

Ecography

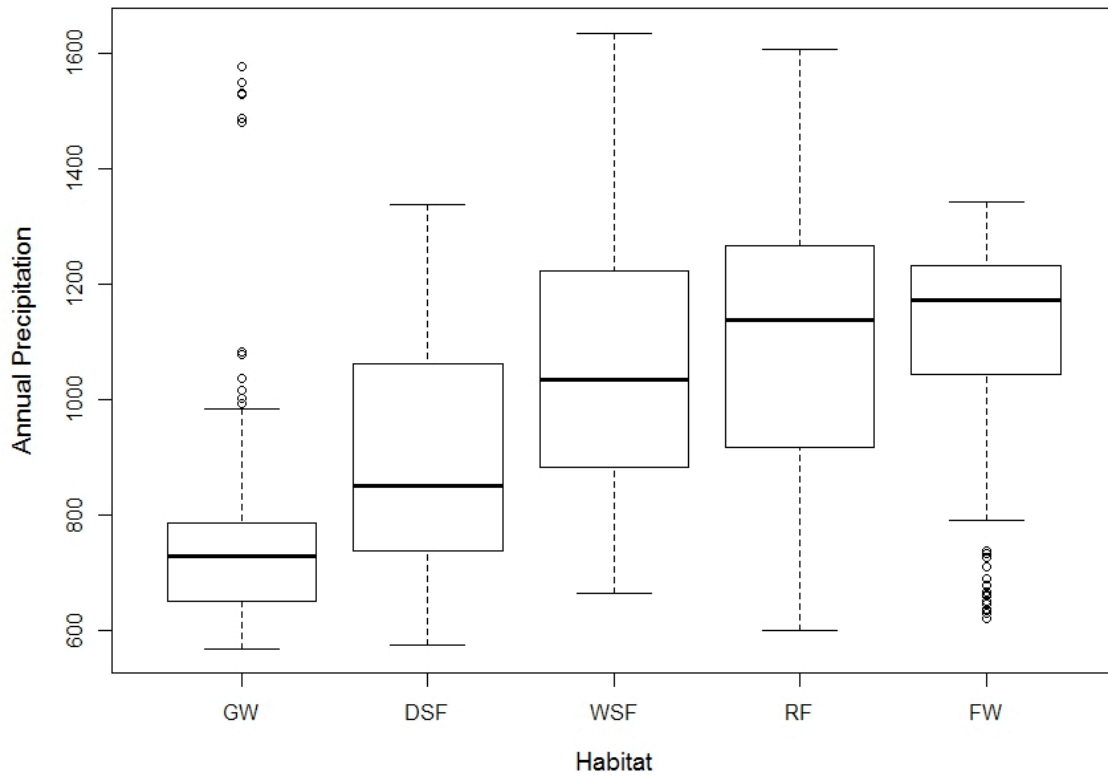
**ECOG-00346**

Letten, A. D., Ashcroft, M. B., Keith, D. A., Gollan, J. R. and Ramp, D. 2013. The importance of temporal climate variability for spatial patterns in plant diversity. – *Ecography* 36: xxx–xxx.

**Supplementary material**

634 **Appendix 1**

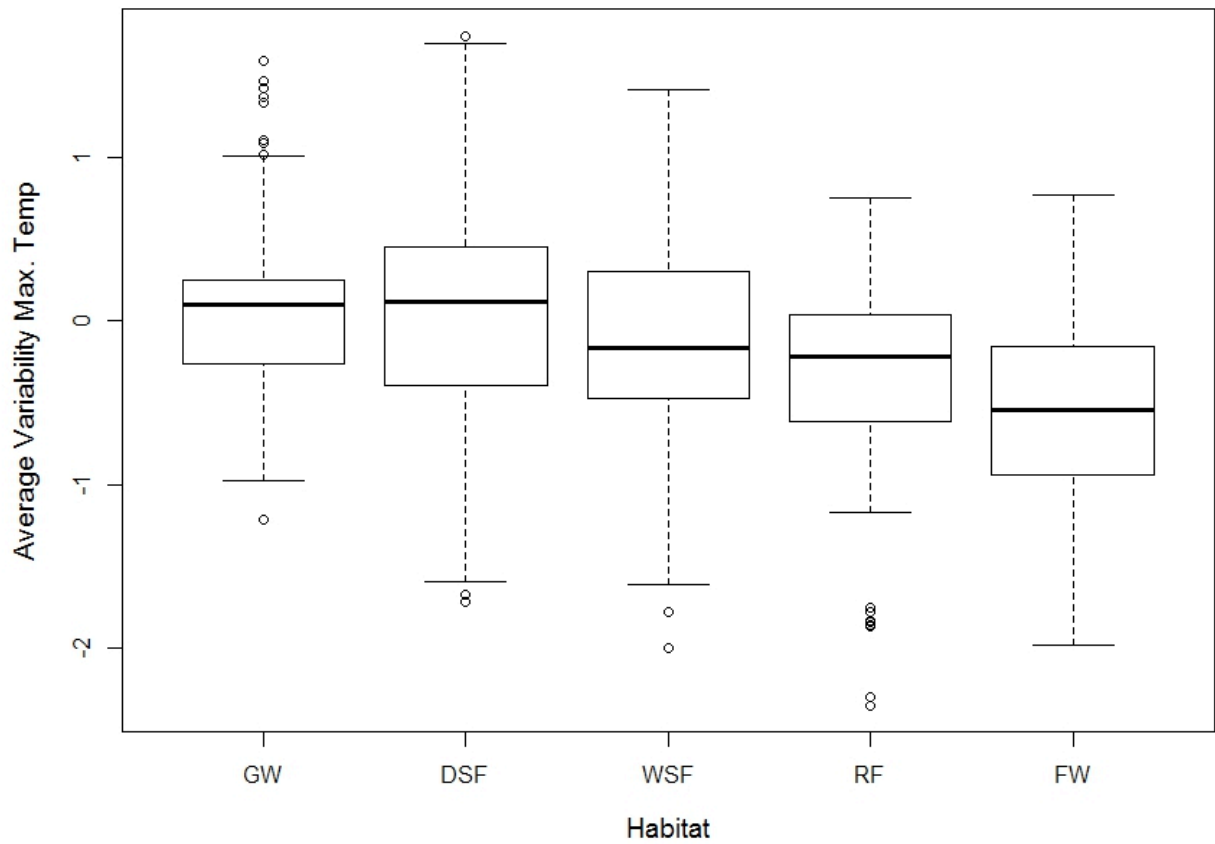
635 **Figure A1** – Spread of average annual precipitation amongst plots grouped by habitat type. Boxes show  
636 median (bold middle line) and 25% and 75% quartiles; whiskers show 1.5 times interquartile range or  
637 maximum value (whichever is smaller); and dots show outliers.



