Table 1: Dominant ring- and diffuse-porous species at the Smithsonian Conservation Biology Institute (SCBI) and Harvard Forest, along with sample sizes analyzed here.

				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	

Table 2: SCBI bands by species

Species	Before Cleaning	After Cleaning	Wood_Structure
American Beech	85	75	Diffuse-porous
Tulip Poplar	338	312	Diffuse-porous
Red Oak	293	270	Ring-Porous
White Oak	273	254	Ring-Porous

Table 3: HF bands by species

Species	Before Cleaning	After Cleaning	Wood_Structure
American Beech	48	26	Diffuse-porous
Black Birch	50	33	Diffuse-porous
Black Cherry	60	20	Diffuse-porous
Grey Birch	35	13	Diffuse-porous
Red Maple	987	339	Diffuse-porous
Striped Maple	23	8	Diffuse-porous
White Birch	25	6	Diffuse-porous
Yellow Birch	148	69	Diffuse-porous
Black Oak	73	18	Ring-Porous
Red Oak	719	226	Ring-Porous
White Ash	63	9	Ring-Porous

Table 4: 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

Table 5: 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
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

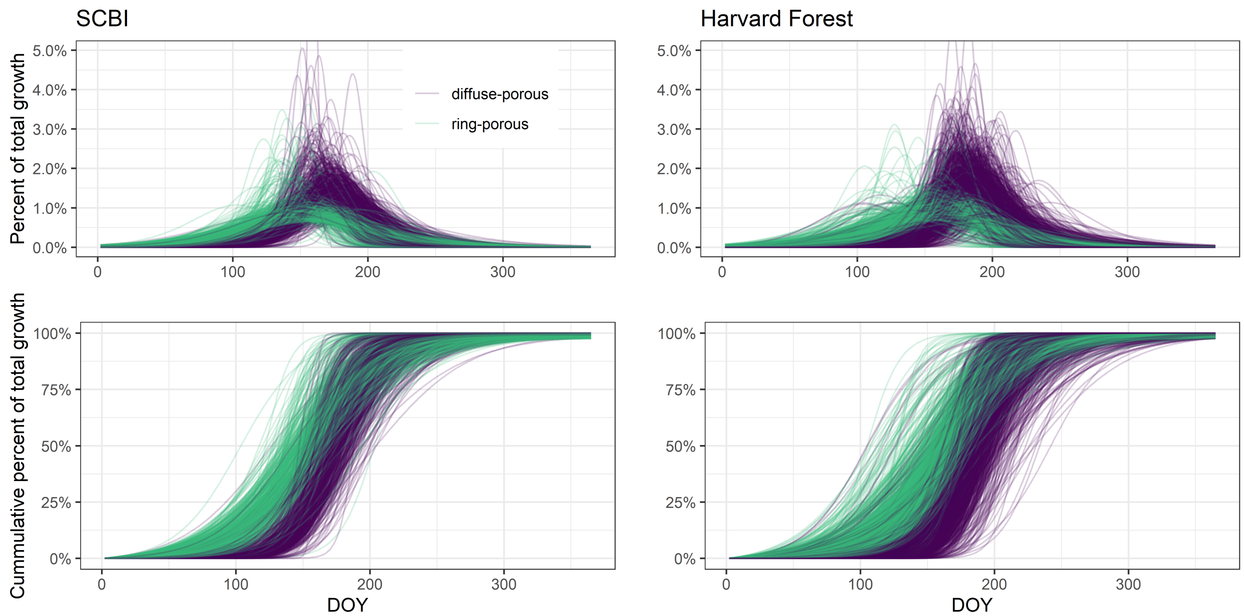
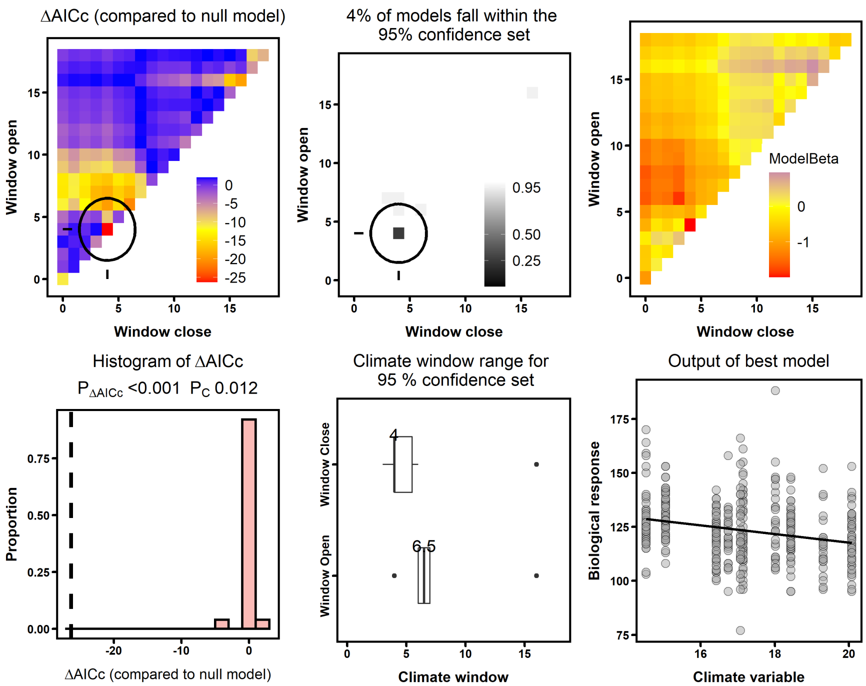


