Extended Data Table 1

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

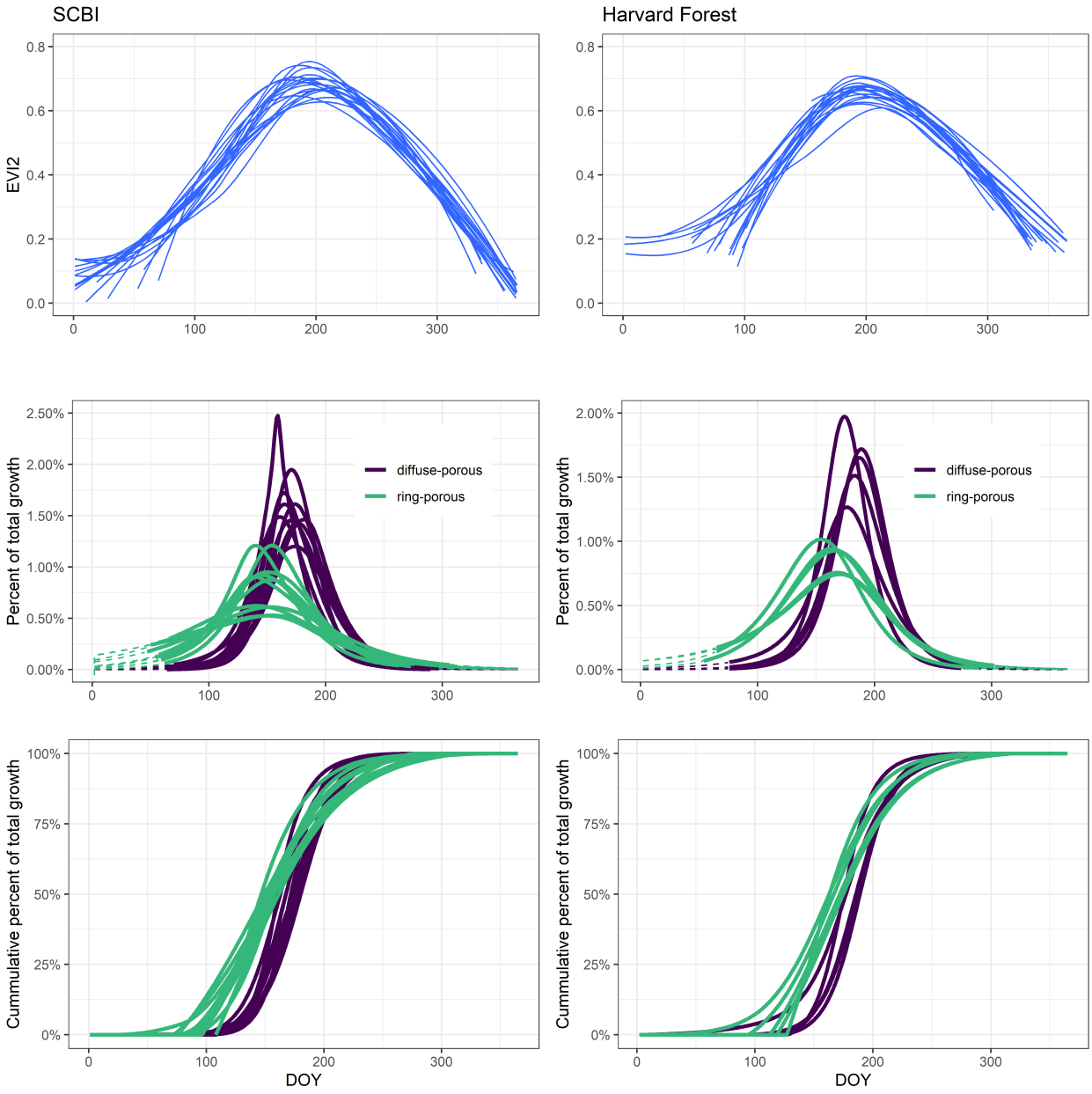
Extended Data Table 2

	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 $\pm$ 0.13	$-$ 2.8 $\pm$ 0.39	$-$ 12.3 $\pm$ 0.91	$-$ 4.2 $\pm$ 0.22
DOY_{50}	$-$ 1 $\pm$ 0.13	$-$ 2.9 $\pm$ 0.4	$-$ 10.3 $\pm$ 0.74	$-$ 2.5 $\pm$ 0.17
DOY_{75}	0.08 $\pm$ 0.19	$-$ 2.9 $\pm$ 0.6	$-$ 11.1 $\pm$ 0.96	$-$ 0.9 $\pm$ 0.23
ΔDBH (cm/°C)	.003 $\pm$ .001	.008 $\pm$ .004	$-$ .027 $\pm$ .004	$-$ .003 $\pm$ .001
Canopy foliage:				
Greenup	3.45 $\pm$ 1.29		2.4 $\pm$ 1.51	
Mid-greenup	3.39 $\pm$ 0.86		3.16 $\pm$ 0.84	
Peak	4.21 $\pm$ 1.70		1.47 $\pm$ 1.02	
Senescence	3.85 $\pm$ 2.13		0.17 $\pm$ 1.53	

