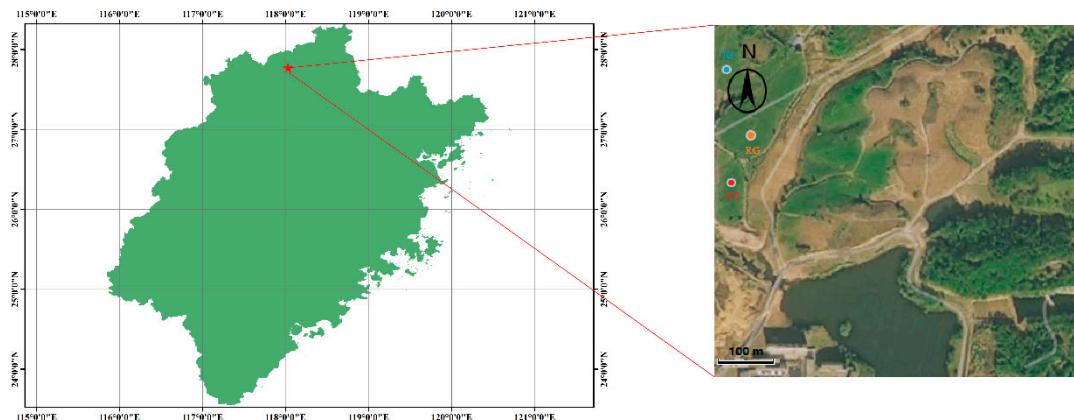
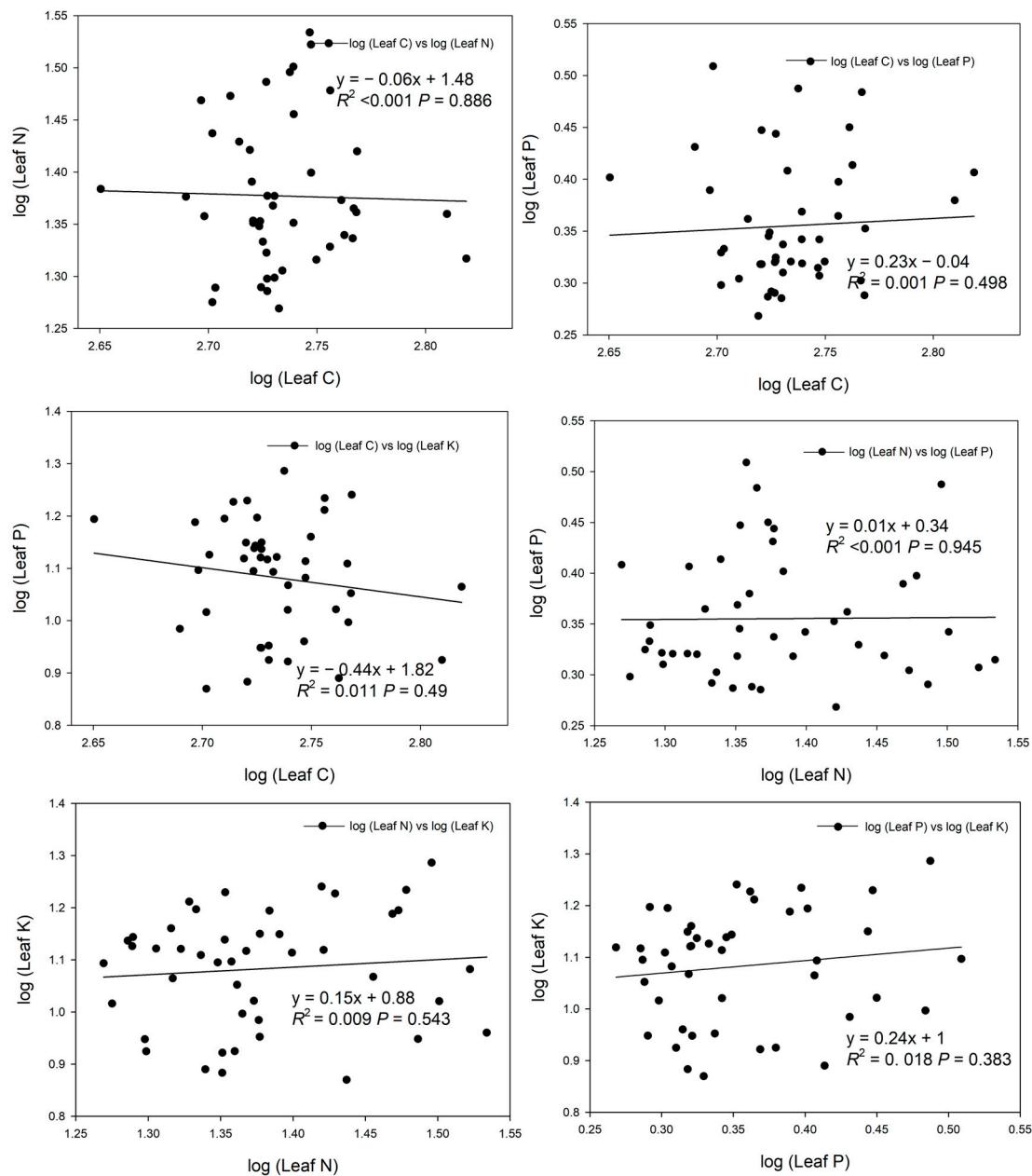


