

Table S11. Contrasts between each PAR and SAR from accumulated method of scaling suitable habitat. Each scale was fit with a separate model.

Scale level	Pairwise comparison	z-ratio	P-value
plot	SAR / Potential-PAR with neighbors	21.250	0.000
plot	SAR / Potential-PAR without neighbors	12.795	0.000
plot	SAR / Realized-PAR with neighbors	25.336	0.000
plot	SAR / Realized-PAR without neighbors	20.226	0.000
plot	Potential-PAR with neighbors / Potential-PAR without neighbors	-8.933	0.000
plot	Potential-PAR with neighbors / Realized-PAR with neighbors	6.591	0.000
plot	Potential-PAR with neighbors / Realized-PAR without neighbors	-0.199	1.000
plot	Potential-PAR without neighbors / Realized-PAR with neighbors	14.613	0.000
plot	Potential-PAR without neighbors / Realized-PAR without neighbors	8.457	0.000
plot	Realized-PAR with neighbors / Realized-PAR without neighbors	-6.590	0.000
grid	SAR / Potential-PAR with neighbors	2.262	0.158
grid	SAR / Potential-PAR without neighbors	0.947	0.878
grid	SAR / Realized-PAR with neighbors	3.612	0.003
grid	SAR / Realized-PAR without neighbors	2.920	0.029
grid	Potential-PAR with neighbors / Potential-PAR without neighbors	-1.466	0.584
grid	Potential-PAR with neighbors / Realized-PAR with neighbors	1.802	0.372
grid	Potential-PAR with neighbors / Realized-PAR without neighbors	0.850	0.915
grid	Potential-PAR without neighbors / Realized-PAR with neighbors	3.075	0.018
grid	Potential-PAR without neighbors / Realized-PAR without neighbors	2.242	0.164
grid	Realized-PAR with neighbors / Realized-PAR without neighbors	-0.977	0.866
site	SAR / Potential-PAR with neighbors	0.000	1.000

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Scale level	Pairwise comparison	z-ratio	P-value
site	SAR / Potential-PAR without neighbors	0.000	1.000
site	SAR / Realized-PAR with neighbors	0.000	1.000
site	SAR / Realized-PAR without neighbors	0.000	1.000
site	Potential-PAR with neighbors / Potential-PAR without neighbors	0.000	1.000
site	Potential-PAR with neighbors / Realized-PAR with neighbors	0.000	1.000
site	Potential-PAR with neighbors / Realized-PAR without neighbors	0.000	1.000
site	Potential-PAR without neighbors / Realized-PAR with neighbors	0.000	1.000
site	Potential-PAR without neighbors / Realized-PAR without neighbors	0.000	1.000
site	Realized-PAR with neighbors / Realized-PAR without neighbors	0.000	1.000