

Figure S2.1 – Spread of average annual precipitation amongst plots grouped by habitat type. Boxes show median (bold middle line) and 25% and 75% quartiles; whiskers show 1.5 times interquartile range or maximum value (whichever is smaller); and dots show outliers.

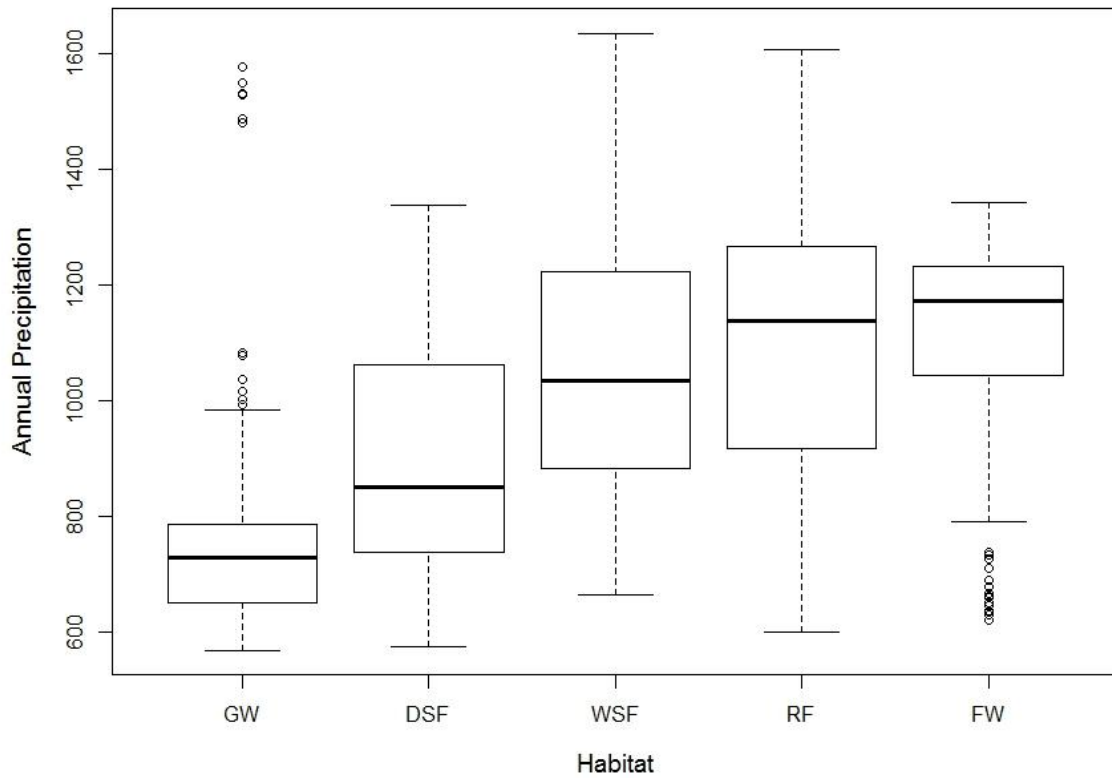


Figure S2.2 – Spread of average variability in maximum temperature amongst plots grouped by habitat type. Boxes show median (bold middle line) and 25% and 75% quartiles; whiskers show 1.5 times interquartile range or maximum value (whichever is smaller); and dots show outliers.