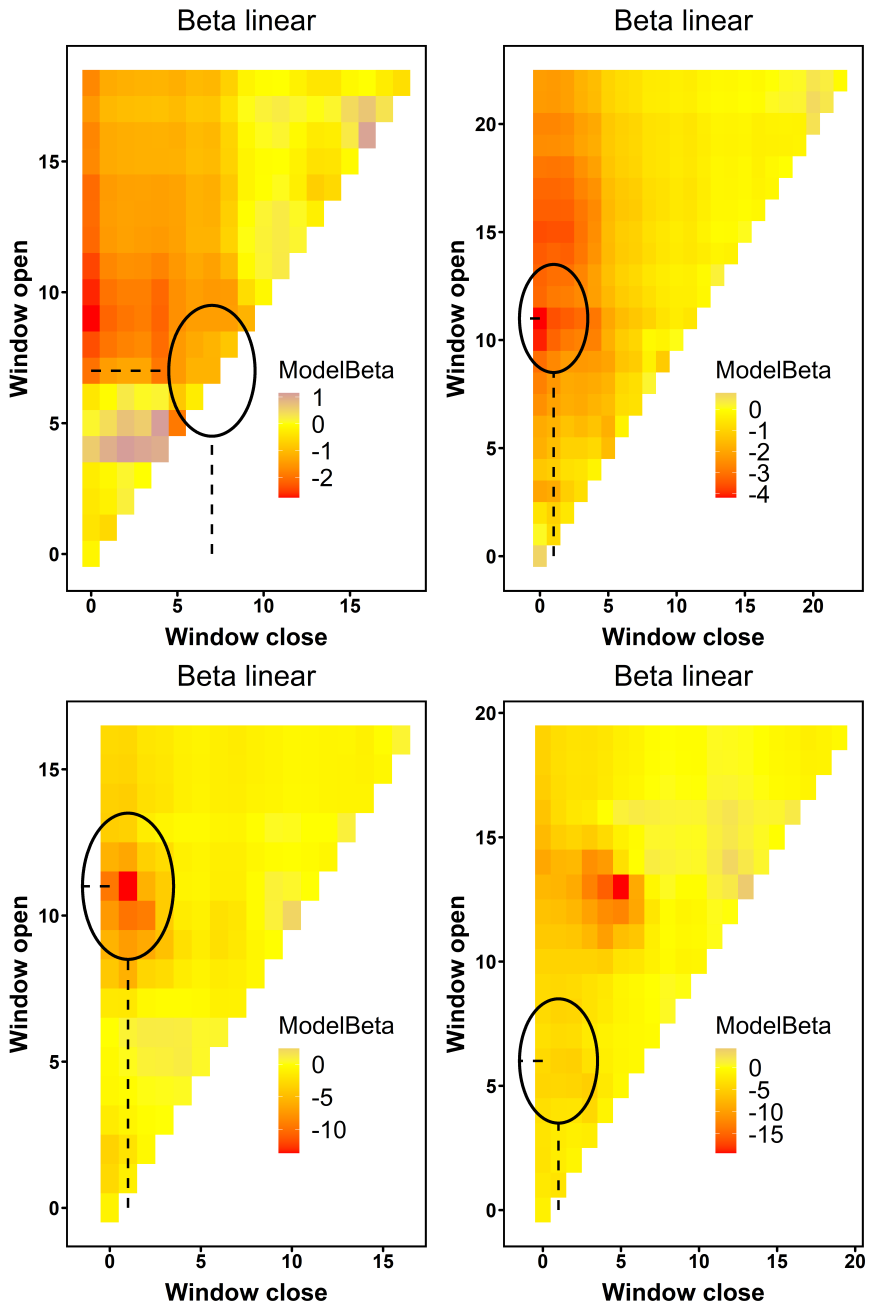
Extended Data Table 3

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

