

# Supplementary

## Herbivory by geese inhibits tidal freshwater wetland restoration success

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Table S1. Plant species encountered in study plots. Species that were planted as part of the original restoration (Source: Hammerschlag et al. 2006. Five Years (2000-2004) of Post-Reconstruction Monitoring of Freshwater Tidal Wetlands in the Urban Anacostia River, Washington, D.C. USA). *Juncus effusus* (L.) and *Schoenoplectus pungens* (Vahl) Palla were also planted at the site, as plugs, but did not appear in the plot level data. *Z. aquatica* was planted by seed by Anacostia Watershed Society in the years 2004-2007 (pers. communication, Stephen McKindley-Ward, AWS).

Latin name	Common name	Perennial or Annual	Planted or Volunteer
<i>Amaranthus cannabinus</i> (L.) J.D. Sauer	tidalmarsh amaranth	perennial	volunteer
<i>Bidens connata</i> Muhl. ex Willd.	purplestem beggarticks	annual	volunteer
<i>Bidens frondosa</i> (L.)	devil's beggartick	annual	volunteer
<i>Bidens laevis</i> (L.) Britton, Sterns & Poggenb.	smooth beggarticks	annual	volunteer
<i>Cuscuta gronovii</i> Willd. ex Schult.	scaldweed	perennial	volunteer
<i>Echinochloa muricata</i> (P. Beauv.) Fernald	rough barnyardgrass	annual	volunteer
<i>Eclipta prostrata</i> (L.) L.	false daisy	perennial	volunteer
<i>Impatiens capensis</i> Meerb.	jewelweed	annual	volunteer
<i>Iris pseudacorus</i> L.	yellow flag	perennial	volunteer
<i>Leersia oryzoides</i> (L.) Sw.	rice cut grass	perennial	volunteer
<i>Lindernia dubia</i> (L.) Pennell	moistbank pimpernel	perennial	volunteer
<i>Lycopus rubellus</i> Moench	taperleaf bugleweed	perennial	volunteer
<i>Murdannia keisak</i> (Hassk.) Hand.-Mazz.	Asian spiderwort	perennial	volunteer
<i>Nuphar advena</i> (Aiton) W.T. Aiton <sup>^</sup>	yellow pond-lily	perennial	planted, plug
<i>Peltandra virginica</i> (L.) Schott	green arrow arum	perennial	planted, plug
<i>Persicaria hydropiper</i> (L.) Opiz	marshpepper knotweed	annual	volunteer
<i>Persicaria punctata</i> (Elliott) Small	dotted smartweed	annual	volunteer
<i>Phalaris arundinacea</i> L.	reed canary grass	perennial	volunteer
<i>Pontederia cordata</i> Nutt.	pickerelweed	perennial	planted, plug
<i>Sagittaria latifolia</i> Willd.	duck potato	perennial	planted, plug
<i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.) Palla	softstem bulrush	perennial	planted, plug
<i>Typha latifolia</i> L.	broadleaf cattail	perennial	volunteer
<i>Zizania aquatica</i> var. <i>aquatica</i> (L.)	annual wildrice	annual	planted, seed

<sup>^</sup> since planted, taxonomy has been revised. In original report, listed as *Nuphar lutea*.

Table S2. Test statistics from *t*-tests of the difference between fenced and unfenced treatments of initially vegetated and unvegetated modules, for response variables total percent cover, species richness, Shannon-Wiener index, and annuals cover, for all years of the study. *p*-values were adjusted with the Bonferroni correction for multiple comparisons.

	Percent Cover					
	Vegetated Plots			Unvegetated Plots		
	DF	t-statistic	Adj p-value	DF	t-statistic	Adj p-value
June 2009	7	1.30	0.233	7	0.89	0.401
August 2009	7	-3.43	0.011	7	-1.40	0.204
August 2010	7	-3.21	0.015	7	-2.69	0.031
August 2011	7	-2.80	0.026	7	-4.41	0.003
August 2012	7	-4.06	0.005	7	-10.80	<0.001
August 2013	7	-3.80	0.007	7	-16.20	<0.001
August 2014	7	-4.21	0.004	7	-8.79	<0.001
August 2015	7	-2.82	0.026	7	-7.36	<0.001
	Percent Cover Comprised of Annuals					
	Vegetated Plots			Unvegetated Plots		
	DF	t-statistic	Adj p-value	DF	t-statistic	Adj p-value
June 2009	7	0.91	0.391	7	0.85	0.423
August 2009	7	-5.39	0.001	7	-1.46	0.187
August 2010	7	-2.88	0.024	7	-2.64	0.003
August 2011	7	-2.01	0.084	7	-2.26	0.058
August 2012	7	-3.40	0.012	7	-3.45	0.011
August 2013	7	-2.60	0.035	7	-2.13	0.070
August 2014	7	-2.95	0.021	7	-3.34	0.012
August 2015	7	-2.56	0.038	7	-2.70	0.031
	Species Richness					
	Vegetated Plots			Unvegetated Plots		
	DF	t-statistic	Adj p-value	DF	t-statistic	Adj p-value
June 2009	7	0.36	0.732	7	1.87	0.104
August 2009	7	-0.48	0.649	7	0.00	1.000
August 2010	7	-2.12	0.072	7	-2.65	0.033
August 2011	7	-4.46	0.003	7	-3.99	0.005
August 2012	7	-4.47	0.003	7	-4.08	0.005
August 2013	7	-3.78	0.007	7	-7.74	<0.001
August 2014	7	-4.64	0.002	7	-5.71	<0.001
August 2015	7	-4.91	0.002	7	-6.70	<0.001
	Shannon-Wiener Index					
	Vegetated Plots			Unvegetated Plots		
	DF	t-statistic	Adj p-value	DF	t-statistic	Adj p-value
June 2009	7	-0.28	0.785	7	1.00	0.351
August 2009	7	-1.51	0.174	7	1.00	0.351
August 2010	7	-1.47	0.185	7	-2.50	0.041
August 2011	7	-3.04	0.019	7	-2.50	0.041
August 2012	7	-5.18	0.001	7	-3.62	0.009
August 2013	7	-3.96	0.005	7	-4.37	0.003
August 2014	7	-4.86	0.002	7	-4.68	0.002
August 2015	7	-4.80	0.002	7	-7.47	<0.001