

Table S1. Annual summary of variables collected across different sites in Lake Taihu. The mean and standard deviation (SD) are shown for all variables.

Variables	DPE		ZSB		MLB		LC		XKB	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
T (°C)	18.73	8.6	18.92	8.55	18.57	8.79	17.90	8.60	17.86	0.17
DOC (mg/L)	7.19	2.86	7.05	3.16	6.33	3.00	5.81	3.26	7.05	2.63
Chl <i>a</i> (µg/L)	170.99	267.39	97.33	139.02	157.21	271.12	31.54	26.97	16.48	7.89
TSS (mg/L)	72.93	52.23	39.82	21.71	53.91	61.41	57.11	22.48	45.02	26.88
TDN (mg/L)	2.64	1.45	3.51	1.77	1.27	0.80	1.62	0.92	1.19	0.68
TDP (µg/L)	68.97	19.30	104.84	47.47	35.01	34.11	25.81	6.45	11.82	3.25
NH ₄ ⁺ (mg/L)	0.70	0.63	1.03	0.79	0.17	0.05	0.15	0.08	0.13	0.07
PO ₄ ³⁻ (µg/L)	46.50	22.88	71.24	42.80	22.50	35.5	15.09	8.31	3.85	1.34
ρPOC (mg/L) ^a	10.52	11.98	7.15	8.86	8.49	7.05	3.99	1.53	2.42	1.40
ρPN (mg/L) ^a	1.73	2.20	0.97	1.19	1.34	1.25	0.61	0.24	0.36	0.20
ρPP (mg/L) ^a	0.22	0.21	0.15	0.13	0.10	0.06	0.08	0.03	0.04	0.02
POC (mg/g) ^b	144.47	83.76	158.01	114.85	179.99	59.95	81.51	42.94	59.91	29.71
PN (mg/g) ^b	23.04	15.80	21.37	15.62	28.18	8.06	12.44	6.49	9.14	4.94
PP (mg/g) ^b	3.2	1.47	3.58	1.40	2.45	0.79	1.41	0.51	0.99	0.36

^a: indicates the concentrations were shown as milligram per litre (mg/L)

^b: indicates the concentrations were shown as milligram per gram (mg/g)

Table S2. Pearson correlation coefficients between environmental variables and seston stoichiometry ratios from different sources.

Variables	C: N			N: P			C: P		
	All	Algal	Terrestrial	All	Algal	Terrestrial	All	Algal	Terrestrial
T (°C)	-0.26	-0.04	-0.18	0.30	0.07	0.09	-0.26*	0.06	0.05
DOC (mg/L)	0.23*	0.15	0.51**	-0.14	-0.43	-0.20	0.23	-0.41	-0.23
Chl <i>a</i> (µg/L)	-0.26*	-0.25	0.13	0.47	0.42*	-0.00	-0.26*	0.25	0.08
TSS (mg/L)	-0.03	-0.36	0.26	0.25	0.44*	-0.11	0.20	0.27	0.02
TDN (mg/L)	0.39*	-0.14	0.33	-0.51	-0.15	-0.29*	-0.21	-0.19	-0.23**
TDP (µg/L)	0.24	0.10	0.57	-0.45*	-0.25*	-0.74***	-0.38**	-0.22*	-0.62***
NH ₄ ⁺ (mg/L)	0.26*	0.09	0.43	-0.36	-0.22	-0.32*	-0.22*	-0.19	-0.25
PO ₄ ³⁻ (µg/L)	0.23*	0.16	0.61*	-0.43	-0.20	-0.54**	-0.35***	-0.24	-0.41***
ρPOC (mg/L) ^a	-0.14	-0.16	0.48*	0.37	0.24	-0.08	0.34*	0.16	0.16
ρPN (mg/L) ^a	-0.25	-0.31	0.17	0.41	0.27	0.15	0.34	0.14	0.29*
ρPP (mg/L) ^a	-0.06	-0.22	0.27	0.06	-0.06	-0.23	0.02	-0.14	-0.23*
POC (mg/g) ^b	-0.15	0.02	0.14	0.36	0.39*	0.14	0.37***	0.39*	0.25
PN (mg/g) ^b	-0.26	-0.01	-0.28	0.46**	0.25	0.31*	0.45	0.28	-0.19
PP (mg/g) ^b	-0.00	-0.00	0.21	-0.39**	-0.39*	-0.27*	-0.25**	-0.38*	-0.33**
ACL	0.17*	0.04	0.18	-0.43**	0.06	-0.19	-0.67***	0.06	-0.19
Paq	-0.11	-0.03	-0.24	0.19*	-0.41*	0.34*	0.20**	-0.41*	0.38**

^a: indicates the concentrations were shown as milligram per litre (mg/L)

^b: indicates the concentrations were shown as milligram per gram (mg/g)

* indicates the *p* values in the correlations are lower than 0.05

** indicates the *p* values in the correlations are lower than 0.01

*** indicates the *p* values in the correlations are lower than 0.001

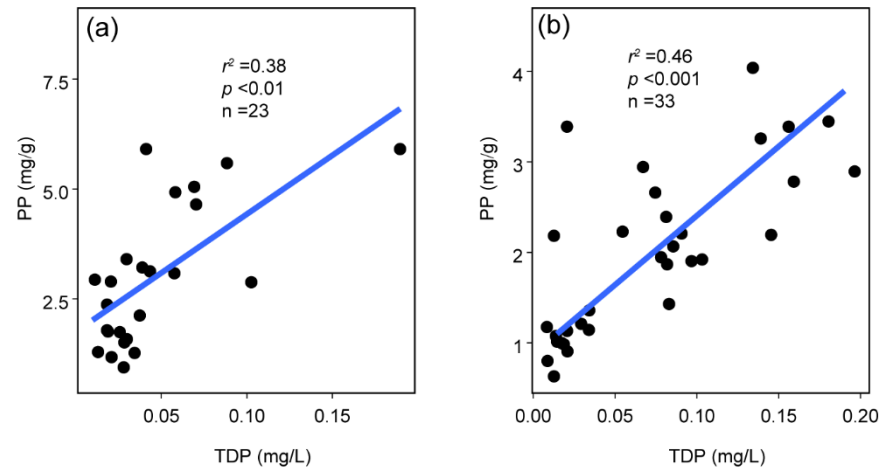


Fig. S1. Linear relationship between TDP and PP in the seston dominated by algal (a) and terrestrial materials (b), respectively