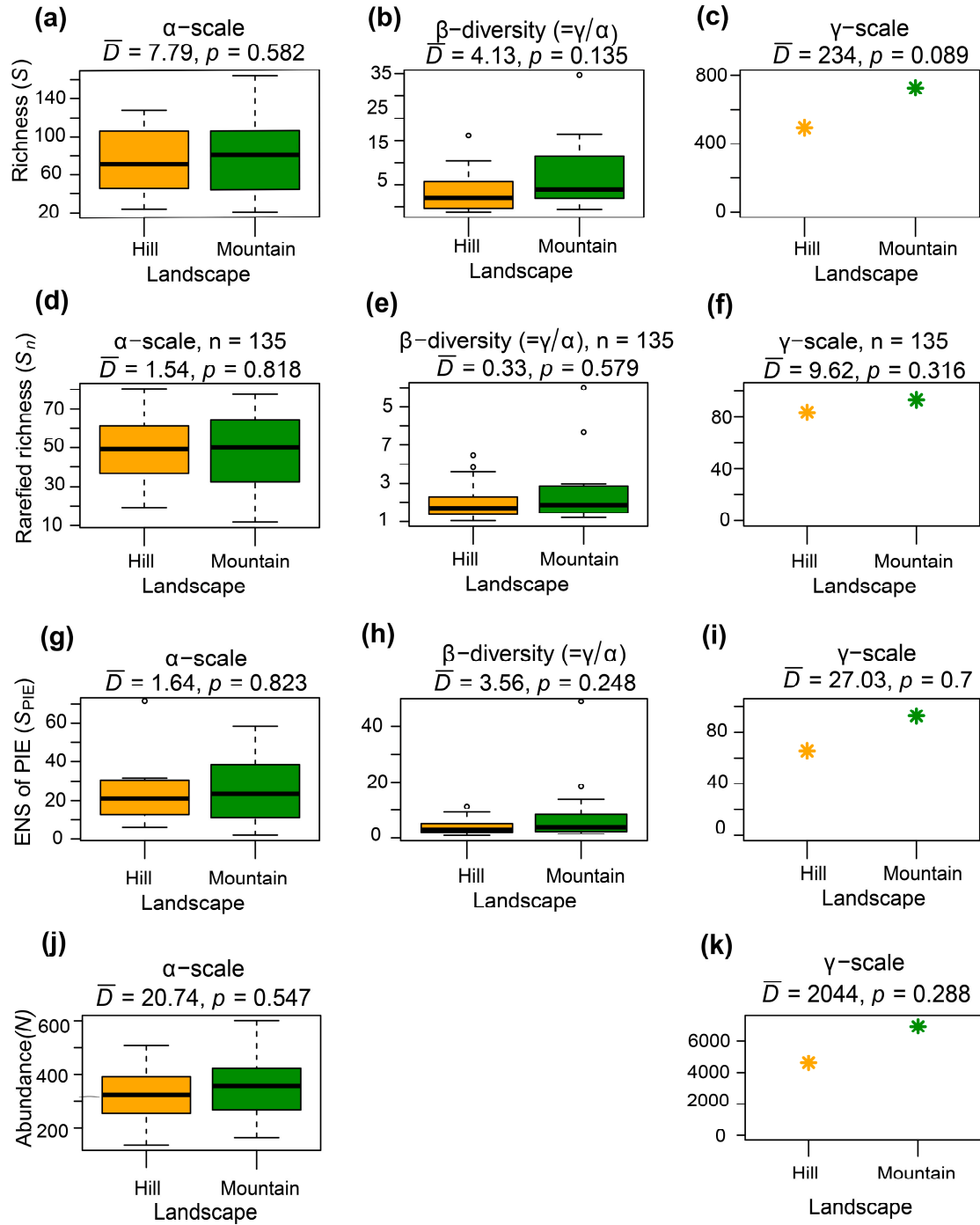
Figure S3. Biodiversity indices derived from the individual rarefaction curves, and permutation tests to compare the indices among the landscapes. (**a**, **b**, **c**) observed species richness (S); (**d**, **e**, **f**) rarefied species richness (S_n); (**g**, **h**, **i**) effective number species (ENS) of probability interspecific encounter (PIE) (S_{PIE}); (**j**, **k**), abundance or number of individuals (N); (**a**, **d**, **g**, **j**) biodiversity at alpha-scale; (**b**, **e**, **h**) biodiversity at beta-scale; (**c**, **f**, **i**, **k**) biodiversity at gamma-scale.