Figure 1: Growth trajectories for ring- and diffuse-porous trees, as both relative and cumulative fractions of total annual growth. Each line represents one year's growth for a given tree, fit with McMahon model.

(a) T_{max}



(b) T_{min}

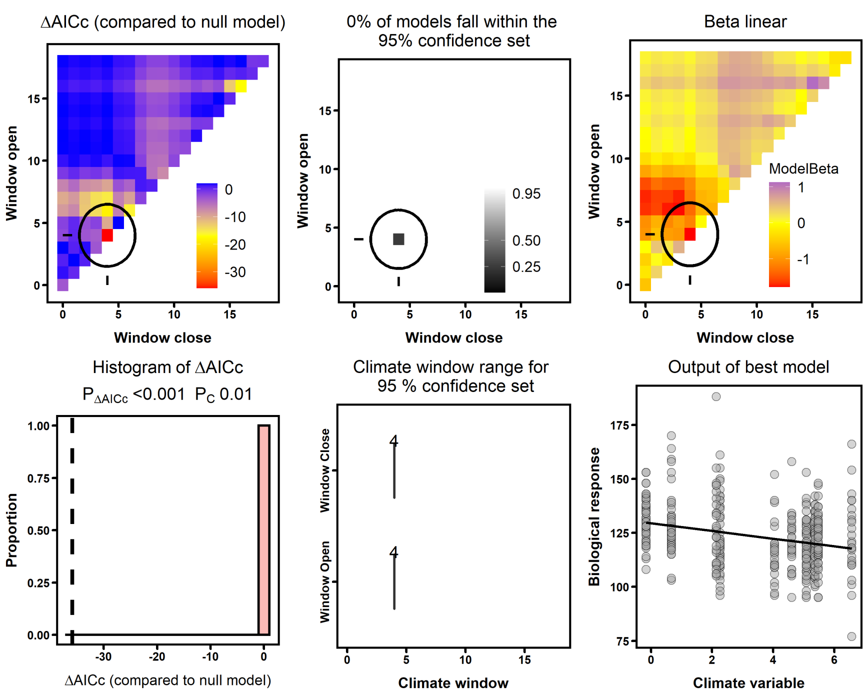
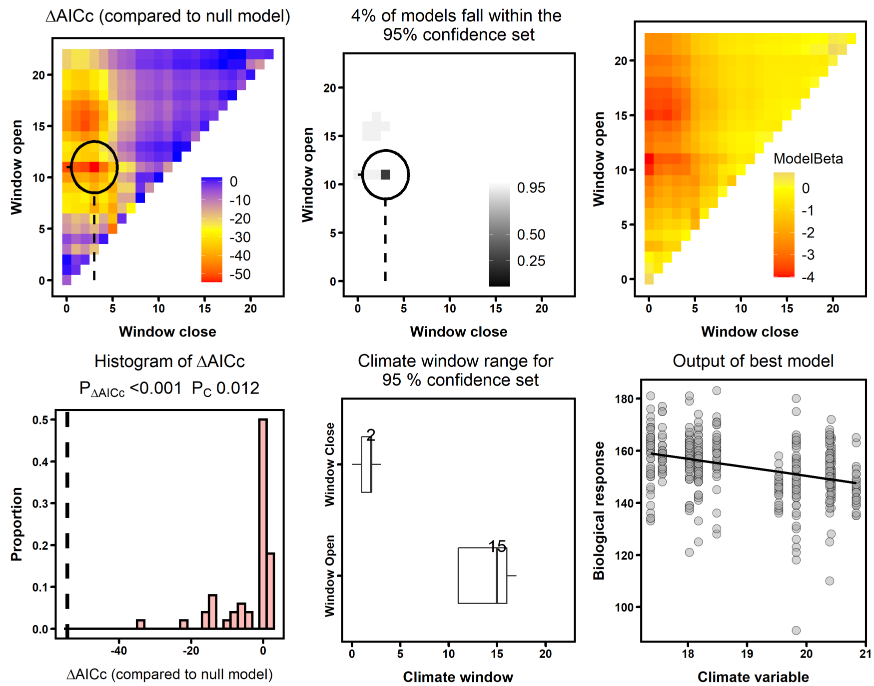