638

639

640 **Figure A2** – Spread of average variability in maximum temperature amongst plots grouped by habitat  
641 type. Boxes show median (bold middle line) and 25% and 75% quartiles; whiskers show 1.5 times  
642 interquartile range or maximum value (whichever is smaller); and dots show outliers.



643

644

645 **Table A1** - Parameter coefficient estimates for global models for each forest type and all plots combined using non-spatial quasipoisson models,  
 646 non-spatial Gaussian models or spatially sensitive SAR error models.

Quasipoisson regression					Gaussian regression					SAR error model							
ALL																	
	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )			
(Intercept)	<b>3.696218</b>	<b>0.006422</b>	<b>575.565</b>	<2e-16	***	(Intercept)	40.7253	0.2581	157.771	<2e-16	***	(Intercept)	40.82572	0.88545	46.1071	<2e-16	***
VarMT	<b>1.359183</b>	<b>0.6222</b>	<b>2.184</b>	<b>0.029021</b>	*	VarMT	<b>55.2543</b>	<b>25.1395</b>	<b>2.198</b>	0.028048	*	VarMT	<b>84.53426</b>	<b>30.0167</b>	<b>2.8162</b>	0.00486	**
VarMT^2	-2.61569	0.446667	-5.856	5.37E-09	***	VarMT^2	<b>-96.4335</b>	<b>16.4538</b>	<b>-5.861</b>	<b>5.22E-09</b>	***	VarMT^2	<b>-56.40293</b>	<b>21.43447</b>	<b>-2.6314</b>	<b>0.00850</b>	**
CC	1.007941	0.455195	2.214	0.026898	*	CC	34.1994	18.1306	1.886	5.94E-02	.	CC	19.79844	18.29735	1.082	0.27924	
MaxH5	-3.72637	0.845806	-4.406	1.10E-05	***	MaxH5	-165.3472	34.5353	-4.788	1.79E-06	***	MaxH5	52.86746	46.04523	1.1482	0.25090	
MaxH5^2	-2.78068	0.41191	-6.751	1.83E-11	***	MaxH5^2	-113.2059	16.3644	-6.918	5.82E-12	***	MaxH5^2	-68.15748	16.91243	-4.03	0.00006	***
MaxH95	0.735995	0.718797	1.024	0.30597		MaxH95	33.5855	29.2633	1.148	2.51E-01		MaxH95	-21.51259	28.22374	-0.7622	0.44593	
MaxH95^2	-0.64232	0.51938	-1.237	0.216311		MaxH95^2	-24.6956	20.5184	-1.204	0.228866		MaxH95^2	-23.93515	20.43361	-1.1714	0.24145	
MinH5	2.657025	0.716274	3.71	0.000212	***	MinH5	123.9955	29.0608	4.267	2.06E-05	***	MinH5	133.6478	31.66339	4.2209	0.00002	***
MinH5^2	-1.70111	0.446819	-3.807	0.000144	***	MinH5^2	-73.8534	17.9574	-4.113	4.04E-05	***	MinH5^2	-52.9319	17.62095	-3.0039	0.00267	**
MinT5	-2.99024	0.805254	-3.713	0.000209	***	MinT5	-118.6318	32.5768	-3.642	0.000277	***	MinT5	34.76203	40.45071	0.8594	0.39014	
MinT5^2	2.173175	0.361598	6.01	2.13E-09	***	MinT5^2	88.615	14.5705	6.082	1.37E-09	***	MinT5^2	65.48044	14.3674	4.5576	0.00001	***
MinT95	3.876975	1.045259	3.709	0.000213	***	MinT95	159.7826	42.1256	3.793	1.52E-04	***	MinT95	52.31951	51.81628	1.0097	0.31263	
MinT95^2	0.315785	0.556954	0.567	0.570775		MinT95^2	18.0257	21.8781	0.824	0.410066		MinT95^2	-23.30304	26.7452	-0.8713	0.38359	
PCQ	-0.50873	0.729185	-0.698	0.485448		PCQ	-12.1073	29.7105	-0.408	0.68367		PCQ	-130.7871	47.55012	-2.7505	0.00595	**
PCQ^2	-3.98798	0.453585	-8.792	<2e-16	***	PCQ^2	-136.8466	16.6488	-8.22	3.25E-16	***	PCQ^2	-51.17131	25.24666	-2.0269	0.04268	*
DSF																	
	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )			
(Intercept)	3.67149	0.00775	473.741	<2e-16	***	(Intercept)	39.7212	0.3047	130.344	<2e-16	***	(Intercept)	40.14681	1.16348	34.5058	<2e-16	***
VarMT	-0.02968	0.57952	-0.051	0.95916		VarMT	<b>3.7088</b>	<b>22.9591</b>	<b>0.162</b>	<b>0.87169</b>		VarMT	<b>72.77781</b>	<b>28.0825</b>	<b>2.5916</b>	<b>0.00955</b>	*
VarMT^2	-1.51345	0.39095	-3.871	0.000113	***	VarMT^2	<b>-60.251</b>	<b>15.2088</b>	<b>-3.962</b>	<b>7.78E-05</b>	***	VarMT^2	<b>-17.9593</b>	<b>18.35705</b>	<b>-0.9783</b>	<b>0.32791</b>	
CC	1.01935	0.44876	2.272	0.02325	*	CC	37.5759	17.382	2.162	0.03079	*	CC	7.66776	16.67918	0.4597	0.64572	
MaxH5	-0.40636	0.58687	-0.692	0.488774		MaxH5	-22.0054	23.6389	-0.931	3.52E-01		MaxH5	106.3558	36.0087	2.9536	0.00314	**
MaxH5^2	-1.74976	0.38743	-4.516	6.76E-06	***	MaxH5^2	-66.4928	14.8973	-4.463	8.64E-06	***	MaxH5^2	-39.32521	14.32823	-2.7446	0.00606	**
MaxH95	-0.76983	0.53228	-1.446	0.148291		MaxH95	-33.4634	20.6923	-1.617	1.06E-01		MaxH95	-0.91862	21.65697	-0.0424	0.96617	
MaxH95^2	-1.58216	0.36755	-4.305	1.78E-05	***	MaxH95^2	-56.0575	13.8313	-4.053	5.30E-05	***	MaxH95^2	-47.16642	14.08297	-3.3492	0.00081	***
MinH5	1.76947	0.7127	2.483	0.013139	*	MinH5	77.0276	28.3832	2.714	0.00672	**	MinH5	97.8897	28.21926	3.4689	0.00052	***
MinH5^2	-1.2034	0.41224	-2.919	0.003559	**	MinH5^2	-46.5905	16.3783	-2.845	0.0045	**	MinH5^2	-24.46748	15.31293	-1.5978	0.11008	
MinT5	0.10163	0.58556	0.174	0.862229		MinT5	10.5619	23.1463	0.456	6.48E-01		MinT5	71.91678	28.51156	2.5224	0.01166	*
MinT5^2	1.53865	0.32393	4.75	2.22E-06	***	MinT5^2	64.3623	13.0544	4.93	9.07E-07	***	MinT5^2	47.67709	12.59039	3.7868	0.00015	***
PCQ	-0.86009	0.66982	-1.284	0.199307		PCQ	-32.6372	26.5229	-1.231	2.19E-01		PCQ	-143.0363	43.53963	-3.2852	0.00102	**
PCQ^2	-2.7765	0.42068	-6.6	5.59E-11	***	PCQ^2	-102.2591	16.0176	-6.384	2.26E-10	***	PCQ^2	0.64838	27.64998	0.0234	0.98129	

