Supporting Information to the paper: Trujillo L.N., Granzow-de la Cerda, Í., Pardo, I., Macía, M.J., Cala, V. Arellano, G., Niche-based processes out-perform neutral processes when predicting distance decay in co-dominance along the Amazon – Andes rainforest gradient. *Journal of Vegetation Science*

Appendix S1. Number of plots, individuals and taxa, and environmental variables. Four forest types in Amazonian and Andean forests in the Madidi region in northwestern Bolivia were studied across an elevational gradient: Amazonian forest (<1000 m elevation), lower montane forest (1200–1500 m), intermediate montane forest (2000–2300 m) and upper montane forest (2800–3200 m). Average and range [minimum, maximum] values are given for climatic, edaphic ant topographic variables. Climatic variables are labeled according to WorldClim database (Hijmans *et al*. 2005) schema: Bio1 = annual mean temperature (all temperatures in °C × 10); Bio2 = mean diurnal range (mean of monthly (maximum temperature - minimum temperature)); Bio3 = isothermality (Bio2/Bio7) (×100); Bio4 = temperature seasonality (standard deviation × 100); Bio5 = maximum temperature of warmest month; Bio6 = minimum temperature of coldest month; Bio7 = temperature annual range (bio5-bio6); Bio8 = mean temperature of wettest quarter; Bio9 = mean temperature of driest quarter; Bio10 = mean temperature of warmest quarter; Bio11 = mean temperature of coldest quarter; Bio12 = annual precipitation (all precipitations in mm); Bio13 = precipitation of wettest month; Bio14 = precipitation of driest month; Bio15 = precipitation seasonality (coefficient of variation); Bio16 = precipitation of wettest quarter; Bio17 = precipitation of driest quarter; Bio18 = precipitation of warmest quarter; Bio19 = precipitation of coldest quarter.

Variable	Amazonian forest (<1000 m elevation)	Lower montane forest (1200–1500 m)	Intermediate montane forest (2000–2300 m)	Upper montane forest (2800–3200 m)
No. of plots	36	18	18	18
No. of individuals	9913	6596	4990	7917
No. of species	715	482	324	205
No. of genera	356	214	139	85
No. of families	93	81	69	49
Elevation (m)	593 [258, 1051]	1365 [1187, 1527]	2205 [2021, 2347]	2933 [2755, 3131]
Bio1	237 [220, 249]	203 [196, 210]	174 [163, 191]	140 [123, 158]
Bio2	106 [103.9, 110.4]	98 [91.8, 103.7]	114.6 [107.8, 120.8]	124.2 [119.5, 127.9]
Bio3	70.9 [68.4, 72.5]	73.1 [72.3, 74.1]	73.9 [73.1, 74.6]	72.5 [71.8, 73.5]
Bio4	1374.9 [1270.1, 1595.2]	1211.7 [1123.7, 1299.9]	1030 [947.6, 1102.9]	1078.6 [956, 1190.5]
Bio5	307.7 [290, 324]	267.3 [259, 276]	246.2 [235, 262]	215.8 [199, 234]
Bio6	158 [145, 167]	133.3 [127, 142]	91.2 [78, 112]	44.5 [25, 67]
Bio7	149.7 [144, 161]	134 [127, 140]	155.1 [147, 162]	171.3 [164, 177]
Bio8	247.9 [232.2, 261.5]	210.7 [203.8, 217.3]	182.5 [171, 199.3]	147.7 [130.3, 165.7]
Bio9	225.2 [212.3, 232.7]	186.6 [180.5, 192.5]	160.2 [147.7, 176]	126.2 [107.8, 144.7]
Bio10	249.13 [232.17, 262.83]	214.58 [207.83, 221.33]	184.86 [174.33, 201.17]	150.93 [135, 168]
Bio11	217.4 [201.8, 226.8]	185.7 [178.5, 192.5]	159.5 [147.7, 176]	124.7 [106.3, 144.7]
Bio12	1575.6 [1036, 2163.1]	2771.9 [2534.6, 2930]	1050.1 [569.3, 1499.1]	881.7 [417.1, 1370.9]
Bio13	295.5 [164.2, 525.4]	583 [484.7, 683.9]	206 [105, 292.4]	162 [58.3, 267.7]
Bio14	29.8 [12.8, 45.5]	3.6 [0, 8]	4.4 [0, 10.6]	2.7 [0.1, 7.7]
Bio15	65.6 [52.8, 87.1]	80.7 [75, 84.6]	78.6 [54.7, 94.6]	73.5 [44.8, 93.4]
Bio16	665.7 [451.1, 1025.8]	1176.3 [1095.1, 1322]	531.5 [239.3, 776.5]	386.8 [151.5, 631.1]
Bio17	137.2 [102.4, 219.7]	42.8 [31.5, 85.2]	43.2 [11.8, 76.2]	28.6 [11, 51.6]

