Supplement of Biogeosciences, 12, 757–767, 2015
http://www.biogeosciences.net/12/757/2015/
doi:10.5194/bg-12-757-2015-supplement

Biogeosciences Open Access

Supplement of

Strong stoichiometric resilience after litter manipulation experiments; a case study in a Chinese grassland

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Supplementary materials:

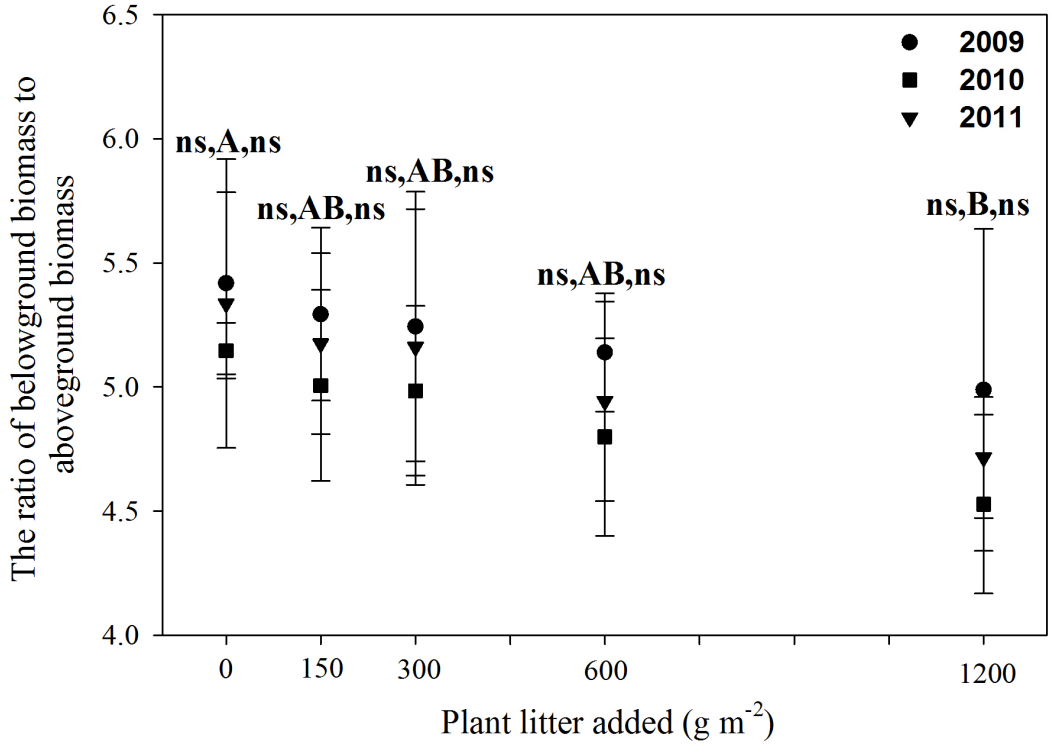

Fig. S1 Ratio of belowground biomass to aboveground biomass in 2009, 2010 and 2011 under different amounts of litter addition in a steppe community of northern China. Vertical bars indicate one standard error about the mean (n=5). A significant year effect ($p<0.05$) was detected but no interaction between litter addition and year. Treatments with different letters are significantly different ($P < 0.05$) according to the Duncan test, small letters, capital letters and Greek letters correspond to the year 2009, 2010 and 2011, respectively. 'ns' implies that no significant differences were detected.

