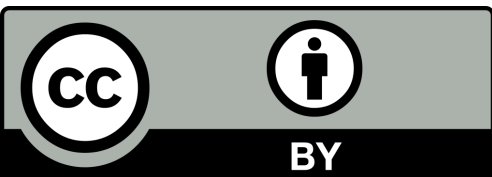




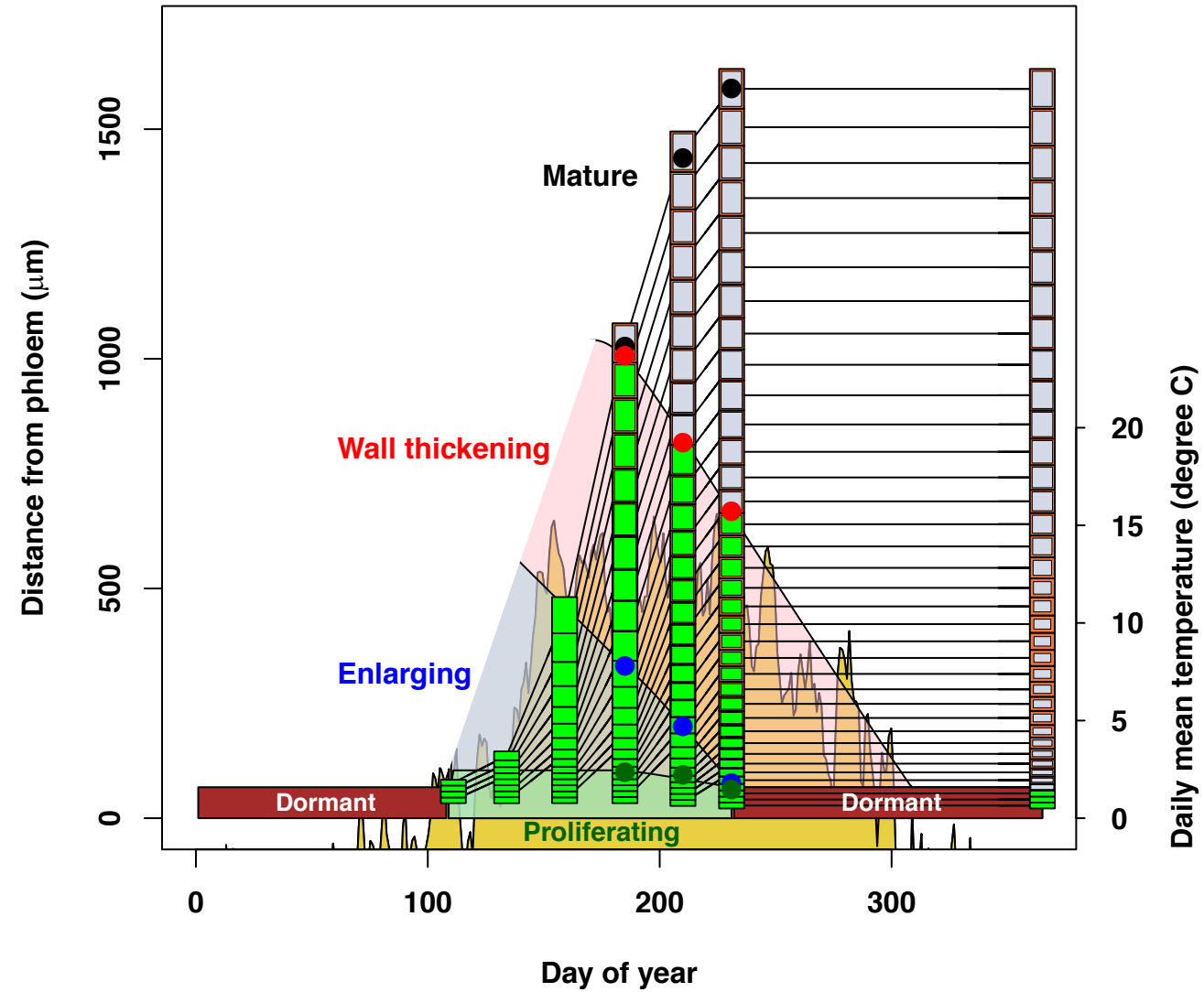
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Mechanistic modelling of the influence of temperature on the wood anatomy of Scots Pine

