SUPPLEMENTARY DATA

Phenotypic Variability and Differences in the Drought Response of Norway Spruce *Pendula* and *Pyramidalis* Half-sib Families

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Figure S1. Duncan's test for ring width (RW) and earlywood (EW) at the family level. Homogeneous groups (H. g.) for 5% transgression probability (α). Affiliation of families (1-24 = *pendula*; 25-48 = *pyramidalis*) to provenances: 1-3 and 25-27= provenance 1; 4-6 and 28-30= prov. 2; 7-9 and 31-33= prov. 3; 10-12 and 34-36= prov. 4; 13-15 and 37-39= prov. 5; 16-18 and 40-42= prov. 6; 19-21 and 43-45= prov. 7; 22-24 and 46-48= prov. 8.

Family	RW (mm)	H.g. (α = 5%)										
31	6.094	*										
6	5.451	*	*									
28	5.451	*	*									
35	5.372	*	*	*								
3	5.341	*	*	*	*							
11	5.137		*	*	*	*						
32	5.094		*	*	*	*						
8	5.045		*	*	*	*	*					
16	5.032		*	*	*	*	*					
7	4.983		*	*	*	*	*					
30	4.980		*	*	*	*	*					
33	4.974		*	*	*	*	*					
44	4.909		*	*	*	*	*					
29	4.835		*	*	*	*	*	*				
42	4.789		*	*	*	*	*	*				
21	4.781		*	*	*	*	*	*				
48	4.764		*	*	*	*	*	*				
19	4.672		*	*	*	*	*	*	*			
26	4.642		*	*	*	*	*	*	*	*		
22	4.602		*	*	*	*	*	*	*	*	*	
1	4.590		*	*	*	*	*	*	*	*	*	
18	4.585		*	*	*	*	*	*	*	*	*	
10	4.582		*	*	*	*	*	*	*	*	*	
24	4.523		*	*	*	*	*	*	*	*	*	
20	4.520		*	*	*	*	*	*	*	*	*	
39	4.508		*	*	*	*	*	*	*	*	*	
43	4.438		*	*	*	*	*	*	*	*	*	*
40	4.432		*	*	*	*	*	*	*	*	*	*
38	4.425		*	*	*	*	*	*	*	*	*	*
36	4.368			*	*	*	*	*	*	*	*	*
47	4.353			*	*	*	*	*	*	*	*	*
12	4.351			*	*	*	*	*	*	*	*	*
4	4.305				*	*	*	*	*	*	*	*
5	4.298				*	*	*	*	*	*	*	*
2	4.293				*	*	*	*	*	*	*	*
15	4.270					*	*	*	*	*	*	*
23	4.214					*	*	*	*	*	*	*	*
17	4.181					*	*	*	*	*	*	*	*
9	4.109					*	*	*	*	*	*	*	*
13	4.095					*	*	*	*	*	*	*	*
25	4.093					*	*	*	*	*	*	*	*
14	3.971						*	*	*	*	*	*	*
41	3.835							*	*	*	*	*	*
46	3.630								*	*	*	*	*
34	3.602									*	*	*	*
27	3.577										*	*	*
45	3.454											*	*
37	3.256												*