11 Table S1: Linear regression equations for each variables

Corresponding figures	Year	Linear regression equations	R^2	*p*
Figure 2 (A), inorganic N	2009	$y = 0.0003 x + 2.2789$	0.9880	0.0006
	2010	$y = 0.0004 x + 2.3823$	0.9223	0.0094
	2011	$y = 0.0004 x + 2.2678$	0.9956	0.0001
Figure 2 (B), available P	2009	$y = 5.45*10^{-5} x + 0.7119$	0.9904	0.0004
	2010	$y = 9.93*10^{-5} x + 0.7350$	0.9059	0.0126
	2011	$y = 7.77*10^{-5} x + 0.7113$	0.9940	0.0002
Figure 3 (A), aboveground biomass	2009	$y = 0.0250 x + 187.7169$	0.9581	0.0037
	2010	$y = 0.0434 x + 200.2773$	0.9711	0.0021
	2011	$y = 0.0369 x + 194.1881$	0.9429	0.0038
Figure 3 (B), belowground biomass	2009	$y = 0.0631 x + 1002.84$	0.9265	0.0086
	2010	$y = 0.0946 x + 1025.49$	0.8681	0.0212
	2011	$y = 0.0836 x + 1021.35$	0.8641	0.0222
Figure 3 (C), total biomass	2009	$y = 0.0882 x + 1190.56$	0.9373	0.0068
	2010	$y = 0.1380 x + 1225.77$	0.9073	0.0123
	2011	$y = 0.1205 x + 1215.46$	0.8979	0.0143
Figure 3 (D), litter	2009	$y = 0.0070 x + 42.85$	0.9247	0.0090
	2010	$y = 0.0097 x + 46.11$	0.8676	0.0213
	2011	$y = 0.0077 x + 43.72$	0.8719	0.0203
Figure 4 (A), C in aboveground biomass	2009	$y = 0.0107 x + 79.2106$	0.9750	0.0017
	2010	$y = 0.0177x + 85.0269$	0.9652	0.0028
	2011	$y = 0.0146 x + 82.6590$	0.9480	0.0051
Figure 4 (B), N in aboveground biomass	2009	$y = 0.0005 x + 2.7111$	0.9757	0.0016
	2010	$y = 0.0010 x + 2.9748$	0.9676	0.0025
	2011	$y = 0.0008 x + 2.8192$	0.9759	0.0016
Figure 4 (C), P in aboveground biomass	2009	$y = 3.92*10^{-5} x + 0.1993$	0.9561	0.0046
	2010	$y = 6.83*10^{-5} x + 0.2164$	0.9692	0.0023
	2011	$y = 5.90*10^{-5} x + 0.2059$	0.9619	0.0032
Figure 4 (D), C in belowground biomass	2009	$y = 0.0212 x + 410.76$	0.9627	0.0031
	2010	$y = 0.0286x + 418.53$	0.9081	0.0122
	2011	$y = 0.0367x + 414.64$	0.8450	0.0272
Figure 4 (E), N in belowground	2009	$y = 0.0013 x + 114.291$	0.9675	0.0025
	2010	$y = 0.0018 x + 11.7406$	0.9144	0.0109

biomass	2011	y = 0.0016 x + 11.6726	0.9159	0.0106
Figure 4 (F), P in belowground biomass	2009	y = 0.0001 x + 0.9669	0.9485	0.0050
	2010	y = 0.0002 x + 0.9956	0.9475	0.0052
	2011	y = 0.0001 x + 0.9878	0.9279	0.0084
Figure 4 (G), C in litter	2009	y = 0.0029 x + 17.3641	0.8969	0.0145
	2010	y = 0.0041x + 18.6355	0.8472	0.0266
	2011	y = 0.0033x + 17.7622	0.8657	0.0218
Figure 4 (H), N in litter	2009	$y = 9.63*10^{-5} x + 0.4240$	0.9283	0.0083
	2010	y = 0.0001x + 0.4580	0.9384	0.0065
	2011	y = 0.0001x + 0.4353	0.9071	0.0124
Figure 4 (I), P in litter	2009	$y = 7.57*10^{-6} x + 0.0345$	0.9304	0.0080
	2010	$y = 1.14*10^{-5}x + 0.0375$	0.8822	0.0178
	2011	$y = 8.99*10^{-6}x + 0.0353$	0.8755	0.0194
Figure 4 (J), C in soil	2009	y = 0.2489 x + 4041.38	0.9992	< 0.0001
	2010	y = 0.2642x + 4052.44	0.9952	0.0001
	2011	y = 0.2529x + 4047.41	0.9992	< 0.0001
Figure 4 (K), N in soil	2009	y = 0.0077 x + 451.71	0.9975	< 0.0001
	2010	y = 0.0067x + 449.47	0.9839	0.0009
	2011	y = 0.0071x + 452.25	0.9902	0.0004
Figure 4 (L), P in soil	2009	y = 0.0006 x + 75.6024	0.9911	0.0004
	2010	y = 0.0005x + 75.3127	0.9684	0.0024
	2011	y = 0.0005x + 75.5776	0.9789	0.0013
Figure 4 (M), C in soil microbial biomass	2009	y = 0.0117 x + 50.0637	0.8796	0.0184
	2010	y = 0.0136x + 53.2399	0.9231	0.0093
	2011	y = 0.0113x + 51.2838	0.9290	0.0082
Figure 4 (N), N in soil microbial biomass	2009	y = 0.0020 x + 4.1233	0.9957	0.0001
	2010	y = 0.0027x + 4.7870	0.9952	0.0001
	2011	y = 0.0023 x + 4.3665	0.9969	< 0.0001
Figure 5 (A), C:N ratio in aboveground biomass	2009	y = -0.0010 x + 29.2102	0.9606	0.0034
	2010	y = -0.0025 x + 28.6053	0.9332	0.0075
	2011	y = -0.0023 x + 29.3773	0.9927	0.0003
Figure 5 (B), C:P ratio in aboveground biomass	2009	y = -0.0218 x + 398.67	0.8214	0.0339
	2010	y = -0.0319 x + 393.06	0.9556	0.0040
	2011	y = -0.0325 x + 400.83	0.9626	0.0031
Figure 5 (C), N:P	2009	NS		

