

Supplementary material 3: Section-level standardized slope estimates for the 91 ecological sections from initial models of invasive richness and cover in response to four metrics of evolutionary relatedness—PSC, PSV, PD, and PSE

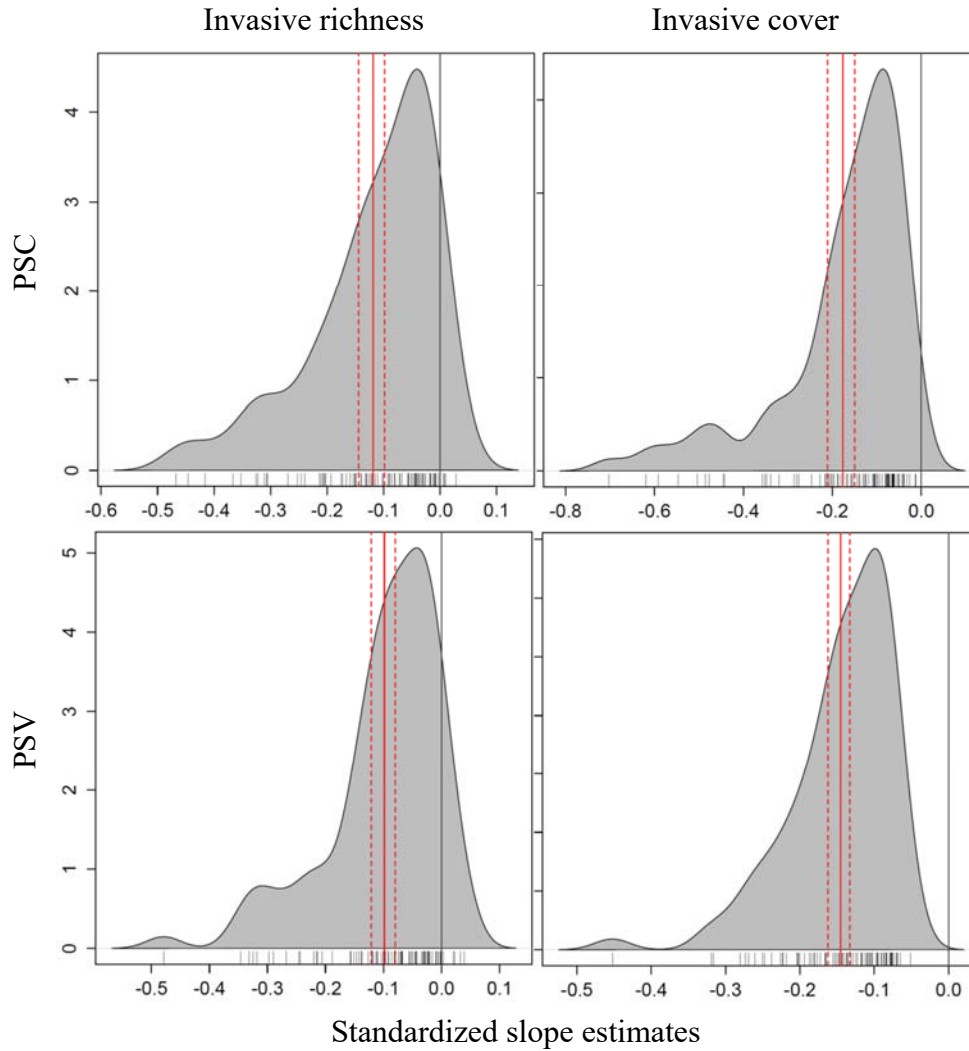


Figure S3.1. Left-skewed distributions of relationships between invasion (invasive richness and cover) and phylogenetic (PSC and PSV) metrics. Note that most values were negative. Solid and dashed red lines equal bootstrapped mean and SE, respectively, shown in Fig. 1 of main paper. Solid grey lines show location of zero for reference. Actual slope values shown as dashes at base of the graph.

