Table 1. Summary of observed variation in thermally-relevant leaf traits with canopy height and/or between sun and shade leaves

trait	symbol	units	response	forest type(s)	reference(s)
leaf mass per area (or inverse of specific leaf area)	LMA (or $1/SLA$)	$g \cdot cm^{-2}$	increases with height	temperate, tropical	Mau et al. 2018, Coble et al. 2017
			sun>shade	global	Hernandez et al. 2019, Mastubara et al. 2009, Martin et. al 2020, Coble et al. 2017, Slot et al. 2019
leaf nitrogen	N_{leaf}	$mg \cdot g^{-1}$	sun<shade		Martin et. al 2020
			sun ≈ shade	temperate broadleaf	Bolstad et al. 2019
		$g \cdot m^{-2}$	sun>shade	tropical	Hernandez et al. 2019

Table 2. Summary of observed variation in leaf metabolism and thermal responses across the vertical gradient and/or between sun and shade leaves

trait	symbol	units	response	forest type(s)	reference(s)
Stomatal conductance					
stomatal conductance	g_s		sun > shade	tropical	Slot et al. 2019
optimum temperature of g_s	T_{opt} of g_s	°C	sun ≈ shade	tropical	Slot et al. 2019
frequency of stomatal closure			increases with height	tropical	Roberts et al. 1990
Photosynthesis					
light-saturated net photosynthesis	A_{sat}		sun > shade	tropical	Slot et al. 2019
optimum temperature of A_{sat}	T_{opt} of A_{sat}	°C	sun ≥ shade	tropical	Slot et al. 2019
thermal damage threshold	T_{50}	°C	sun ≥ shade	tropical	Slot et al. 2019
			decreases with height*	savanna	Curtis et. al, 2018
light compensation point	LCP		sun > shade	tropical	Slot et al. 2019
Respiration					
dark respiration at reference T	$R_{dark}(T_{ref})$		sun > shade	tropical	Slot et al. 2019
		μmol (kg leaf)$^{-1}$ s^{-1}	sun > shade	temperate	Bolstad et al. 1999
		μmol (m leaf)$^{-2}$ s^{-1}	sun > shade	temperate	Bolstad et al. 1999
		μmol (kg N)$^{-1}$ s^{-1}	sun > shade	temperate	Bolstad et al. 1999
temperature sensitivity of R_{dark}	Q_{10}	°C^{-1}	sun ≤ shade	temperate	Bolstad et al. 1999
VOC production					
(isoprenes)					

*composite climatic stress variable from canopy temperature, vapour pressure deficit, and relative humidity is higher in lower canopy