Family	EW (mm)	H.g. (α = 5%)						
31	4.988	*						
28	4.649	*	*					
35	4.518	*	*	*				
6	4.418	*	*	*	*			
7	4.261	*	*	*	*	*		
16	4.226	*	*	*	*	*		
8	4.212	*	*	*	*	*		
11	4.181	*	*	*	*	*		
29	4.128	*	*	*	*	*		
32	4.120	*	*	*	*	*		
30	4.047	*	*	*	*	*		
42	4.015		*	*	*	*		
33	3.999		*	*	*	*		
10	3.963		*	*	*	*	*	
21	3.896		*	*	*	*	*	*
48	3.886		*	*	*	*	*	*
22	3.810		*	*	*	*	*	*	*
43	3.783		*	*	*	*	*	*	*
44	3.780		*	*	*	*	*	*	*
20	3.773		*	*	*	*	*	*	*
26	3.773		*	*	*	*	*	*	*
40	3.766		*	*	*	*	*	*	*
3	3.718		*	*	*	*	*	*	*
47	3.677		*	*	*	*	*	*	*
15	3.662		*	*	*	*	*	*	*
5	3.645		*	*	*	*	*	*	*
36	3.642		*	*	*	*	*	*	*
12	3.625		*	*	*	*	*	*	*
24	3.563			*	*	*	*	*	*
19	3.556			*	*	*	*	*	*
18	3.544			*	*	*	*	*	*
4	3.527			*	*	*	*	*	*
1	3.511			*	*	*	*	*	*
23	3.489			*	*	*	*	*	*
9	3.471				*	*	*	*	*
17	3.440				*	*	*	*	*
13	3.440				*	*	*	*	*
25	3.427				*	*	*	*	*
39	3.419				*	*	*	*	*
2	3.365					*	*	*	*
14	3.292					*	*	*	*
41	3.286					*	*	*	*
38	3.261					*	*	*	*
34	2.960						*	*	*
46	2.946						*	*	*
45	2.916							*	*
27	2.905							*	*
37	2.821								*

Figure S2. Duncan's test for latewood (LW) and latewood proportion (LWP) at the family level. Homogeneous groups (H. g.) for 5% transgression probability (α). Affiliation of families (1-24 = *pendula*; 25-48 = *pyramidalis*) to provenances as in figure S1.

Family	LW (mm)	H.g. (α = 5%)															
3	1.624	*															
38	1.164		*														
44	1.130		*	*													
19	1.116		*	*	*												
31	1.106		*	*	*	*											
39	1.090		*	*	*	*	*										
1	1.079		*	*	*	*	*	*									
18	1.041		*	*	*	*	*	*	*								
6	1.033		*	*	*	*	*	*	*	*							
33	0.976		*	*	*	*	*	*	*	*	*						
32	0.974		*	*	*	*	*	*	*	*	*						
24	0.960		*	*	*	*	*	*	*	*	*	*					
11	0.956		*	*	*	*	*	*	*	*	*	*	*				
30	0.933		*	*	*	*	*	*	*	*	*	*	*	*			
2	0.928		*	*	*	*	*	*	*	*	*	*	*	*	*		
21	0.886		*	*	*	*	*	*	*	*	*	*	*	*	*		
48	0.878		*	*	*	*	*	*	*	*	*	*	*	*	*		
26	0.870		*	*	*	*	*	*	*	*	*	*	*	*	*	*	
35	0.855		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8	0.833			*	*	*	*	*	*	*	*	*	*	*	*	*	*
16	0.807				*	*	*	*	*	*	*	*	*	*	*	*	*
28	0.802					*	*	*	*	*	*	*	*	*	*	*	*
22	0.791						*	*	*	*	*	*	*	*	*	*	*
4	0.779						*	*	*	*	*	*	*	*	*	*	*
42	0.775							*	*	*	*	*	*	*	*	*	*
20	0.748								*	*	*	*	*	*	*	*	*	*
17	0.741								*	*	*	*	*	*	*	*	*	*
12	0.726								*	*	*	*	*	*	*	*	*	*
36	0.726								*	*	*	*	*	*	*	*	*	*
23	0.725								*	*	*	*	*	*	*	*	*	*
7	0.722									*	*	*	*	*	*	*	*	*
29	0.707										*	*	*	*	*	*	*	*
46	0.684										*	*	*	*	*	*	*	*
14	0.679										*	*	*	*	*	*	*	*
47	0.676										*	*	*	*	*	*	*	*
27	0.673										*	*	*	*	*	*	*	*
40	0.667										*	*	*	*	*	*	*	*
25	0.667										*	*	*	*	*	*	*	*
13	0.656										*	*	*	*	*	*	*	*
43	0.655										*	*	*	*	*	*	*	*
5	0.653										*	*	*	*	*	*	*	*
34	0.642											*	*	*	*	*	*	*
9	0.637												*	*	*	*	*	*
10	0.619													*	*	*	*	*
15	0.609														*	*	*	*
41	0.549															*	*	*
45	0.538																*	*
37	0.436																	*