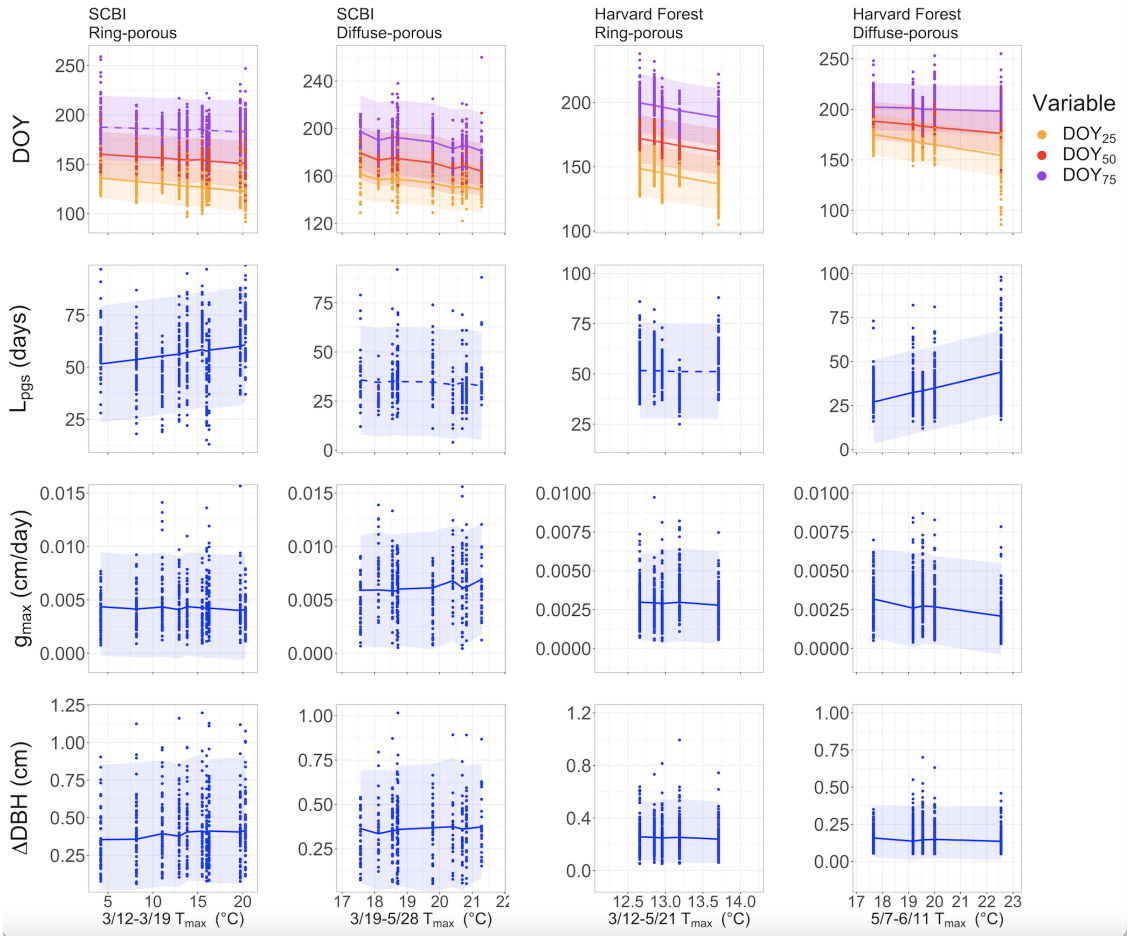
Extended Data Figure 1



