The Canadian Field-Naturalist

Supplementary Material:

Rooting depth and below ground biomass in a freshwater coastal marsh invaded by European Reed (*Phragmites australis*) compared with remnant uninvaded sites at Long Point, Ontario

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We present output for general linear models (GLM) predicting total below ground biomass in Table S1 that provides statistical information for each term in the model *below ground biomass* = $\beta_1 W + \beta_2 T + \beta_3 T \times W + \beta_0 + \varepsilon$, where W is water depth, T is site type, and ε is error. We reference this table in the Results section to show that our initial model had an interaction term that was not significant. The output for the referenced rerun model without the interaction term, *below ground biomass* = $\beta_1 W + \beta_2 T + \beta_0 + \varepsilon$, is shown in Table S1b.

Table S1. Results table for GLM predicting total below ground biomass with and without interaction term. a) GLM output showing the effect of site type, water depth, and the site type × water depth interaction on the amount of total below ground biomass. b) GLM output showing the effect of site type and water depth on the amount of total below ground biomass.

Source	Type III sum of squares	df	Mean square	*F*	*P*
a) GLM output with interaction term					
Corrected model	43613022.9	3	14537674.3	6.266	0.001
Intercept	2183399.2	1	2183399.2	0.941	0.336
Site type	73008.6	1	73008.6	0.031	0.860
Water depth	12826265.9	1	12826265.7	5.528	0.022
Site type × water depth	1567471.3	1	1567471.3	0.676	0.415
Error	125281903.6	54	2320035.3		
Total	513517588.7	58			
Corrected total	168894926.6	57			
b) GLM output without interaction term					
Corrected model	42045551.6	2	21022775.8	9.115	<0.001
Intercept	1850697.6	1	1850697.6	0.802	0.374
Site type	31151617.5	1	31151617.5	13.507	0.001
Water depth	13672592.9	1	13672592.9	5.928	0.018
Error	126849374.9	55	2306352.3		
Total	513517588.7	58			
Corrected total	168894926.6	57			

Presented here (Table S2) is output for GLM predicting rooting depth. This includes each term in the model *rooting depth* = $\beta_1 W + \beta_2 T + \beta_3 T \times W + \beta_0 + \varepsilon$, where W is water depth, T is site type, and ε is error. We reference this table in the Results section to show our initial model had an interaction term that was not significant (Table S2a). The output for the rerun model without the interaction term, *rooting depth* = $\beta_1 W + \beta_2 T + \beta_0 + \varepsilon$, was also not significant (Table S2b).

TABLE S2. Results table for GLM predicting rooting depth with and without interaction term. a) GLM output showing the effect of site type, water depth, and the site type × water depth interaction on rooting depth. b) GLM output showing the effect of site type and water depth on rooting depth.

Source	Type III sum of squares	df	Mean square	*F*	*P*
a) GLM output with interaction term					
Corrected model	252.2	3	84.1	0.770	0.516
Intercept	3812.8	1	3812.8	34.935	<0.001
Site type	7.9	1	7.9	0.072	0.789
Water depth	193.8	1	193.8	1.776	0.188
Site type × water depth	0.3	1	0.3	0.003	0.959
Error	5893.5	54	109.1		
Total	87184.0	58			
Corrected total	6145.7	57			
b) GLM output without interaction term					
Corrected model	251.9	2	125.9	1.175	0.316
Intercept	3857.3	1	3857.3	35.995	<0.001
Site type	193.9	1	193.9	1.809	0.184
Water depth	74.1	1	74.1	0.691	0.409
Error	5893.8	55	107.2		
Total	87184.0	58			
Corrected total	6145.7	57			

The GLM plot referenced in the Discussion section depicts total below ground biomass by water depth for the European Reed (*Phragmites australis*) invaded marsh and uninvaded marsh sites (Figure S1). Though the slopes do not appear identical, the interaction between site type and water depth was not statistically significant (Table S1a).

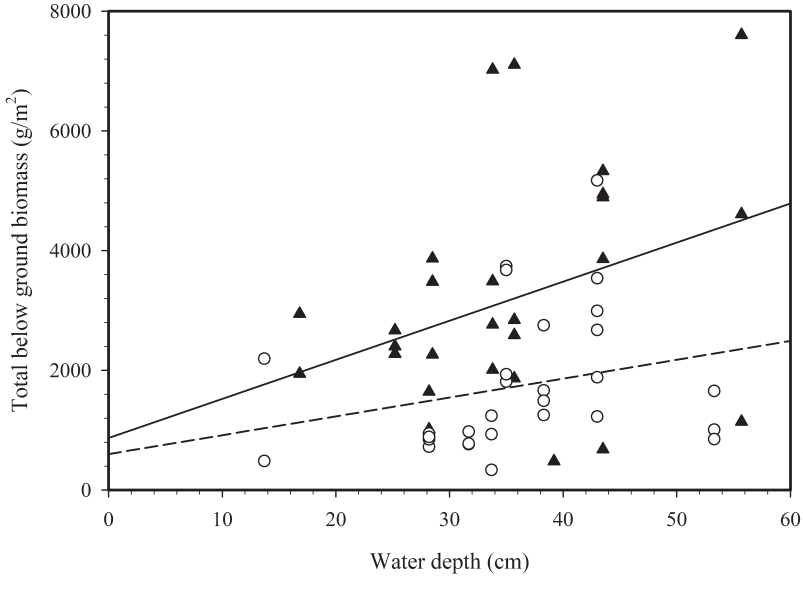

FIGURE S1. Total below ground biomass with water depth for European Reed (*Phragmites australis*) invaded sites (solid line and black triangles; $n = 29$) and uninvaded sites (dashed line and white circles; $n = 29$). Note that the slopes for the two lines are not significantly different (Table S1a), and so an interaction term was not included in the final model.