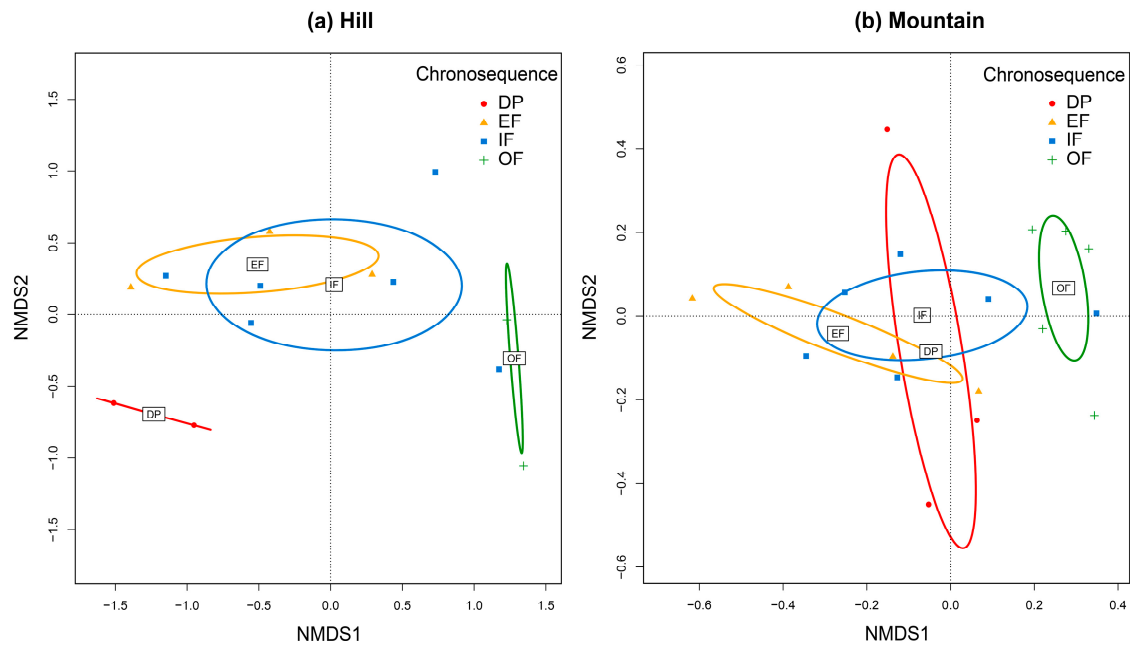
Figure S4. Nonmetric multidimensional scaling (NMDS) based on Bray-Curtis dissimilarity displaying the composition of plant communities in different successional categories (DP, degraded pasture; EF, early forest; IF, Intermediate forest; OF, Old-growth forest or mature forest) in two landscape units. (**a**), hill; (**b**) mountain. Ellipses represent the standard deviation around the centroid of each category for each landscape.