Andrew D. Friend
Department of Geography
University of Cambridge

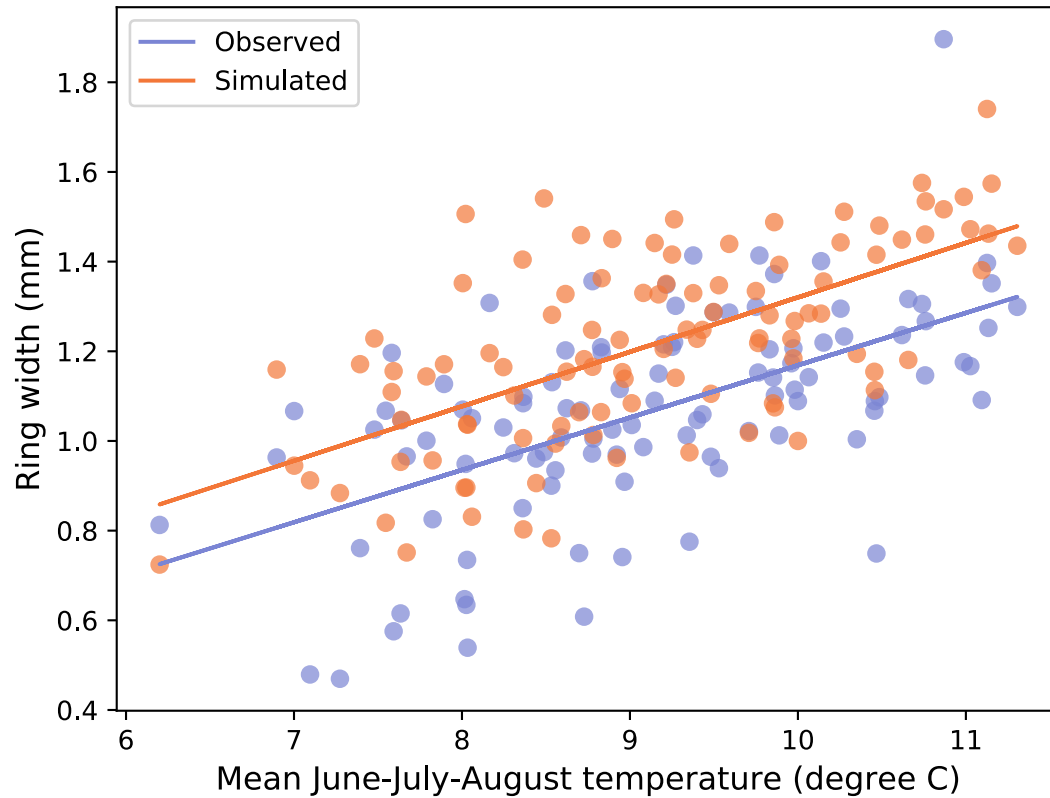


Progression of cellular-level growth through one year