## WSF

	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )			
(Intercept)	3.78821	0.01348	281.065	<2e-16	***	(Intercept)	44.4785	0.5951	74.74	<2e-16	***	(Intercept)	44.58861	0.81464	54.734	<2e-16	***
VarMT	0.31937	0.50763	0.629	0.5297		VarMT	13.1729	22.2028	0.593	0.5534		VarMT	26.67831	22.91098	1.1644	0.24425	
VarMT^2	-1.53583	0.33262	-4.617	5.54E-06	***	VarMT^2	-60.3494	13.4305	-4.493	9.65E-06	***	VarMT^2	-57.3296	14.69991	-3.9	9.62E-05	***
MaxT95	0.04725	0.77171	0.061	0.9512		MaxT95	-0.9637	33.8897	-0.028	0.9773		MaxT95	-32.73655	33.33632	-0.982	0.3261	
MaxT95^2	-0.3193	0.32711	-0.976	0.3297		MaxT95^2	-14.2515	14.0951	-1.011	0.3127		MaxT95^2	-13.04588	14.19708	-0.9189	0.35814	
MaxT5	0.07799	0.75258	0.104	0.9175		MaxT5	5.6712	33.3702	0.17	0.8652		MaxT5	18.98193	35.33949	0.5371	0.59118	
MaxT5^2	-0.55822	0.38408	-1.453	0.1471		MaxT5^2	-23.816	16.6944	-1.427	0.1546		MaxT5^2	-23.37391	16.09555	-1.4522	0.14645	
MinH95	0.13797	0.33471	0.412	0.6805		MinH95	4.9674	14.8011	0.336	0.7374		MinH95	-0.26435	16.02226	-0.0165	0.98684	
MinH95^2	-0.35606	0.29793	-1.195	0.2329		MinH95^2	-14.6355	12.3861	-1.182	0.2382		MinH95^2	-16.50522	12.64776	-1.305	0.1919	
MinT5	-0.01932	0.39786	-0.049	0.9613		MinT5	-0.7629	17.4424	-0.044	0.9651		MinT5	0.44101	17.20265	0.0256	0.97955	
MinT5^2	-0.10326	0.2854	-0.362	0.7177		MinT5^2	-5.4678	12.4032	-0.441	0.6596		MinT5^2	-6.40688	12.56355	-0.51	0.61008	
PDQ	-0.52366	0.38344	-1.366	0.1729		PDQ	-22.1218	16.9174	-1.308	0.1919		PDQ	-32.05906	19.83676	-1.6161	0.10606	
PDQ^2	-0.6996	0.29722	-2.354	0.0192	*	PDQ^2	-26.0339	12.3407	-2.11	0.0356	*	PDQ^2	-28.22353	14.8213	-1.9043	0.05688	

