

Extended Data Table 1

	species	dendrometer bands		tree cores	
		n trees	n tree-years	n cores	date range
SCBI					
ring-porous	<i>Carya cordiformis</i>	0	0	18	1917-2009
	<i>Carya glabra</i>	0	0	39	1901-2009
	<i>Carya ovalis</i>	0	0	24	1896-2009
	<i>Carya tomentosa</i>	0	0	17	1926-2009
	<i>Fraxinus nigra</i>	0	0	16	1901-2016
	<i>Fraxinus americana</i>	0	0	69	1910-2009
	<i>Quercus alba</i>	34	272	66	1904-2009
	<i>Quercus montana</i>	0	0	67	1893-2009
	<i>Quercus rubra</i>	33	265	71	1870-2009
	<i>Quercus velutina</i>	0	0	83	1902-2009
diffuse-porous	<i>Fagus grandifolia</i>	13	75	81	1932-2009
	<i>Liriodendron tulipifera</i>	39	292	109	1920-2009
Harvard Forest					
ring-porous	<i>Fraxinus americana</i>	8	28	34	1901-2008
	<i>Quercus rubra</i>	119	529	179	1901-2014
	<i>Quercus velutina</i>	11	53	0	
diffuse-porous	<i>Fagus grandifolia</i>	8	35	0	
	<i>Betula lenta</i>	8	37	0	
	<i>Betula populifolia</i>	5	16	0	
	<i>Betula papyrifera</i>	3	10	0	
	<i>Betula alleghaniensis</i>	19	72	44	1952-2013
	<i>Prunus serotina</i>	8	29	0	
	<i>Acer rubrum</i>	128	477	59	1930-2014
	<i>Acer pensylvanicum</i>	4	13	0	