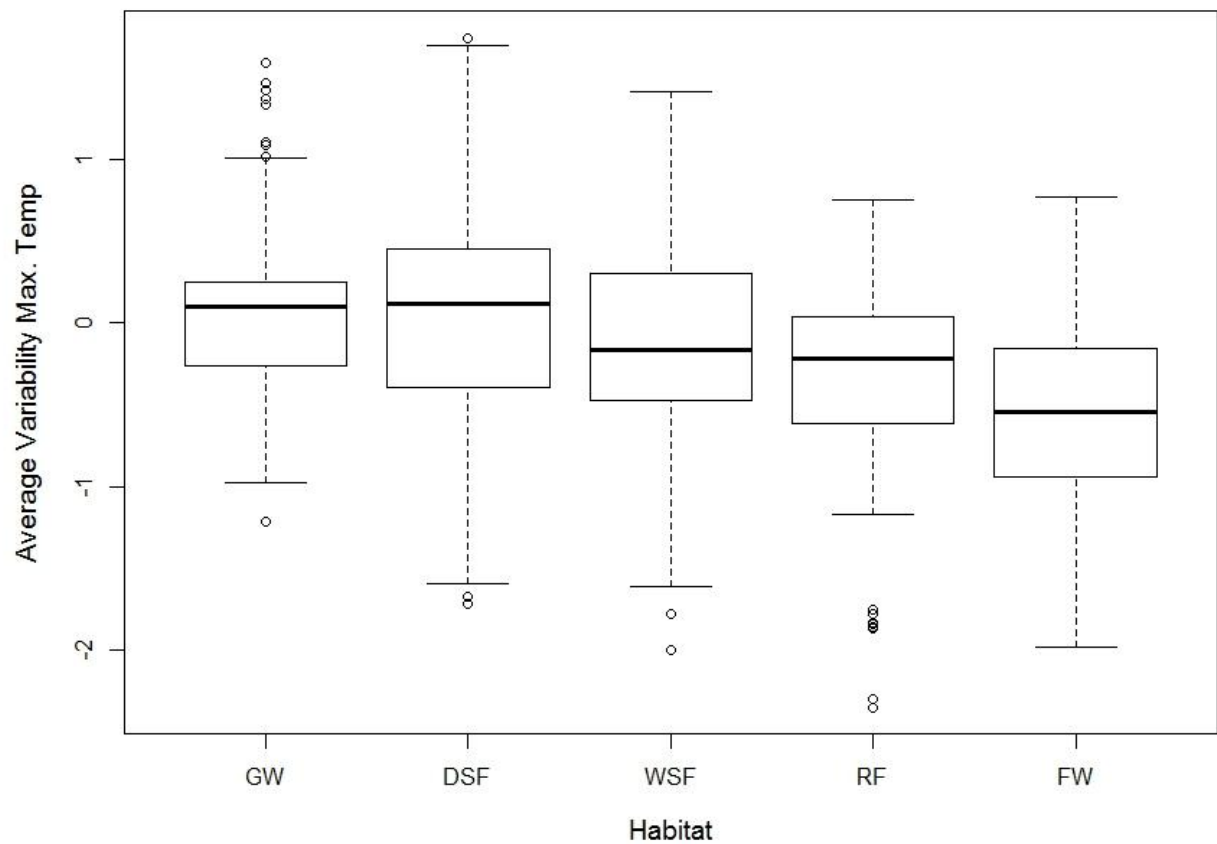


Table S2.1 - Parameter coefficient estimates for global models for each forest type and all plots combined using non-spatial quasipoisson models, non-spatial Gaussian models or spatially sensitive SAR error models.

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)	3.696218	0.006422	575.565	<2e-16	***	(Intercept)	40.7253	0.2581	157.771	<2e-16	***	(Intercept)	40.82572	0.88545	46.1071	<2e-16	***
VarMT	1.359183	0.6222	2.184	0.029021	*	VarMT	55.2543	25.1395	2.198	0.028048	*	VarMT	84.53426	30.0167	2.8162	0.00486	**
VarMT^2	-2.61569	0.446667	-5.856	5.37E-09	***	VarMT^2	-96.4335	16.4538	-5.861	5.22E-09	***	VarMT^2	-56.40293	21.43447	-2.6314	0.00850	**
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	3.7088	22.9591	0.162	0.87169		VarMT	72.77781	28.0825	2.5916	0.00955	*
VarMT^2	-1.51345	0.39095	-3.871	0.000113	***	VarMT^2	-60.251	15.2088	-3.962	7.78E-05	***	VarMT^2	-17.9593	18.35705	-0.9783	0.32791	
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)	
(Intercept)	3.78821	0.01348	281.065	<2e-16	***
VarMT	0.31937	0.50763	0.629	0.5297	
VarMT^2	-1.53583	0.33262	-4.617	5.54E-06	***
MaxT95	0.04725	0.77171	0.061	0.9512	
MaxT95^2	-0.3193	0.32711	-0.976	0.3297	
MaxT5	0.07799	0.75258	0.104	0.9175	
MaxT5^2	-0.55822	0.38408	-1.453	0.1471	
MinH95	0.13797	0.33471	0.412	0.6805	
MinH95^2	-0.35606	0.29793	-1.195	0.2329	
MinT5	-0.01932	0.39786	-0.049	0.9613	
MinT5^2	-0.10326	0.2854	-0.362	0.7177	
PDQ	-0.52366	0.38344	-1.366	0.1729	
PDQ^2	-0.6996	0.29722	-2.354	0.0192	*

