

Damage and alteration of mangroves inhabited by a marine wood-borer

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Supplement

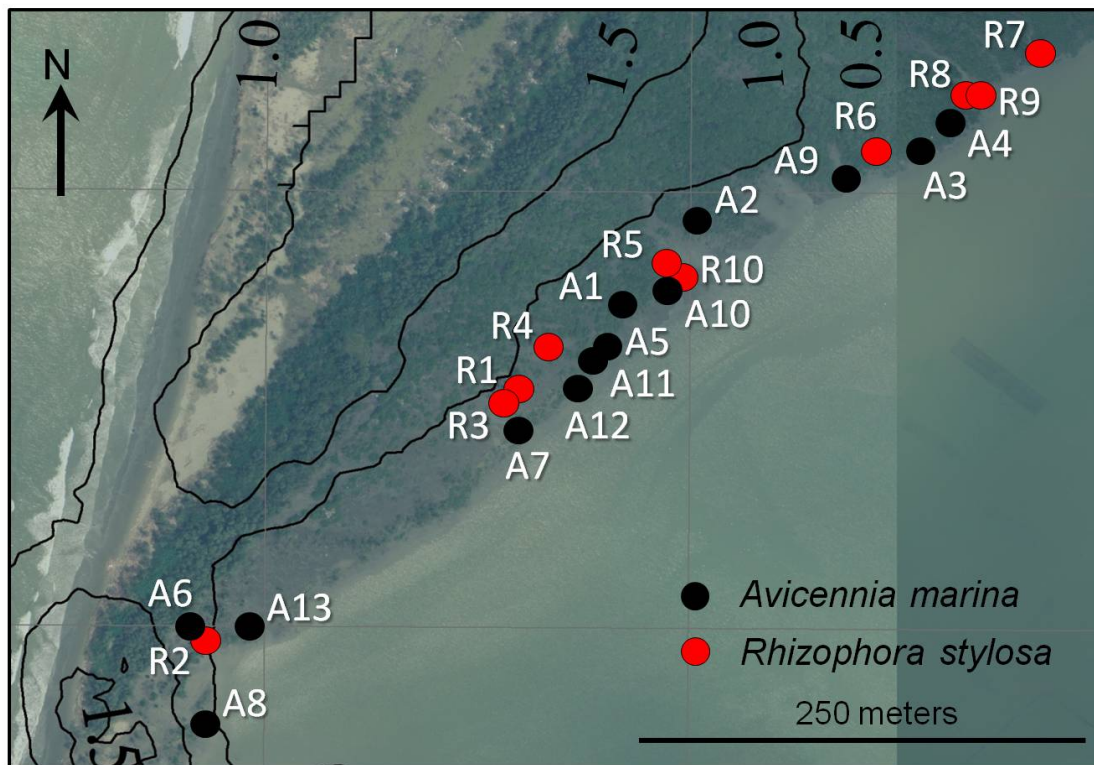


Fig. S1. Contour map in meters above mean sea level of the study area in Haomeiliao (23° 21.661' N, 120° 07.826' E) showing the locations of the sampled trees of *Avicennia marina* ('A', black circles) and *Rhizophora stylosa* ('R', red circles). Numbers indicate the relative amount of burrow damage in ascending order respective to each species (see Table S1 for details). Imagery provided by the Aerial Survey Office, Forestry Bureau, Council of Agriculture, Executive Yuan, Taiwan. Elevation data was provided by the National Land Surveying and Mapping Center, Ministry of the Interior, Taiwan

Table S1. Some key physical characteristics (burrow damage, height of the tide mark on trees, height of the tree) of the 2 sampled mangrove species (a) *Avicennia marina* and (b) *Rhizophora stylosa* in relation to their location in Fig. S1

(a) <i>Avicennia marina</i>			
ID	No. of burrows	Height of tide mark (cm)	Height (cm)
A1	48	45	163
A2	53	46	207
A3	62	53	170
A4	81	50	143
A5	99	47	156
A6	104	36	268
A7	209	51	115
A8	209	45	57
A9	219	60	142
A10	235	49	152
A11	303	58	147
A12	325	47	106
A13	575	54	172
(b) <i>Rhizophora stylosa</i>			
ID	% of roots burrowed	Height of tide mark (cm)	Height (cm)
R1	2.0	30	230
R2	12.5	54	246
R3	21.4	37	230
R4	23.2	41	198
R5	30.4	49	253
R6	50.5	60	292
R7	53.5	52	234
R8	75.3	46	254
R9	88.0	46	325
R10	89.2	53	200

Table S2. Raw p-values and p-values adjusted based on the false discovery rate for analyses of the relationship (Pearson's correlation) between 4 types of burrowing damage and various metrics of morphology, performance, and fecundity for the 2 mangrove species (a) *Rhizophora stylosa* and (b) *Avicennia marina*. False discovery rates were calculated separately for each of the 4 families of tests

(a) *R. stylosa*

	% of roots burrowed			No. of burrows per cm of aerial root	
	p	p(adj)		p	p(adj)
No. of grounded roots	<0.001	<0.001	No. of grounded roots	0.038	0.084
% of roots broken	<0.001	<0.001	% of roots broken	0.036	0.084
No. of propagules	0.026	0.039	No. of propagules	0.732	0.784
No. of non-foliated twigs	0.002	0.005	No. of non-foliated twigs	0.042	0.084
Leaf area	0.039	0.047	Leaf area	0.061	0.092
Tree height	0.338	0.338	Tree height	0.784	0.784

(b) *A. marina*

	No. of burrows per tree			No. of burrows per cm of pneumatophore	
	p	p(adj)		p	p(adj)
Pneumatophore density	<0.001	<0.001	Pneumatophore length	0.086	0.115
Pneumatophore mass	0.004	0.011	Pneumatophore weight	0.302	0.302
Lenticel density	0.002	0.009	Lenticels per pneumatophore	0.027	0.054
% of pneumatophores broken	0.101	0.201	% cover of necrotic tissue on pneumatophore	<0.001	<0.001
Pneumatophore length	0.252	0.335			
Pneumatophore weight	0.066	0.201			
Leaf area	0.039	0.079			
Tree height	0.405	0.405			