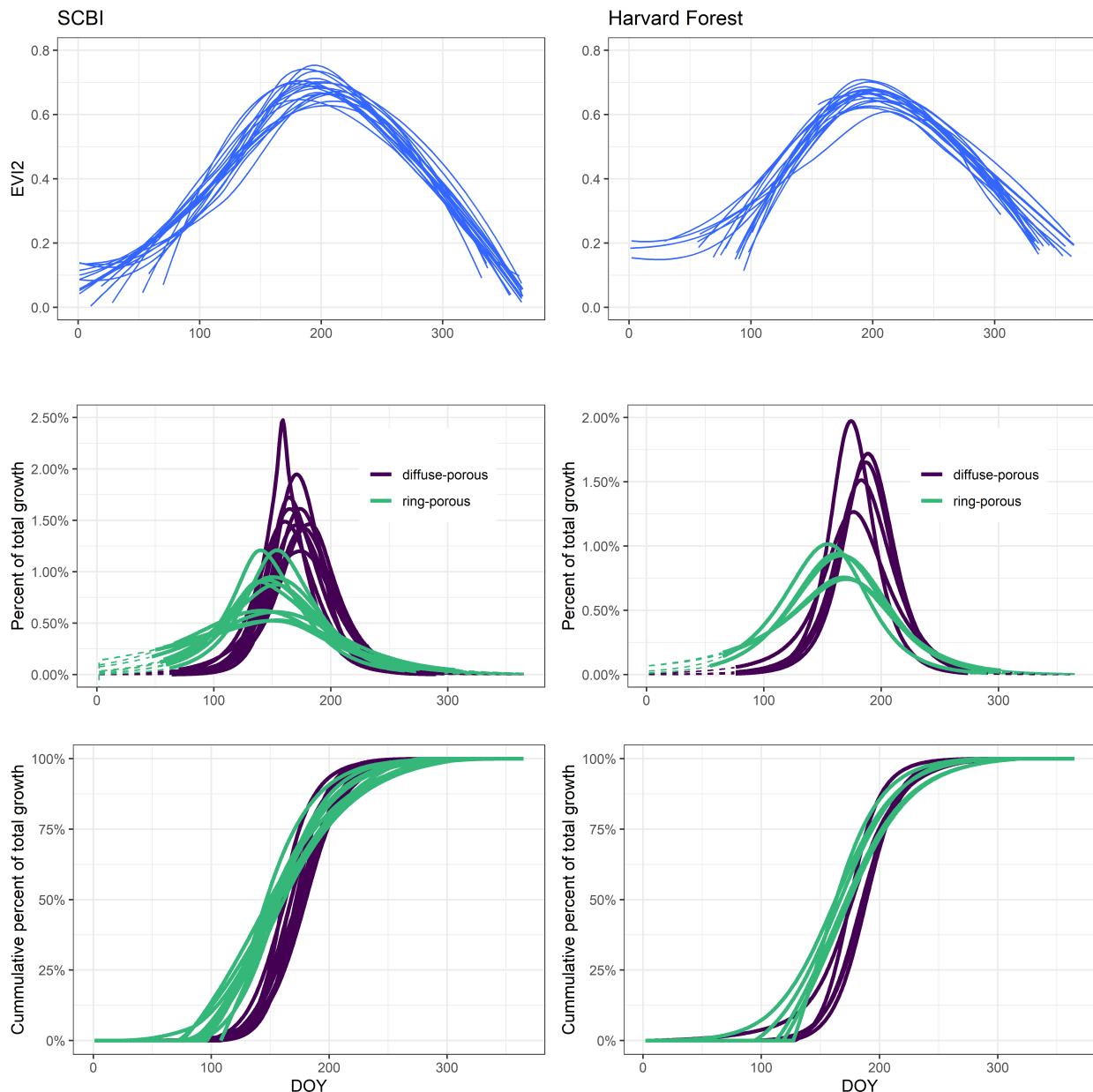
Extended Data Table 2

	SCBI		Harvard Forest	
	ring-porous	diffuse-porous	ring-porous	diffuse-porous
critical T_{max} window	3/5-3/19	3/19-5/28	3/12-5/21	5/7-6/11
Stem Growth				
DOY_{25}	128 (May 8)	155 (June 5)	144 (May 24)	166 (June 16)
DOY_{50}	154 (June 4)	172 (June 22)	168 (June 17)	183 (July 3)
DOY_{75}	185 (July 4)	190 (July 9)	195 (July 14)	201 (July 20)
g_{max} (cm/day)	0.0043	0.0061	0.003	0.003
L_{pgs}	57.3	34.8	51.3	34.4
ΔDBH (cm/yr)	0.41	0.36	0.26	0.16
Canopy Foliage (ecosystem level)				
Greenup	101 (April 11)		115 (April 25)	
Mid-greenup	121 (May 1)		137 (May 17)	
Peak	173 (June 22)		182 (July 1)	
Senescence	215 (Aug. 3)		218 (Aug. 6)	
Temperature sensitivity (days/°C)				
Stem growth:				
DOY_{25}	– 1.7 ± 0.13	– 2.8 ± 0.39	– 12.3 ± 0.91	– 4.2 ± 0.22
DOY_{50}	– 1 ± 0.13	– 2.9 ± 0.4	– 10.3 ± 0.74	– 2.5 ± 0.17
DOY_{75}	0.08 ± 0.19	– 2.9 ± 0.6	– 11.1 ± 0.96	– 0.9 ± 0.23
ΔDBH (cm/°C)	.003 ± .001	.008 ± .004	– .027 ± .004	– .003 ± .001
Canopy foliage:				
Greenup	3.45 ± 1.29		2.4 ± 1.51	
Mid-greenup	3.39 ± 0.86		3.16 ± 0.84	
Peak	4.21 ± 1.70		1.47 ± 1.02	
Senescence	3.85 ± 2.13		0.17 ± 1.53	