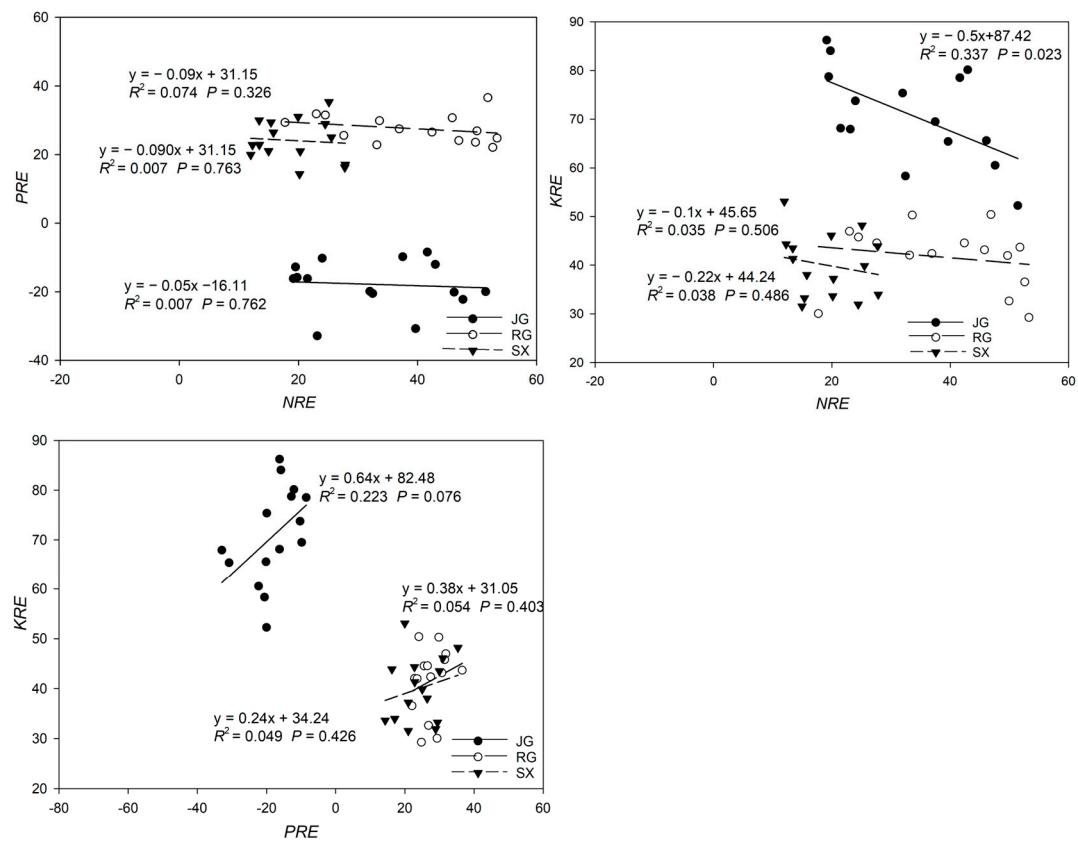
## Supplementary material



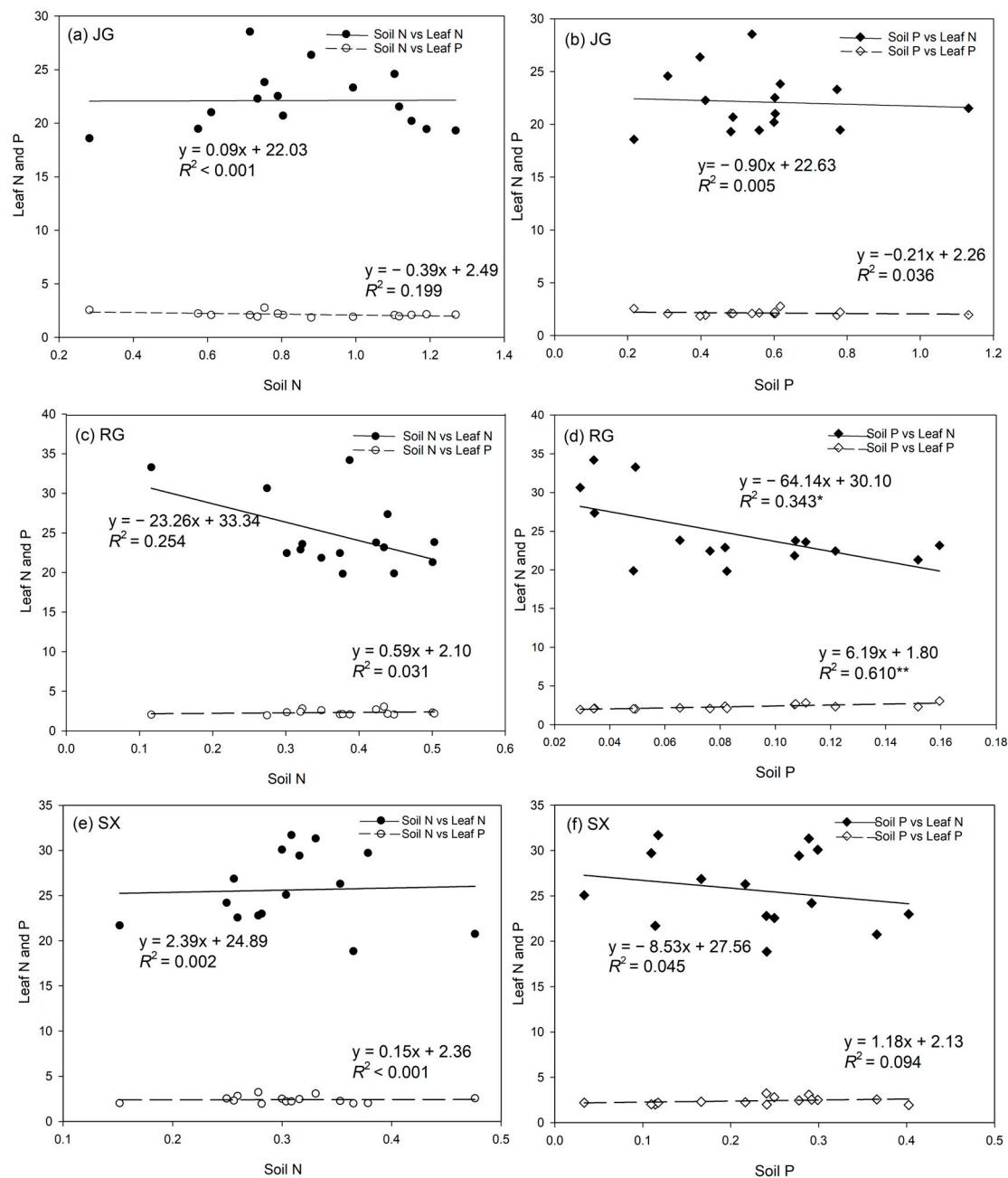
**Figure S1.** Schematic diagram of the study site. JG, RG and SX represent *WuyiJingui*, *WuyiRougui* and *WuyiShuixian*, respectively.