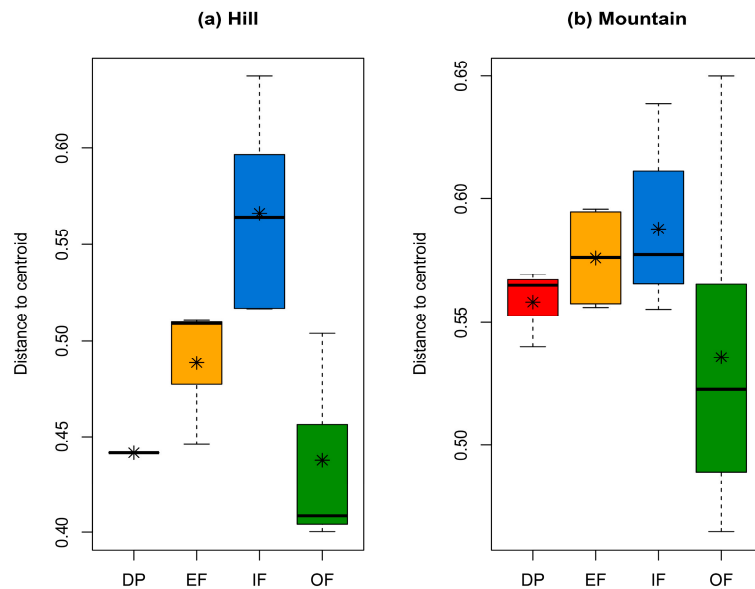
Figure S5. Analysis of multivariate homogeneity of group (i.e., successional category: DP, degraded pasture; EF, early forest; IF, Intermediate forest; OF, Old-growth forest or mature forest) dispersions (variances) based on the group centroid in two landscape units. (**a**) hill; (**b**) mountain.
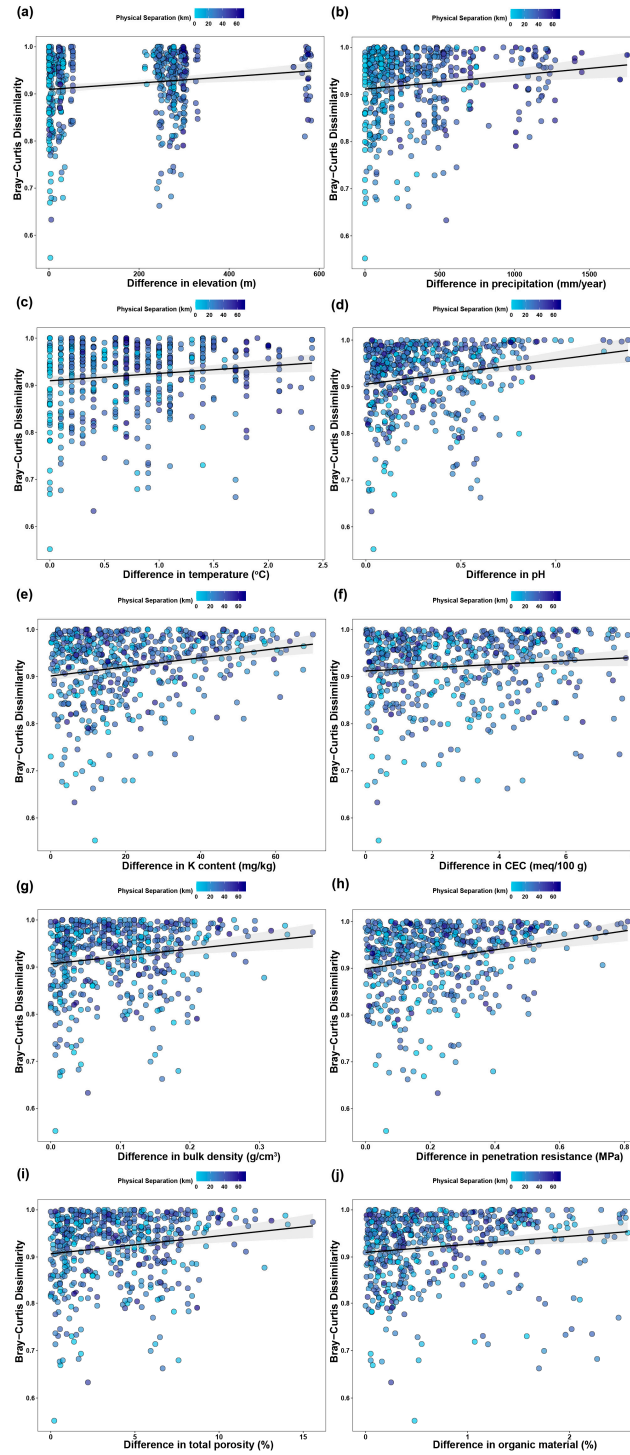
Figure S6. Mantel correlation pairwise tests between species dissimilarity matrix and different environmental vectors. (**a**) species vs. elevation; (**b**) species vs. precipitation; (**c**) species vs. temperature; (**d**) species vs. pH; (**e**) species vs. K content; (**f**) species vs. CEC (Cationic exchange capacity); (**g**) species vs. bulk density; (**h**) species vs. penetration resistance; (**i**) species vs. porosity; (**j**) species vs. organic material. All the scatterplots displayed the spatial separation gradient.