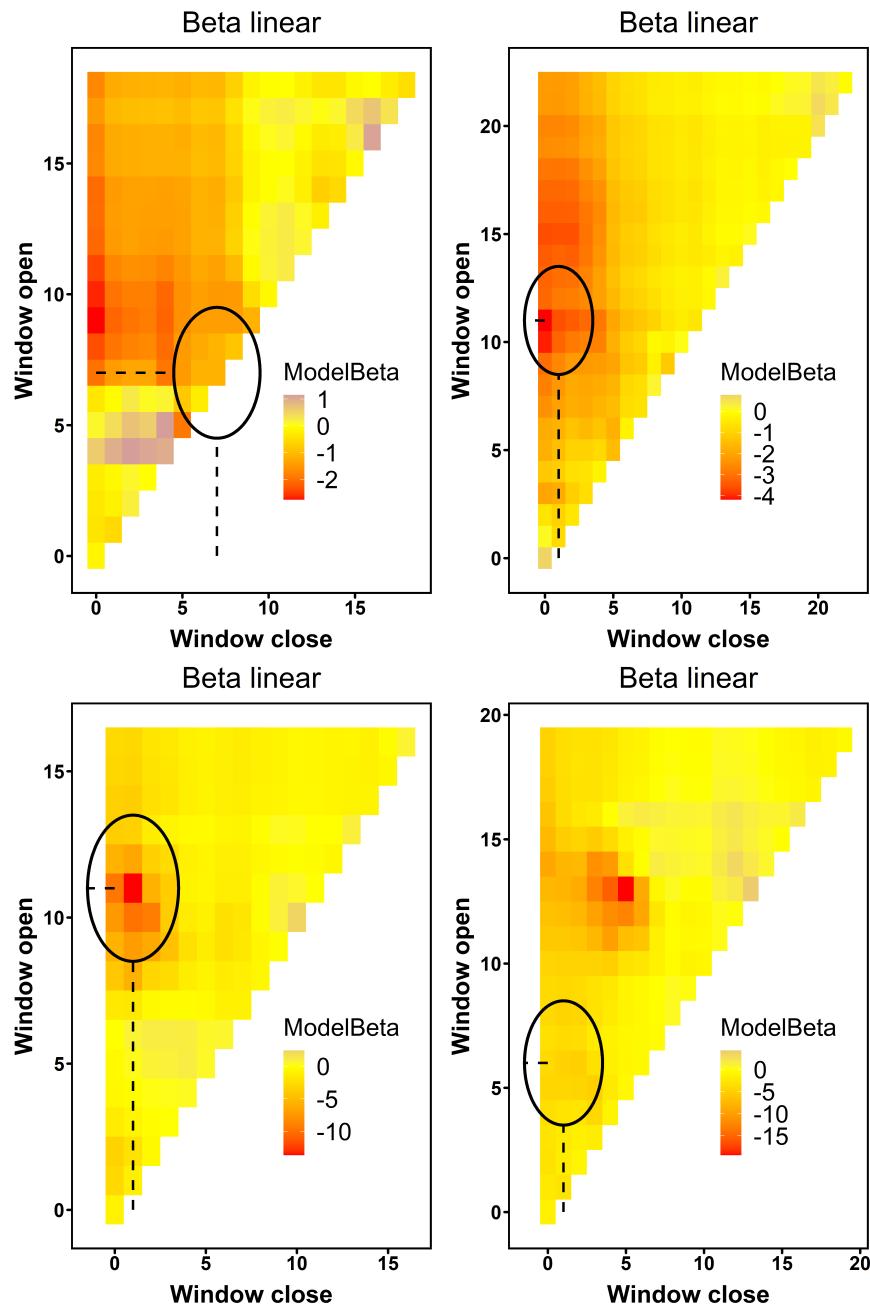
Extended Data Table 3

species	n	n. significant bootstrapped correlations of RWI to monthly mean max. T																	
		univariate analysis												multivariate analysis					
		March		April		May		June		July		Aug		April		June-July			
Ring-porous																			
<i>Carya cordiformis</i>	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
<i>Carya glabra</i>	7	0	0	0	0	0	3	0	5	0	5	0	0	0	0	0	0	0	5
<i>Carya ovalis</i>	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
<i>Carya ovata</i>	21	0	2	0	0	0	5	0	20	0	17	0	12	2	0	0	0	0	20
<i>Carya tomentosa</i>	2	0	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	1
<i>Fraxinus americana</i>	5	0	1	0	0	0	4	0	3	0	2	1	0	0	0	0	0	0	3
<i>Fraxinus nigra</i>	2	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1
<i>Quercus alba</i>	35	0	2	0	4	0	18	0	31	0	29	0	23	0	2	0	0	0	33
<i>Quercus bicolor</i>	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
<i>Quercus macrocarpa</i>	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1
<i>Quercus montana</i>	17	0	1	0	2	1	4	0	10	0	9	0	3	1	2	0	0	0	11
<i>Quercus pagoda</i>	1	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	1