Figure 2: Full climwin output for DOY_{25} for ring porous species at SCBI.

(a) T_{max}



(b) T_{min}

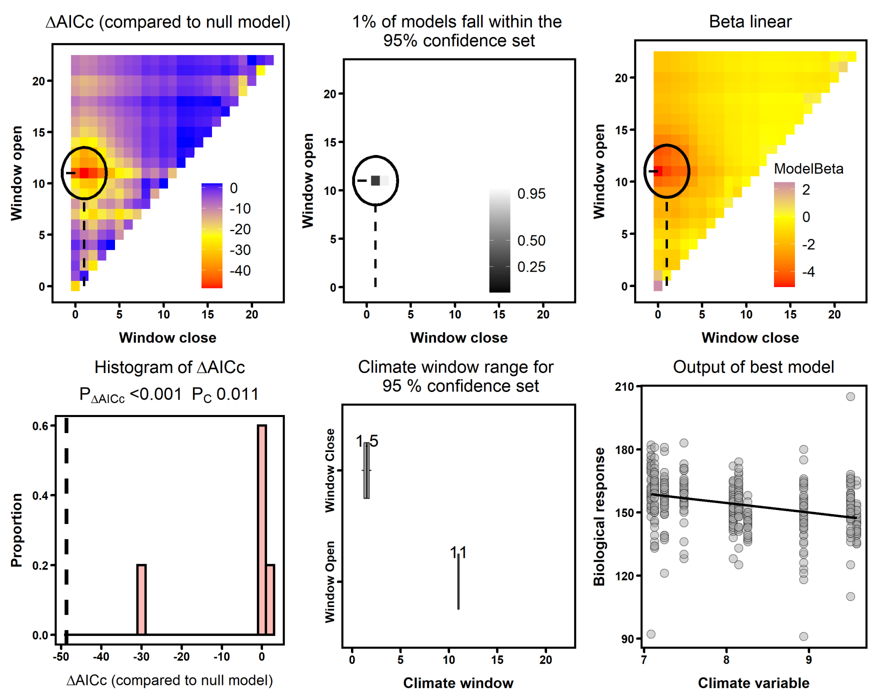
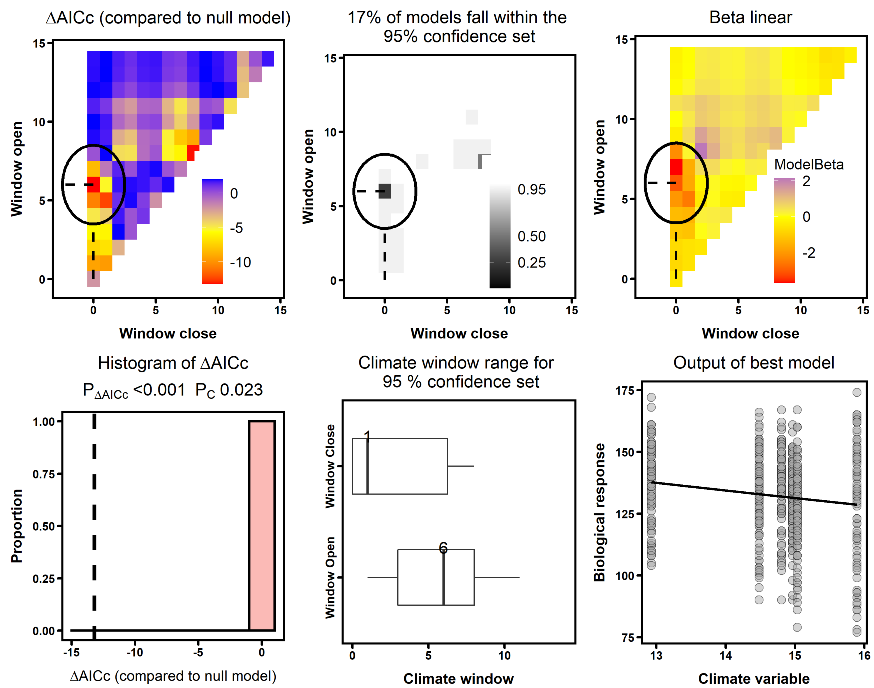


