Extended Data Table 1 | Dominant ring- and diffuse-porous species at the Smithsonian Conservation Biology Institute (SCBI) and Harvard Forest, along with sample sizes included in this analysis.

				dendrometer bands		tree cores	
site	xylem porosity	species	species code	n trees	n tree-years	n cores	date range
SCBI	ring	*Carya cordiformis*	CACO	0	0	18	1917-2009
		Carya glabra	CAGL	0	0	39	1901-2009
		Carya ovalis	CAOVL	0	0	24	1896-2009
		Carya tomentosa	CATO	0	0	17	1926-2009
		Fraxinus americana	FRAM	0	0	69	1910-2009
		Quercus alba	QURU	34	197	66	1904-2009
		Quercus montana	QUPR	0	0	67	1893-2009
		Quercus rubra	QUAL	35	229	71	1870-2009
		Quercus velutina	QUVE	0	0	83	1902-2009
	diffuse	*Fagus grandifolia*	FAGR	13	89	81	1932-2009
		Liriodendron tulipifera	LITU	41	354	109	1920-2009
Harvard	ring	*Fraxinus americana*	FRAM	9	27	0	
		Quercus alba	QURU	118	575	179	1901-2014
		Quercus velutina	QUVE	11	50	0	
	diffuse	*Fagus grandifolia*	FAGR	8	45	0	
		Betula lenta	BELE	8	44	0	
		Betula populifolia	BEPO	5	24	0	
		Betula papyrifera	BEPA	3	13	0	
		Betula alleghaniensis	BEAL	21	90	44	1952-2013
		Prunus serotina	PRSE	9	37	0	
		Acer rubrum	ACRU	144	669	59	1930-2014
		Acer pensylvanicum	ACPE	4	16	0	

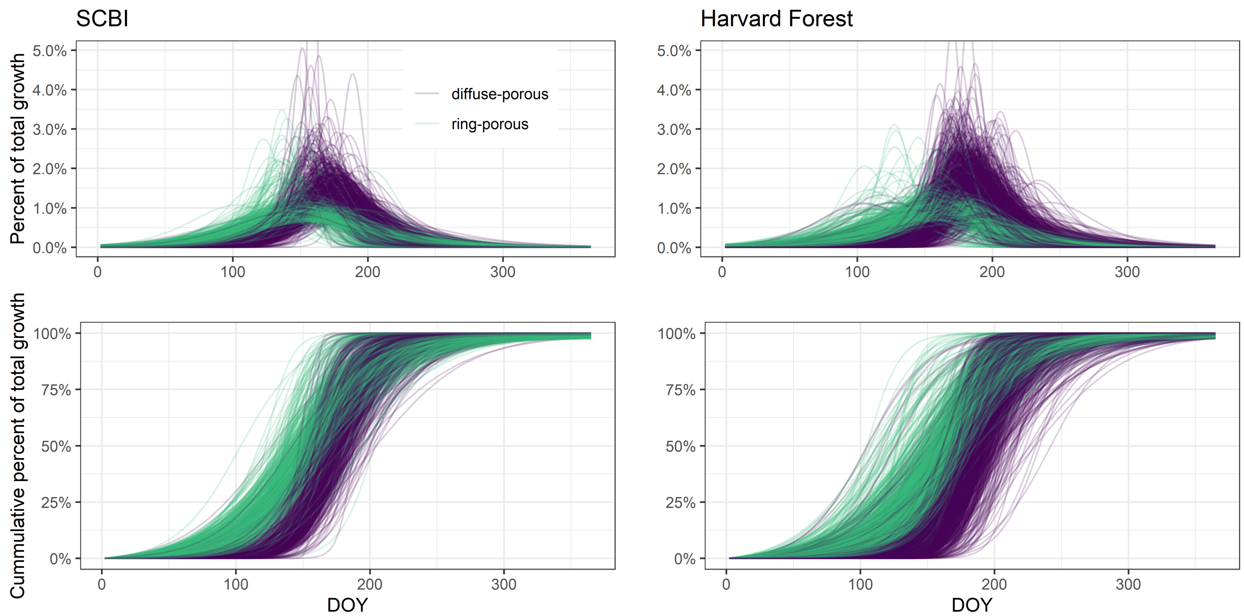
Extended Data Table 2 | Sample size by year

Year	SCBI	Harvard Forest
1998	NA	755
1999	NA	733
2000	NA	711
2001	NA	704
2002	NA	701
2003	NA	700
2011	105	NA
2012	99	NA
2013	145	NA
2014	146	NA
2015	144	NA
2016	145	NA
2017	145	NA
2018	143	NA
2019	142	NA

