

# Population dynamics of *Pentaclethra macroloba*, a hyperdominant tree in the Amazon River estuary

## Supplementary Material

Supplement S1. Effect of edaphic variables and vegetation on the population density of <i>Pentaclethra macroloba</i> in a floodplain forest of the Amazon estuary												
Variables	Ajuruxi				Maracá				Mazagão Velho			
	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
Soil												
pH	$\beta = 3.95^*$	$\beta = 0.36$	$\beta = 1.33$	$\beta = 0.39$	$\beta = -1.44$	$\beta = 1.60$	$\beta = -1.76$	$\beta = 0.018$	$\beta = 2.43$	$\beta = -0.01$	$\beta = -0.49$	$\beta = -2.64^{**}$
OM	$\beta = 0.02$	$\beta = 0.004$	$\beta = 0.10$	$\beta = 0.03$	$\beta = 0.01$	$\beta = -0.01$	$\beta = 0.01$	$\beta = -0.003$	$\beta = -0.001$	$\beta = -0.06$	$\beta = 0.02$	$\beta = 0.04$
P	$\beta = -0.02$	$\beta = 0.03$	$\beta = -0.01$	$\beta = 0.07$	$\beta = 0.06$	$\beta = -0.04$	$\beta = 0.03$	$\beta = -0.13$	$\beta = -0.02$	$\beta = -0.07$	$\beta = -0.08$	$\beta = 0.02$
K	$\beta = -9.72$	$\beta = 4.64$	$\beta = 2.25$	$\beta = -12.13$	$\beta = -11.55$	$\beta = 8.18$	$\beta = 5.21$	$\beta = 0.27$	$\beta = 5.35$	$\beta = -3.62$	$\beta = 8.55$	$\beta = 12.2^{**}$
Ca + Mg	$\beta = 0.32$	$\beta = -0.08$	$\beta = 0.13$	$\beta = -0.05$	$\beta = -0.06$	$\beta = 0.26$	$\beta = -0.12$	$\beta = 0.42$	$\beta = -0.22$	$\beta = 0.04$	$\beta = 0.22$	$\beta = 0.48^*$
Ca	$\beta = 0.32$	$\beta = 0.08$	$\beta = 0.21$	$\beta = -0.15$	$\beta = -0.12$	$\beta = 0.35$	$\beta = -0.35$	$\beta = 0.36$	$\beta = -0.14$	$\beta = -0.12$	$\beta = 0.17$	$\beta = 0.85^*$
Mg	$\beta = 0.55$	$\beta = -0.27$	$\beta = 0.09$	$\beta = 0.08$	$\beta = 0.11$	$\beta = 0.25$	$\beta = 0.02$	$\beta = 0.23$	$\beta = -0.49$	$\beta = 0.35$	$\beta = 0.27$	$\beta = 0.79$
Al	$\beta = -3.74$	$\beta = -2.08$	$\beta = -0.86$	$\beta = -0.78$	$\beta = -0.12$	$\beta = -5.21$	$\beta = 1.14$	$\beta = -1.20$	$\beta = -0.11$	$\beta = 0.07$	$\beta = 0.48$	$\beta = 0.83^*$
H + Al	$\beta = -0.93$	$\beta = -0.27$	$\beta = -0.03$	$\beta = -0.56$	$\beta = 0.42$	$\beta = -0.24$	$\beta = 0.33$	$\beta = 0.03$	$\beta = -0.36$	$\beta = -0.12$	$\beta = 0.26$	$\beta = 0.36^{***}$
SB	$\beta = 0.31$	$\beta = -0.07$	$\beta = 0.13$	$\beta = -0.08$	$\beta = -0.06$	$\beta = 0.26$	$\beta = -0.12$	$\beta = 0.43$	$\beta = -0.21$	$\beta = 0.07$	$\beta = 0.23$	$\beta = 0.47^*$
CTC	$\beta = 0.13$	$\beta = -0.14$	$\beta = 0.09$	$\beta = -0.47$	$\beta = 0.03$	$\beta = 0.21$	$\beta = -0.07$	$\beta = 0.25$	$\beta = -0.34$	$\beta = -0.08$	$\beta = 0.28^{**}$	$\beta = 0.24^{***}$
