

Table S3. Model results for each germination traits with incubator and study system as fixed factors

Model	Autumn germination ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	-1.2058	-6.0965	3.9891	3164	0.65	lambda	0.97	0.95	0.99
Snowbed	-1.3056	-1.6766	-0.928	9000	< 1e-04	philogeny	42.08	13.07	80.15
Temperate	-3.3769	-5.2656	-1.6011	5041	0.000444	population:species	3.73	1.61	6.73
Snowbed:Temperate	-1.5722	-2.1752	-0.9351	8525	< 1e-04				

Model	Winter germination ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	-11.02727	-16.14827	-6.3829	5034.5	<1e-04	lambda	0.96	0.93	0.99
Snowbed	5.32881	4.36314	6.32126	4940.9	<1e-04	philogeny	36.89	11.68	71.38
Temperate	-2.32362	-5.4347	0.63654	1050	0.0991	population:species	1.11	0	2.94
Snowbed:Temperate	2.76127	0.02432	5.65154	913.6	0.0211				

Model	Spring germination ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	-4.6001	-8.7471	-0.6848	6036	0.02444	lambda	0.91	0.8	0.98
Snowbed	-1.4936	-2.0146	-0.9632	8207	0.0001	philogeny	29.59	3.24	61.16
Temperate	2.1545	0.7167	3.6048	6961	0.00444	population:species	2.84	0.59	6.07
Snowbed:Temperate	-1.8345	-2.5447	-1.038	9000	0.0001				

Model	Summer germination ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	-5.79454	-8.36251	-3.10879	8599	<1e-04	lambda	0.86	0.75	0.95
Snowbed	1.90418	1.30014	2.52494	9000	<1e-04	philogeny	11.61	3.48	21.15
Temperate	1.09207	-0.08803	2.29047	8501	0.0707	population:species	0.82	0	1.8
Snowbed:Temperate	1.23857	0.46582	2.05616	9000	0.004				

Model	Total germination ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	3.3251	0.3915	6.3164	9289	0.02956	lambda	0.95	0.92	0.98
Snowbed	-0.1843	-0.5484	0.1722	9000	0.31578	philogeny	16.62	6.71	28.45
Temperate	-1.6193	-2.8093	-0.3817	8302	0.00756	population:species	1.37	0.5	2.49
Snowbed:Temperate	-0.3644	-0.8522	0.1264	9000	0.14378				

Model	T50 (scaled) ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	-0.4064	-1.1043	0.2183	9000	0.207	lambda	0.69	0.43	0.89
Snowbed	0.2975	0.172	0.4195	9000	<1e-04	philogeny	0.65	0.07	1.35
Temperate	0.7432	0.3968	1.0839	8700	<1e-04	population:species	0.2	0.06	0.36
Snowbed:Temperate	0.3985	0.2084	0.5931	9000	<1e-04				

Model	environmental heat sum (scaled) ~ incubator * study system								
Fixed factors	post.mean	L_95% CI	U_95% CI	eff.samp	pMCMC	Random factors	Mean	lower	upper
(Intercept)	0.032588	-0.605908	0.71984	9000	0.9387	lambda	0.51	0.14	0.81
Snowbed	-0.159881	-0.331099	0.011447	11454	0.066	philogeny	0.62	0	1.42
Temperate	0.399984	-0.017123	0.815636	9000	0.0602	population:species	0.34	0.12	0.62
Snowbed:Temperate	0.287376	-0.004271	0.53382	9349	0.036				