

1 Supporting Information

2 Leaf turgor loss point varies among tree species, habitats, and seasons in a bottomland hardwood
3 forest

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5 **Table S1** Summary of turgor loss point (TLP) values and drought tolerance scores for woody
6 species from upland temperate biomes that were used for comparison to the bottomland species
7 measured in the present study (see Fig. 4). Biome and TLP values are from Bartlett et al.
8 (2012c). Drought tolerance scores are from Niinemets and Valladares (2006).

Species	Biome	Drought tolerance score	TLP (MPa)
<i>Abies grandis</i>	TemperateConifer	2.33	-2.4
<i>Acer campestre</i>	Temperate	2.93	-1.9
<i>Acer rubrum</i>	Temperate	1.84	-1.45
<i>Arbutus unedo</i>	Med/TempDry	3.9	-0.98
<i>Betula papyrifera</i>	Temperate	2.02	-1.33
<i>Chilopsis linearis</i>	SemiDesert	3.85	-2.85
<i>Fagus sylvatica</i>	Temperate	2.4	-2.17
<i>Fraxinus pennsylvanica</i>	Temperate	3.85	-2.36
<i>Heteromeles arbutifolia</i>	Med/TempDry	4.5	-2.53
<i>Ilex aquifolium</i>	Temperate	3.04	-2.7
<i>Lagerstroemia indica</i>	Temperate	2.88	-1.85
<i>Larix decidua</i>	TemperateConifer	2.31	-2.67
<i>Magnolia grandiflora</i>	Temperate	2.88	-2.06
<i>Picea mariana</i>	TemperateConifer	2	-2.17
<i>Pinus banksiana</i>	TemperateConifer	4	-1.8
<i>Pinus cembra</i>	TemperateConifer	3.01	-2.34
<i>Pinus ponderosa</i>	TemperateConifer	4.32	-2.91
<i>Pinus resinosa</i>	TemperateConifer	3	-1.94
<i>Prunus serotina</i>	Temperate	3.02	-1.42
<i>Quercus agrifolia</i>	Med/TempDry	5	-2.98
<i>Quercus alba</i>	Temperate	3.56	-2.05
<i>Quercus cerris</i>	Temperate	4.29	-3.58

9 **Table S1** continued

<i>Quercus crispula</i>	Temperate	3	-2.19
<i>Quercus ilex</i>	Med/TempDry	4.72	-2.84
<i>Quercus laurifolia</i>	Temperate	3	-2.46
<i>Quercus nigra</i>	Temperate	3	-2.81
<i>Quercus petraea</i>	Temperate	3.02	-2.24
<i>Quercus robur</i>	Temperate	2.95	-2.63
<i>Quercus rubra</i>	Temperate	2.88	-2.53
<i>Quercus serrata</i>	Temperate	3	-1.97
<i>Quercus velutina</i>	Temperate	3	-2.75
<i>Sabal palmetto</i>	Med/TempDry	4	-3.81
<i>Thuja plicata</i>	TemperateConifer	2.23	-1.94

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11 **Table S2** Turgor loss point (TLP) values within season and habitat for each study species.
 12 Values are mean $\pm$ 1 standard deviation. Units are MPa.

