



Supplement of

Leaf carbon and nitrogen stoichiometric variation along environmental gradients

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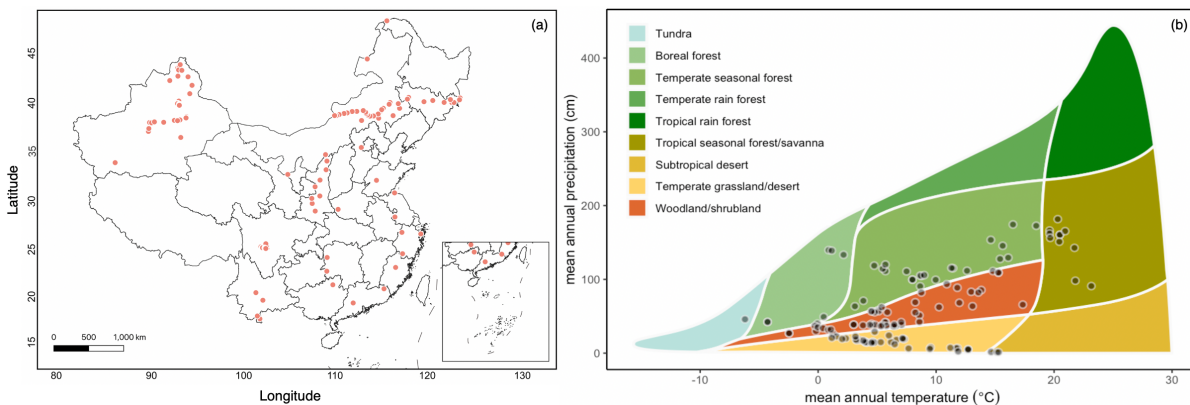
Table S1 Summary of the mixed model relating N_{mass} to V_{cmax25}/M_a , with LAI as a random effect on both the slope and the intercept.

		slope	intercept
LAI effect		$p = 0.03$	$p < 0.01$
LAI group	0-1	0.34	2.04
	1-2	0.62	1.75
	2-3	0.64	1.86
	3-4	0.66	1.79
	4-5	0.72	1.55
	>5	0.76	1.44

Table S2 Summary of the multiple regression on distance matrices (MRM) between leaf stoichiometric traits and spatial distance and bioclimatic factors.

	C_{mass}	N_{mass}	C:N ratio
Spatial distance r^2	0.004	0.002	0.000
Bioclimatic factors r^2	0.006	0.019	0.014

Fig. S1 The locations and biomes of sites in this study. (a) Each red dot is a site from CPTDv2. (b) Whittaker plot, showing site climates as black dots.



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Fig. S2 The relationships between leaf stoichiometric traits and soil C:N ratio. Yellow and green dots are deciduous and evergreen species, respectively.