**Figure S2.** Bivariate plots among the leaf carbon (C), nitrogen (N), phosphorus (P), and potassium (K) in the tea species. Major axis regression for significance of  $R^2$ .



**Figure S3.** The correlations among of nitrogen resorption efficiencies (NRE), phosphorus resorption efficiencies (PRE) and potassium resorption efficiencies (KRE) in three Wuyi Rock tea cultivars. JG: *Wuyi Jingui*. RG: *Wuyi Rougui*. SX: *Wuyi Shuixian*.



**Figure S4.** Relationships between leaf nitrogen and phosphorus contents with respective soil nitrogen and phosphorus contents in three Wuyi Rock tea cultivars. JG: *Wuyi Jingui*. RG: *Wuyi Rougui*. SX: *Wuyi Shuixian*.

**Table S1.** The contents (Mean  $\pm$  SE) of stoichiometric for the organic carbon (C), total nitrogen (N), total phosphorus (P) and total potassium (K) in leaves, litter, and soil in the Wuyi Rock tea species.

	JG			RG			SX		
	Leaf	Litter	Soil	Leaf	Litter	Soil	Leaf	Litter	Soil
C:N	24.46 $\pm$ 0.73B	28.78 $\pm$ 8.87B	29.97 $\pm$ 1.89	22.99 $\pm$ 1.02B	28.69 $\pm$ 0.93Ba	36.02 $\pm$ 1.69Aa	21.76 $\pm$ 1.11Ba	26.30 $\pm$ 1.18B	36.96 $\pm$ 1.69A
	a	a	Ab	a				b	a
C:P	256.22 $\pm$ 0.59	181.07 $\pm$ 7.53	47.90 $\pm$ 4.29	241.62 $\pm$ 7.43	300.47 $\pm$ 19.87	201.31 $\pm$ 32.65	231.88 $\pm$ 10.85	215.01 $\pm$ 8.17	68.35 $\pm$ 17.17
	Ba	Ca	Ab	Ba	Ba	Aa	Ba	Ba	Ab
C:K	51.88 $\pm$ 2.29B	119.81 $\pm$ 1.94	1.03 $\pm$ 0.08C	60.35 $\pm$ 1.92B	219.57 $\pm$ 5.13A	0.87 $\pm$ 0.08Ca	39.25 $\pm$ 2.80Bb	348.35 $\pm$ 2.11	0.24 $\pm$ 0.03Cb
	b	Ac	a	a	b			Aa	
N:P	10.46 $\pm$ 0.50A	5.84 $\pm$ 0.26Bc	1.67 $\pm$ 0.19C	10.94 $\pm$ 0.78A	10.34 $\pm$ 0.42Aa	5.64 $\pm$ 0.90Ba	10.88 $\pm$ 0.56Aa	8.51 $\pm$ 0.44Bb	1.97 $\pm$ 0.54Cb
	a		b	a					
N:K	1.65 $\pm$ 0.07Ab	4.21 $\pm$ 0.44Ac	0.04 $\pm$ 0.004	2.70 $\pm$ 0.16Ba	7.41 $\pm$ 0.71Ab	0.03 $\pm$ 0.002Cb	1.82 $\pm$ 0.10Bb	13.02 $\pm$ 1.15A	0.007 $\pm$ 0.001
			Ca					a	Cc
P:K	0.16 $\pm$ 0.01Ab	0.71 $\pm$ 0.05Ab	0.02 $\pm$ 0.002	0.25 $\pm$ 0.01Ba	0.71 $\pm$ 0.05Ab	0.007 $\pm$ 0.0001C	0.17 $\pm$ 0.01Bb	1.63 $\pm$ 0.19Aa	0.005 $\pm$ 0.001
			Ca			b			Cb

Note: JG, RG and SX represent *WuyiJingui*, *WuyiRougui* and *WuyiShuixian*, respectively. Different capital letters in the same tea species show significant differences among different components. Different small letters in the same component show significant differences among different tea species.