## RF

	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )			
(Intercept)	3.666	0.03698	99.141	<2e-16	***	(Intercept)	40.851	1.507	27.109	<2e-16	***	(Intercept)	41.4633	1.7049	24.32	<2e-16	***
VarMT	1.35961	0.74336	1.829	0.0707		VarMT	53.834	30.807	1.747	0.084		VarMT	54.0033	31.7114	1.703	0.08858	
VarMT^2	-0.41787	0.46482	-0.899	0.3711		VarMT^2	-18.807	17.141	-1.097	0.2755		VarMT^2	-29.0014	19.1096	-1.5176	0.12911	
MaxH95	0.29358	0.71821	0.409	0.6837		MaxH95	21.022	31.37	0.67	0.5045		MaxH95	10.0624	29.069	0.3462	0.72923	
MaxH95^2	-0.85301	0.79949	-1.067	0.2889		MaxH95^2	-23.745	31.77	-0.747	0.4568		MaxH95^2	-29.9884	28.9751	-1.035	0.30068	
MinH5	0.68639	0.53811	1.276	0.2054		MinH5	31.023	23.483	1.321	0.1898		MinH5	29.5606	20.5896	1.4357	0.15109	
MinH5^2	0.11337	0.43935	0.258	0.797		MinH5^2	4.815	17.903	0.269	0.7886		MinH5^2	12.4381	15.3498	0.8103	0.41776	
MinT95	1.75532	0.84702	2.072	0.0411	*	MinT95	63.319	34.543	1.833	0.0701		MinT95	53.6658	33.2827	1.6124	0.10687	
MinT95^2	-1.45053	0.73293	-1.979	0.0509		MinT95^2	-33.02	27.154	-1.216	0.2272		MinT95^2	-13.9662	24.9236	-0.5604	0.57523	
PDQ	0.27733	0.65232	0.425	0.6717		PDQ	11.148	26.301	0.424	0.6727		PDQ	10.8864	29.0015	0.3754	0.70738	
PDQ^2	-0.71889	0.58286	-1.233	0.2206		PDQ^2	-15.687	21.28	-0.737	0.4629		PDQ^2	-24.6172	22.267	-1.1055	0.26892	

## FW

	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )			
(Intercept)	3.52061	0.02581	136.392	<2e-16	***	(Intercept)	34.8419	0.8808	39.558	<2e-16	***	(Intercept)	34.8253	1.1964	29.1077	<2e-16	***
VarMT	1.91409	0.62345	3.07	0.00243	**	VarMT	62.74	22.4623	2.793	0.00572	**	VarMT	84.7265	26.1117	3.2448	0.001175	**
MaxT95	1.06369	0.77202	1.378	0.16978		MaxT95	35.113	27.6108	1.272	0.204931		MaxT95	31.58	28.0595	1.1255	0.260392	
MaxT95^2	0.18589	0.48017	0.387	0.69906		MaxT95^2	12.8563	17.8995	0.718	0.47343		MaxT95^2	27.7726	18.8645	1.4722	0.140962	
MinT95	0.82781	0.65511	1.264	0.20781		MinT95	34.5573	24.1898	1.429	0.154659		MinT95	34.2919	25.1842	1.3616	0.17331	
MinT95^2	-0.32106	0.40464	-0.793	0.42844		MinT95^2	-13.1064	14.968	-0.876	0.382266		MinT95^2	-8.6305	16.1313	-0.535	0.592638	
MaxH5	-2.14298	0.45289	-4.732	4.17E-06	***	MaxH5	-84.6479	17.88	-4.734	4.12E-06	***	MaxH5	-58.0646	21.029	-2.7612	0.005759	**
MaxH5^2	-1.48432	0.42801	-3.468	0.00064	***	MaxH5^2	-57.8518	15.8617	-3.647	0.000337	***	MaxH5^2	-40.4713	14.7794	-2.7384	0.006175	**
MaxH95	1.03856	0.65476	1.586	0.11425		MaxH95	45.3044	24.2803	1.866	0.063499		MaxH95	23.8203	23.9805	0.9933	0.320555	
MinH5	0.84765	0.64492	1.314	0.19021		MinH5	23.5197	22.8442	1.03	0.304437		MinH5	16.1941	22.4557	0.7212	0.470812	
MinH5^2	-0.23079	0.45823	-0.504	0.61505		MinH5^2	-10.0318	16.6356	-0.603	0.54716		MinH5^2	-26.6027	16.237	-1.6384	0.101337	
AP	0.61744	0.69676	0.886	0.37659		AP	20.7957	25.2647	0.823	0.41141		AP	14.3864	29.8841	0.4814	0.630227	