RF

	Estimate	Std.Error	t value	Pr(> t)	
(Intercept)	3.666	0.03698	99.141	<2e-16	***
VarMT	1.35961	0.74336	1.829	0.0707	.
VarMT^2	-0.41787	0.46482	-0.899	0.3711	
MaxH95	0.29358	0.71821	0.409	0.6837	
MaxH95^2	-0.85301	0.79949	-1.067	0.2889	
MinH5	0.68639	0.53811	1.276	0.2054	
MinH5^2	0.11337	0.43935	0.258	0.797	
MinT95	1.75532	0.84702	2.072	0.0411	*
MinT95^2	-1.45053	0.73293	-1.979	0.0509	.
PDQ	0.27733	0.65232	0.425	0.6717	
PDQ^2	-0.71889	0.58286	-1.233	0.2206	

FW

	Estimate	Std.Error	t value	Pr(> t)	
(Intercept)	3.52061	0.02581	136.392	<2e-16	***
VarMT	1.91409	0.62345	3.07	0.00243	**
MaxT95	1.06369	0.77202	1.378	0.16978	
MaxT95^2	0.18589	0.48017	0.387	0.69906	
MinT95	0.82781	0.65511	1.264	0.20781	
MinT95^2	-0.32106	0.40464	-0.793	0.42844	
MaxH5	-2.14298	0.45289	-4.732	4.17E-06	***
MaxH5^2	-1.48432	0.42801	-3.468	0.00064	***
MaxH95	1.03856	0.65476	1.586	0.11425	
MinH5	0.84765	0.64492	1.314	0.19021	
MinH5^2	-0.23079	0.45823	-0.504	0.61505	
AP	0.61744	0.69676	0.886	0.37659	

	Estimate	Std.Error	t value	Pr(> t)	
(Intercept)	44.4785	0.5951	74.74	<2e-16	***
VarMT	13.1729	22.2028	0.593	0.5534	
VarMT^2	-60.3494	13.4305	-4.493	9.65E-06	***
MaxT95	-0.9637	33.8897	-0.028	0.9773	
MaxT95^2	-14.2515	14.0951	-1.011	0.3127	
MaxT5	5.6712	33.3702	0.17	0.8652	
MaxT5^2	-23.816	16.6944	-1.427	0.1546	
MinH95	4.9674	14.8011	0.336	0.7374	
MinH95^2	-14.6355	12.3861	-1.182	0.2382	
MinT5	-0.7629	17.4424	-0.044	0.9651	
MinT5^2	-5.4678	12.4032	-0.441	0.6596	
PDQ	-22.1218	16.9174	-1.308	0.1919	
PDQ^2	-26.0339	12.3407	-2.11	0.0356	*

	Estimate	Std.Error	t value	Pr(> t)	
(Intercept)	40.851	1.507	27.109	<2e-16	***
VarMT	53.834	30.807	1.747	0.084	.
VarMT^2	-18.807	17.141	-1.097	0.2755	
MaxH95	21.022	31.37	0.67	0.5045	
MaxH95^2	-23.745	31.77	-0.747	0.4568	
MinH5	31.023	23.483	1.321	0.1898	
MinH5^2	4.815	17.903	0.269	0.7886	
MinT95	63.319	34.543	1.833	0.0701	.
MinT95^2	-33.02	27.154	-1.216	0.2272	
PDQ	11.148	26.301	0.424	0.6727	
PDQ^2	-15.687	21.28	-0.737	0.4629	

