

Date of study:

May - September 2015

Date of public archiving: Published as of 2025: in Harvard Forest Data Archive: **HF452** Title is: Functional Traits of Selected Tree Species in Harvard Forest, New Hampshire, and Southern Quebec 2015

Last modified:

25 July 2025 (see notes)

Goal

Measure functional traits for 43 woody plant species at four sites: Harvard Forest, White Mountains, Second College Grant, and St.-Hippolyte

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Category	Trait	Units	Significance
Leaf morphology	Leaf size	cm ²	Climate gradients
	SLA	mm ² /mg	Life history, leaf economics spectrum
	Leaf shape	Level of toothedness/ dissection	Strong latitudinal and climate gradients for some species
Tissue nutrient status	Leaf N%	mg/g	Life history strategy, investment in light-harvesting modules
	δ ¹³ C		Leaf lifetime integrated stomatal conductance
	Leaf dry matter content	mg/g	Leaf toughness, resistance to herbivores

Growth form	Height	m	Size, performance
Reproduction	Seed size	g	Allocation to each diaspore
Wood anatomy	Stem specific density	mg/mm3	Growth rate, drought resistance
	Pore anatomy	Categorical: 3-5	<p>Taken from http://insidewood.lib.ncsu.edu/menu/type/modern?0</p> <p>3 Wood ring-porous</p> <p>4 Wood semi-ring-porous</p> <p>5 Wood diffuse-porous</p>

Data and Code

Github <https://github.com/DeirdreLoughnan/Treetraits>

W: drive WeldShare > Wolkovich Lab > Tree Traits Summer 2015

Files	Where	What
Summer 2015 Tree Traits.xlsx	Github	Compiled data from the four sites; C/N added June 2016
Code	Github	R code
Datasheets	W: drive > Datasheets Midge: home/deirdre/WDrive_traits > Datasheet scans	Raw scanned datasheets, including lab notebooks
SLA Summer 2015 images	W: drive > SLA Summer 2015 Midge: home/deirdre/WDrive_traits > SLA Summer 2015	Scanned images of leaves
Maps and field sampling	W: drive > Mapping and Sample Design Midge: home/deirdre/WDrive_traits	

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Trait Protocol 2015.doc	W: drive Midge: home/deirdre/WDrive_traits	Overview of trait protocols
Wolkovich&HS_Forest_C.N Data_July2015_Results.xlsx	W: drive Midge: home/deirdre/WDrive_traits/CN measurement	C/N data from St. Hippolyte and Harvard Forest done by Harry Stone at HF

Note:

We submitted these data to the Harvard Forest Data Archive on 13 Nov 2024, with Emery Boose replying on 24 Nov 2024 (followed up on 13 Feb 2025, as the data are not yet online from what I can see). Previously we had submitted these data to them (July 2018) but asked that they hold off on publishing then until we have analyzed and published on the data ourselves.

UPDATE on 25 July 2025: Lizzie just checked and the data are up:

<https://harvardforest1.fas.harvard.edu/exist/apps/datasets/showData.html?id=HF452>