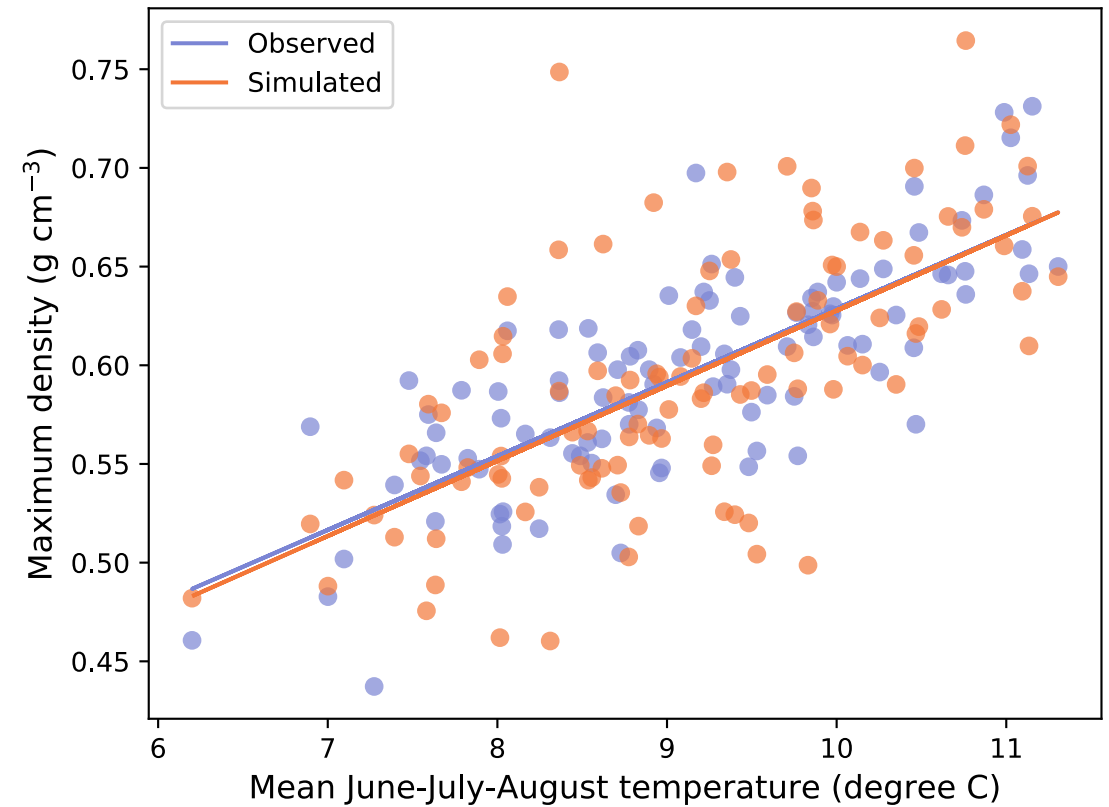


Calibration of temperature responses

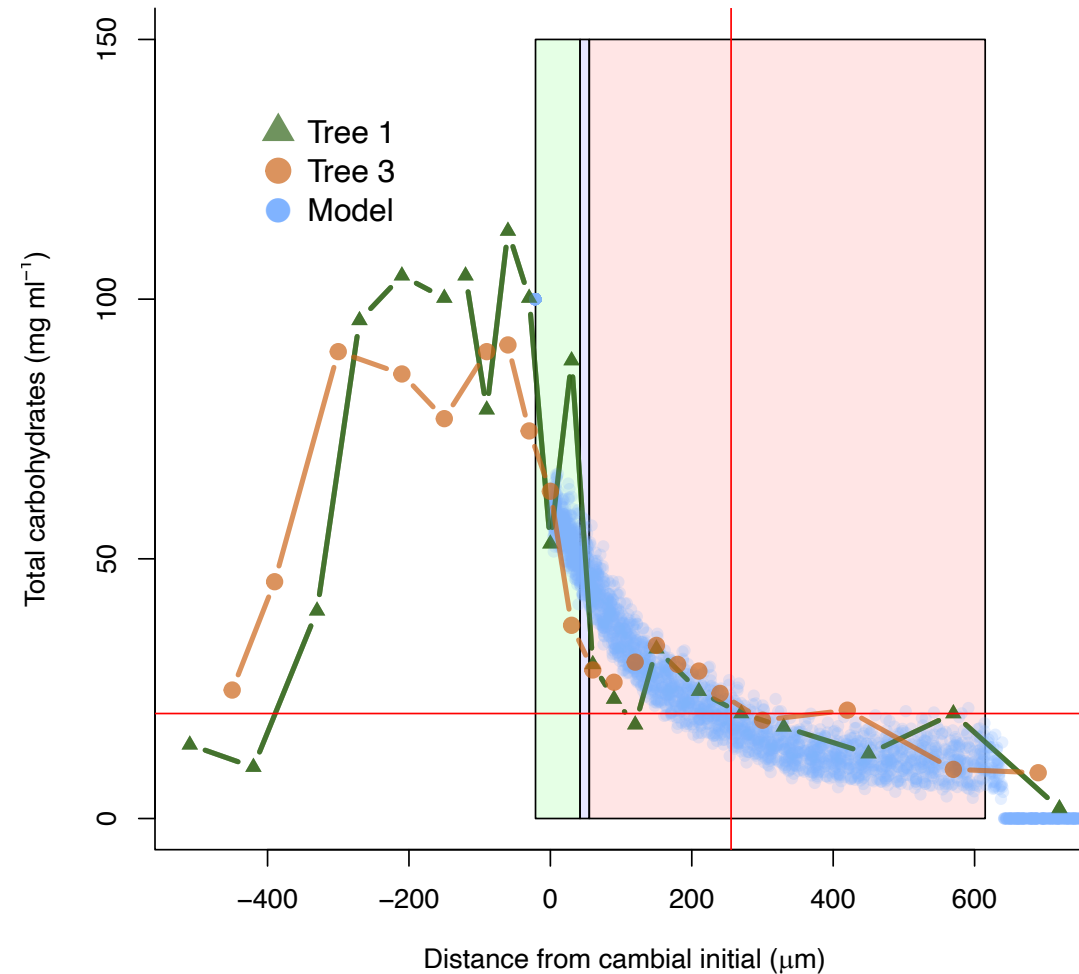
Cell elongation ($E_a = 0.32$ eV)