GW

	Estimate	Std.Error	t value	Pr(> t )		Estimate	Std.Error	z value	Pr(> z )		
(Intercept)	3.85587	0.02006	192.2	<2e-16	***	(Intercept)	47.6089	1.5993	29.7573	<2e-16	***
MaxH5	-0.10973	0.41689	-0.263	0.79264		MaxH5	-30.9895	26.646	-1.163	0.2448	
MaxH5^2	0.25333	0.3953	0.641	0.5223		MaxH5^2	-7.446	20.1458	-0.3696	0.7117	
MaxH95	-0.03838	0.63159	-0.061	0.9516		MaxH95	49.975	34.8871	1.4325	0.152	
MaxH95^2	-0.02978	0.59151	-0.05	0.95989		MaxH95^2	1.0474	27.8079	0.0377	0.97	
MinT5	0.46628	0.50207	0.929	0.35408		MinT5	27.7859	24.9657	1.113	0.2657	
MinT5^2	-0.17574	0.37421	-0.47	0.63908		MinT5^2	-5.747	16.8811	-0.3404	0.7335	
PWaQ	-0.76892	0.64388	-1.194	0.23371		PWaQ	-45.6047	35.8789	-1.2711	0.2037	
PWaQ^2	-1.4596	0.47361	-3.082	0.00232	**	PWaQ^2	-42.6343	26.7383	-1.5945	0.1108	

647

648

649 **Table A2** – Pearson correlations ( $r$ ) of all independent variables available for model selection for each forest type and all plots combined. Values  
650 greater than  $|0.7|$  are in bold. See Table 1 in main text for abbreviations.

<b>ALL</b>															
	VarMT	AP	CC	MaxH5	MaxH95	MaxT5	MaxT95	MinH5	MinH95	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
VarMT	1.000	-0.571	-0.024	-0.383	0.324	-0.416	0.314	-0.430	-0.150	-0.433	-0.628	-0.529	-0.531	-0.440	-0.617
AP	-0.571	1.000	0.235	0.556	0.157	-0.031	-0.665	0.674	0.619	0.531	0.236	<b>0.969</b>	<b>0.922</b>	<b>0.934</b>	<b>0.952</b>
CC	-0.024	0.235	1.000	0.091	0.390	-0.531	-0.519	0.579	0.573	0.318	-0.099	0.248	0.194	0.267	0.185
MaxH5	-0.383	0.556	0.091	1.000	0.210	0.192	-0.275	0.458	0.582	-0.020	0.273	0.517	0.466	0.460	0.558
MaxH95	0.324	0.157	0.390	0.210	1.000	<b>-0.761</b>	-0.496	0.429	0.668	-0.238	-0.681	0.156	0.203	0.221	0.106
MaxT5	-0.416	-0.031	-0.531	0.192	<b>-0.761</b>	1.000	0.626	-0.382	-0.534	0.043	<b>0.757</b>	-0.038	-0.108	-0.116	0.023
MaxT95	0.314	-0.665	-0.519	-0.275	-0.496	0.626	1.000	<b>-0.851</b>	<b>-0.767</b>	-0.409	0.230	-0.626	-0.681	-0.638	-0.636
MinH5	-0.430	0.674	0.579	0.458	0.429	-0.382	<b>-0.851</b>	1.000	<b>0.766</b>	0.420	0.041	0.670	0.597	0.679	0.614
MinH95	-0.150	0.619	0.573	0.582	0.668	-0.534	<b>-0.767</b>	<b>0.766</b>	1.000	0.322	-0.142	0.604	0.549	0.618	0.553
MinT5	-0.433	0.531	0.318	-0.020	-0.238	0.043	-0.409	0.420	0.322	1.000	0.507	0.551	0.394	0.537	0.464
MinT95	-0.628	0.236	-0.099	0.273	-0.681	<b>0.757</b>	0.230	0.041	-0.142	0.507	1.000	0.272	0.042	0.197	0.220
PweQ	-0.529	<b>0.969</b>	0.248	0.517	0.156	-0.038	-0.626	0.670	0.604	0.551	0.272	1.000	<b>0.811</b>	<b>0.985</b>	<b>0.853</b>
PDQ	-0.531	<b>0.922</b>	0.194	0.466	0.203	-0.108	-0.681	0.597	0.549	0.394	0.042	<b>0.811</b>	1.000	<b>0.755</b>	<b>0.976</b>
PwaQ	-0.440	<b>0.934</b>	0.267	0.460	0.221	-0.116	-0.638	0.679	0.618	0.537	0.197	<b>0.985</b>	<b>0.755</b>	1.000	<b>0.785</b>
PCQ	-0.617	<b>0.952</b>	0.185	0.558	0.106	0.023	-0.636	0.614	0.553	0.464	0.220	<b>0.853</b>	<b>0.976</b>	<b>0.785</b>	1.000

