

Herbivory rather than root competition and environmental factors determines plant establishment in fragmented forests

Tianxiang Li, Xue Li, Chuping Wu, Yuping Zhong, Mingjian Yu, and Jinliang Liu

Supplementary Materials

Table S1 The number of survived seedlings in 32 plots on 11 islands.

Table S2 The environmental variables in 32 plots on 11 islands.

Table S1. The number of survived seedlings in 32 plots under three experimental treatments (Control, excluding root competition, and excluding herbivory) for four species (*Cinnamomum camphora*, *Cyclobalanopsis glauca*, *Loropetalum chinense*, *Schima superba*).

	<i>Cinnamomum camphora</i>			<i>Cyclobalanopsis glauca</i>			<i>Loropetalum chinense</i>			<i>pSchima superba</i>		
	Control	Exclud- ing root competi- tion	Exclud- ing her- bivory	Control	Exclud- ing root competi- tion	Exclud- ing her- bivory	Control	Exclud- ing root competi- tion	Exclud- ing her- bivory	Control	Exclud- ing root competi- tion	Exclud- ing her- bivory
B1B1	0	0	7	0	0	2	10	9	23	2	2	1
B1B2	15	4	12	1	1	3	15	13	24	0	1	1
B1N1	0	4	8	0	2	2	1	6	13	1	1	1
B1N2	0	0	6	0	0	4	1	5	15	2	6	3
B2B1	5	3	11	2	0	5	11	11	13	2	3	0
B2B2	0	0	8	1	0	6	13	13	11	1	1	2
B2N1	0	1	12	4	2	4	14	17	13	1	0	1
B2N2	4	1	8	2	0	3	11	13	22	4	3	13
B5B1	0	1	14	1	0	10	1	0	6	2	4	1
B5B2	1	0	23	0	0	10	3	6	10	4	9	13
B5N1	1	0	17	0	1	2	12	9	18	3	0	5
B5N2	1	0	13	0	0	15	2	3	23	1	1	2
B7B1	14	15	21	1	1	2	10	11	17	1	4	5
B7B2	0	0	8	0	2	12	4	3	27	8	3	5
B7N1	0	0	9	7	1	2	10	9	14	5	12	5
B7N2	3	0	15	0	0	8	2	2	7	2	1	1
N3S1	0	2	10	0	0	12	2	7	19	6	1	3
N3S2	0	0	4	1	0	9	2	3	13	3	2	1
N4S1	3	0	13	1	0	8	5	3	23	5	1	3
N4S2	1	1	11	0	0	5	0	3	9	4	4	1
N5S1	0	0	15	0	0	6	12	13	15	2	3	5
N5S2	1	0	15	0	0	9	8	13	14	6	6	13
N6S1	0	1	13	0	0	5	8	9	23	4	5	6
N6S2	0	6	12	0	0	11	10	9	17	6	4	3
N7S1	9	13	13	1	1	9	30	26	27	4	4	2
N7S2	0	0	24	0	3	10	10	18	24	4	6	10
N8S1	1	0	19	0	0	15	25	18	23	3	8	9
N8S2	1	0	24	3	2	9	17	13	27	8	8	2

N9B1	1	6	19	0	3	9	7	14	21	0	2	6
N9B2	7	21	17	0	0	2	21	24	24	5	7	4
N9N1	2	7	16	0	0	5	13	10	21	5	8	5
N9N2	7	3	6	2	0	9	28	25	26	6	6	12

Table S2. The environmental variables in 32 plots on 11 islands.