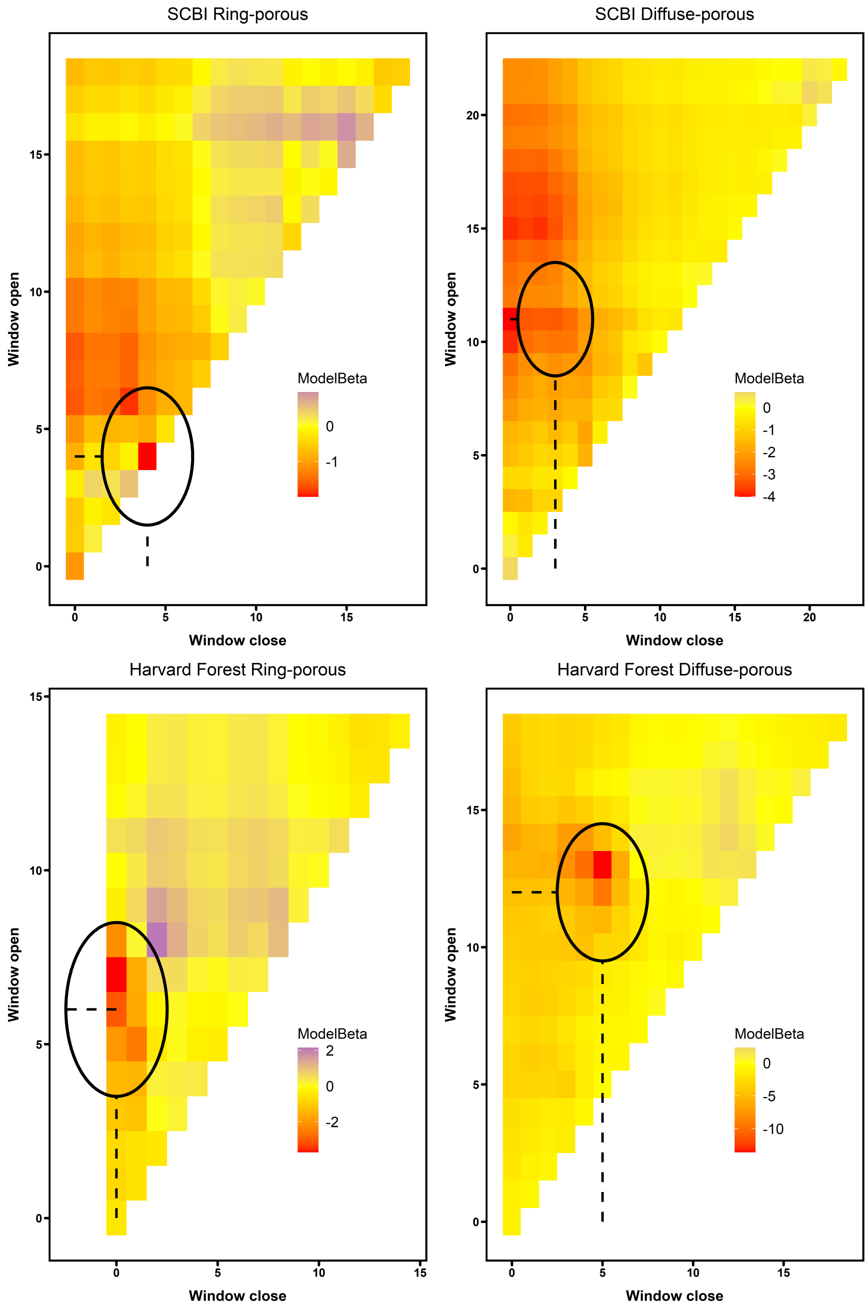
This figure needs some work if we choose to include it. It would also probably make sense to include years for which leaf phenology is available.

Extended Data Table 3 | Summary of parameters describing the phenology and rate of growth for ring- and diffuse- porous species at SCBI and Harvard Forest.