<b>DSF</b>															
	VarMT	AP	CC	MaxH5	MaxH95	MaxT5	MaxT95	MinH5	MinH95	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
VarMT	1.000	-0.597	-0.026	-0.457	0.358	-0.476	0.360	-0.509	-0.179	-0.454	<b>-0.704</b>	-0.534	-0.573	-0.433	-0.662
AP	-0.597	1.000	0.201	0.640	0.064	0.065	-0.672	0.690	0.626	0.560	0.350	<b>0.968</b>	<b>0.922</b>	<b>0.921</b>	<b>0.957</b>
CC	-0.026	0.201	1.000	0.098	0.385	-0.528	-0.517	0.547	0.536	0.263	-0.092	0.226	0.159	0.245	0.152
MaxH5	-0.457	0.640	0.098	1.000	0.177	0.186	-0.406	0.572	0.616	0.007	0.297	0.603	0.548	0.553	0.629
MaxH95	0.358	0.064	0.385	0.177	1.000	<b>-0.777</b>	-0.434	0.308	0.652	-0.252	-0.692	0.077	0.099	0.136	0.003
MaxT5	-0.476	0.065	-0.528	0.186	<b>-0.777</b>	1.000	0.531	-0.253	-0.511	0.093	<b>0.769</b>	0.043	0.001	-0.030	0.125
MaxT95	0.360	-0.672	-0.517	-0.406	-0.434	0.531	1.000	<b>-0.850</b>	<b>-0.807</b>	-0.433	0.093	-0.635	-0.670	-0.628	-0.642
MinH5	-0.509	0.690	0.547	0.572	0.308	-0.253	<b>-0.850</b>	1.000	<b>0.777</b>	0.452	0.212	0.682	0.596	0.675	0.636
MinH95	-0.179	0.626	0.536	0.616	0.652	-0.511	<b>-0.807</b>	<b>0.777</b>	1.000	0.296	-0.125	0.623	0.547	0.641	0.547
MinT5	-0.454	0.560	0.263	0.007	-0.252	0.093	-0.433	0.452	0.296	1.000	0.521	0.581	0.434	0.576	0.495
MinT95	<b>-0.704</b>	0.350	-0.092	0.297	-0.692	<b>0.769</b>	0.093	0.212	-0.125	0.521	1.000	0.365	0.185	0.301	0.354
PweQ	-0.534	<b>0.968</b>	0.226	0.603	0.077	0.043	-0.635	0.682	0.623	0.581	0.365	1.000	<b>0.807</b>	<b>0.982</b>	<b>0.859</b>
PDQ	-0.573	<b>0.922</b>	0.159	0.548	0.099	0.001	-0.670	0.596	0.547	0.434	0.185	<b>0.807</b>	1.000	<b>0.725</b>	<b>0.976</b>
PwaQ	-0.433	<b>0.921</b>	0.245	0.553	0.136	-0.030	-0.628	0.675	0.641	0.576	0.301	<b>0.982</b>	<b>0.725</b>	1.000	<b>0.772</b>
PCQ	-0.662	<b>0.957</b>	0.152	0.629	0.003	0.125	-0.642	0.636	0.547	0.495	0.354	<b>0.859</b>	<b>0.976</b>	<b>0.772</b>	1.000

**GW**

	AP	MaxH95	MaxT5	MaxT95	MinH5	MinH95	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
AP	1.000	<b>0.748</b>	-0.642	<b>-0.805</b>	<b>0.841</b>	0.639	-0.065	-0.684	<b>0.974</b>	<b>0.936</b>	<b>0.974</b>	<b>0.978</b>
MaxH95	<b>0.748</b>	1.000	<b>-0.782</b>	<b>-0.748</b>	<b>0.773</b>	<b>0.861</b>	-0.268	<b>-0.782</b>	0.682	<b>0.752</b>	0.689	<b>0.748</b>
MaxT5	-0.642	<b>-0.782</b>	1.000	<b>0.920</b>	-0.680	<b>-0.764</b>	0.053	<b>0.809</b>	-0.546	<b>-0.733</b>	-0.553	-0.679
MaxT95	<b>-0.805</b>	<b>-0.748</b>	<b>0.920</b>	1.000	<b>-0.831</b>	<b>-0.729</b>	-0.017	<b>0.752</b>	<b>-0.741</b>	<b>-0.841</b>	<b>-0.744</b>	<b>-0.824</b>
MinH5	<b>0.841</b>	<b>0.773</b>	-0.680	<b>-0.831</b>	1.000	<b>0.817</b>	0.096	-0.515	<b>0.858</b>	<b>0.729</b>	<b>0.862</b>	<b>0.784</b>
MinH95	0.639	<b>0.861</b>	<b>-0.764</b>	<b>-0.729</b>	<b>0.817</b>	1.000	0.124	-0.516	0.623	0.558	0.623	0.588
MinT5	-0.065	-0.268	0.053	-0.017	0.096	0.124	1.000	0.505	0.040	-0.233	0.027	-0.161
MinT95	-0.684	<b>-0.782</b>	<b>0.809</b>	<b>0.752</b>	-0.515	-0.516	0.505	1.000	-0.542	<b>-0.846</b>	-0.556	<b>-0.765</b>
PWeQ	<b>0.974</b>	0.682	-0.546	<b>-0.741</b>	<b>0.858</b>	0.623	0.040	-0.542	1.000	<b>0.839</b>	<b>0.998</b>	<b>0.910</b>
PDQ	<b>0.936</b>	<b>0.752</b>	<b>-0.733</b>	<b>-0.841</b>	<b>0.729</b>	0.558	-0.233	<b>-0.846</b>	<b>0.839</b>	1.000	<b>0.844</b>	<b>0.984</b>
PWaQ	<b>0.974</b>	0.689	-0.553	<b>-0.744</b>	<b>0.862</b>	0.623	0.027	-0.556	<b>0.998</b>	<b>0.844</b>	1.000	<b>0.912</b>
PCQ	<b>0.978</b>	<b>0.748</b>	-0.679	<b>-0.824</b>	<b>0.784</b>	0.588	-0.161	<b>-0.765</b>	<b>0.910</b>	<b>0.984</b>	<b>0.912</b>	1.000