Family	LWP (%)	H.g. (α = 5%)							
3	29.7	*							
38	26.3	*	*						
1	24.8	*	*	*					
39	24.4	*	*	*	*				
19	23.9	*	*	*	*	*			
18	22.8		*	*	*	*	*		
44	22.7		*	*	*	*	*		
2	21.6		*	*	*	*	*	*	
24	21.4		*	*	*	*	*	*	*
33	19.6			*	*	*	*	*	*	*
21	19.5			*	*	*	*	*	*	*
46	19.1			*	*	*	*	*	*	*
6	19.0			*	*	*	*	*	*	*
27	18.9			*	*	*	*	*	*	*
32	18.9			*	*	*	*	*	*	*
26	18.9			*	*	*	*	*	*	*
30	18.7			*	*	*	*	*	*	*
11	18.6			*	*	*	*	*	*	*
48	18.5			*	*	*	*	*	*	*
31	18.3			*	*	*	*	*	*	*
4	18.0				*	*	*	*	*	*
34	17.9				*	*	*	*	*	*
17	17.7				*	*	*	*	*	*
22	17.6					*	*	*	*	*
23	17.2					*	*	*	*	*
14	17.2					*	*	*	*	*
36	17.1						*	*	*	*
12	16.8						*	*	*	*
8	16.7						*	*	*	*
20	16.6						*	*	*	*
25	16.4						*	*	*	*
42	16.2						*	*	*	*
16	16.1						*	*	*	*
13	16.0						*	*	*	*
35	16.0						*	*	*	*
45	15.7							*	*	*
9	15.6							*	*	*
5	15.5							*	*	*
43	15.5							*	*	*
29	15.5							*	*	*
47	15.5							*	*	*
40	15.1							*	*	*
10	14.9							*	*	*
28	14.8							*	*	*
41	14.5								*	*
7	14.5								*	*
15	14.2									*
37	13.4									*

Figure S3. Five-year dynamics of ring width (RW) and latewood proportion (LWP).

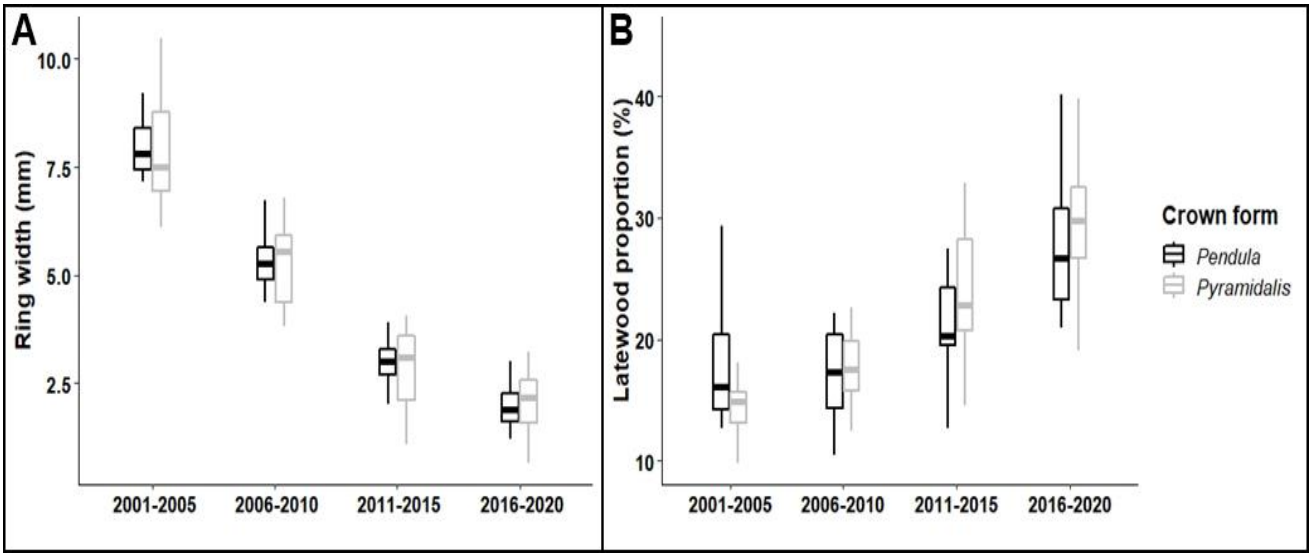

Figure S4. Monthly SPI index of the 2011-2012 drought period.