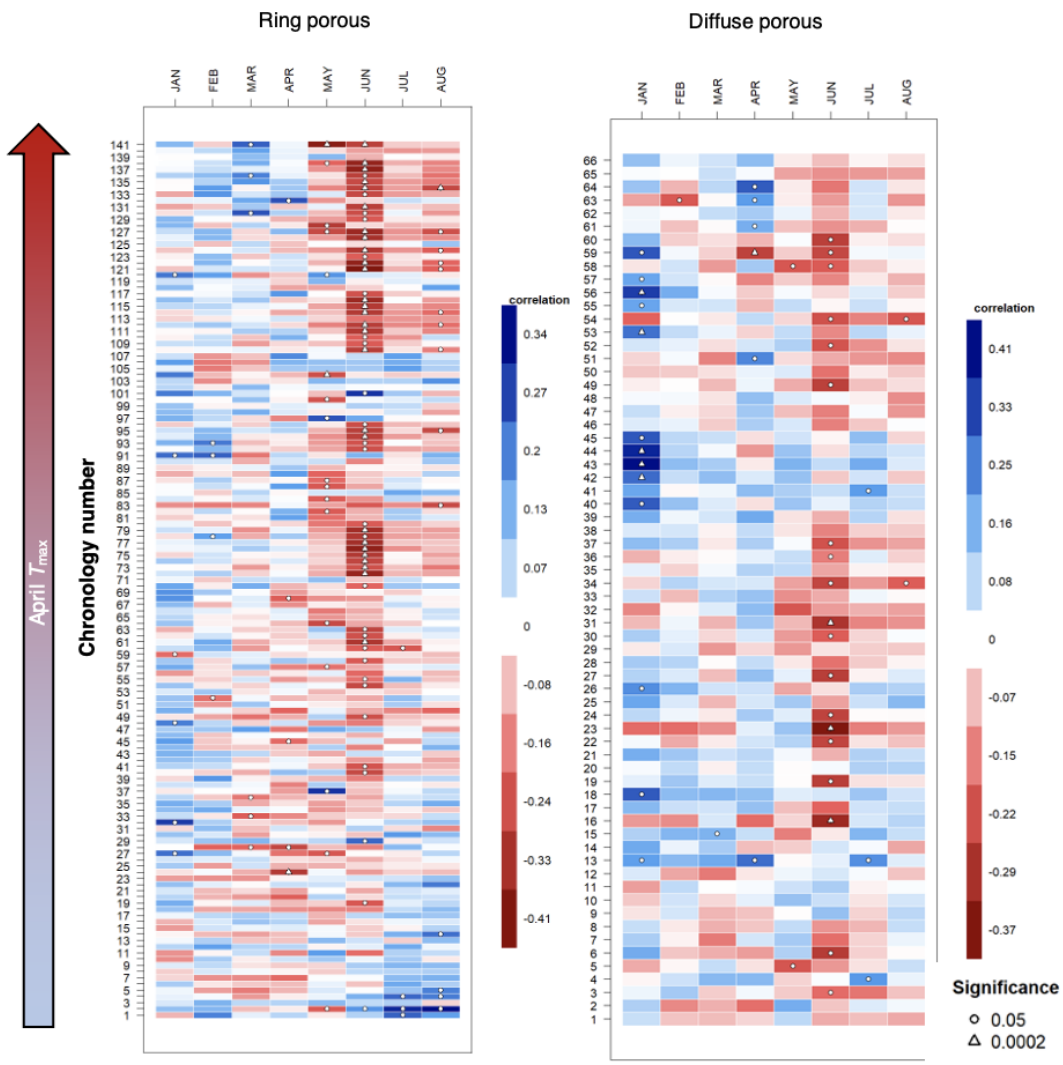
	SCBI		Harvard Forest	
	ring	diffuse	ring	diffuse
Stem Growth				
critical T_{max} window	3/22-4/9	2/19-5/21	4/2-5/7	3/19-5/7
DOY_{25}	123 (May 4)	154 (June 4)	132 (May 15)	164 (June 14)
DOY_{50}	152 (June 2)	172 (June 22)	159 (June 9)	182 (July 2)
DOY_{75}	180 (June 30)	190 (July 9)	186 (July 6)	199 (July 19)
$DOY_{g_{max}}$	152 (June 2)	173 (June 23)	161 (June 11)	183 (July 3)
g_{max} (mm/day)	0.046	0.061	0.03	0.025
L_{pgs}	56.5	35.8	54.5	35.1
ΔDBH (mm/yr)	4.7	3.6	3.1	1.4
Leaf Phenology (ecosystem level)				
Greenup	101 (April 11)		115 (April 25)	
Mid-greenup	120 (April 30)		137 (May 17)	
Peak	173 (June 22)		182 (July 1)	
Senescence	215 (Aug. 3)		218 (Aug. 6)	



Extended Data Figure 1 | Growth trajectories for ring- and diffuse-porous trees, as both relative and cumulative fractions of total annual growth. Each line represents one year's growth for a given tree, fit with McMahon model.



Extended Data Figure 2 | Landscapes of relationships between the day of year on which 25% of annual growth is achieved (DOY_{25}) and temperature in prior weeks for ring- and diffuse-porous trees at SCBI and Harvard Forest. Shown are matrices of linear coefficients of first-order linear regressions between temperature and DOY_{25}, where Window Open and Window Close indicate number of weeks prior to DOY_{25} (ring-porous: May 5 at SCBI, May 13 at HF; diffuse-porous: June 4 at SCBI, June 14 at HF). Black circles indicate the critical T_{max} window (ring-porous: March 22- April 9 at SCBI, April 2 - May 07 at HF; diffuse-porous: Feb. 19- May 21 at SCBI, March 19 - May 07 at HF).



Extended Data Figure 3 | Sensitivity of annual growth, as derived from tree-rings, to monthly minimum temperatures, for 207 chronologies from 114 sites across eastern North America. Chronologies are grouped by xylem porosity and ordered by mean April T_max. Chronology details are given in the Supplementary Information. (**NOTE: Figure still needs some work. Chronology numbers are off.** See GitHub Issue #49.)