**WSF**

	VarMT	AP	MaxH95	MaxT5	MaxT95	MinH95	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
VarMT	1.000	-0.513	0.560	-0.551	0.094	0.180	-0.536	-0.666	-0.528	-0.341	-0.483	-0.456
AP	-0.513	1.000	-0.230	0.212	-0.412	0.168	0.603	0.296	<b>0.953</b>	<b>0.861</b>	<b>0.934</b>	<b>0.910</b>
MaxH95	0.560	-0.230	1.000	<b>-0.743</b>	-0.335	0.564	-0.622	<b>-0.815</b>	-0.259	-0.030	-0.194	-0.199
MaxT5	-0.551	0.212	<b>-0.743</b>	1.000	0.634	-0.483	0.331	<b>0.814</b>	0.242	-0.007	0.169	0.185
MaxT95	0.094	-0.412	-0.335	0.634	1.000	-0.552	-0.225	0.393	-0.324	-0.549	-0.354	-0.443
MinH95	0.180	0.168	0.564	-0.483	-0.552	1.000	-0.012	-0.274	0.134	0.175	0.146	0.162
MinT5	-0.536	0.603	-0.622	0.331	-0.225	-0.012	1.000	0.632	0.593	0.416	0.558	0.543
MinT95	-0.666	0.296	<b>-0.815</b>	<b>0.814</b>	0.393	-0.274	0.632	1.000	0.380	-0.041	0.316	0.188
PWeQ	-0.528	<b>0.953</b>	-0.259	0.242	-0.324	0.134	0.593	0.380	1.000	0.681	<b>0.993</b>	<b>0.744</b>
PDQ	-0.341	<b>0.861</b>	-0.030	-0.007	-0.549	0.175	0.416	-0.041	0.681	1.000	0.662	<b>0.962</b>
PWaQ	-0.483	<b>0.934</b>	-0.194	0.169	-0.354	0.146	0.558	0.316	<b>0.993</b>	0.662	1.000	<b>0.709</b>
PCQ	-0.456	<b>0.910</b>	-0.199	0.185	-0.443	0.162	0.543	0.188	<b>0.744</b>	<b>0.962</b>	<b>0.709</b>	1.000

**RF**

	VarMT	AP	MaxH95	MaxT5	MinH5	MinT95	PDQ	PCQ
VarMT	1.000	-0.531	0.496	-0.368	-0.333	-0.474	-0.494	-0.554
AP	-0.531	1.000	0.189	0.027	0.535	0.044	<b>0.920</b>	<b>0.917</b>
MaxH95	0.496	0.189	1.000	-0.591	0.398	-0.667	0.173	0.086
MaxT5	-0.368	0.027	-0.591	1.000	-0.494	<b>0.768</b>	-0.004	0.134
MinH5	-0.333	0.535	0.398	-0.494	1.000	-0.290	0.484	0.438
MinT95	-0.474	0.044	-0.667	<b>0.768</b>	-0.290	1.000	-0.087	0.069
PDQ	-0.494	<b>0.920</b>	0.173	-0.004	0.484	-0.087	1.000	<b>0.974</b>
PCQ	-0.554	<b>0.917</b>	0.086	0.134	0.438	0.069	<b>0.974</b>	1.000

<b>FW</b>												
	VarMT	AP	MaxH5	MaxH95	MaxT95	MinH5	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
VarMT	1.000	-0.669	-0.364	0.507	0.611	-0.393	-0.620	-0.585	-0.570	<b>-0.746</b>	-0.442	<b>-0.734</b>
AP	-0.669	1.000	0.450	-0.449	-0.605	0.303	<b>0.750</b>	0.580	<b>0.961</b>	<b>0.945</b>	<b>0.895</b>	<b>0.944</b>
MaxH5	-0.364	0.450	1.000	0.069	-0.246	0.267	0.051	0.332	0.390	0.460	0.313	0.477
MaxH95	0.507	-0.449	0.069	1.000	0.193	0.132	-0.504	-0.558	-0.382	-0.480	-0.321	-0.484
MaxT95	0.611	-0.605	-0.246	0.193	1.000	-0.677	-0.632	-0.183	-0.545	-0.629	-0.482	-0.611
MinH5	-0.393	0.303	0.267	0.132	-0.677	1.000	0.340	0.221	0.279	0.292	0.251	0.313
MinT5	-0.620	<b>0.750</b>	0.051	-0.504	-0.632	0.340	1.000	0.640	0.699	<b>0.711</b>	0.655	<b>0.720</b>
MinT95	-0.585	0.580	0.332	-0.558	-0.183	0.221	0.640	1.000	0.517	0.551	0.454	0.609
PWeQ	-0.570	<b>0.961</b>	0.390	-0.382	-0.545	0.279	0.699	0.517	1.000	<b>0.826</b>	<b>0.974</b>	<b>0.825</b>
PDQ	<b>-0.746</b>	<b>0.945</b>	0.460	-0.480	-0.629	0.292	<b>0.711</b>	0.551	<b>0.826</b>	1.000	<b>0.708</b>	<b>0.991</b>
PWaQ	-0.442	<b>0.895</b>	0.313	-0.321	-0.482	0.251	0.655	0.454	<b>0.974</b>	<b>0.708</b>	1.000	<b>0.703</b>
PCQ	<b>-0.734</b>	<b>0.944</b>	0.477	-0.484	-0.611	0.313	<b>0.720</b>	0.609	<b>0.825</b>	<b>0.991</b>	<b>0.703</b>	1.000

651

652

653 **Table A3** – Best fitting models comprising the 95% confidence set for each forest type and all plots combined. Models are ranked according to  
 654 QAIC, which measures the relative goodness of fit of each model. Unshaded cells indicate variables excluded from the model in that row. The  
 655 percentage deviance explained by each model is given by Dev.(%) and model Akaike weights are given by  $w_i$ .