Species	Early Growing Season		Late Growing Season	
	Non-Flooded	Seasonally Flooded	Non-Flooded	Seasonally Flooded
<i>Acer negundo</i>	-1.67 $\pm$ 0.23 (-1.94, -1.21)	-1.84 $\pm$ 0.18 (-2.24, -1.64)	-1.72 $\pm$ 0.09 (-1.94, -1.22)	-1.70 $\pm$ 0.11 (-1.88, -1.52)
<i>Acer rubrum</i>	-2.10 $\pm$ 0.15 (-2.35, -1.87)	-2.09 $\pm$ 0.07 (-2.13, -2.01)	-1.98 $\pm$ 0.13 (-2.18, -1.68)	-1.98 $\pm$ 0.06 (-2.04, -1.92)
<i>Carya aquatica</i>	-2.30 $\pm$ 0.18 (-2.65, -2.11)	—	—	—
<i>Carya illinoensis</i>	-1.98 $\pm$ 0.13 (-2.27, -1.80)	-2.32 $\pm$ 0.20 (-2.65, -1.99)	-2.38 $\pm$ 0.35 (-3.06, -1.87)	-2.36 $\pm$ 0.13 (-2.55, -2.16)
<i>Celtis laevigata</i>	-2.15 $\pm$ 0.15 (-2.41, -1.87)	-2.10 $\pm$ 0.19 (-2.38, -1.84)	-2.40 $\pm$ 0.23 (-2.86, -2.09)	-2.14 $\pm$ 0.15 (-2.42, -1.97)
<i>Cephalanthus occidentalis</i>	-1.84 $\pm$ 0.13 (-2.02, -1.54)	-1.89 $\pm$ 0.25 (-2.26, -1.31)	-1.99 $\pm$ 0.09 (-2.17, -1.84)	-1.93 $\pm$ 0.28 (-2.58, -1.62)
<i>Cornus drummondii</i>	-2.25 $\pm$ 0.16 (-2.53, -2.04)	-1.96 $\pm$ 0.17 (-2.33, -1.69)	-2.23 $\pm$ 0.28 (-2.56, -1.78)	-1.88 $\pm$ 0.13 (-2.09, -1.62)
<i>Diospyros virginiana</i>	-2.11 $\pm$ 0.18 (-2.37, -1.79)	-2.08 $\pm$ 0.12 (-2.30, -1.81)	-2.40 $\pm$ 0.19 (-2.71, -2.15)	-2.26 $\pm$ 0.14 (-2.50, -2.03)
<i>Forestiera acuminata</i>	-2.80 $\pm$ 0.41 (-3.42, -2.28)	-3.01 $\pm$ 0.40 (-3.89, -2.48)	-3.00 $\pm$ 0.32 (-3.53, -2.53)	-2.90 $\pm$ 0.18 (-3.28, -2.68)
<i>Fraxinus pennsylvanica</i>	-1.93 $\pm$ 0.15 (-2.13, -1.62)	-1.97 $\pm$ 0.14 (-2.17, -1.77)	-2.14 $\pm$ 0.27 (-2.67, -1.83)	-1.96 $\pm$ 0.19 (-2.24, -1.51)
<i>Gleditsia triacanthos</i>	-2.11 $\pm$ 0.20 (-2.53, -1.80)	-2.16 $\pm$ 0.16 (-2.32, -1.87)	—	—
<i>Liquidambar styraciflua</i>	-2.06 $\pm$ 0.09 (-2.20, -1.88)	-1.98 $\pm$ 0.11 (-2.26, -1.84)	-2.12 $\pm$ 0.07 (-2.22, -1.95)	-2.09 $\pm$ 0.07 (-2.24, -1.99)
<i>Platanus occidentalis</i>	-2.10 $\pm$ 0.08 (-2.25, -1.97)	-1.95 $\pm$ 0.12 (-2.32, -1.83)	-2.21 $\pm$ 0.36 (-2.87, -1.72)	-2.06 $\pm$ 0.17 (-2.29, -1.74)

