

**Supplementary Materials: Huxley JD and Spasojevic MJ (2021) Area not geographic isolation mediates biodiversity responses of alpine refugia to climate change. Front. Ecol. Evol. 9:633697. doi: 10.3389/fevo.2021.633697**

**Supplementary Table 1.** Model outputs for all separate generalized linear mixed models (GLMM) for each response variable with year, area, isolation, all possible interactions of those variables as predictors and site as a random factor.

Response variable	Predictor variable	F ratio	p value
Species Richness	<b>Year</b>	<b>20.67</b>	<b>0.020</b>
	<i>Area</i>	9.46	0.054
	<b>Year * Area</b>	<b>15.30</b>	<b>0.030</b>
	Isolation	2.01	0.251
	Year * Isolation	2.18	0.237
	Area* Isolation	1.78	0.274
	<i>Year * Area* Isolation</i>	8.82	0.059
Pielou's Evenness	Year	1.16	0.359
	Area	1.89	0.263
	Year * Area	0.01	0.988
	Isolation	0.08	0.786
	Year * Isolation	0.01	0.961
	Area* Isolation	1.42	0.319
	<i>Year * Area* Isolation</i>	0.019	0.900
Shannon's diversity	Year	0.05	0.842
	Area	0.84	0.427
	Year * Area	2.07	0.245
	Isolation	0.51	0.525
	Year * Isolation	0.40	0.574
	Area* Isolation	3.26	0.169

	<b>Year * Area* Isolation</b>	2.13	0.240
NRI	<i>Year</i>	9.38	0.055
	Area	0.02	0.896
	Year * Area	0.43	0.557
	Isolation	0.00	0.970
	Year * Isolation	0.56	0.509
	Area* Isolation	0.71	0.462
	<b>Year * Area* Isolation</b>	1.05	0.381
NTD	<i>Year</i>	5.51	0.101
	Area	1.60	0.295
	Year * Area	0.00	0.966
	Isolation	0.16	0.712
	Year * Isolation	0.13	0.739
	Area* Isolation	0.00	0.992
	<b>Year * Area* Isolation</b>	0.73	0.456
CWM height	Year	3.77	0.148
	Area	1.88	0.263
	<b>Year * Area</b>	<b>27.99</b>	<b>0.013</b>
	Isolation	4.74	0.118
	Year * Isolation	1.09	0.373
	Area* Isolation	0.10	0.775
	<b>Year * Area* Isolation</b>	<b>24.45</b>	<b>0.016</b>
CWM Leaf Area	<b>Year</b>	<b>43.36</b>	<b>0.007</b>
	Area	0.42	0.565
	Year * Area	2.09	0.244
	Isolation	0.25	0.654
	Year * Isolation	6.45	0.085
	Area* Isolation	0.00	0.983
	<i>Year * Area* Isolation</i>	6.01	0.092
CWM SLA	<i>Year</i>	6.56	0.083

	Area	0.20	0.684
	Year * Area	0.26	0.643
	Isolation	0.12	0.752
	Year * Isolation	0.50	0.531
	Area* Isolation	0.03	0.865
	Year * Area* Isolation	0.58	0.503
CWM LDMC	<i>Year</i>	<i>8.45</i>	<i>0.062</i>
	Area	0.75	0.450
	Year * Area	0.93	0.407
	Isolation	1.43	0.317
	Year * Isolation	0.06	0.822
	Area* Isolation	1.05	0.380
	Year * Area* Isolation	0.92	0.409
FDis Height	Year	1.38	0.325
	Area	4.28	0.130
	<b>Year * Area</b>	<b>26.31</b>	<b>0.014</b>
	Isolation	5.24	0.106
	Year * Isolation	0.25	0.653
	Area* Isolation	1.71	0.282
	<b>Year * Area* Isolation</b>	<b>32.51</b>	<b>0.011</b>
FDis Leaf Area	Year	5.25	0.106
	Area	1.44	0.317
	Year * Area	0.00	0.964
	Isolation	0.02	0.898
	Year * Isolation	0.05	0.842
	Area* Isolation	0.21	0.679
	Year * Area* Isolation	0.34	0.601
FDis SLA	<b>Year</b>	<b>41.68</b>	<b>0.008</b>
	Area	0.31	0.615
	<b>Year * Area</b>	<b>24.41</b>	<b>0.016</b>

	Isolation	0.09	0.787
	Year * Isolation	3.97	0.140
	Area* Isolation	3.38	0.163
	Year * Area* Isolation	4.20	0.133
FDis LDMC	Year	2.42	0.218
	Area	0.42	0.563
	Year * Area	1.70	0.283
	Isolation	0.17	0.708
	Year * Isolation	0.08	0.801
	Area* Isolation	0.01	0.946
	Year * Area* Isolation	0.32	0.613