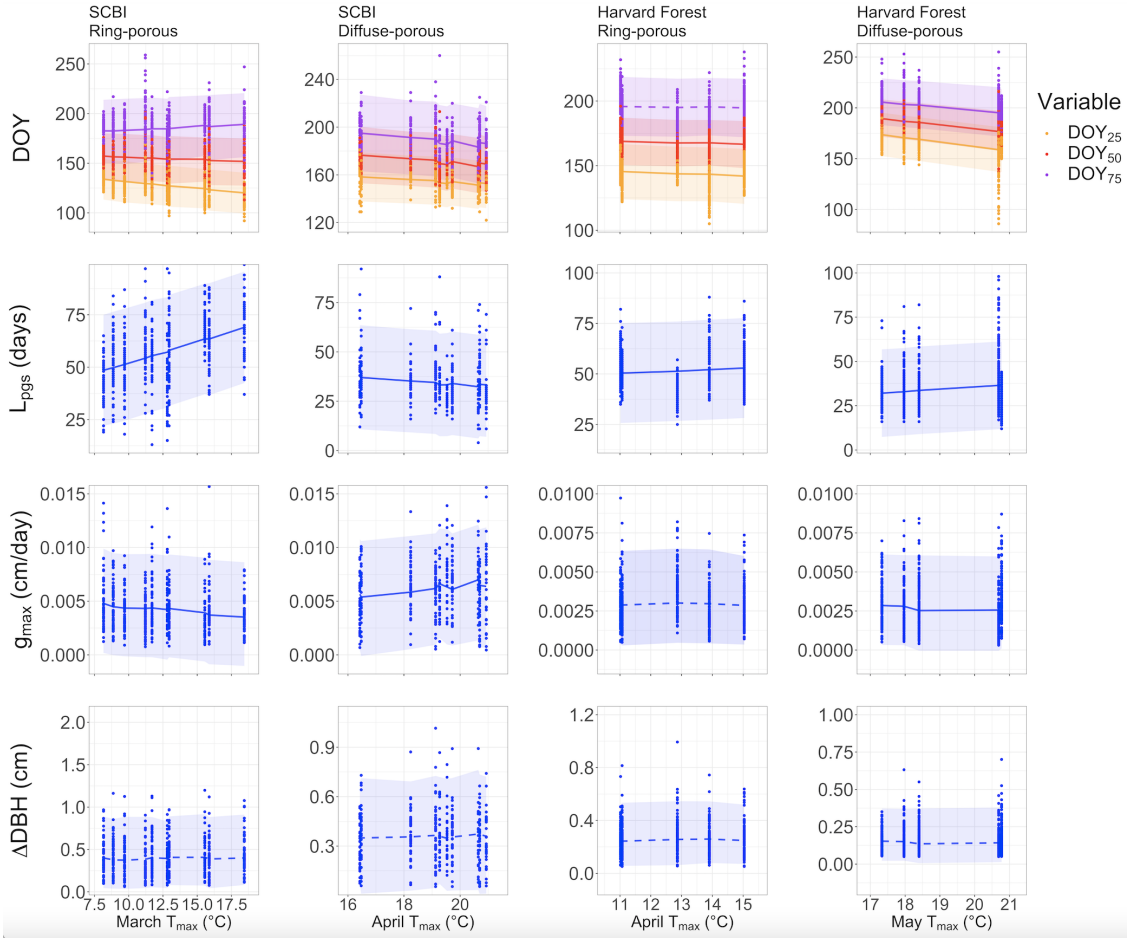
Extended Data Figure 2



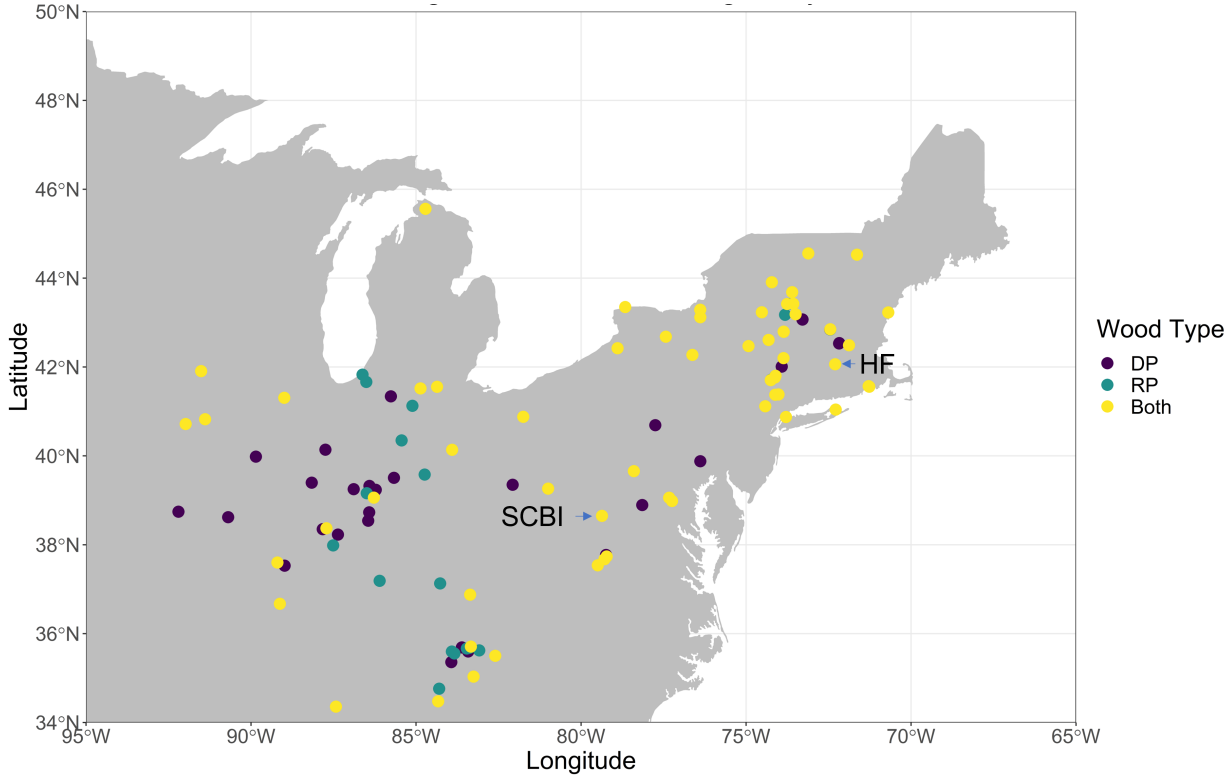