BS	$\beta = 0.19^*$	$\beta = 0.05$	$\beta = 0.03$	$\beta = 0.06$	$\beta = -0.09$	$\beta = 0.07$	$\beta = -0.06$	$\beta = 0.02$	$\beta = 0.02$	$\beta = 0.019$	$\beta = -0.02$	$\beta = -0.03$
Al Sat.	$\beta = -0.61$	$\beta = -0.35$	$\beta = -0.13$	$\beta = -0.08$	$\beta = -0.004$	$\beta = -0.62$	$\beta = 0.11$	$\beta = -0.39$	$\beta = -0.02$	$\beta = 0.007$	$\beta = 0.04$	$\beta = 0.01$
Clay	$\beta = -0.0005$	$\beta = -0.009$	$\beta = 0.003$	$\beta = -0.02$	$\beta = 0.0007$	$\beta = 0.008$	$\beta = -0.009$	$\beta = 0.01$	$\beta = 0.01$	$\beta = -0.001$	$\beta = 0.006^*$	$\beta = 0.009^{**}$
CS	$\beta = -0.005$	$\beta = -0.0008$	$\beta = -0.009$	$\beta = -0.0004$	$\beta = -0.003$	$\beta = -0.003$	$\beta = 0.007$	$\beta = 0.005$	$\beta = 0.003$	$\beta = 0.01$	$\beta = 0.0001$	$\beta = 0.01^{**}$
FS	$\beta = -0.006$	$\beta = 0.01$	$\beta = 0.007$	$\beta = -0.01$	$\beta = 0.04^{**}$	$\beta = -0.005$	$\beta = -0.004$	$\beta = 0.03$	$\beta = -0.008$	$\beta = 0.02$	$\beta = -0.01$	$\beta = -0.06^*$
TS	$\beta = -0.003$	$\beta = 0.001$	$\beta = -0.003$	$\beta = -0.003$	$\beta = -0.01$	$\beta = -0.002$	$\beta = 0.004$	$\beta = 0.009$	$\beta = 0.002$	$\beta = 0.009$	$\beta = -0.005$	$\beta = 0.01^*$
Silt	$\beta = 0.008$	$\beta = 0.002$	$\beta = -0.001$	$\beta = 0.01$	$\beta = 0.0002$	$\beta = -0.0009$	$\beta = -0.001$	$\beta = -0.008$	$\beta = -0.004$	$\beta = -0.001$	$\beta = -0.008$	$\beta = -0.007$
Porosity	$\beta = 0.02$	$\beta = 0.02$	$\beta = -0.01$	$\beta = -0.06$	$\beta = 0.005$	$\beta = 0.02$	$\beta = 0.02$	$\beta = -0.009$	$\beta = 0.007$	$\beta = -0.02$	$\beta = 0.002$	$\beta = 0.05$
Humidity	$\beta = -0.004$	$\beta = 0.02$	$\beta = -0.11$	$\beta = -0.12^*$	$\beta = 0.009$	$\beta = -0.01$	$\beta = 0.01$	$\beta = 0.008$	$\beta = 0.001$	$\beta = -0.03$	$\beta = 0.004$	$\beta = 0.01$
Vegetation												
Richness	$\beta = -0.11$	$\beta = 0.14^*$	$\beta = 0.05$	$\beta = -0.04$	$\beta = -0.10$	$\beta = -0.22$	$\beta = 0.09$	$\beta = 0.0005$				
Diversity	$\beta = -0.36$	$\beta = 0.75$	$\beta = 0.38$	$\beta = -0.71$	$\beta = 0.30$	$\beta = -1.11$	$\beta = 0.52$	$\beta = -0.04$				
Luminosity	$\beta = -0.07$	$\beta = 0.01$	$\beta = -0.08$	$\beta = 0.003$	$\beta = 0.001$	$\beta = 0.04$	$\beta = -0.01$	$\beta = -0.04$				

Significance: \*0.05, \*\*0.01, \*\*\*0.001;  $\beta$  = GLM regression coefficient.  
BS – Sum of bases; pH – Hydrogeonic Potential; FS – Fine sand; CEC – Cation Exchange Capacity; OM – Organic Matter; CS – Coarse Sand; PD – Particle Density; K+ – Potassium; Ca2+ – Calcium; Al3+ – Aluminum, TS – Total.