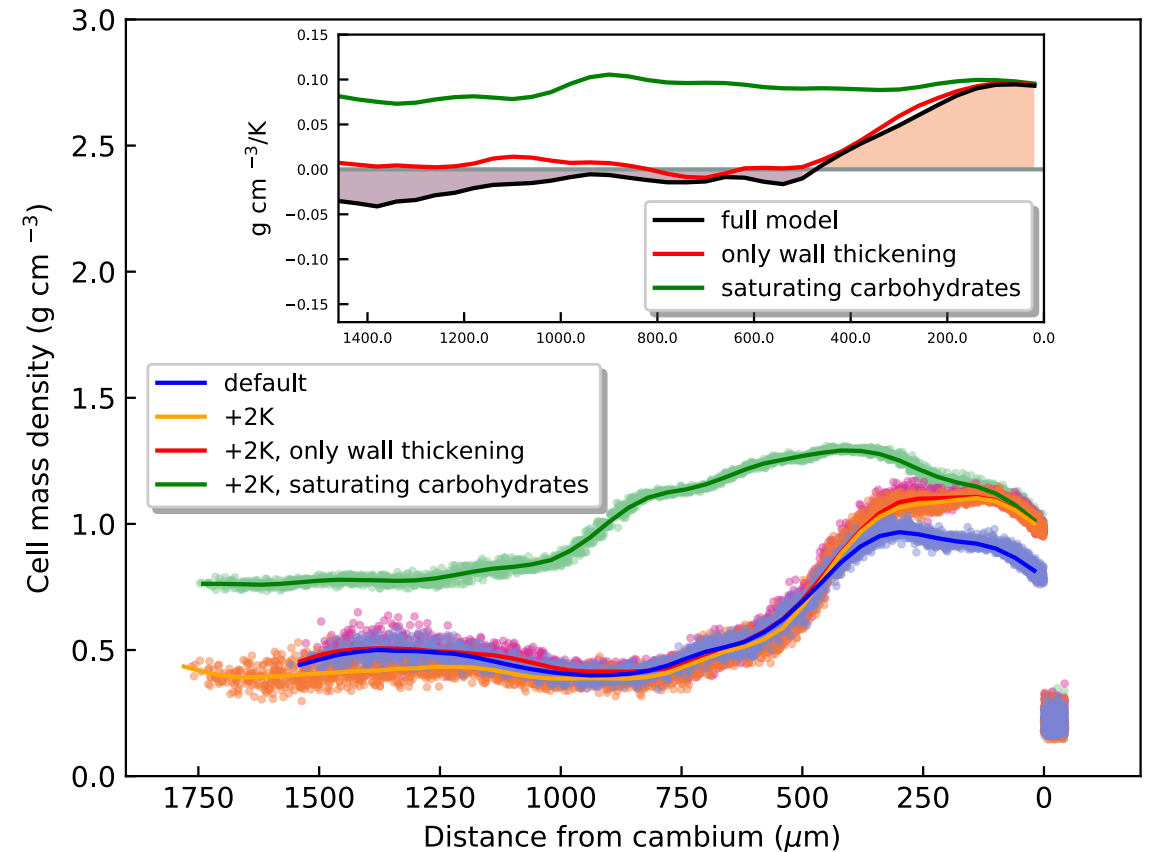
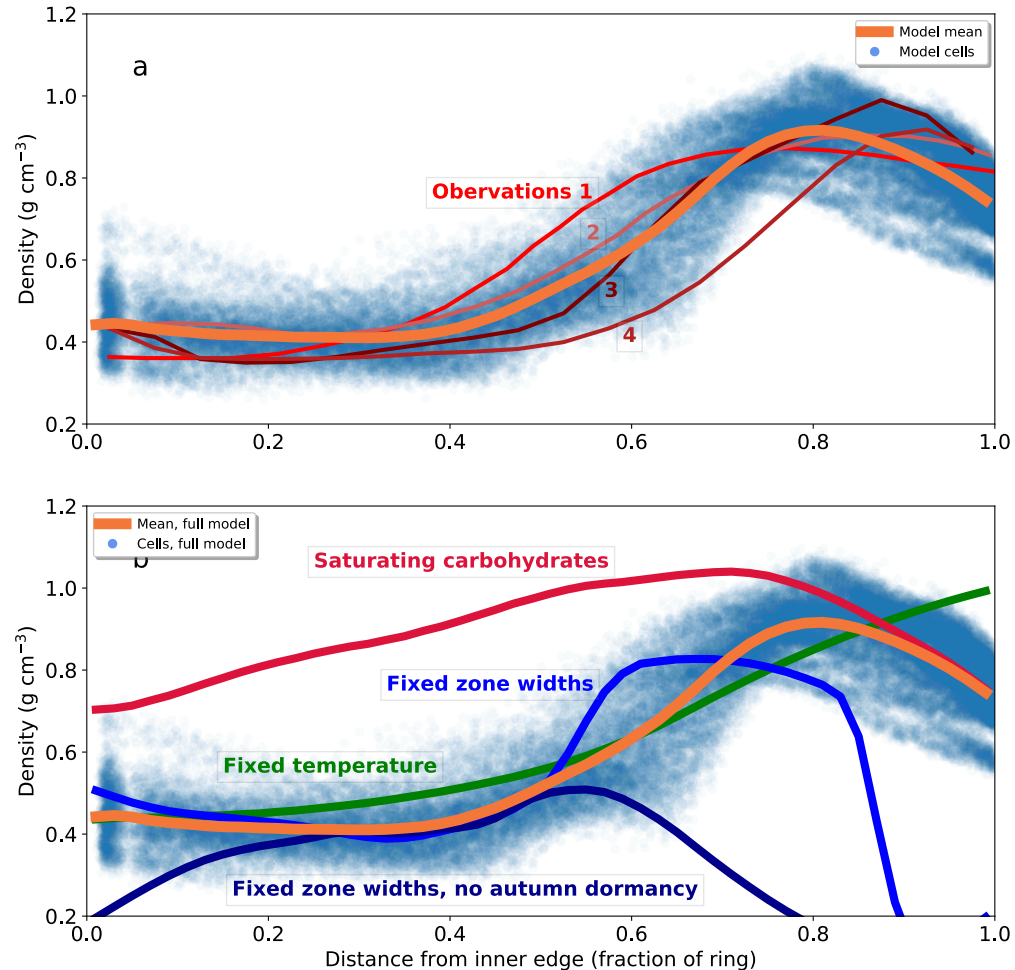
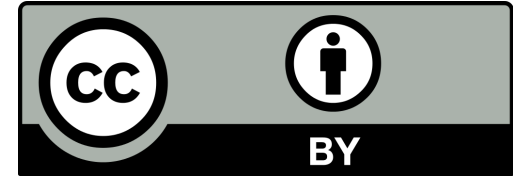
Wall thickening ($E_a = 1.39$ eV)