**Table S2.** Summary of reduced major axis regression analyses (slope and y-intercept, allometric index) of leaf nutrients stoichiometry for three Wuyi Rock tea cultivars.

	Species	n	log a (95%)	b (95%)	r <sup>2</sup>	p
C versus N	JG	15	0.63 (-4.62, 5.89)	0.42 (-2.70, 3.54)	0.006	0.776
	RG	15	1.78 (-0.83, 4.39)	-0.23 (-1.76, 1.30)	0.008	0.751
	SX	15	2.01 (-0.05, 4.08)	-0.36 (-1.58, 0.86)	0.030	0.535
	All	45	1.48 (0.10, 2.85)	-0.06 (-0.87, 0.75)	<0.001	0.886
C versus P	JG	15	-0.30 (-4.79, 4.20)	0.37 (-2.30, 3.04)	0.007	0.769
	RG	15	-0.75 (-2.71, 1.21)	0.65 (-0.50, 1.81)	0.103	0.242
	SX	15	0.94 (-1.06, 2.95)	-0.33 (-1.52, 0.85)	0.028	0.550
	All	45	-0.04 (-1.22, 1.13)	0.23 (-0.46, 0.93)	0.011	0.498
C versus K	JG	15	1.58 (-1.46, 4.62)	-0.27 (-2.07, 1.53)	0.008	0.753
	RG	15	-0.11 (-3.10, 2.88)	0.64 (-1.12, 2.39)	0.045	0.449
	SX	15	1.90 (-0.70, 4.50)	-0.44 (-1.97, 1.09)	0.029	0.543
	All	45	1.82 (-0.32, 3.96)	-0.44 (-1.70, 0.83)	0.011	0.490
N versus P	JG	15	0.64 (-0.02, 1.31)	-0.23 (-0.73, 0.26)	0.075	0.322
	RG	15	0.74 (0.12, 1.35)	-0.27 (-0.72, 0.17)	0.117	0.212
	SX	15	0.18 (-0.63, 0.99)	0.14 (-0.43, 0.72)	0.021	0.607
	All	45	0.34 (-0.02, 0.71)	0.01 (-0.25, 0.27)	<0.001	0.945
N versus K	JG	15	1.33 (0.88, 1.78)	-0.15 (-0.48, 0.19)	0.065	0.357
	RG	15	0.84 (-0.12, 1.81)	0.09 (-0.61, 0.79)	0.006	0.787
	SX	15	0.24 (-0.66, 1.15)	0.65 (0.00, 1.29)	0.264	0.050
	All	45	0.88 (0.22, 1.54)	0.15 (-0.33, 0.62)	0.009	0.543
P versus K	JG	15	1.13 (0.99, 1.26)	0.01 (-0.40, 0.41)	<0.001	0.959
	RG	15	0.89 (0.57, 1.21)	0.22 (-0.65, 1.10)	0.023	0.594
	SX	15	0.94 (0.68, 1.21)	0.55 (-0.15, 1.25)	0.182	0.113
	All	45	1.00 (0.80, 1.20)	0.24 (-0.31, 0.80)	0.018	0.383

Note: JG: *Wuyi Jingui*, RG: *Wuyi Rougui*, SX: *Wuyi Shuixian*, All: all three tea cultivars.

**Table S3.** The correlation analysis between nutrient resorption efficiencies, leaf traits, and soil nutrients for *Wuyi Jingui*.

Note: \* , \*\*represent significant difference at  $\alpha=0.05, 0.01$  levels, respectively. Soil N: soil total nitrogen content. Soil P: soil total phosphorus content. Soil C: soil organic carbon content. Soil K: soil total potassium content. LT: leaf thickness. SLA: specific leaf area. LDMC: leaf dry mass content. Chl: Chlorophyll contents. NRE: nitrogen resorption efficiencies. PRE: phosphorus resorption efficiencies. KRE: potassium resorption efficiencies. The same below.

**Table S4.** The correlation analysis between nutrient resorption efficiencies, leaf traits, and soil nutrients for *Wuyi Rougui*.

**Table S5.** The correlation analysis between nutrient resorption efficiencies, leaf traits, and soil nutrients for *Wuyi Shuxian*.