Plots	Soil depth(cm)	Litter depth(cm)	Slope(°)	Altitude(m)	Irradiance	Edge distance(m)	Area(ha)
B1B1	13.68 ± 2.40	2.69 ± 0.05	21.67 ± 7.51	112.00 ± 2.65	0.93 ± 0.02	19.17 ± 2.56	1153.88
B1B2	9.34 ± 1.63	2.33 ± 0.52	34.67 ± 3.51	112.00 ± 4.36	0.80 ± 0.24	24.57 ± 2.78	1153.88
B1N1	13.50 ± 2.29	2.50 ± 0.12	13.00 ± 2.65	142.00 ± 2.00	0.61 ± 0.52	74.49 ± 7.27	1153.88
B1N2	13.53 ± 0.53	2.60 ± 0.18	36.00 ± 4.36	144.33 ± 8.14	0.91 ± 0.02	68.78 ± 5.45	1153.88
B2B1	18.49 ± 1.02	2.93 ± 0.21	41.00 ± 3.00	134.00 ± 1.00	0.75 ± 0.02	15.81 ± 3.19	154.55
B2B2	19.26 ± 2.78	2.70 ± 0.26	12.67 ± 7.23	123.00 ± 5.29	0.75 ± 0.10	34.83 ± 5.99	154.55
B2N1	17.97 ± 3.82	2.77 ± 0.18	32.33 ± 9.87	153.00 ± 1.00	0.54 ± 0.47	63.67 ± 2.88	154.55
B2N2	11.18 ± 2.44	1.83 ± 0.33	36.00 ± 12.17	163.33 ± 4.04	0.83 ± 0.01	117.50 ± 15.72	154.55
B5B1	9.05 ± 0.61	2.13 ± 0.12	31.00 ± 6.24	127.67 ± 2.89	0.87 ± 0.02	33.57 ± 4.31	106.67
B5B2	8.02 ± 1.62	1.72 ± 0.33	26.33 ± 3.79	116.00 ± 3.61	0.81 ± 0.08	29.25 ± 4.85	106.67
B5N1	14.59 ± 0.75	2.71 ± 0.05	45.33 ± 5.51	158.67 ± 4.73	0.67 ± 0.04	49.28 ± 2.71	106.67
B5N2	10.47 ± 1.17	1.26 ± 0.19	30.33 ± 5.86	141.67 ± 0.58	0.88 ± 0.02	68.41 ± 6.20	106.67
B7B1	9.05 ± 0.61	2.13 ± 0.12	34.00 ± 6.00	125.67 ± 2.52	0.81 ± 0.04	21.59 ± 2.72	23.88
B7B2	8.02 ± 1.62	1.72 ± 0.33	38.00 ± 3.61	108.67 ± 1.53	0.79 ± 0.03	8.37 ± 0.68	23.88
B7N1	14.59 ± 0.75	2.71 ± 0.05	37.33 ± 2.08	144.00 ± 2.65	0.86 ± 0.01	61.3 ± 6.06	23.88
B7N2	10.47 ± 1.17	1.26 ± 0.19	29.33 ± 8.96	127.00 ± 2.00	0.86 ± 0.02	40.52 ± 4.35	23.88
N3S1	12.64 ± 1.30	2.65 ± 0.04	24.67 ± 8.62	119.00 ± 2.65	0.90 ± 0.02	16.92 ± 4.20	1.06
N3S2	12.86 ± 0.84	2.58 ± 0.56	33.67 ± 2.52	115.00 ± 3.00	0.91 ± 0.02	25.09 ± 0.98	1.06
N4S1	11.87 ± 0.89	2.50 ± 0.27	17.33 ± 6.11	109.00 ± 1.73	0.86 ± 0.10	15.45 ± 3.69	1.42
N4S2	12.62 ± 0.27	2.58 ± 0.30	20.67 ± 9.29	115.00 ± 1.73	0.85 ± 0.03	18.63 ± 5.00	1.42
N5S1	19.26 ± 0.27	2.61 ± 0.04	23.67 ± 3.79	125.00 ± 1.00	0.90 ± 0.03	29.44 ± 1.33	1.62
N5S2	12.34 ± 1.80	2.26 ± 0.20	21.00 ± 7.00	109.67 ± 2.52	0.88 ± 0.07	14.60 ± 4.01	1.62
N6S1	15.37 ± 1.73	2.92 ± 0.18	26.67 ± 9.29	112.33 ± 2.52	0.90 ± 0.05	20.68 ± 1.29	2.26
N6S2	11.19 ± 1.87	2.38 ± 0.44	31.00 ± 13.00	123.00 ± 6.56	0.65 ± 0.50	32.25 ± 0.48	2.26
N7S1	15.14 ± 1.42	2.43 ± 0.09	37.33 ± 4.51	119.67 ± 4.16	0.89 ± 0.02	14.98 ± 2.68	4.19
N7S2	14.05 ± 2.08	2.26 ± 0.32	22.33 ± 4.16	117.00 ± 1.73	0.84 ± 0.03	15.49 ± 1.18	4.19
N8S1	14.11 ± 3.60	2.55 ± 0.37	40.67 ± 4.62	119.33 ± 10.5	0.87 ± 0.06	15.94 ± 4.74	3.05
N8S2	8.63 ± 0.41	2.09 ± 0.33	39.67 ± 3.79	113.67 ± 3.21	0.67 ± 0.27	16.95 ± 0.77	3.05
N9B1	8.56 ± 1.09	1.76 ± 0.44	28.33 ± 9.29	125.33 ± 7.02	0.73 ± 0.15	22.18 ± 5.03	74
N9B2	12.53 ± 2.11	2.29 ± 0.25	31.00 ± 3.46	112.33 ± 3.21	0.66 ± 0.08	17.40 ± 3.80	74
N9N1	13.71 ± 4.76	2.20 ± 0.38	45.00 ± 2.65	185.33 ± 4.73	0.87 ± 0.08	70.07 ± 7.02	74
N9N2	10.88 ± 1.35	2.12 ± 0.25	10.00 ± 6.08	125.67 ± 4.04	0.58 ± 0.50	42.51 ± 1.29	74