Variable	Amazonian forest (<1000 m elevation)	Lower montane forest (1200–1500 m)	Intermediate montane forest (2000–2300 m)	Upper montane forest (2800–3200 m)
Bio18	506 [221.6, 812.2]	805.3 [718.5, 954.3]	387.8 [159.3, 632.4]	280.7 [110.3, 468.1]
Bio19	300.3 [237.6, 394.9]	78.1 [31.5, 145.9]	46.4 [11.8, 89.1]	33.8 [11, 61.8]
pH	5.56 [3.85, 8.01]	3.22 [2.68, 3.96]	3.52 [2.74, 4.91]	3.29 [2.51, 4.56]
Al (mg/kg)	383.1 [100.8, 1187]	1445.2 [720.8, 1924.8]	1094.4 [415.7, 1881.5]	1304.7 [622, 2026.7]
C (%)	3.24 [0.12, 16.53]	20.28 [5.98, 38.33]	28.32 [15.76, 42.13]	38.16 [24.29, 47.91]
N (%)	0.3 [0.06, 0.81]	1.26 [0.46, 3.33]	1.69 [0.89, 3.12]	1.57 [1.12, 2.21]
C:N	8.69 [4.75, 14.58]	14.37 [10.36, 16.77]	15.2 [11.83, 18.68]	20.65 [13.31, 26.25]
S (mg/kg)	0.03 [0, 0.1]	0.14 [0.04, 0.27]	0.19 [0.08, 0.28]	0.18 [0.14, 0.25]
Ca (mg/kg)	1742.8 [101.5, 8137.7]	158.7 [32.8, 364]	1285.8 [293.8, 6302]	1115.5 [174.7, 6205.1]
Mg (mg/kg)	232.72 [31.7, 885]	137.02 [32.2, 409.7]	471.14 [156.1, 1364.9]	576.12 [188.2, 1430.2]
K (mg/kg)	110.13 [6.87, 313.8]	202.47 [73.2, 391.1]	451.75 [252.9, 1002.2]	531.65 [202, 871.8]
P (mg/kg)	29.62 [5.75, 119.8]	60.84 [4.19, 383.8]	91.61 [30.3, 318.4]	105.76 [2.54, 342.4]
Fe (mg/kg)	134.77 [20, 204.6]	294.44 [85.1, 506]	189.03 [95.8, 303.3]	283.03 [121.6, 480]
Mn (mg/kg)	117.52 [4.5, 365.1]	26.23 [4.27, 138.9]	103.64 [2.21, 477]	77.76 [7.36, 422]
Co (mg/kg)	0.62 [0.14, 1.88]	0.85 [0.05, 4.8]	0.39 [0.01, 1.24]	0.54 [0.11, 1.63]
Ni (mg/kg)	1.02 [0.22, 3.44]	1.54 [0.6, 3.71]	1.41 [0.18, 3.1]	1.76 [0.52, 3.37]
Cu (mg/kg)	2.49 [0.85, 5.75]	2.61 [1.2, 5.52]	2.59 [0.24, 5.24]	3.36 [0.37, 5.46]
Zn (mg/kg)	4.47 [0.73, 19.2]	7.59 [1.14, 39.6]	11.82 [5.74, 18.7]	19.02 [5.79, 44.3]
Slope (%)	24 [4, 67]	44 [17, 73]	52 [21, 74]	55 [27, 84]
Northness	-0.14 [-1, 1]	0.23 [-0.92, 1]	-0.04 [-1, 0.99]	0.33 [-0.94, 0.99]
Eastness	-0.04 [-0.99, 0.99]	-0.2 [-1, 0.95]	-0.01 [-0.98, 0.94]	0.13 [-0.91, 0.99]