Ecography

ECOG-00045
Wang, S., Tang, Z., Qiao, X., Shen, Z., Wang, X., Zheng, C. and Fang, J. 2012. The influence of species pools and local processes on the community structure: a test case with woody plant communities in China's mountains. – Ecography 35: xxx–xxx.

Supplementary material

Wang et al. Table S1 Information for the 35 mountains in the Normal Plot Dataset.

Number	Mountain	Latitude (º)	Longitude (º)	No. Plots	Altitude (m)	MTCM (ºC)	AP (mm)
1	Mt. Daxingan	51.7	123.1	10	701~1114	-29.2~-28.2	489~551
2	Mt. Xiaoxingan	47.2	128.9	5	401~466	-22.0~-21.8	623~642
3	Mt. Datudingzi	44.4	128.2	8	970~1524	-22.4~-20.5	827~988
4	Mt. Changbai	42.2	128.1	34	530~1945	-20.9~-16.6	716~1132
5	Mt. Laotudingzi	41.3	124.9	15	534~1220	-19.4~-17.2	804~1005
6	Mt. Wuling	40.6	117.5	18	1070~1995	-17.3~-12.4	649~782
7	Mt. Songshan	40.5	115.8	5	743~1245	-13.1~-10.4	475~548
8	Mt. Xiaowutai	39.9	115.0	28	1450~2550	-18.7~-12.9	580~750
9	Mt. Guandi	37.8	111.5	24	1491~2676	-15.1~-8.6	564~726
10	Mt. Zhongtiao	35.3	112.1	16	960~1680	-7.0~-4.5	727~796
11	Mt. Taibai	34.0	107.8	76	1200~3300	-8.9~-1.8	759~993
12	Mt. Niubeiliang	33.9	109.0	49	1430~2798	-7.2~-2.5	867~1014
13	Mt. Xiaolong	33.6	106.3	6	1530~2170	-3.9~-1.7	805~873
14	Mt. Baotianman	33.5	111.9	19	1087~1824	-3.7~-1.1	1032~1126
15	Mt. Motianling	32.8	104.7	25	670~3400	-6.2~3.5	826~1033
16	Mt. Micang	32.6	106.8	37	700~2500	-2.9~3.7	941~1108
17	Mt. Jiuding	32.4	106.4	14	1430~2300	-2.6~0.7	996~1129
18	Mt. Jigong	31.8	114.1	13	202~700	-0.3~1.7	1128~1335
19	Mt. Shennongjia	31.3	110.4	6	1700~1740	-3.1~-2.9	1648~1667
20	Mt. Xitianmu	30.3	119.4	7	610~1398	-1.6~1.6	1545~1852
21	Mt. Mingzhulao	28.3	110.3	5	1520~1800	-0.8~-0.3	1825~1898
22	Mt. Baishanzu	28.3	119.5	11	900~1720	0.0~4.3	1756~2197
23	Mt. Wuyi	27.8	117.7	44	690~2000	-0.4~4.6	1881~2341
24	Mt. Gongshan	27.8	98.6	12	2025~3140	-1.1~5.5	997~1156
25	Mt. Fanjing	27.8	108.2	7	1000~1850	-3.0~2.0	1233~1618
26	Mt. Yulong	27.1	100.2	13	2722~3825	-4.1~2.4	678~859
27	Mt. Bamian	26.4	114.0	12	650~1750	2.1~5.3	1726~2304
28	Mt. Maoer	25.9	110.5	16	660~2009	-0.6~5.2	1573~1986
29	Mt. Dupang	25.5	110.4	8	617~1650	1.6~6.0	1590~1909
30	Mangshan	25.0	112.9	19	610~1800	3.6~7.2	1865~2473
31	Mt. Xiaohei	24.8	98.8	8	1840~2370	3.9~7.1	1213~1294
32	Mt. Wuliang	24.6	100.6	16	1389~2800	2.4~10.9	901~1130
33	Mt. Ailao	24.5	101.5	8	1830~2460	5.0~8.8	860~950
34	Mt. Baozhu	23.4	103.9	11	2312~2997	1.2~5.0	1532~1828
35	Xishuangbanna	22.0	101.6	6	660~1250	12.1~15.4	1632~1876