	Estimate	Std.Error	t value	Pr(> t)	
(Intercept)	34.8419	0.8808	39.558	<2e-16	***
VarMT	62.74	22.4623	2.793	0.00572	**
MaxT95	35.113	27.6108	1.272	0.204931	
MaxT95^2	12.8563	17.8995	0.718	0.47343	
MinT95	34.5573	24.1898	1.429	0.154659	
MinT95^2	-13.1064	14.968	-0.876	0.382266	
MaxH5	-84.6479	17.88	-4.734	4.12E-06	***
MaxH5^2	-57.8518	15.8617	-3.647	0.000337	***
MaxH95	45.3044	24.2803	1.866	0.063499	.
MinH5	23.5197	22.8442	1.03	0.304437	
MinH5^2	-10.0318	16.6356	-0.603	0.54716	
AP	20.7957	25.2647	0.823	0.41141	

	Estimate	Std.Error	z value	Pr(> z)	
(Intercept)	44.58861	0.81464	54.734	<2e-16	***
VarMT	26.67831	22.91098	1.1644	0.24425	
VarMT^2	-57.3296	14.69991	-3.9	9.62E-05	***
MaxT95	-32.73655	33.33632	-0.982	0.3261	
MaxT95^2	-13.04588	14.19708	-0.9189	0.35814	
MaxT5	18.98193	35.33949	0.5371	0.59118	
MaxT5^2	-23.37391	16.09555	-1.4522	0.14645	
MinH95	-0.26435	16.02226	-0.0165	0.98684	
MinH95^2	-16.50522	12.64776	-1.305	0.1919	
MinT5	0.44101	17.20265	0.0256	0.97955	
MinT5^2	-6.40688	12.56355	-0.51	0.61008	
PDQ	-32.05906	19.83676	-1.6161	0.10606	
PDQ^2	-28.22353	14.8213	-1.9043	0.05688	.

	Estimate	Std.Error	z value	Pr(> z)	
(Intercept)	41.4633	1.7049	24.32	<2e-16	***
VarMT	54.0033	31.7114	1.703	0.08858	.
VarMT^2	-29.0014	19.1096	-1.5176	0.12911	
MaxH95	10.0624	29.069	0.3462	0.72923	
MaxH95^2	-29.9884	28.9751	-1.035	0.30068	
MinH5	29.5606	20.5896	1.4357	0.15109	
MinH5^2	12.4381	15.3498	0.8103	0.41776	
MinT95	53.6658	33.2827	1.6124	0.10687	
MinT95^2	-13.9662	24.9236	-0.5604	0.57523	
PDQ	10.8864	29.0015	0.3754	0.70738	
PDQ^2	-24.6172	22.267	-1.1055	0.26892	

	Estimate	Std.Error	z value	Pr(> z)	
(Intercept)	34.8253	1.1964	29.1077	<2e-16	***
VarMT	84.7265	26.1117	3.2448	0.001175	**
MaxT95	31.58	28.0595	1.1255	0.260392	
MaxT95^2	27.7726	18.8645	1.4722	0.140962	
MinT95	34.2919	25.1842	1.3616	0.17331	
MinT95^2	-8.6305	16.1313	-0.535	0.592638	
MaxH5	-58.0646	21.029	-2.7612	0.005759	**
MaxH5^2	-40.4713	14.7794	-2.7384	0.006175	**
MaxH95	23.8203	23.9805	0.9933	0.320555	
MinH5	16.1941	22.4557	0.7212	0.470812	
MinH5^2	-26.6027	16.237	-1.6384	0.101337	
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	0.9439	50.44	<2e-16	***	(Intercept)	47.5909	1.5993	29.7573	<2e-16	***
MaxH5	-0.10973	0.41689	-0.263	0.79264			MaxH5	-4.6584	20.1438	-0.231	0.81734		MaxH5	-30.9895	26.646	-1.163	0.2448	
MaxH5^2	0.25333	0.3953	0.641	0.5223			MaxH5^2	13.3657	18.9883	0.704	0.48226		MaxH5^2	-7.446	20.1458	-0.3696	0.7117	
MaxH95	-0.03838	0.63159	-0.061	0.9516			MaxH95	-3.4011	29.7824	-0.114	0.90919		MaxH95	49.975	34.8871	1.4325	0.152	
MaxH95^2	-0.02978	0.59151	-0.05	0.95989			MaxH95^2	-3.2437	27.4856	-0.118	0.90617		MaxH95^2	1.0474	27.8079	0.0377	0.97	
MinT5	0.46628	0.50207	0.929	0.35408			MinT5	20.8758	23.4437	0.89	0.37421		MinT5	27.7859	24.9657	1.113	0.2657	
MinT5^2	-0.17574	0.37421	-0.47	0.63908			MinT5^2	-7.5634	17.0409	-0.444	0.6576		MinT5^2	-5.747	16.8811	-0.3404	0.7335	
PWaQ	-0.76892	0.64388	-1.194	0.23371			PWaQ	-20.5255	28.5207	-0.72	0.47251		PWaQ	-45.6047	35.8789	-1.2711	0.2037	
PWaQ^2	-1.4596	0.47361	-3.082	0.00232	**		PWaQ^2	-57.0721	20.5488	-2.777	0.00596	**	PWaQ^2	-42.6343	26.7383	-1.5945	0.1108	