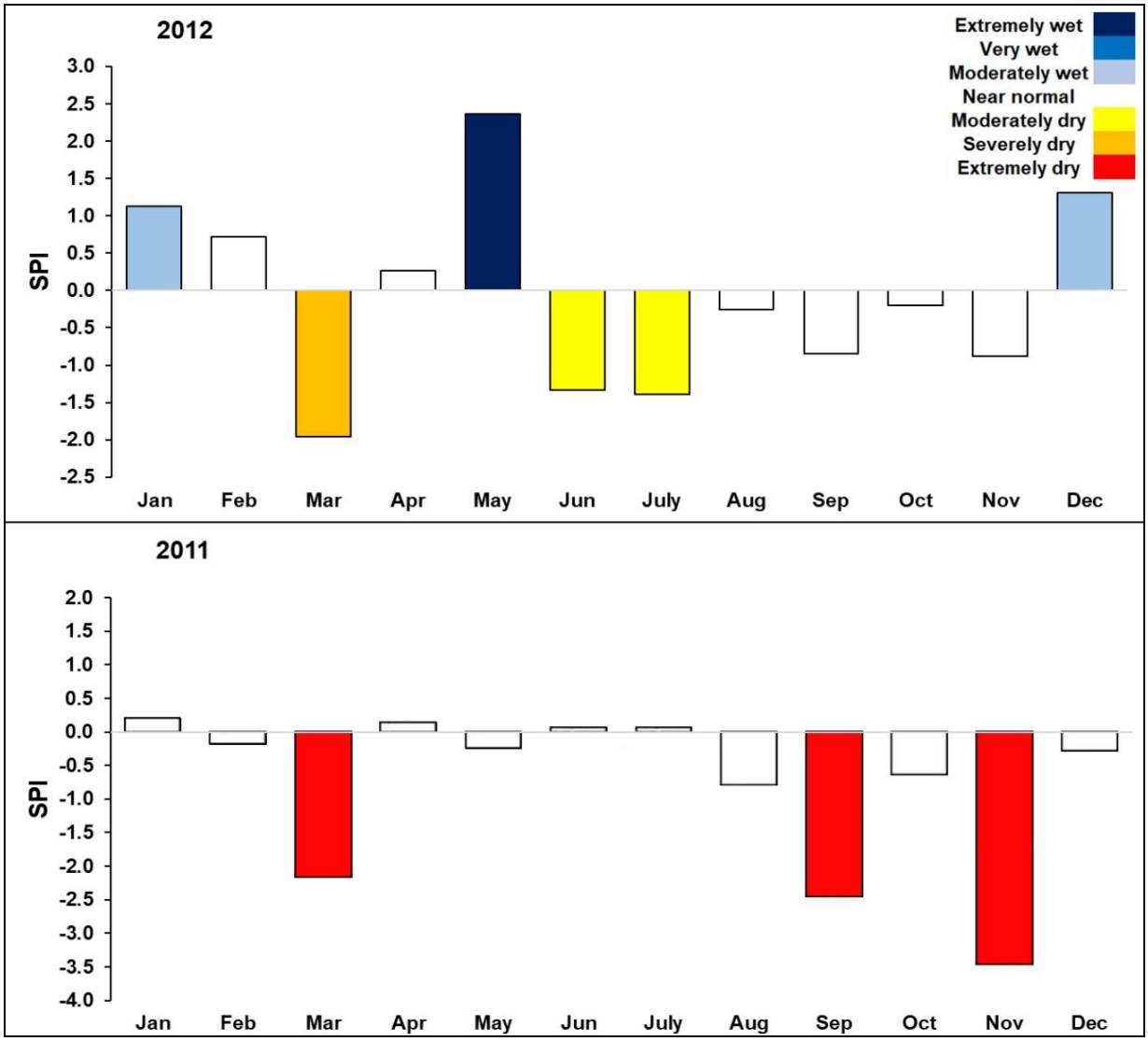
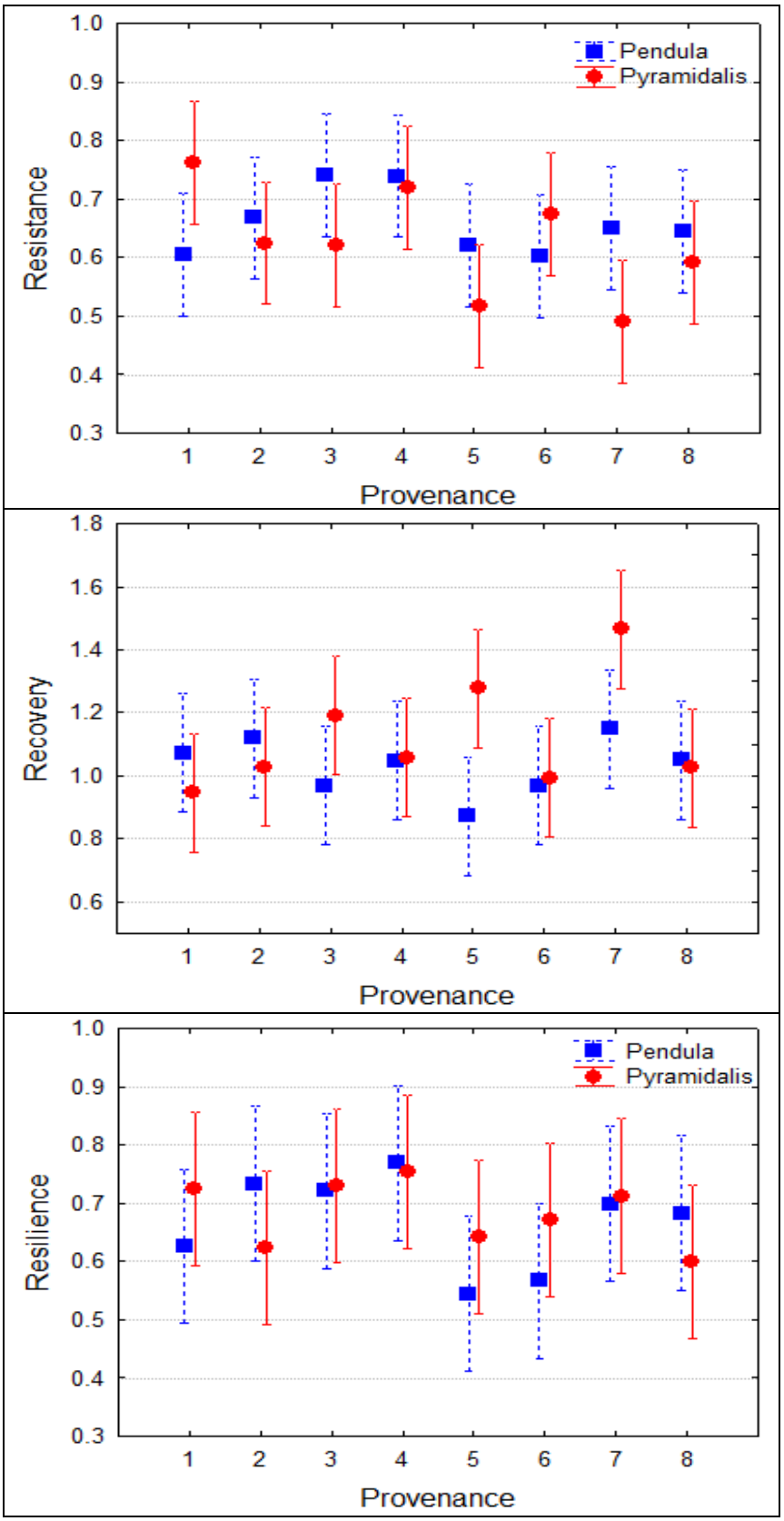
Figure S5. Resistance, recovery, and resilience of the two crown forms in each provenance.