

site code	site name	location	1950 - 2019 climate			vegetation type(s)	n species	n cores	original publication(s)
			July T_{mean}	Jan T_{mean}	MAP				
BCNM	Barro Colorado Nature Monument	Panama	26.6	25.5	2627	BD, BE	3	84	Alfaro-Sánchez, Muller-Landau, Wright, and Camarero 2017
HKK	Huai Kha Khaeng	Thailand	25.7	22.4	1428	BD, BE	4	470	Vlam, Baker, Bunyavejchewin, and Zuidema 2014
SCBI	Smithsonian Conservation Biology Institute	Virginia, USA	24.3	0.9	1018	BD, NE	14	704	Helcoski et al. 2019; Gonzalez-Akre et al. 2020
LDW	Lilly Dickey Woods	Indiana, USA	24.0	-2.2	1099	BD	6	170	Maxwell, Harley, and Robeson 2016
HF	Harvard Forest	Massachusetts, USA	21.6	-5.1	1104	BD, NE	4	366	Alexander et al. 2019; Finzi et al. 2020
ZOF	Žofín Forest Dynamics Plot	Czech Republic	18.1	-2.0	731	NE, BD	4	2059	Šamonil et al. 2013; Kašpar, Tumaier, Vašíčková, and Šamonil, 2021
NIO	Niobrara	Nebraska, USA	23.4	-6.5	520	BD	1	84	Bumann et al. 2019
LT	Little Tesuque	New Mexico, USA	16.2	-3.1	608	NE	2	34	
CB	Cedar Breaks	Utah, USA	13.8	-6.2	842	NE, BD	7	187	Birch et al. 2020a-d
SC	Scotty Creek	Northwest Territories, Canada	16.5	-24.7	373	NE	1	443	Sniderhan and Baltzer 2016

hypotheses and specific predictions	frequency observed
<i>How does climate shape tree growth?</i>	
Drought limits tree growth, but the response to water is nonlinear	
The time window over which water influences growth is often ≥ 9 months.	5 / 10 sites
Growth responses to precipitation are predominantly positive,	34 / ?? Species-site combinations
...but positive responses decelerate or decline at high precipitation.	32 / 34 species-site combinations with positive first-order terms
Temperature has predominantly negative, nonlinear effects on growth.	
The time window over which T influences growth rarely exceeds 3 months.	9 / 10 sites
Annual growth responds more strongly to T_{max} or PET than to T_{min} .	8 / 10 sites
Growth responses to T are predominantly negative, particularly at higher T .	
However, there are cases where growth increases under warmer T .	
Climate sensitivity varies with DBH.	44 percent of models
Water and DBH have an interactive effect on growth.	X percent of models
Temperature and DBH have an interactive effect on growth.	X percent of models
<i>How does growth rate vary as trees grow?</i>	
Growth rate, by any metric, varies nonlinearly with DBH.	X percent of models
Ring width increment (RW) declines with DBH for trees established in the open,	
...but increases with DBH for trees established in the understory.	
Basal area increment (BAI) increases to a peak at intermediate DBH and then declines.	
Biomass increment (ΔAGB) increases to a peak at intermediate DBH and then declines.	98 percent of species-site combinations
<i>How have growth rates changed through time?</i>	
Growth rates of most forest tree populations have declined through time due to demographic and successional changes.	90 percent of species-site combinations
In secondary or disturbed forests, growth rates of most species have declined.	XX / XX species at 7 sites
In old-growth forests, growth rates of some species has declined,	XX / XX species at 3 sites
...whereas others have increased.	3 / XX species at 3 sites