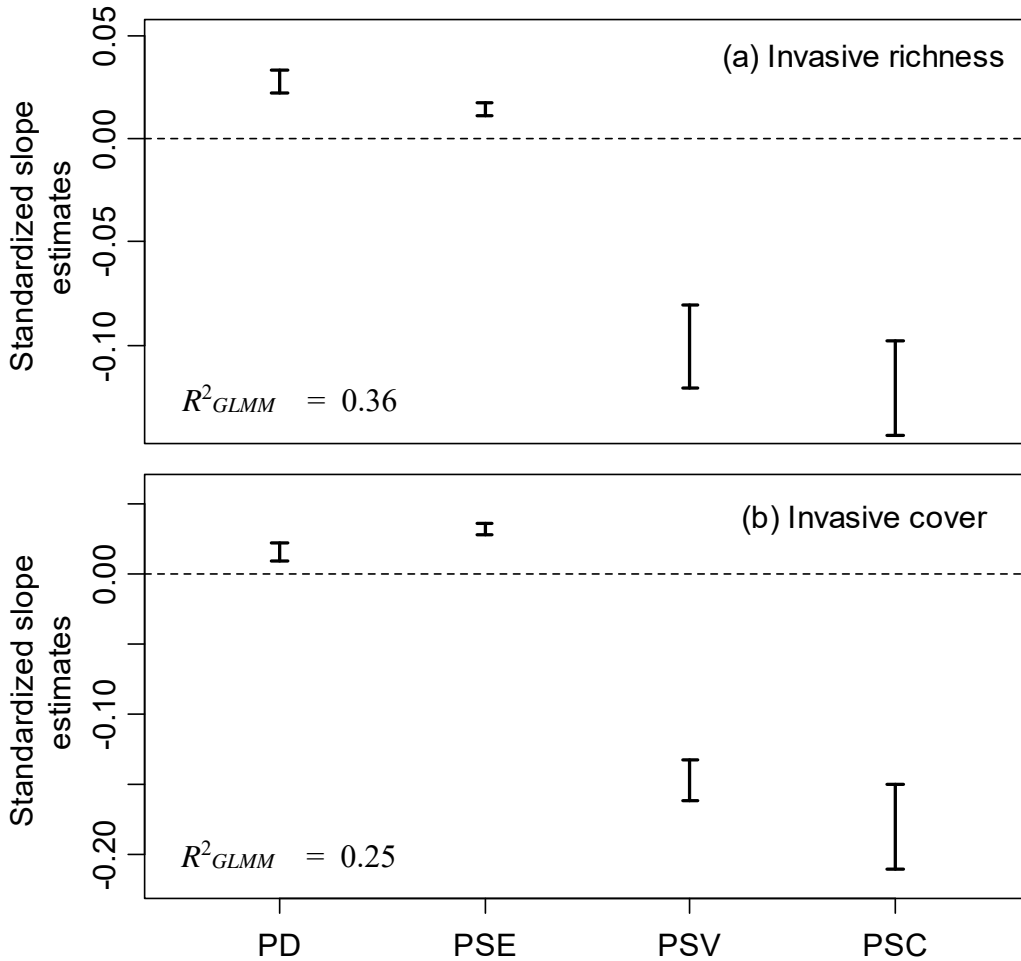


Figure S3.2. Ninety-five percent confidence intervals for means of bootstrapped distributions of slope values for relationships between four metrics of evolutionary diversity (PD, PSE, PSV, and PSC) and (a) invasive richness and (b) invasive cover. Also shown is the percent total variability explained by each model, as estimated by coefficient of determination for generalized mixed-effect models (R^2_{GLMM}). 95% CIs of PSV and PSC occur further from zero and have larger ranges than the 95% CIs of PD and PSE. These patterns reveal stronger relationships with invasive richness and cover, and greater spatial variability in these relationships, for both PSV and PSC than both PD and PSE.

Table S3.1. Intercept and slope estimates for 91 ecological sections of the eastern United States of America for (a) invasive richness and (b) invasive cover models. “Section #” coincides with the “section number” shown in Suppl. material 1, table S1.1 and fig. S1.2.

<u>Section #</u>	<u>Section name</u>	<u>(a) Invasive richness</u>					<u>(b) Invasive cover</u>				
		<u>Intercept</u>	<u>PD</u>	<u>PSV</u>	<u>PSE</u>	<u>PSC</u>	<u>Intercept</u>	<u>PD</u>	<u>PSV</u>	<u>PSE</u>	<u>PSC</u>
1	Northern Minnesota and Ontario	1.136	-0.008	-0.021	0.008	-0.016	2.386	0.006	-0.074	0.020	-0.032
2	Red River Valley	1.362	0.025	-0.086	0.012	-0.102	2.633	0.017	-0.132	0.031	-0.152
3	Lake Agassiz- Aspen Parklands	1.331	0.024	-0.081	0.006	-0.081	2.470	0.015	-0.106	0.021	-0.079
4	Aroostook Hills and Lowlands	1.121	0.003	-0.056	0.008	-0.040	2.392	0.009	-0.090	0.019	-0.050
5	Minnesota and Northeast Iowa Morainal-Oak Savannah	1.535	0.034	-0.151	0.027	-0.204	2.750	-0.002	-0.143	0.040	-0.214
6	Northern Minnesota Drift and Lake Plains	1.177	-0.014	-0.007	-0.006	0.029	2.390	-0.007	-0.051	0.023	-0.012
7	Northern Superior Uplands	1.078	0.010	-0.029	0.002	-0.006	2.358	0.008	-0.070	0.020	-0.026
8	Maine - New Brunswick Foothills and Lowlands	1.062	0.002	-0.031	0.004	-0.013	2.373	0.011	-0.084	0.019	-0.038