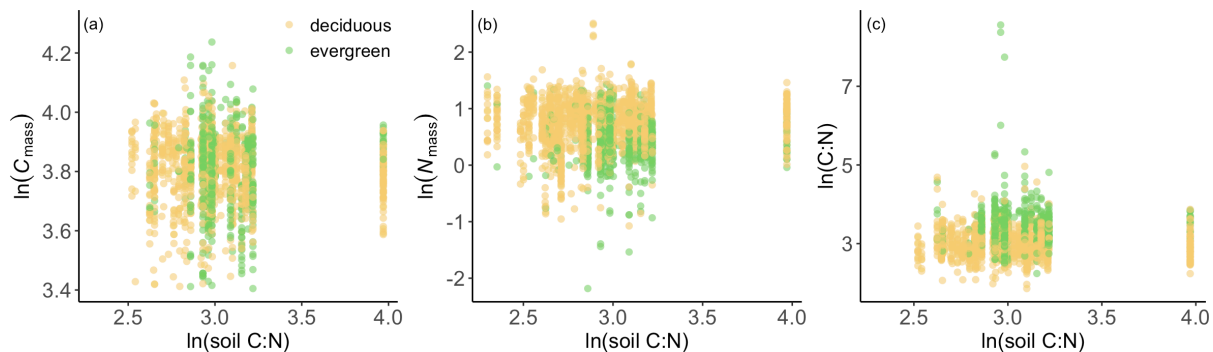
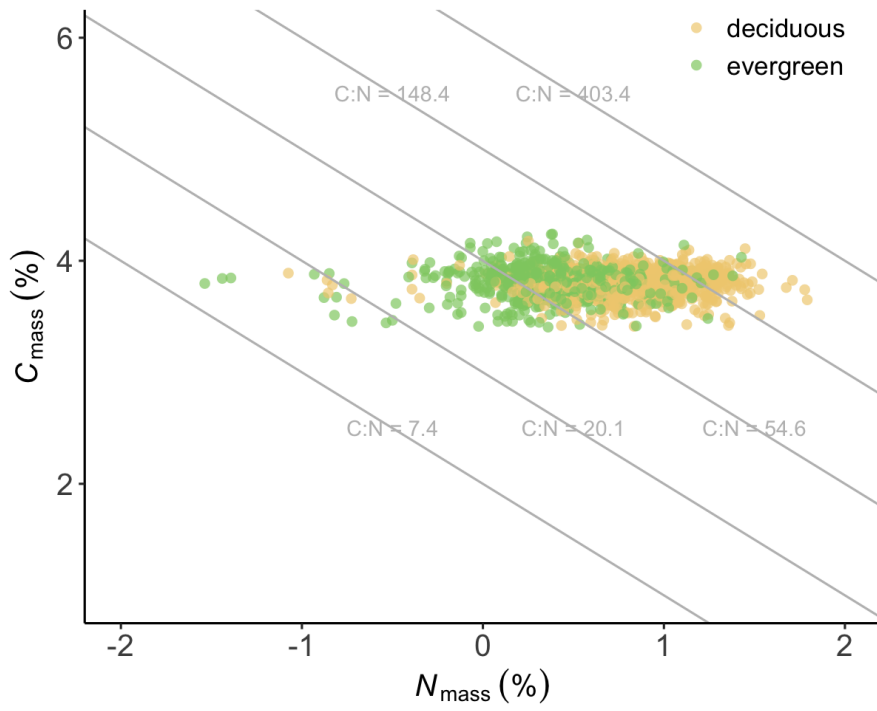
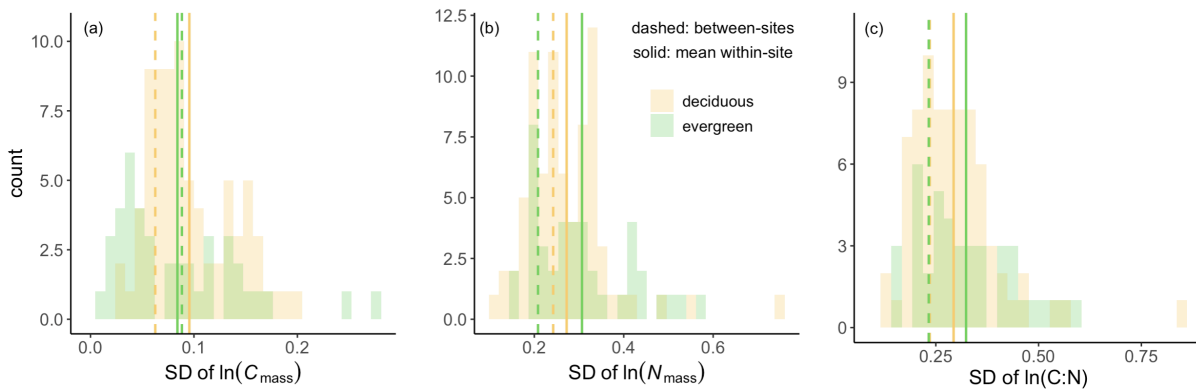


Fig. S3 The relationship between leaf carbon (C_{mass}), nitrogen concentration (N_{mass}) and C:N ratio. Grey lines are isolines of constant C:N ratio. The x and y axes are natural-log transformed. Yellow and green dots are deciduous and evergreen species respectively.



20 **Fig. S4 Histogram of standard deviations (SD) for the within- and between-site variation of each trait.** Dashed and solid lines represent between-site and mean within-site SD, respectively. Yellow and green colours distinguish deciduous and evergreen species.



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