Extended Data Figure 3



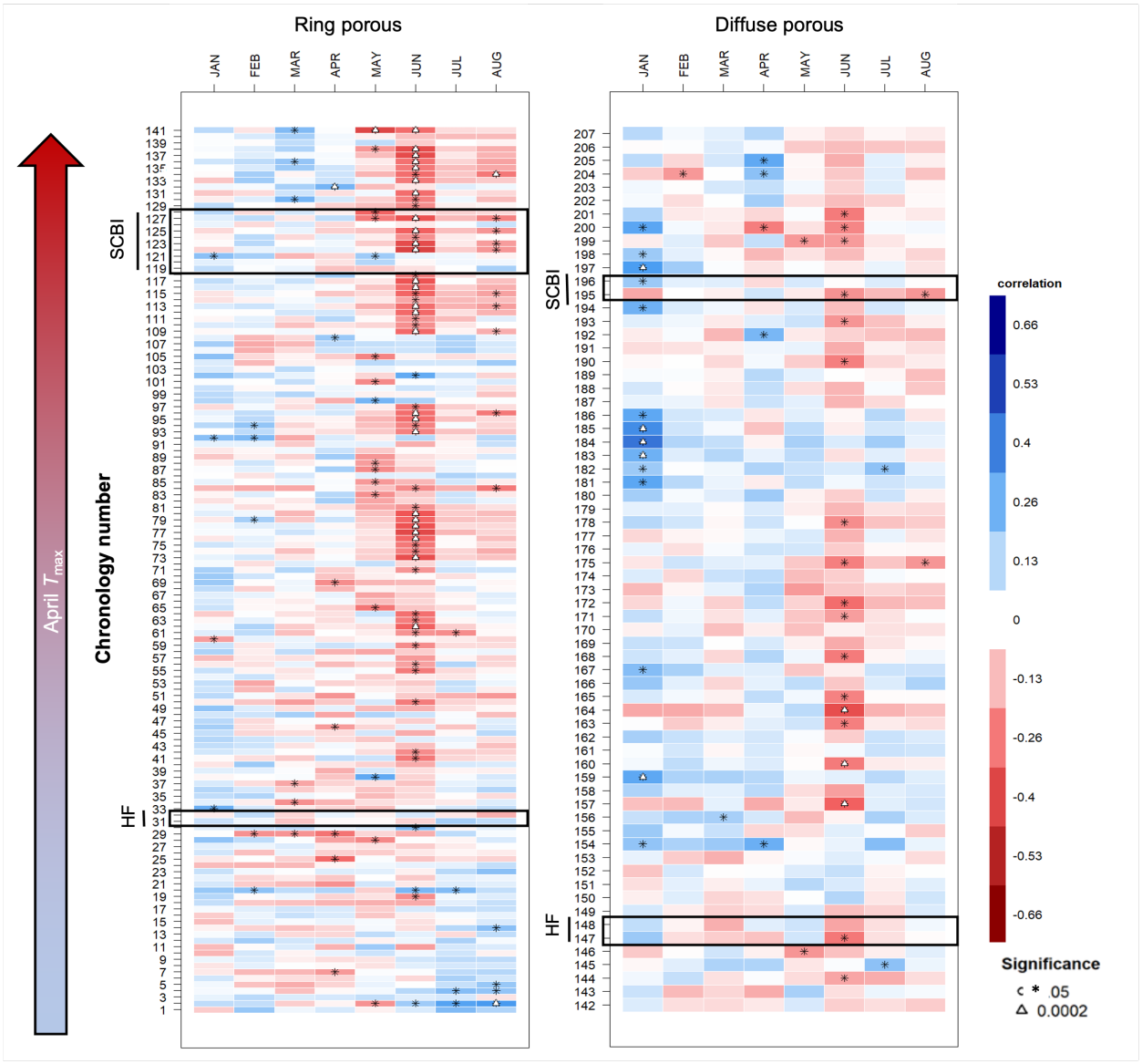
Extended Data Figure 4



Extended Data Figure 5



Extended Data Figure 6



Extended Data Figure 7