ALL

VarMT	CC	MinT5	MinT95	MaxH5	MaxH95	MinH5	PCQ	Dev.(%)	QAIC	$\Delta$ QAIC	$w_i$
								16.39	5915.10	0.00	0.507
								16.49	5915.80	0.77	0.345
								16.33	5918.80	3.70	0.080
								16.19	5919.20	4.13	0.064

DSF

VarMT	CC	MinT5	MaxH5	MaxH95	MinH5	PCQ	Dev.(%)	QAIC	$\Delta$ QAIC	$w_i$
							17.61	3985.20	0.00	0.801
							17.35	3988.30	3.19	0.162

WSF

VarMT	MaxT95	MaxT5	MinT5	MinH95	PDQ	Dev.(%)	QAIC	$\Delta$ QAIC	$w_i$
						15.92	1071.78	0.00	0.228
						15.76	1072.44	0.67	0.164
						16.57	1073.05	1.27	0.121
						14.48	1073.81	2.03	0.083
						16.37	1073.88	2.11	0.080
						15.34	1074.22	2.44	0.067
						16.21	1074.53	2.75	0.058
						16.00	1075.47	3.70	0.036
						16.82	1075.99	4.22	0.028
						15.78	1076.36	4.58	0.023
						16.62	1076.82	5.05	0.018
						14.62	1077.22	5.45	0.015
						14.53	1077.62	5.84	0.012
						16.40	1077.77	5.99	0.011
						13.50	1077.93	6.15	0.011

RF

VarMT	MinT95	MaxH95	MinH5	PDQ	Dev.(%)	QAIC	$\Delta$ QAIC	$w_i$
					33.60	219.69	0.00	0.215
					35.42	220.98	1.30	0.113
					35.04	221.54	1.86	0.085
					34.78	221.93	2.24	0.070
					32.08	221.94	2.26	0.070
					29.35	221.99	2.30	0.068
					37.03	222.59	2.90	0.051
					37.02	222.61	2.93	0.050
					31.53	222.75	3.06	0.047
					36.51	223.36	3.67	0.034
					33.8	223.39	3.70	0.034
					33.75	223.46	3.77	0.033
					33.74	223.47	3.78	0.033
					35.50	224.86	5.17	0.016
					38.15	224.93	5.24	0.016
					30.00	225.03	5.35	0.015
					32.53	225.26	5.58	0.013

FW

VarMT	MaxT95	MinT95	MaxH5	MaxH95	MinH5	AP	Dev.(%)	QAIC	ΔQAIC	w <sub>i</sub>
							30.39	480.46	0.00	0.392
							30.40	482.40	1.95	0.148
							30.48	484.17	3.71	0.061
							30.44	484.29	3.83	0.058
							26.27	485.27	4.82	0.035
							27.22	485.71	5.25	0.028
							30.54	485.97	5.51	0.025
							30.48	486.15	5.70	0.023
							26.64	486.51	6.05	0.019
							29.72	486.61	6.15	0.018
							29.05	486.75	6.29	0.017
							27.17	486.81	6.36	0.016
							30.85	486.97	6.51	0.015
							28.32	487.10	6.64	0.014
							31.10	487.23	6.77	0.013
							29.51	487.28	6.82	0.013
							30.12	487.31	6.85	0.013

GW

MinT5	MaxH5	MaxH95	PWQ	Dev.(%)	QAIC	ΔQAIC	w <sub>i</sub>
				11.11	538.90	0.00	0.526
				11.74	541.20	2.36	0.162
				11.53	541.80	2.90	0.123
				11.42	542.00	3.19	0.107
				12.03	544.40	5.59	0.032

656

657

658

659

660

661 **Table A4** - Percentage deviance explained by variability in maximum temperature (VarMT) and absolute maximum temperature (MaxT95) as  
 662 independent predictors of non-tree species richness for each forest type and all plots combined (ALL = all plots combined, DSF = dry sclerophyll  
 663 forest, WSF = wet sclerophyll forest, GW = grassy woodland, RF = rainforest and FW = forested wetlands). Non-significant results are shown in  
 664 brackets. Both linear and quadratic parameter estimates and standard errors ( $x/x^2$ ) are provided for quadratic models.

	VarMT			MaxT95		
	%Dev. Exp.	Estimate	SE	%Dev. Exp.	Estimate	SE
ALL	5.58	3.1/-3.9	0.4/0.4	1.38	1.6/-1.8	0.4/0.4
GW	(0.57)	-0.4	0.3	5.55	0.2/-1.2	0.3/0.4
DSF	2.29	0.9/-2.1	0.4/0.4	2.24	-0.7/-2.2	0.4/0.4
WSF	8.54	1.5/-1.4	0.3/0.3	2.39	1.0	0.3
RF	6.00	1.2	0.5	6.70	1.2	0.5
FW	19.70	3.2	0.4	16.90	2.9	0.4

665

666 **Table A5** - Percentage deviance explained by variability in maximum temperature (VarMT) and absolute maximum temperature (MaxT95) as  
 667 independent predictors of tree species richness for each forest type and all plots combined (ALL = all plots combined, DSF = dry sclerophyll  
 668 forest, WSF = wet sclerophyll forest, GW = grassy woodland, RF = rainforest and FW = forested wetlands). Non-significant results are shown in  
 669 brackets. Both linear and quadratic parameter estimates and standard errors ( $x/x^2$ ) are provided for quadratic models.

670

	VarMT			MaxT95		
	%Dev. Exp.	Estimate	SE	%Dev. Exp.	Estimate	SE
ALL	5.06	-5.2/-4.3	0.6/0.6	12.81	-10.2/- 2.5	0.6/0.5
GW	(0.04)	-0.2	0.6	(0.10)	-0.3	0.6
DSF	3.36	-3.2/-1.4	0.5/0.5	13.10	-6.9/-0.9	0.5/0.5
WSF	23.19	-3.9/-3.8	0.5/0.5	2.23	-0.1/-1.5	0.5/0.6
RF	14.78	0.5/-2.9	0.7/0.8	(0.10)	-0.2	0.6
FW	2.80	1.5	0.6	(1.80)	-1.3	0.6

671