Figure 3: Full climwin output for DOY_{25} for diffuse porous species at SCBI.

(a) T_{max}



(b) T_{min}

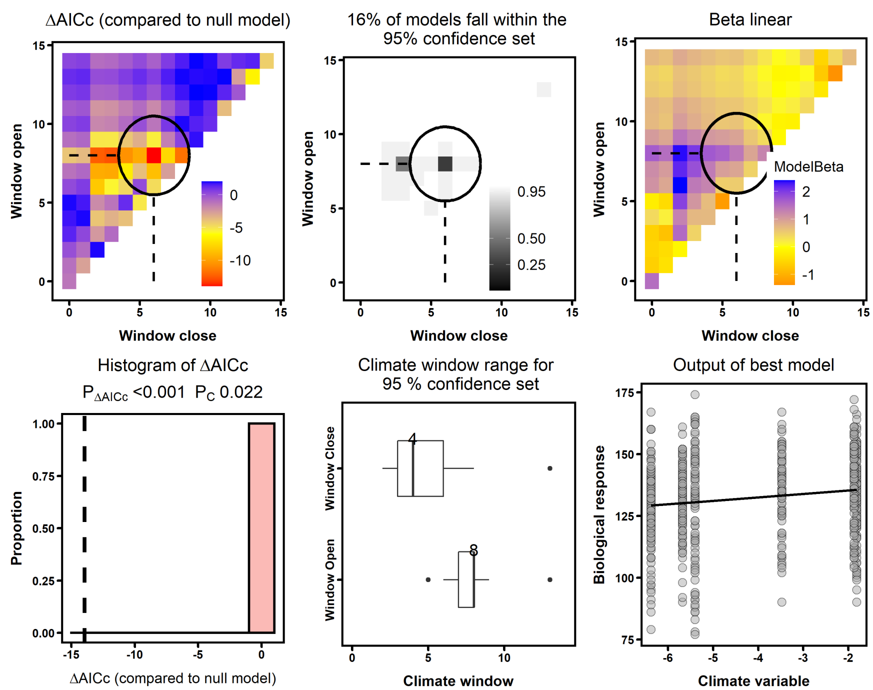
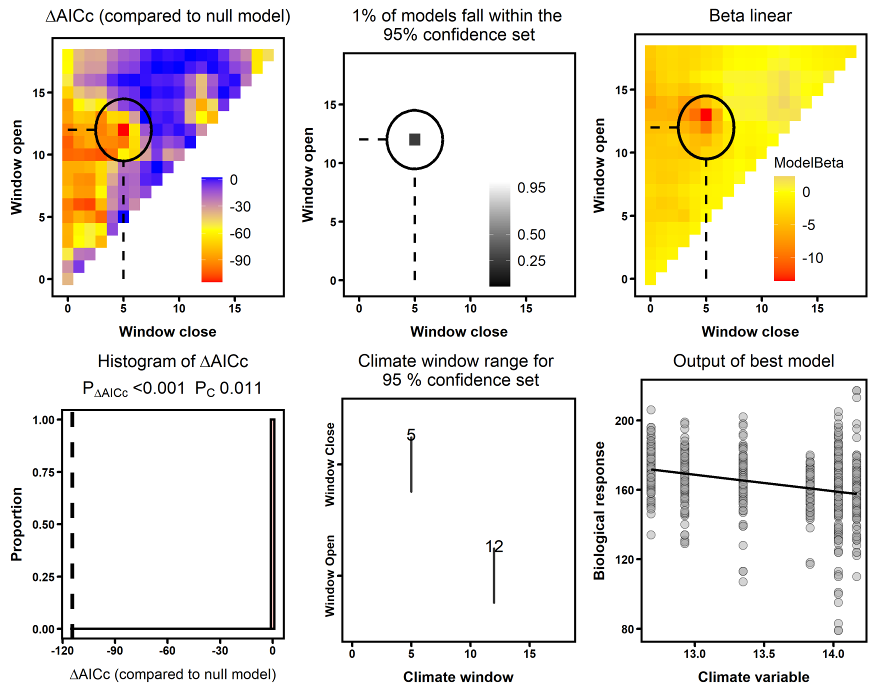