9	Northern Upper Peninsula	1.080	-0.002	-0.020	0.011	-0.030	2.364	0.009	-0.080	0.021	-0.044
10	Fundy Coastal and Interior	1.034	0.004	-0.027	0.007	-0.013	2.385	0.011	-0.090	0.017	-0.041
11	Southwest Lake Superior Clay Plain	1.149	0.000	-0.009	0.006	-0.008	2.410	0.006	-0.076	0.027	-0.064
12	Southern Superior Uplands	1.049	0.014	-0.005	0.011	-0.008	2.364	0.014	-0.084	0.025	-0.064
13	White Mountains	1.028	-0.002	-0.002	0.004	0.010	2.348	0.001	-0.065	0.025	-0.040
14	Western Superior Uplands	1.212	0.018	-0.050	0.008	-0.056	2.431	0.013	-0.095	0.031	-0.105
15	Northern Green Bay Lobe	1.202	0.004	-0.010	0.007	-0.033	2.430	0.013	-0.095	0.029	-0.097
16	Northern Highlands	1.120	0.003	-0.025	0.008	-0.037	2.358	0.007	-0.068	0.028	-0.054
17	St. Lawrence and Champlain Valley	1.344	0.041	-0.147	0.006	-0.122	2.564	0.027	-0.137	0.022	-0.125
18	Eastern Upper Peninsula	1.126	-0.003	0.022	0.016	-0.009	2.388	0.008	-0.076	0.029	-0.069
19	Central Maine Coastal and Embayment	1.124	-0.005	-0.001	0.012	-0.018	2.416	0.007	-0.083	0.025	-0.063
20	Adirondack Highlands	1.054	0.024	-0.046	0.008	-0.030	2.354	0.026	-0.096	0.020	-0.060

21	New England Piedmont	1.190	0.008	-0.080	0.031	-0.131	2.427	0.007	-0.102	0.034	-0.131
22	North Central U.S. Driftless and Escarpment	1.606	0.047	-0.101	0.010	-0.151	2.671	0.015	-0.142	0.021	-0.125
23	Lower New England	1.403	0.035	-0.318	0.021	-0.306	2.543	0.030	-0.194	0.015	-0.181
24	North Central Wisconsin Uplands	1.261	-0.009	-0.118	0.027	-0.166	2.455	0.011	-0.109	0.026	-0.108
25	Northern Lower Peninsula	1.195	0.009	-0.045	0.016	-0.057	2.430	0.011	-0.077	0.029	-0.072
26	Green-Taconic- Berkshire Mountains	1.261	0.042	-0.146	0.032	-0.193	2.538	0.037	-0.166	0.032	-0.204
27	Hudson Valley	1.924	0.085	-0.479	0.034	-0.467	3.159	0.033	-0.250	0.033	-0.319
28	Wisconsin Central Sands	1.236	0.017	0.022	-0.004	0.028	2.436	0.011	-0.084	0.022	-0.051
29	Green Bay - Manitowac Upland	1.541	0.030	-0.120	0.006	-0.129	2.746	-0.001	-0.140	0.022	-0.131
30	Tug Hill Plateau - Mohawk Valley	1.400	0.029	-0.215	0.009	-0.173	2.649	0.000	-0.148	0.011	-0.104
31	Northern Glaciated Allegheny Plateau	1.543	0.046	-0.157	0.013	-0.202	2.604	0.013	-0.147	0.028	-0.168