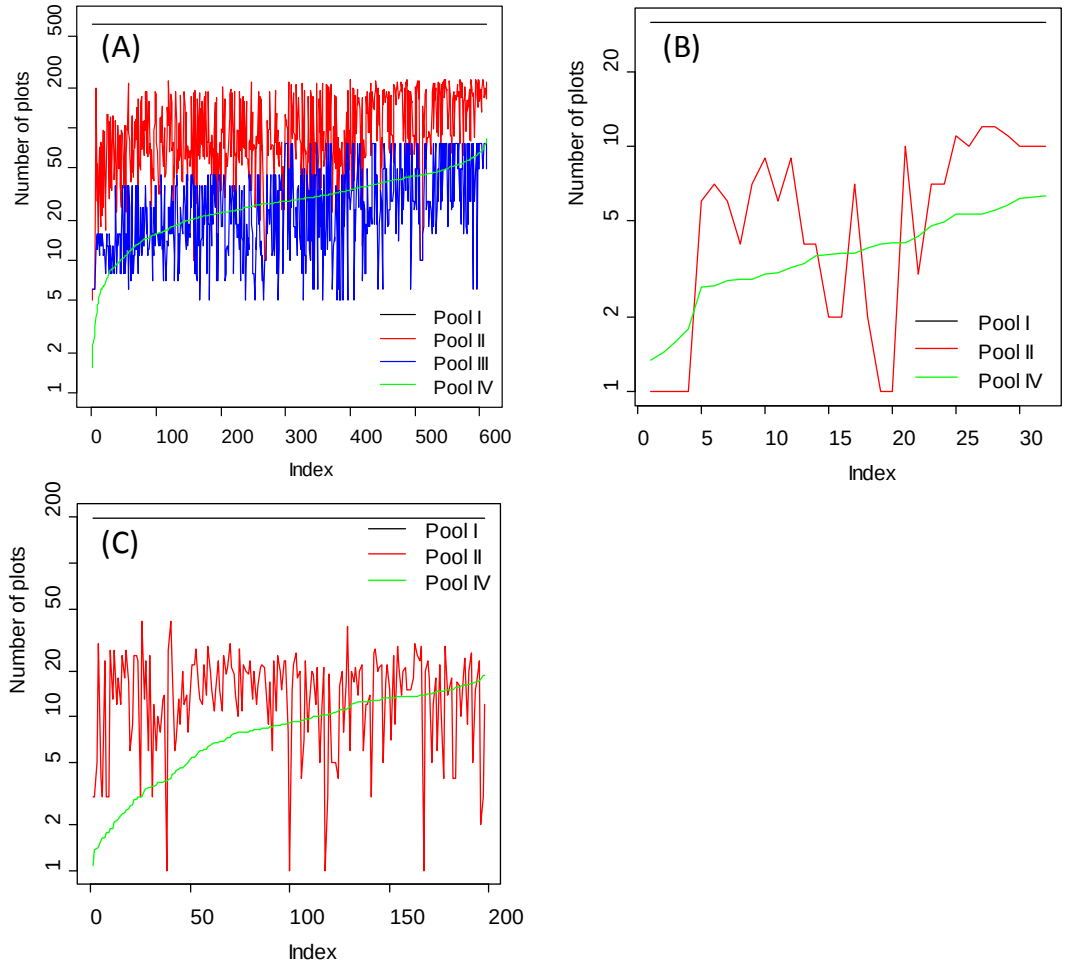
Wang et al. Table S2 Information for the 11 mountains in the Nested Plot Dataset.

Number	Mountain	Latitude (°)	Longitude (°)	No. Plots	Altitude (m)	MTCM (°C)	AP (mm)	Total area (m^2)
1	Mt. Daxingan	51.8	122.7	2	923~1048	-26.3~-26.2	543~545	5000~5000
4	Mt.Changbai	42.1	128.1	3	793~1965	-20.8~-17.1	754~1088	5000~10000
6	Mt. Wuling	40.3	117.3	2	1380~1800	-14.7~-12.8	596~641	3400~5000
10	Mt.Taihang	35.5	112.4	1	1780	-7.4	757	5000
11	Mt.Taibai	33.9	107.7	10	1500~3200	-11.1~-3.6	614~811	4000~5000
19	Mt. Shennongjia	31.4	110.3	5	700~2800	-6.1~3.3	827~1051	5000~5000
36	Mt. Gongga	29.8	101.7	4	1600~2800	-1.3~6.1	786~831	2500~2500
33	Mt.Ailao	24.5	101.0	1	2488	4.6	1389	10000
37	Mt. Dinghu	23.2	112.5	1	300	12.4	1064	10000
35	Xishuangbanna	22.0	101.2	1	730	14.6	1503	10000
38	Mt. Jianfeng	18.7	108.8	1	790	11.7	3928	10000

Wang et al. Table S3 Regression results of the species-higher taxon relationship in three datasets: *n* represents the number of plots under particular sampling size, *b* represents the regression exponent. In the software *R*, the default calculation of R^2 is based on: $R^2.default$ = 1 – (residual sum of squares/total sum of squares about zero), where y = depended variable. While this formula always returns very high R^2, we adjusted the calculation of R^2 according to the approach under regular regression (Weisberg 2005): $R^2.adjusted$ = 1 – (residual sum of squares/total sum of squares about the mean of y).

Dataset	Subplot area	*n*	G-S		F-S	
			b	R^2.adjusted	*b*	R^2.adjusted
Normal Plot Dataset	600	611	0.925	0.977	0.822	0.917
Nested Plot Dataset	100	21	0.950	0.985	0.842	0.909
	200	31	0.951	0.988	0.831	0.940
	400	31	0.945	0.983	0.823	0.931
	800	31	0.934	0.983	0.810	0.947
	1600	31	0.924	0.988	0.798	0.948
	3200	28	0.918	0.991	0.790	0.946
Gentry Dataset	100	198	0.971	0.977	0.874	0.926
	200	198	0.962	0.979	0.848	0.923
	300	198	0.955	0.980	0.833	0.926
	400	198	0.951	0.982	0.821	0.929
	500	198	0.948	0.981	0.813	0.931
	600	198	0.945	0.981	0.805	0.925
	700	198	0.943	0.982	0.801	0.917
	800	198	0.941	0.983	0.796	0.910
	900	198	0.940	0.983	0.792	0.904
	1000	198	0.939	0.983	0.790	0.900

Wang et al. Figure S1 Number of plots included in the four species pool for Normal Plot Dataset (A), Nested Plot Dataset (B), and Gentry Dataset (C). Note that the species pool is defined for each specific local community and the communities are sorted according to the number of plots under similarity-based species pool (IV). The top solid line denotes the total number of species encountered in the dataset.



Wang et al. Figure S2 Latitudinal patterns of SES of G/S and F/S under four species pool. Species pools I, II, III, and IV represent full, climate-based, geography-based, and similarity-based species pool, respectively.