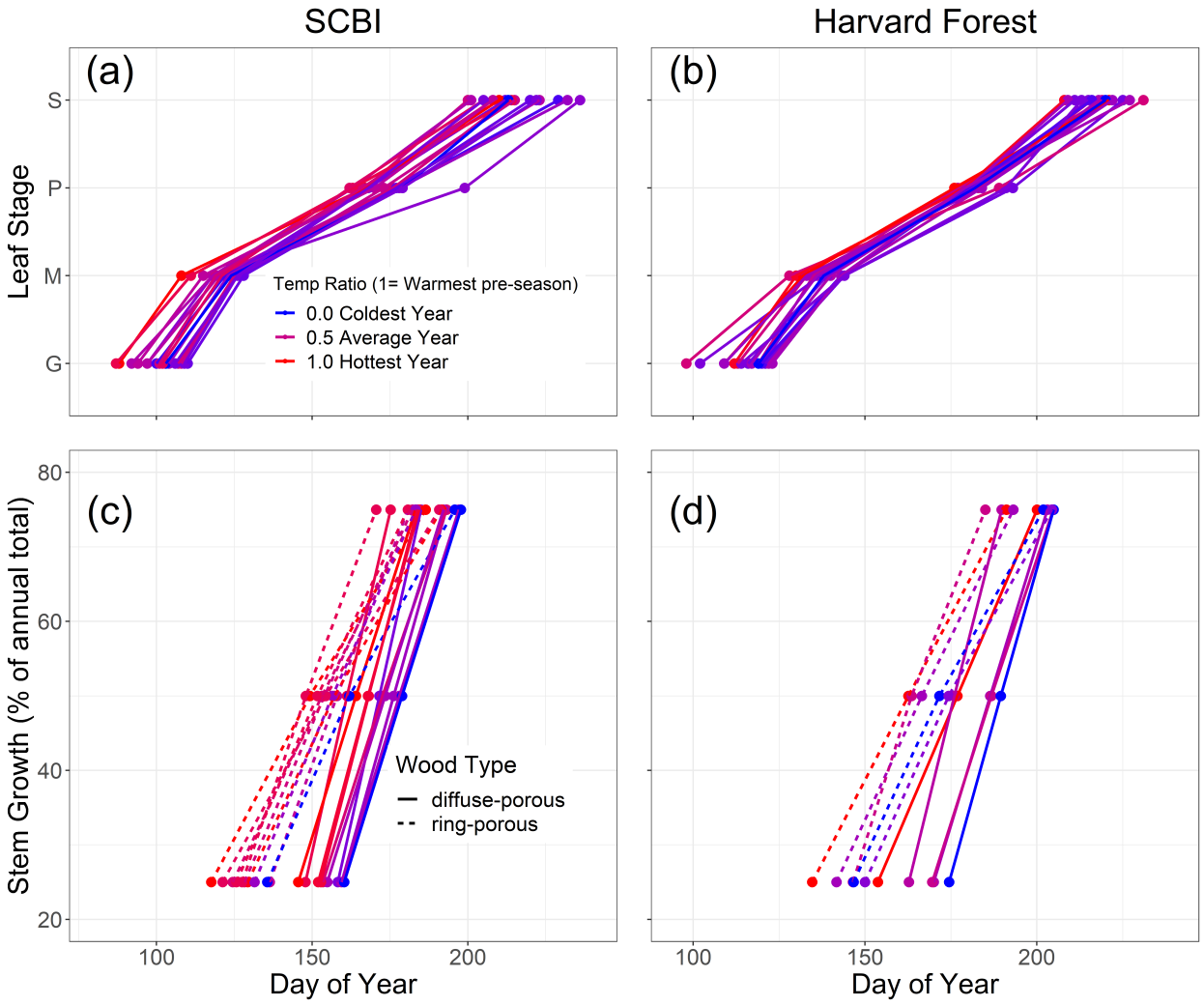

Figure 2 | Responses of foliage phenology (a,b) and stem growth timing (c,d) to spring temperatures at the Smithsonian Conservation Biology Institute (a,c) and Harvard Forest (b,d). Panels (a-b) show ecosystem-level canopy foliage phenology from 2001-2018, obtained from the MODIS Global Vegetation Phenology product (MCD12Q2.006) for a single pixel at the center of each ForestGEO plot, where G = Greenup, M=Mid-greenup, P=peak, and S=Senescence (i.e., beginning of green-down). Panels (c-d) show the dates at which stem growth milestones were achieved, on average, for sampled populations of ring porous and diffuse porous trees at SCBI (2011-2020) and Harvard Forest (1999-2003). Mean DOY_{25}, DOY_{50}, and DOY_{75} were estimated using the Bayesian model visualized, with confidence intervals, in Extended Data Figure 4. Mean maximum temperature (T_{max}) was calculated for each xylem architecture/site combination over the respective critical temperature window (CTW), 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. Leaf phenology years are colored according to the CTW T_{max} of the porosity group containing the dominant canopy species at each site (diffuse porous at SCBI, ring porous at Harvard Forest).