Table S2.2 – Pearson correlations (r) of all independent variables available for model selection for each forest type and all plots combined. Values greater than $|0.7|$ are in bold. See Table 1 in main text for abbreviations.

ALL															
	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	0.969	0.922	0.934	0.952
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	-0.761	-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	-0.761	1.000	0.626	-0.382	-0.534	0.043	0.757	-0.038	-0.108	-0.116	0.023
MaxT95	0.314	-0.665	-0.519	-0.275	-0.496	0.626	1.000	-0.851	-0.767	-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	-0.851	1.000	0.766	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	-0.767	0.766	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	0.757	0.230	0.041	-0.142	0.507	1.000	0.272	0.042	0.197	0.220
PWeQ	-0.529	0.969	0.248	0.517	0.156	-0.038	-0.626	0.670	0.604	0.551	0.272	1.000	0.811	0.985	0.853
PDQ	-0.531	0.922	0.194	0.466	0.203	-0.108	-0.681	0.597	0.549	0.394	0.042	0.811	1.000	0.755	0.976
PWaQ	-0.440	0.934	0.267	0.460	0.221	-0.116	-0.638	0.679	0.618	0.537	0.197	0.985	0.755	1.000	0.785
PCQ	-0.617	0.952	0.185	0.558	0.106	0.023	-0.636	0.614	0.553	0.464	0.220	0.853	0.976	0.785	1.000

DSF															
	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	-0.704	-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	0.968	0.922	0.921	0.957
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	-0.777	-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	-0.777	1.000	0.531	-0.253	-0.511	0.093	0.769	0.043	0.001	-0.030	0.125
MaxT95	0.360	-0.672	-0.517	-0.406	-0.434	0.531	1.000	-0.850	-0.807	-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	-0.850	1.000	0.777	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	-0.807	0.777	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	-0.704	0.350	-0.092	0.297	-0.692	0.769	0.093	0.212	-0.125	0.521	1.000	0.365	0.185	0.301	0.354
PWeQ	-0.534	0.968	0.226	0.603	0.077	0.043	-0.635	0.682	0.623	0.581	0.365	1.000	0.807	0.982	0.859
PDQ	-0.573	0.922	0.159	0.548	0.099	0.001	-0.670	0.596	0.547	0.434	0.185	0.807	1.000	0.725	0.976
PWaQ	-0.433	0.921	0.245	0.553	0.136	-0.030	-0.628	0.675	0.641	0.576	0.301	0.982	0.725	1.000	0.772
PCQ	-0.662	0.957	0.152	0.629	0.003	0.125	-0.642	0.636	0.547	0.495	0.354	0.859	0.976	0.772	1.000

