

### SUPPLEMENTARY MATERIAL 3

**Table S2.** Physiognomic characteristics and soil properties of the four systems analysed, measured as described in Supplementary Material 3. SOM = soil organic matter; TN = total nitrogen; P = phosphorous; Ca = calcium; Mg = magnesium; Na = sodium; K = potassium; CEC = cationic exchange capacity; s.e. = standard error.

**Tabla S2.** Características fisonómicas y del suelo en los cuatro sistemas, medidas según se describe en Material Suplementario 3. SOM = materia orgánica del suelo; TN = contenido total de nitrógeno; P = contenido de fósforo; Ca = contenido de calcio; Mg = contenido de magnesio; Na = contenido de sodio; K = contenido de potasio; CEC = capacidad de intercambio catiónico; s.e. = error estándar.

Ecosystem Physiognomy		Sub-Andean		Mountain Chaco		Espinal		Dry Chaco		
		Forest mean (s.e.)	Treeless mean (s.e.)	Forest mean (s.e.)	Treeless mean (s.e.)	Forest mean (s.e.)	Treeless mean (s.e.)	Forest mean (s.e.)	Treeless mean (s.e.)	
Architecture	Maximum height (m)	4.50 (0.80)	0.77 (0.06)	5.33 (0.67)	0.73 (0.03)	6.67 (0.60)	0.57 (0.02)	11.50 (1.04)	0.60 (0.09)	
	Bare Soil (%)	8.33 (6.01)	10.0 (7.65)	0.67 (0.67)	2.00 (1.15)	1.33 (0.67)	0.67 (0.67)	14.17 (3.00)	45.00 (7.64)	
Soil		SOM(%)	13.65 (0.97)	8.56 (1.61)	9.79 (3.89)	8.91 (0.39)	2.51 (0.81)	4.24 (3.22)	1.96 (0.22)	1.99 (0.15)
		TN (%)	0.63 (0.06)	0.45 (0.05)	0.57 (0.15)	0.44 (0.02)	0.14 (0.05)	0.24 (0.18)	0.08 (0.01)	0.09 (0.00)
		pH	4.99 (0.08)	4.99 (0.19)	5.82 (0.50)	5.83 (0.06)	5.57 (0.12)	5.68 (0.42)	6.97 (0.13)	7.50 (0.19)
Soil		Conductivity 1:1 (dS/m)	0.31 (0.04)	0.15 (0.02)	0.42 (0.02)	0.15 (0.02)	0.28 (0.01)	0.24 (0.07)	0.30 (0.05)	0.17 (0.03)
		P (ppm)	8.03 (0.92)	5.33 (1.43)	59.20 (35.08)	6.70 (0.46)	71.41 (12.74)	92.20 (19.84)	121.87 (13.44)	86.20 (7.96)
		Ca (meq/100g)	14.20 (0.55)	11.02 (1.52)	15.47 (2.75)	16.45 (1.10)	10.95 (3.13)	6.35 (1.94)	11.48 (0.95)	15.00 (1.45)

Mg (meq/100g)	3.27 (0.54)	0.63 (0.20)	2.22 (0.12)	1.85 (0.21)	1.62 (0.51)	2.03 (0.09)	1.87 (0.27)	2.10 (0.26)
Na (meq/100g)	0.25 (0.03)	0.25 (0.02)	0.20 (0.01)	0.16 (0.04)	0.22 (0.01)	0.26 (0.03)	0.20 (0.01)	0.30 (0.05)
K (meq/100g)	0.83 (0.14)	0.38 (0.07)	1.02 (0.12)	1.05 (0.25)	1.23 (0.26)	1.36 (0.15)	1.22 (0.18)	1.77 (0.16)
CEC (meq/100g)	19.68 (2.79)	13.90 (1.08)	22.37 (1.66)	22.37 (1.39)	16.13 (4.22)	11.00 (2.69)	15.03 (0.23)	19.30 (1.31)
Sand (%)	77.23 (0.27)	69.20 (5.72)	69.20 (0.67)	64.27 (1.83)	44.27 (18.08)	71.93 (4.24)	62.30 (1.37)	37.07 (2.97)
Silt (%)	17.57 (0.55)	24.80 (4.00)	24.37 (0.44)	26.63 (2.12)	44.93 (15.47)	20.83 (2.99)	29.90 (1.50)	51.90 (3.25)
Clay (%)	5.20 (0.29)	6.00 (1.74)	6.43 (0.43)	9.10 (0.70)	10.80 (2.70)	7.23 (1.39)	7.80 (0.21)	11.03 (0.81)