Figure 4: Full climwin output for DOY_{25} for ring porous species at Harvard Forest.

(a) T_{max}



(b) T_{min}

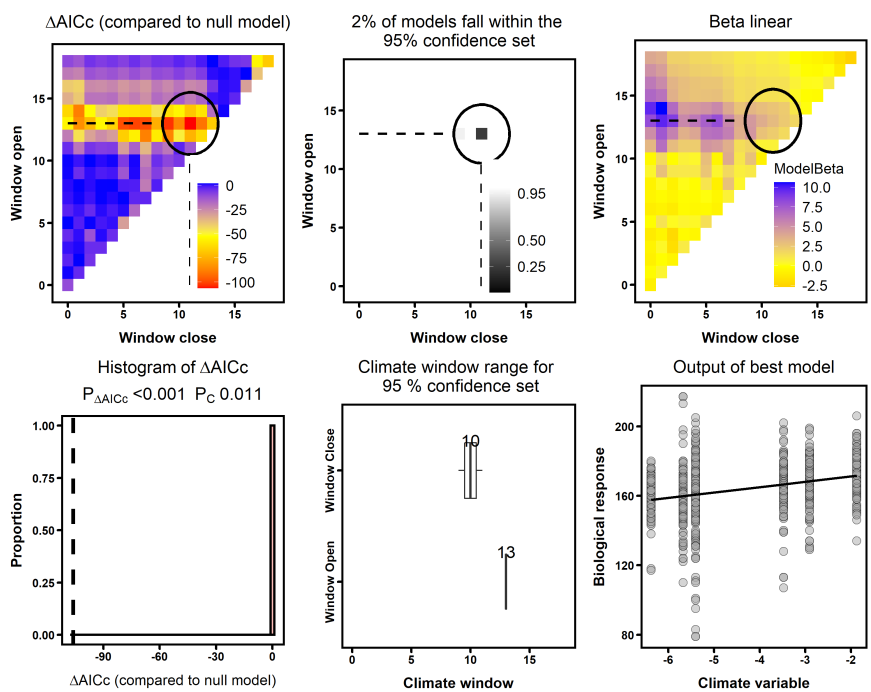


Figure 5: Full climwin output for DOY_{25} for diffuse porous species at Harvard Forest.