GW

	AP	MaxH95	MaxT5	MaxT95	MinH5	MinH95	MinT5	MinT95	PWeQ	PDQ	PWaQ	PCQ
AP	1.000	0.748	-0.642	-0.805	0.841	0.639	-0.065	-0.684	0.974	0.936	0.974	0.978
MaxH95	0.748	1.000	-0.782	-0.748	0.773	0.861	-0.268	-0.782	0.682	0.752	0.689	0.748
MaxT5	-0.642	-0.782	1.000	0.920	-0.680	-0.764	0.053	0.809	-0.546	-0.733	-0.553	-0.679
MaxT95	-0.805	-0.748	0.920	1.000	-0.831	-0.729	-0.017	0.752	-0.741	-0.841	-0.744	-0.824
MinH5	0.841	0.773	-0.680	-0.831	1.000	0.817	0.096	-0.515	0.858	0.729	0.862	0.784
MinH95	0.639	0.861	-0.764	-0.729	0.817	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	-0.782	0.809	0.752	-0.515	-0.516	0.505	1.000	-0.542	-0.846	-0.556	-0.765
PweQ	0.974	0.682	-0.546	-0.741	0.858	0.623	0.040	-0.542	1.000	0.839	0.998	0.910
PDQ	0.936	0.752	-0.733	-0.841	0.729	0.558	-0.233	-0.846	0.839	1.000	0.844	0.984
PwaQ	0.974	0.689	-0.553	-0.744	0.862	0.623	0.027	-0.556	0.998	0.844	1.000	0.912
PCQ	0.978	0.748	-0.679	-0.824	0.784	0.588	-0.161	-0.765	0.910	0.984	0.912	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	0.953	0.861	0.934	0.910
MaxH95	0.560	-0.230	1.000	-0.743	-0.335	0.564	-0.622	-0.815	-0.259	-0.030	-0.194	-0.199
MaxT5	-0.551	0.212	-0.743	1.000	0.634	-0.483	0.331	0.814	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	-0.815	0.814	0.393	-0.274	0.632	1.000	0.380	-0.041	0.316	0.188
PweQ	-0.528	0.953	-0.259	0.242	-0.324	0.134	0.593	0.380	1.000	0.681	0.993	0.744
PDQ	-0.341	0.861	-0.030	-0.007	-0.549	0.175	0.416	-0.041	0.681	1.000	0.662	0.962
PwaQ	-0.483	0.934	-0.194	0.169	-0.354	0.146	0.558	0.316	0.993	0.662	1.000	0.709
PCQ	-0.456	0.910	-0.199	0.185	-0.443	0.162	0.543	0.188	0.744	0.962	0.709	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	0.920	0.917
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	0.768	-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	0.768	-0.290	1.000	-0.087	0.069
PDQ	-0.494	0.920	0.173	-0.004	0.484	-0.087	1.000	0.974
PCQ	-0.554	0.917	0.086	0.134	0.438	0.069	0.974	1.000

FW												
	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	-0.746	-0.442	-0.734
AP	-0.669	1.000	0.450	-0.449	-0.605	0.303	0.750	0.580	0.961	0.945	0.895	0.944
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	0.750	0.051	-0.504	-0.632	0.340	1.000	0.640	0.699	0.711	0.655	0.720
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	0.961	0.390	-0.382	-0.545	0.279	0.699	0.517	1.000	0.826	0.974	0.825
PDQ	-0.746	0.945	0.460	-0.480	-0.629	0.292	0.711	0.551	0.826	1.000	0.708	0.991
PwaQ	-0.442	0.895	0.313	-0.321	-0.482	0.251	0.655	0.454	0.974	0.708	1.000	0.703
PCQ	-0.734	0.944	0.477	-0.484	-0.611	0.313	0.720	0.609	0.825	0.991	0.703	1.000

Table S2.3 – Best fitting models comprising the 95% confidence set for each forest type and all plots combined. Models are ranked according to QAIC, which measures the relative goodness of fit of each model. Unshaded cells indicate variables excluded from the model in that row. The 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	Δ 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	Δ 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	Δ 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	Δ 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	Δ QAIC	w_i
							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	Δ QAIC	w_i
				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

Table S2.4 - Percentage deviance explained by variability in maximum temperature (VarMT) and absolute maximum temperature (MaxT95) as independent predictors of non-tree species richness for each forest type and all plots combined (ALL = all plots combined, DSF = dry sclerophyll forest, WSF = wet sclerophyll forest, GW = grassy woodland, RF = rainforest and FW = forested wetlands). Non-significant results are shown in 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

Table S2.5 - Percentage deviance explained by variability in maximum temperature (VarMT) and absolute maximum temperature (MaxT95) as independent predictors of tree species richness for each forest type and all plots combined (ALL = all plots combined, DSF = dry sclerophyll forest, WSF = wet sclerophyll forest, GW = grassy woodland, RF = rainforest and FW = forested wetlands). Non-significant results are shown in 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	5.06	-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