32	Catskill Mountains	1.336	0.041	-0.070	0.013	-0.090	2.487	0.023	-0.117	0.024	-0.105
33	North Central Glaciated Plains	1.630	0.057	-0.138	0.012	-0.159	2.687	0.020	-0.145	0.028	-0.158
34	Erie and Ontario Lake Plain	1.927	0.057	-0.346	0.013	-0.325	3.125	0.007	-0.200	0.020	-0.199
35	Southwestern Great Lakes Morainal	1.914	0.044	-0.104	0.003	-0.119	3.109	0.024	-0.173	0.024	-0.165
36	Lake Whittlesey Glaciolacustrine Plain	1.643	0.046	-0.110	0.015	-0.148	2.670	0.016	-0.129	0.030	-0.144
37	Northern Unglaciated Allegheny Plateau	1.253	-0.004	-0.029	0.026	-0.089	2.435	-0.004	-0.084	0.034	-0.108
38	South Central Great Lakes	1.730	0.052	-0.206	0.000	-0.175	2.847	0.030	-0.181	0.029	-0.209
39	Central Till Plains and Grand Prairies	1.718	0.060	-0.189	0.015	-0.211	2.809	0.027	-0.164	0.033	-0.203
40	Nebraska Rolling Hills	1.288	0.023	-0.111	0.011	-0.110	2.455	0.016	-0.107	0.023	-0.088
41	Western Glaciated Allegheny Plateau	1.675	0.051	-0.214	0.009	-0.208	2.764	0.026	-0.156	0.024	-0.153

42	Southern Unglaci- ated Allegheny Plateau	1.773	0.056	-0.267	0.020	-0.310	3.035	0.073	-0.280	0.054	-0.445
43	Blue Ridge Mountains	1.273	0.022	-0.126	0.039	-0.206	2.703	0.001	-0.180	0.058	-0.348
44	Central Till Plains-Beech- Maple	1.956	0.067	-0.142	0.017	-0.213	3.030	0.039	-0.187	0.046	-0.280
45	Northern Atlantic Coastal Plain	1.445	0.029	-0.332	0.033	-0.306	2.662	0.008	-0.177	0.023	-0.195
46	Northern Ridge and Valley	1.527	0.059	-0.325	0.086	-0.446	2.963	0.070	-0.319	0.080	-0.619
47	Northern Appalachian Piedmont	1.908	0.017	-0.290	0.040	-0.366	3.474	0.017	-0.204	0.081	-0.443
48	Flint Hills	1.187	0.013	-0.052	0.016	-0.072	2.379	0.014	-0.091	0.022	-0.061
49	Allegheny Mountains	1.398	0.052	-0.244	0.023	-0.246	2.568	0.023	-0.166	0.019	-0.157
50	Interior Low Plateau- Transition Hills	1.684	0.100	-0.298	0.062	-0.416	3.095	0.099	-0.316	0.079	-0.592
51	Central Dissected Till Plains	1.560	0.061	-0.086	0.008	-0.101	2.736	0.029	-0.144	0.034	-0.178
52	Central Appalachian Piedmont	1.575	0.027	-0.098	0.012	-0.150	3.211	0.004	-0.202	0.040	-0.286

53	Northern Cumberland Plateau	1.413	0.020	-0.157	0.042	-0.269	2.963	-0.016	-0.223	0.074	-0.477
54	Osage Plains	1.333	0.045	-0.075	0.011	-0.092	2.522	0.039	-0.136	0.024	-0.124
55	Interior Low Plateau- Bluegrass	1.916	0.070	-0.110	-0.004	-0.132	3.380	0.021	-0.226	0.016	-0.210
56	Central Till Plains-Oak Hickory	1.745	0.074	0.032	0.003	-0.028	2.914	0.038	-0.151	0.051	-0.247
57	Interior Low Plateau- Shawnee Hills	1.665	0.043	-0.138	0.046	-0.253	3.336	0.050	-0.274	0.081	-0.547
58	Middle Atlantic Coastal Plains and Flatwoods	1.384	0.012	-0.096	-0.010	-0.092	2.889	-0.013	-0.247	0.016	-0.275
59	Interior Low Plateau- Highland Rim	1.634	0.095	-0.246	0.045	-0.352	3.361	0.133	-0.452	0.061	-0.702
60	White and Black River Alluvial Plains	1.234	0.063	-0.024	0.004	-0.010	2.619	0.081	-0.153	0.024	-0.129
61	Coastal Plains- Loess	1.707	-0.003	0.020	-0.008	-0.026	3.339	-0.065	-0.097	0.030	-0.104
62	Ozark Highlands	1.258	0.009	-0.110	0.017	-0.140	2.530	0.009	-0.156	0.028	-0.187
63	Northern Cumberland Mountains	1.456	0.030	-0.220	0.043	-0.323	2.934	0.012	-0.269	0.061	-0.485