<i>Quercus rubra</i>	37	0	3	0	2	1	4	0	25	0	18	1	5	1	1	0	0	0	22
<i>Quercus sp (white oak group)</i>	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<i>Quercus stellata</i>	2	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1
<i>Quercus velutina</i>	7	0	0	0	0	0	2	0	5	0	6	0	3	0	0	0	0	0	7
TOTAL	141	0	10	1	8	2	45	0	107	0	91	2	53	4	5	0	0	0	108
Diffuse-porous																			
<i>Acer rubrum</i>	4	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	3	
<i>Acer saccharum</i>	16	0	0	1	0	0	2	0	14	0	12	0	6	3	0	0	0	0	14
<i>Betula alleghaniensis</i>	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1
<i>Betula lenta</i>	3	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	2
<i>Fagus grandifolia</i>	6	0	0	1	0	0	0	0	4	0	5	0	1	1	0	0	0	0	5
<i>Liriodendron tulipifera</i>	32	0	0	2	1	0	7	0	30	0	17	0	16	1	0	0	0	0	27
<i>Magnolia acuminata</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Nyssa sylvatica</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Populus grandidentata</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	66	0	0	4	2	0	10	0	52	0	36	0	23	5	1	0	0	0	52
TOTAL	207	0	10	5	10	2	55	0	159	0	127	2	76	9	6	0	0	160	