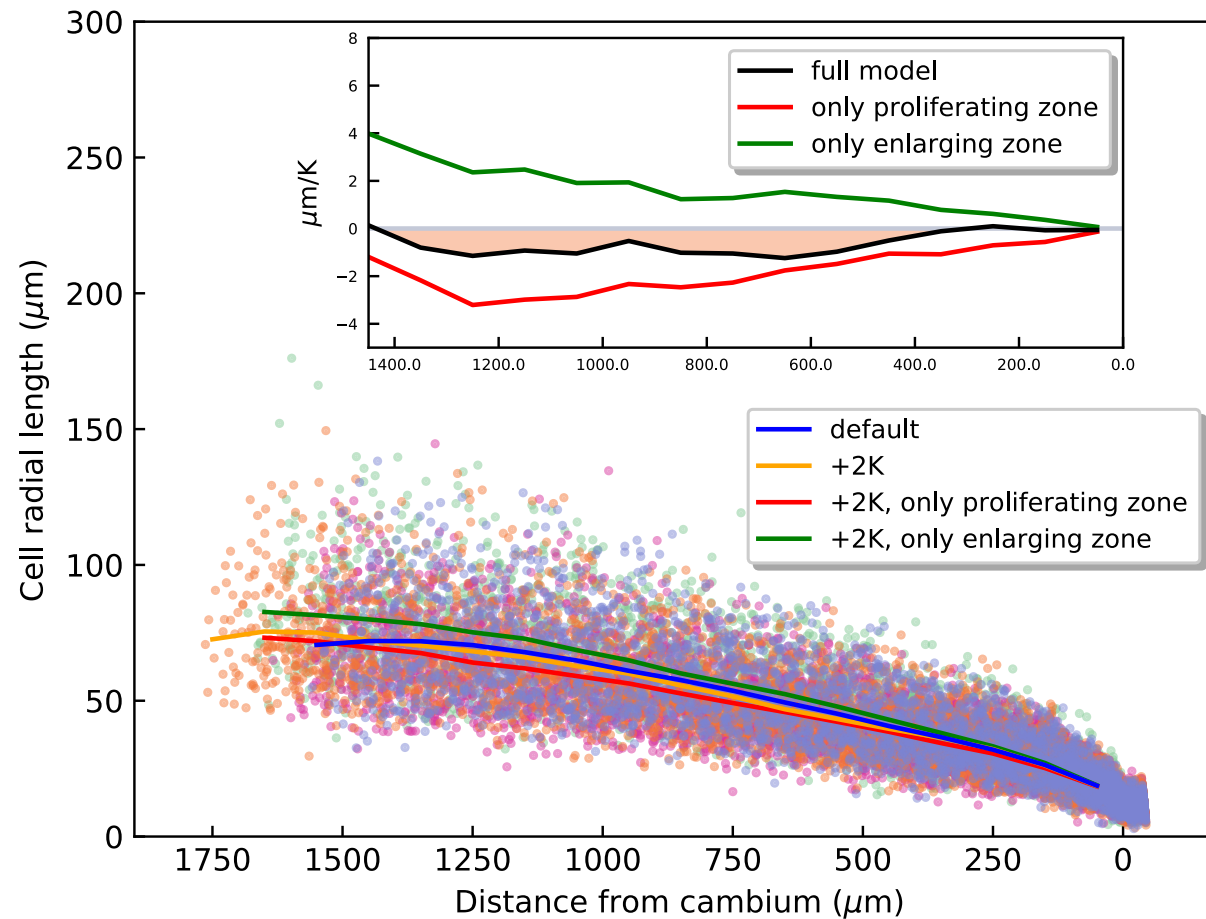
Carbohydrate profiles: Observed and predicted