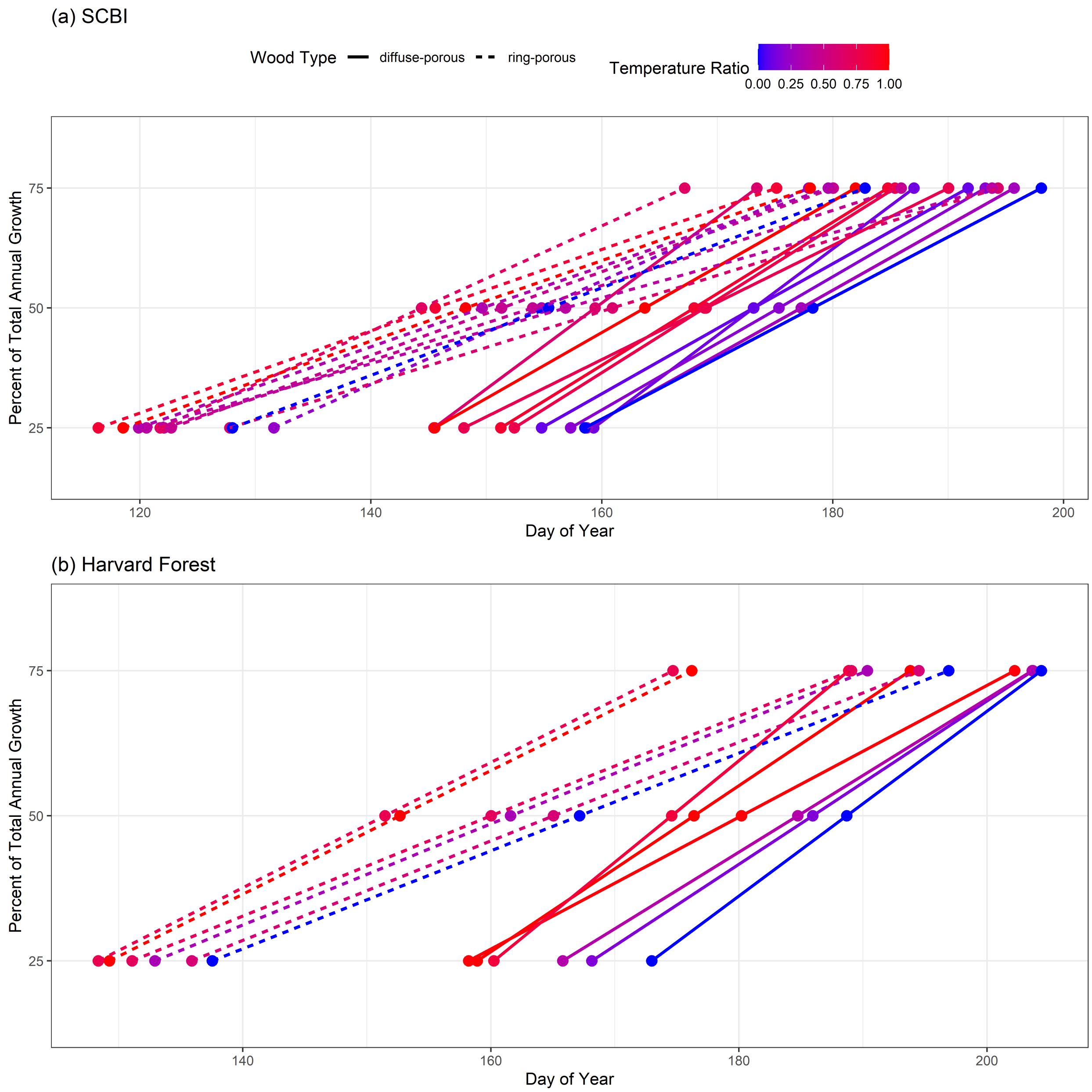


Figure 6: Day of year where growth milestones were achieved at (a) the Smithonian Conservation Biology Institute and (b) Harvard Forest. Each line represents a single year of ring-porous (dotted line) or diffuse-porous (solid line) trees at each site. Mean temperature was calculated for each wood-type/site combination over the respective critical T_{max} window, then turned into a ratio and assigned a color on a gradient where the coldest year in the sample is blue and the warmest is red.