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15 **Table S2** continued

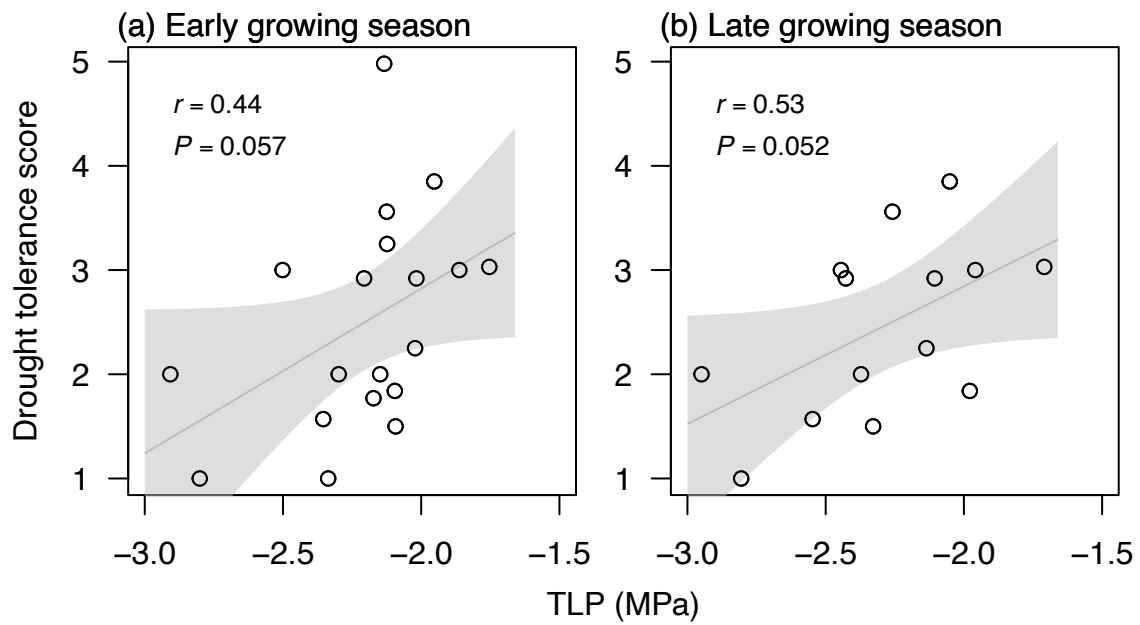
Species	Early Growing Season		Late Growing Season	
	Non-Flooded	Seasonally Flooded	Non-Flooded	Seasonally Flooded
<i>Populus deltoides</i>	-2.36 ± 0.17 (-2.62, -2.10)	-2.35 ± 0.19 (-2.70, -2.05)	-2.62 ± 0.34 (-3.00, -1.98)	-2.48 ± 0.28 (-3.09, -2.15)
<i>Quercus lyrata</i>	-2.34 ± 0.12 (-2.61, -2.14)	—	—	—
<i>Quercus nigra</i>	-2.55 ± 0.22 (-2.95, -2.24)	-2.46 ± 0.26 (-2.84, -2.09)	-2.32 ± 0.12 (-2.57, -2.11)	-2.57 ± 0.19 (-2.84, -2.30)
<i>Quercus texana</i>	-2.79 ± 0.23 (-3.09, -2.27)	-2.81 ± 0.20 (-3.20, -2.50)	-2.95 ± 0.36 (-3.63, -2.37)	-2.62 ± 0.10 (-2.77, -2.48)
<i>Salix nigra</i>	-2.19 ± 0.20 (-2.58, -1.92)	-2.15 ± 0.19 (-2.52, -1.83)	—	—
<i>Taxodium distichum</i>	-2.19 ± 0.24 (-2.64, -1.76)	-2.06 ± 0.23 (-2.60, -1.80)	—	—
<i>Ulmus americana</i>	-2.35 ± 0.38 (-3.01, -1.75)	-2.06 ± 0.14 (-2.27, -1.79)	-2.44 ± 0.33 (-3.14, -1.97)	-2.41 ± 0.25 (-2.80, -2.07)

16

17 **Table S2** ANOVA statistics for Model 11 in Table 2.

Effect	χ^2	df	P
Species	700.3	19	2.2×10^{-16}
Season	16.1	1	5.9×10^{-05}
Habitat	8.5	1	0.0034
Diameter	24.0	1	9.8×10^{-07}
Season $\times$ Habitat	4.1	1	0.042

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20 **Figure S1** Results from Pearson's correlation analyses of species level turgor loss point (TLP)
 21 from (a) early growing season and (b) late growing season drought tolerance scores from the
 22 index of Niinemets and Valladares (2006).