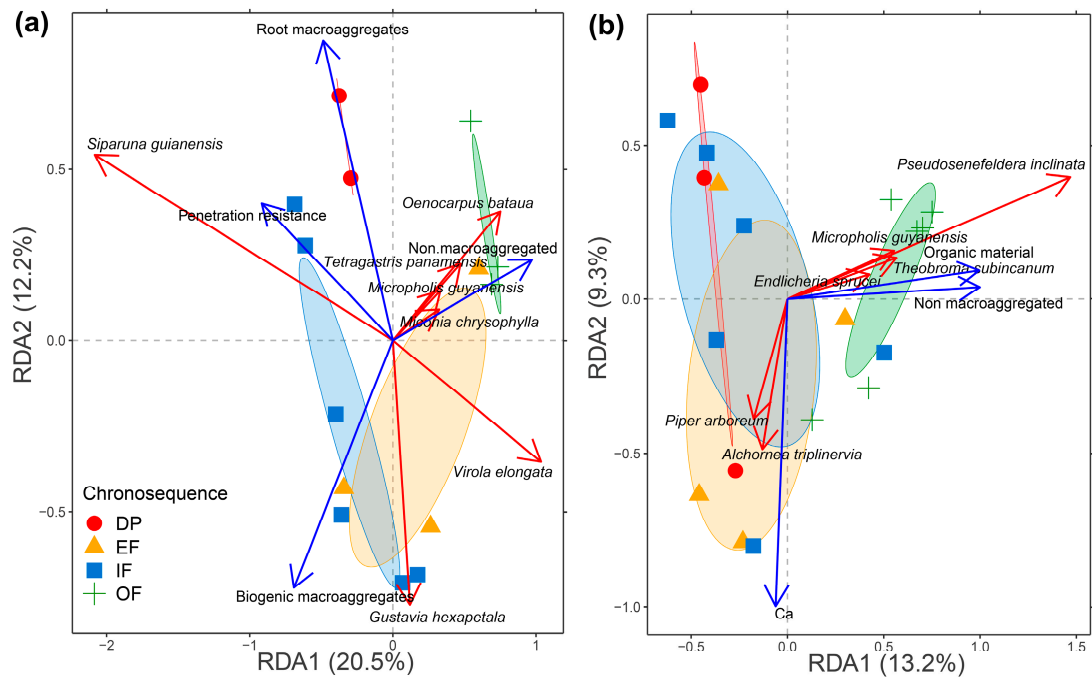
Figure S7. Redundancy analysis (RDA) of plant communities associated to different successional categories (DP, degraded pasture; EF, early forest; IF, Intermediate forest; OF, Old-growth forest or mature forest), constrained by above and below ground environmental variables in two landscapes units. (**a**) hill; (**b**) mountain. Ellipses represent the standard deviation around the centroid of each category. Blue arrows represent the environmental variables that were significant to constrained ordination ($p < 0.05$). Red arrows indicate the species vectors most important in the ordination ($r > 0.5$ and $p < 0.05$).