64	Central Ridge and Valley	1.765	0.046	-0.151	0.036	-0.240	3.589	0.061	-0.261	0.080	-0.504
65	Boston Mountains	1.171	0.029	-0.081	0.023	-0.115	2.506	0.030	-0.142	0.039	-0.203
66	Coastal Plains- Middle	1.549	0.003	-0.035	0.021	-0.086	3.275	-0.037	-0.105	0.056	-0.217
67	Arkansas Valley	1.424	0.053	-0.113	0.005	-0.125	2.889	0.066	-0.218	0.024	-0.227
68	Southern Appalachian Piedmont	1.652	0.001	-0.075	0.010	-0.120	3.239	-0.027	-0.224	0.028	-0.280
69	Ouachita Mountains	1.260	0.013	-0.032	-0.012	-0.031	2.609	0.012	-0.136	0.016	-0.100
70	Southern Cumberland Plateau	1.510	-0.004	-0.004	0.019	-0.120	3.410	-0.063	-0.086	0.095	-0.357
71	Arkansas Alluvial Plains	1.326	0.000	0.039	0.029	-0.055	2.722	-0.021	-0.086	0.053	-0.188
72	Cross Timbers and Prairie	1.295	0.079	-0.086	0.011	-0.057	2.515	0.044	-0.103	0.025	-0.075
73	Northern Atlantic Coastal Flatwoods	1.245	0.023	-0.091	-0.008	-0.044	2.708	0.003	-0.165	0.000	-0.080
74	Mid Coastal Plains-Western	1.355	-0.005	-0.024	0.017	-0.037	2.759	-0.032	-0.070	0.031	-0.074
75	Southern Ridge and Valley	1.601	0.019	-0.043	0.019	-0.139	3.412	-0.034	-0.125	0.079	-0.338

76	Texas Cross Timbers and Prairie	1.181	0.015	-0.028	0.011	-0.044	2.516	0.018	-0.116	0.028	-0.118
77	Blackland Prairie	1.281	0.018	-0.016	0.004	-0.018	2.582	0.020	-0.118	0.025	-0.109
78	Southern Atlantic Coastal Plains and Flatwoods	1.371	0.032	-0.068	0.007	-0.068	2.790	0.020	-0.145	0.024	-0.140
79	Atlantic Coastal Flatwoods	1.158	0.021	-0.069	0.006	-0.036	2.510	0.018	-0.112	0.016	-0.065
80	Southern Mississippi Alluvial Plain	1.408	0.067	-0.002	0.016	-0.049	2.743	0.067	-0.118	0.046	-0.166
81	Coastal Plains and Flatwoods- Western Gulf	1.348	-0.025	-0.072	0.008	-0.052	2.709	-0.051	-0.110	0.014	-0.076
82	Oak Woods and Prairie	1.220	0.051	-0.068	0.012	-0.071	2.630	0.062	-0.143	0.029	-0.144
83	Gulf Coastal Plains and Flatwoods	1.462	0.037	-0.092	-0.002	-0.079	2.963	0.037	-0.185	0.013	-0.138
84	Atchafalaya and Red River Alluvial Plains	1.384	0.051	-0.023	-0.009	0.006	2.677	0.014	-0.123	0.013	-0.065
85	Gulf Coastal Lowlands	1.227	0.012	-0.031	0.001	0.008	2.589	-0.003	-0.077	0.016	-0.013
86	Florida Coastal Plains Central Highlands	1.127	0.011	-0.046	0.002	-0.018	2.437	0.001	-0.087	0.015	-0.032

87	Louisiana Coastal Prairie and Marshes	1.522	0.036	-0.111	-0.014	-0.041	3.067	0.021	-0.203	-0.006	-0.094
88	Florida Coastal Lowlands-Gulf	1.137	-0.017	-0.055	0.011	-0.046	2.489	-0.023	-0.096	0.021	-0.078
89	Central Gulf Prairie and Marshes	1.577	0.040	-0.120	0.014	-0.154	3.316	0.014	-0.238	0.044	-0.352
90	Florida Coastal Lowlands- Atlantic	1.108	-0.008	-0.043	0.009	-0.042	2.440	-0.010	-0.078	0.025	-0.062
91	Everglades	1.242	0.019	0.003	0.009	-0.002	2.648	0.019	-0.087	0.029	-0.074