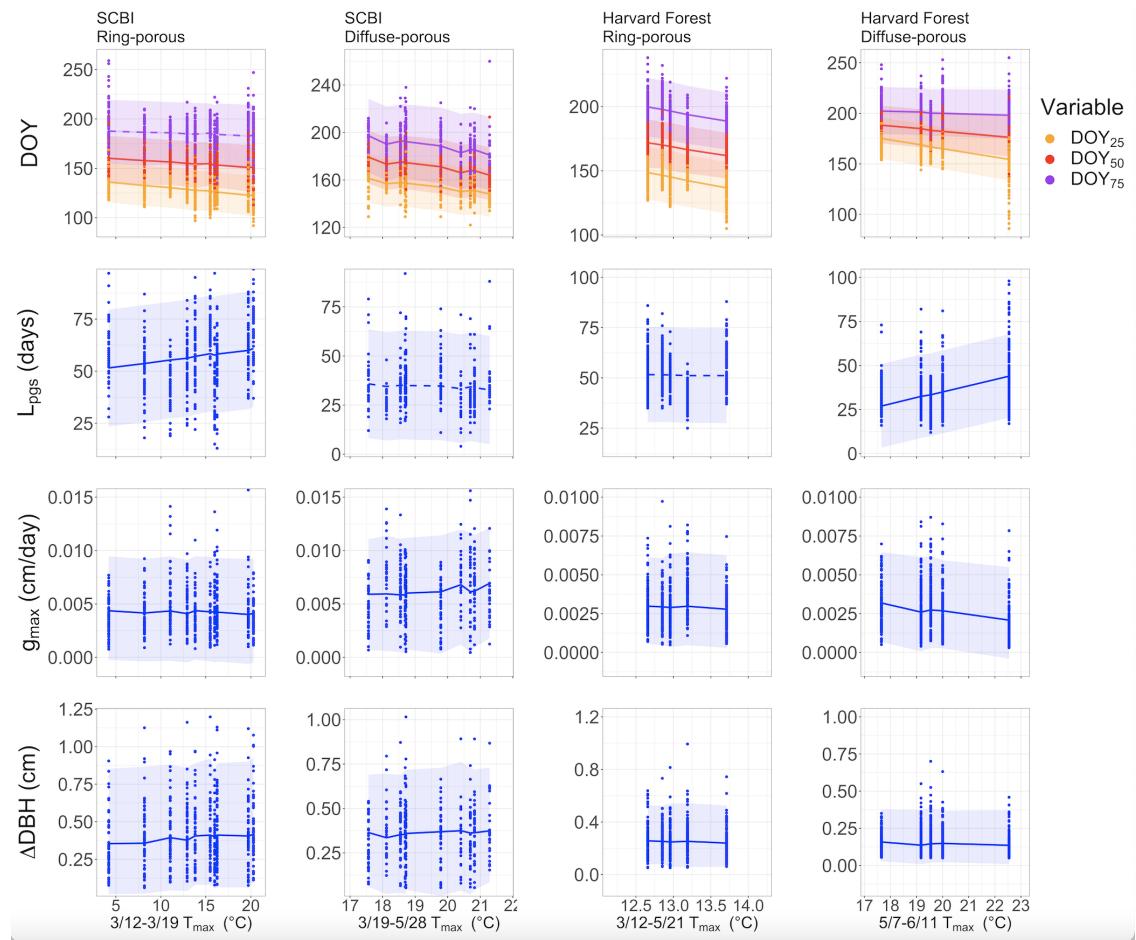
Extended Data Figure 1



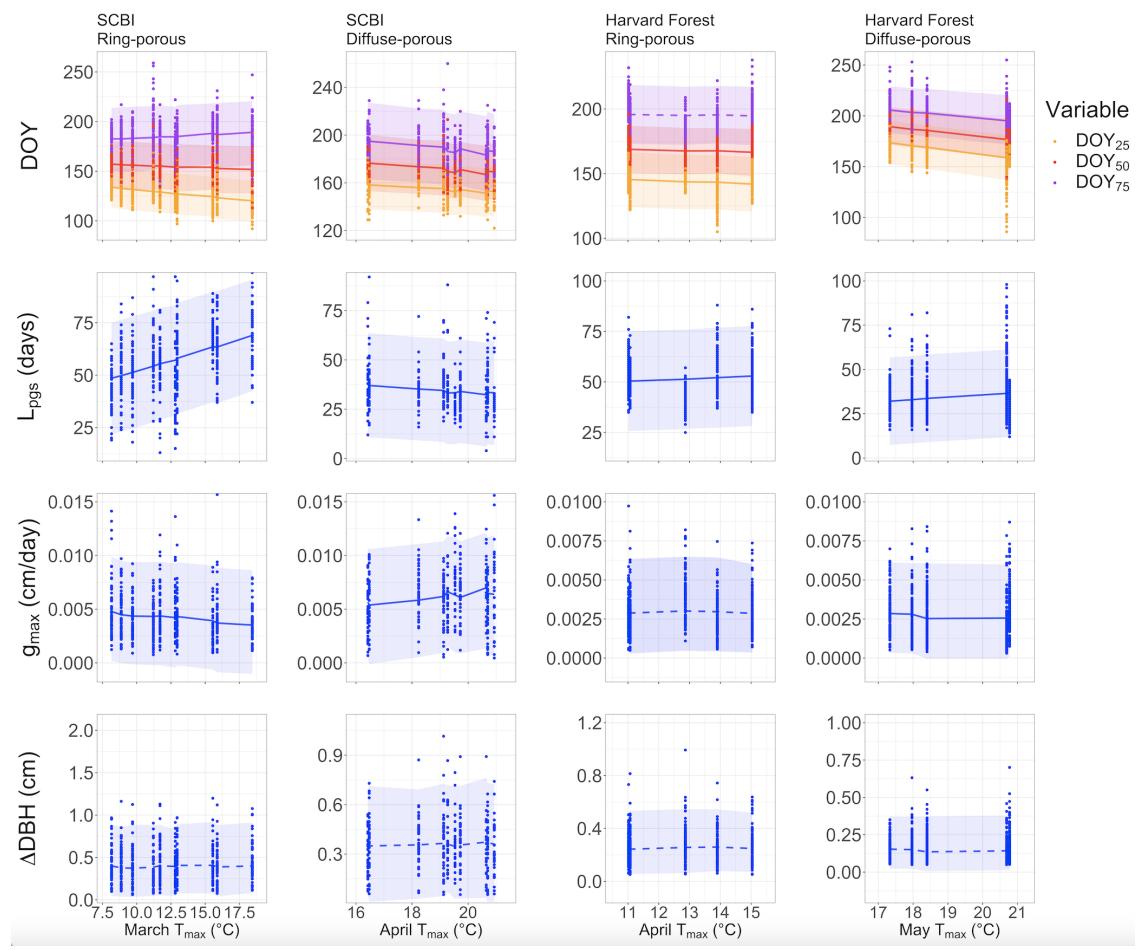