ratio in aboveground biomass	2010	NS		
	2011	NS		
Figure 5 (D), C:N ratio in belowground biomass	2009	y = -0.0020 x + 36.0898	0.9327	0.0076
	2010	y = -0.0019 x + 35.7446	0.8531	0.0250
	2011	y = -0.0014 x + 35.6171	0.9793	0.0013
Figure 5 (E), C:P ratio in belowground biomass	2009	y = -0.0250 x + 426.41	08917	0.0157
	2010	y = -0.0276 x + 421.92	0.9586	0.0036
	2011	y = -0.0238 x + 422.69	0.9435	0.0058
Figure 5 (F), N:P ratio in belowground biomass	2009	NS		
	2010	NS		
	2011	y = -0.0002 x + 11.9062	0.8075	0.0382
Figure 5 (G), C:N ratio in litter	2009	y = -0.0019 x + 40.9642	0.8610	0.0230
	2010	y = -0.0030 x + 40.6665	0.9893	0.0005
	2011	y = -0.0024 x + 40.8086	0.9662	0.0027
Figure 5 (H) C:P ratio in litter	2009	y = -0.0240 x + 505.72	0.8982	0.0142
	2010	y = -0.0317 x + 497.57	0.9324	0.0076
	2011	y = -0.0290 x + 503.36	0.79937	0.040
Figure 5 (I), N:P ratio in litter	2009	NS		
	2010	NS		
	2011	NS		
Figure 5 (J), C:N ratio in soil	2009	y = 0.0004 x + 8.9602	0.9954	0.0001
	2010	y = 0.0004 x + 9.0321	0.9844	0.0008
	2011	y = 0.0004 x + 8.9652	0.9960	0.0001
Figure 5 (K), C:P ratio in soil	2009	y = 0.0029 x + 53.5717	0.9986	0.0001
	2010	y = 0.0032 x + 53.9324	0.9911	0.0004
	2011	y = 0.0030 x + 53.6731	0.9984	< 0.0001
Figure 5 (L), N:P ratio in soil	2009	$y = 5.42*10^{-5} x + 5.9787$	0.9851	0.0008
	2010	y = 5.17*10-5 x + 5.9717	0.9298	0.0081
	2011	$y = 5.55*10^{-5} x + 5.9868$	0.9293	0.0081
Figure 5 (M),), C:N ratio in soil microbial biomass	2009	y = -0.0019 x + 12.0448	0.9420	0.0060
	2010	y = -0.0021 x + 11.0743	0.9899	0.0004
	2011	y = -0.0022 x + 11.6713	0.9703	0.0022
Supplementary Figure 1, belowground biomass:aboveground biomass ratio	2009	y = -0.0003 x + 5.3669	0.9530	0.0044
	2010	y = -0.0005 x + 5.2911	0.9695	0.0023
	2011	y = -0.0005 x + 5.1179	0.9872	0.0006

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