



**Dendrology**  
FORS 2319  
Instructor: Dr. Jeremy Stovall  
Lecture 7:  
Identifying Unknowns with Keys

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### Taxonomic Keys

- Keys are used to identify an unknown plant
  - Often difficult to get to an herbarium
  - Don't have access to digital resources in field
- Keys are a series of statements
  - Compare physical characteristics with your specimen
  - If they don't match up, eliminate that possibility
  - Eventually, you can identify the species



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### Types of Keys

- Dichotomous
  - Indented (Nixon)
  - Bracketed
- Multichotomous
  - Database driven (VT)
  - Multiple choices



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### Key Use Example



- 1. Specimen has opposite leaf arrangement.....2
- 1. Specimen has alternate leaf arrangement.....3
  - 2. Serrate margins.....*Acer rubrum*
  - 2. Entire margins.....*Acer floridanum*
- 3. Oval leaf shape.....*Ostrya virginiana*
- 3. Deltoid leaf shape.....*Betula nigra*

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### Tips to Constructing a Good Key

*From Fralish and Franklin 2002*

- Develop a title that gives the scope
  - Morphology (leaf, twig)
  - Geographic range
  - Then stay within your scope
- Provide a list of species included
- Include only 2 alternatives in a couplet
- Make sure alternatives actually oppose each other
  - Leaf > 1.4 cm vs. twig brown: what do you do when both are true?
  - Leaf  $\geq$  1.4 cm vs. leaf < 1.4 cm long works better

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### Tips to Constructing a Good Key

*From Fralish and Franklin 2002*

- Use correct jargon
- Use quantitative measurements
  - Not long vs. short
  - More than 6 in. vs. less than or equal to 6 in.
- Don't use negatives
  - Leaf margin entire is better than margin not serrate
- Name plant part (i.e. margin, apex, bud scale) before describing it

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### Tips to Constructing a Good Key

*From Fralish and Franklin 2002*

- Check for dead ends and logical inconsistencies
- About same number of couplets as species is reasonable
  - More means it could be done better
  - Less means it is probably wrong
- KISS

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