Extended Data Figure 2



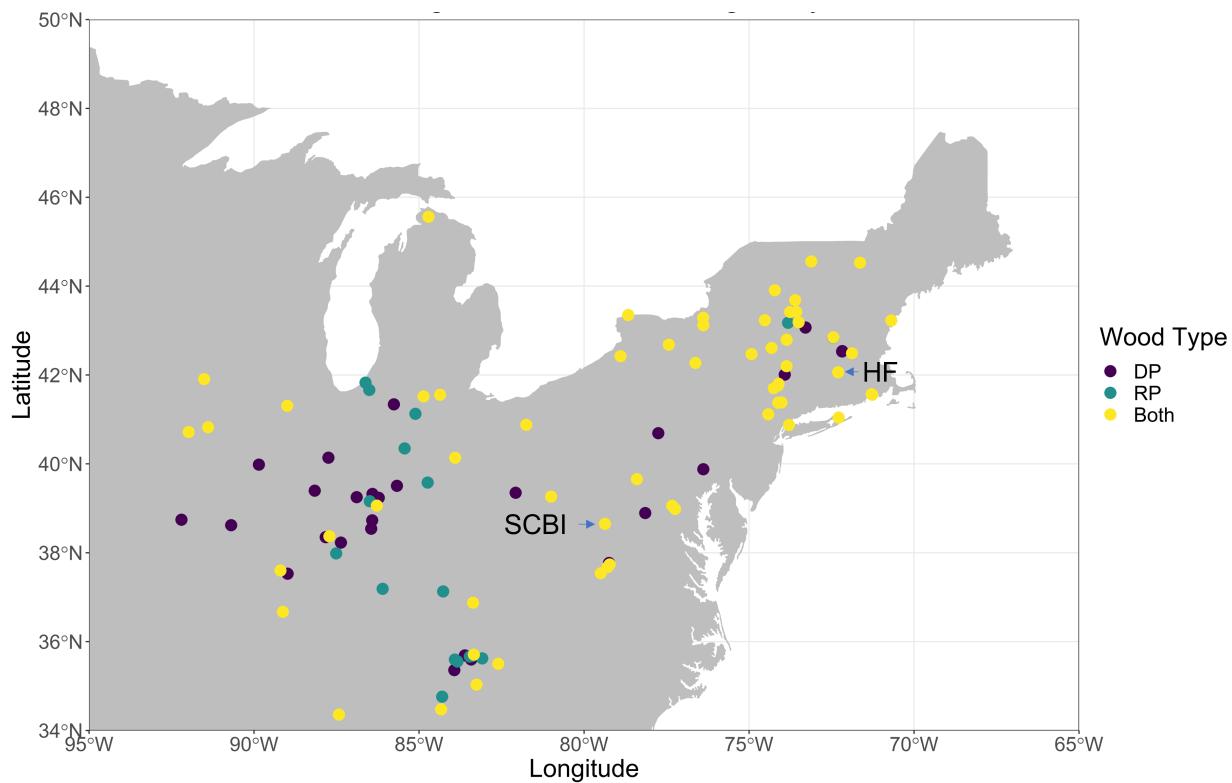
Extended Data Figure 3



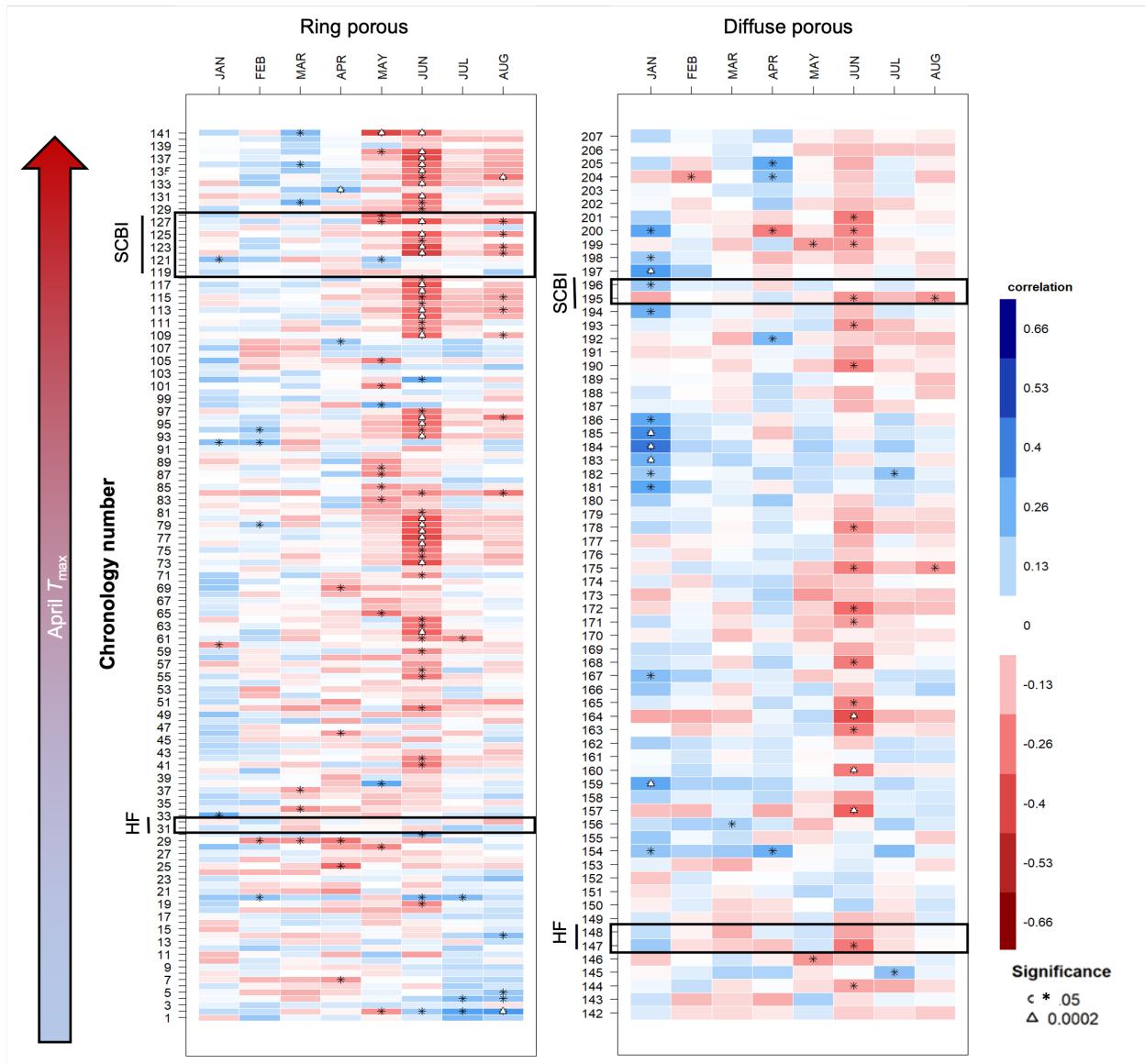
Extended Data Figure 4



Extended Data Figure 5



Extended Data Figure 6



Extended Data Figure 7