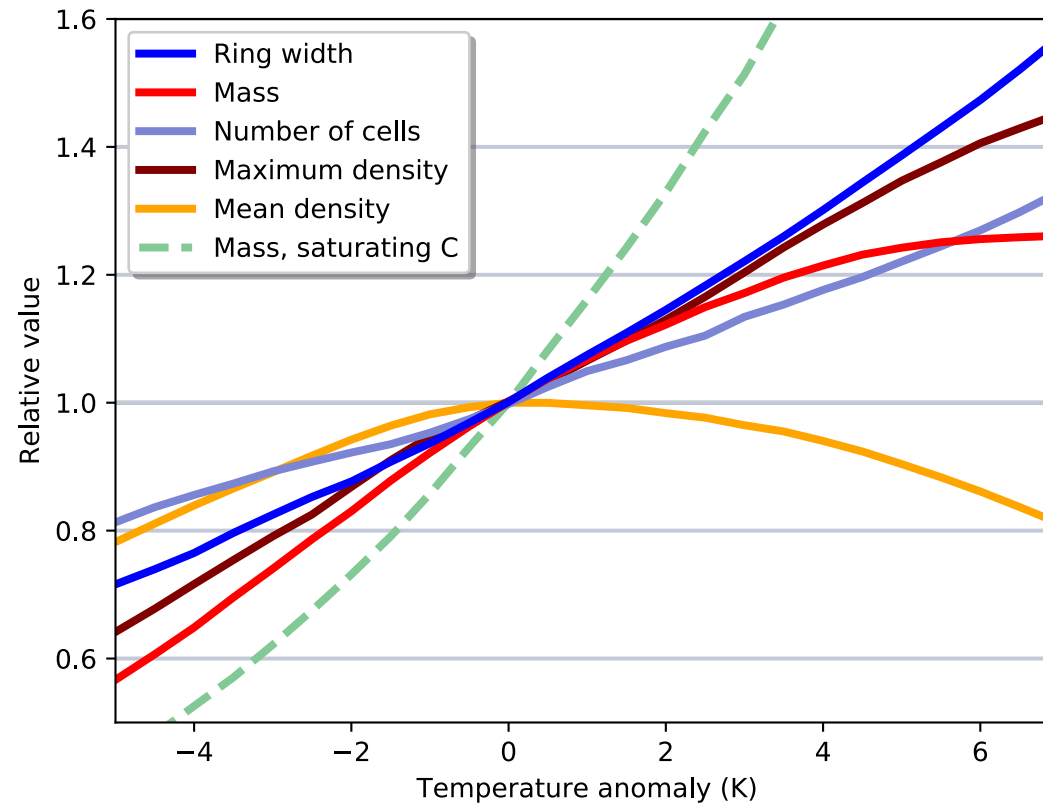
Cell-mass density profile: controls and temperature effects



Cell size responses to temperature



Overall temperature responses: mass and volume diverge



Wood structure explained by complex spatial source-sink interactions

bioRxiv 2020.05.02.073643; doi: <https://doi.org/10.1101/2020.05.02.073643>

