

Dendrology
FORS 2319
 Instructor: Dr. Jeremy Stovall
 TAs: Mason Helm, Carlos Jackson
 Lecture 1: Intro to Dendro





Before I Forget


- Lab starts **NEXT** week
 - Human Services 321 Tuesday
 - Human Services 314 Wednesday
 - We'll be inside for this one
- Bring a laptop, tablet, or phone to class next Wednesday



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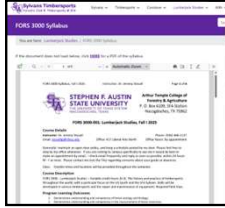
About Me

-  B.S. Clemson '05
-  M.S. UVM '07
-  Ph.D. VT '10
-  Started Aug. '10



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Shameless Sylvans Promo



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4

What is Dendrology?

Dendro =



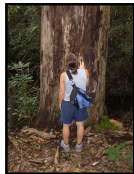
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5

What is a TREE?



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6

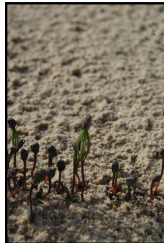
What is a TREE?

- A woody plant that has many secondary branches supported clear of the ground on a single main stem or trunk with clear apical dominance (Wikipedia)
- A woody perennial plant having a single usually elongate main stem generally w/ few or no branches on its lower part (Merriam-Webster)
- A woody plant that at maturity is 13 feet or more in height, with a single trunk at least 3 inches in diameter at breast height, unbranched for at least several feet above the ground, and having a more or less definite crown (Harlow & Harrar; Little)

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7

Are These Trees?



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8

What is a TREE?

"I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so..."

"But I know it when I see it"

— Justice Potter Stewart, concurring opinion in *Jacobellis v. Ohio* 378 U.S. 184 (1964), regarding possible obscenity in *The Lovers*.



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9

What is a TREE?

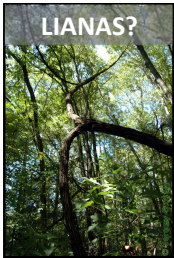
A big plant with a stick up the middle
(Colin Tudge)



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10

But What To Do With These?



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11

Woody Plants




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12

Woody Plants

Coast redwood
Hyperion

380 feet



Almost 4x height of Steen Hall!

102 feet




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13

Woody Plants

- Giant Sequoia
- General Sherman Tree
 - 274.9 feet tall
 - 32.65 foot average width at ground
 - 52,508 cubic feet of volume



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14

Woody Plants

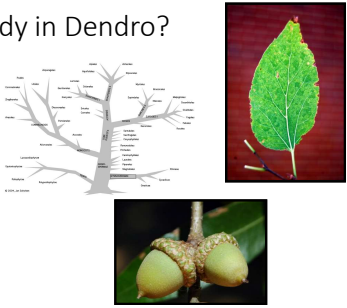


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15


What Do We Study in Dendro?

- Identification
- Morphology
- Taxonomy
- Evolution
- Silvics (Ecology)
- Distribution



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What Do We Study in Dendro?



IDENTIFICATION

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What Do We Study in Dendro?




IDENTIFICATION

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What Do We Study in Dendro?

Who's this? →




How do you know?

IDENTIFICATION

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What Do We Study in Dendro?

Who's this? →

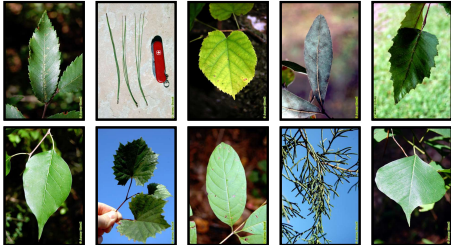


How do you know?

IDENTIFICATION

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What Do We Study in Dendro?



MORPHOLOGY

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MORPHOLOGY

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22

What Do We Study in Dendro?

What does bark look like?




MORPHOLOGY

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23

What Do We Study in Dendro?



MORPHOLOGY

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24

What Do We Study in Dendro?

HABIT: the growth form of a woody plant
Tree, shrub, vine, etc.

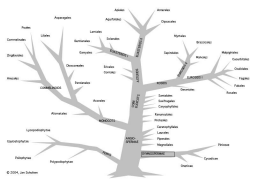


MORPHOLOGY

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25

What Do We Study in Dendro?



Binomial Scientific Name
Genus + specific epithet

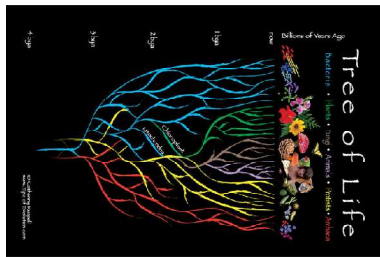
- Acer rubrum*
- Acer floridanum*
- Quercus alba*
- Quercus macrocarpa*
- Toxicodendron vernix*
- Lagerstroemia indica*
- Liquidambar styraciflua*

TAXONOMY

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26

What Do We Study in Dendro?

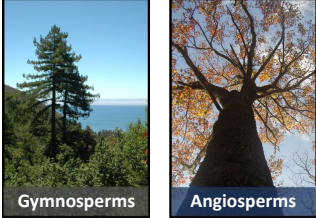


EVOLUTION

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27

What Do We Study in Dendro?




Gymnosperms Angiosperms

EVOLUTION

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What Do We Study in Dendro?

• Gymnosperms




EVOLUTION

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What Do We Study in Dendro?

• Gymnosperms

- "Naked Seed"
- 600 Tree Species
- 8 Families



EVOLUTION

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What Do We Study in Dendro?

- Angiosperms
 - Flowers & Fruits
 - ~60,000 Tree Species
 - ~400 Families
 - ~30 Orders

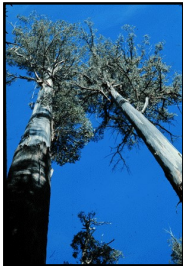


EVOLUTION

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31

What Do We Study in Dendro?



EVOLUTION

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32

What Do We Study in Dendro?



EVOLUTION

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33

What Do We Study in Dendro?



EVOLUTION

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34

What Do We Study in Dendro?

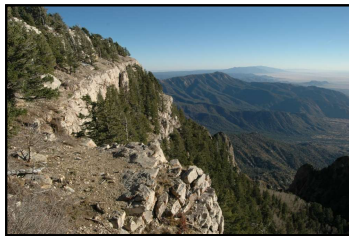
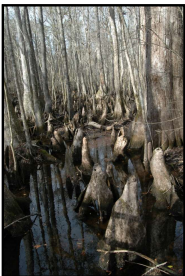


EVOLUTION

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35

What Do We Study in Dendro?



SILVICS (ECOLOGY)

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36


What Do We Study in Dendro?



SILVICS (ECOLOGY)

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What Do We Study in Dendro?



SILVICS (ECOLOGY)

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What Do We Study in Dendro?



SILVICS (ECOLOGY)

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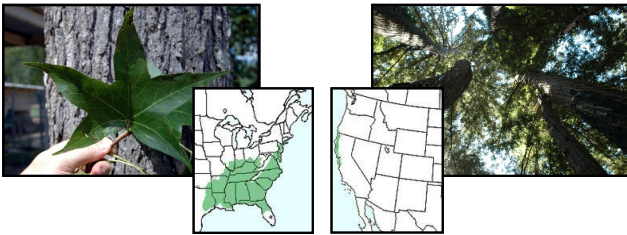


SILVICS (ECOLOGY)

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40

What Do We Study in Dendro?



DISTRIBUTION

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41
