

Dendrology (Tree I.D.)



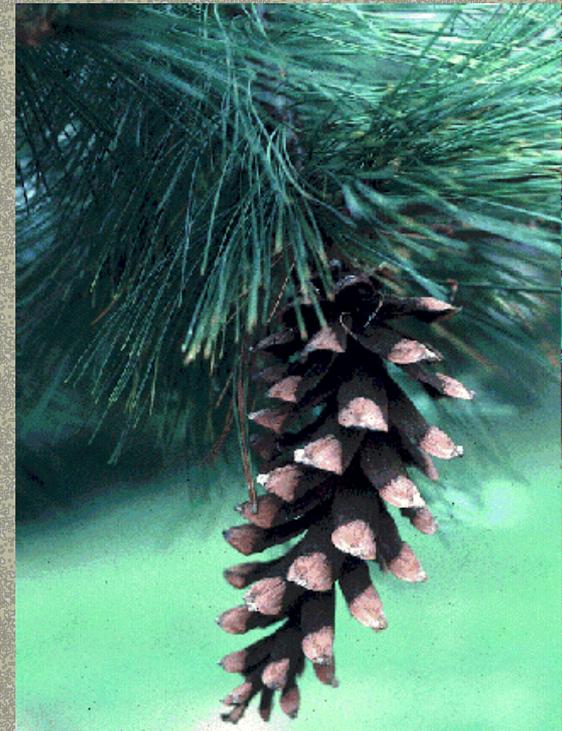
Mary Carol Sheffield, Paulding County
Extension Coordinator

Paulding County 4-H Forestry Judging Coach



Softwoods

- Foliage
 - Needles, scales
- Reproduction
 - cones
- Examples
 - Pines, hemlocks, cedars, cypresses





Hardwoods

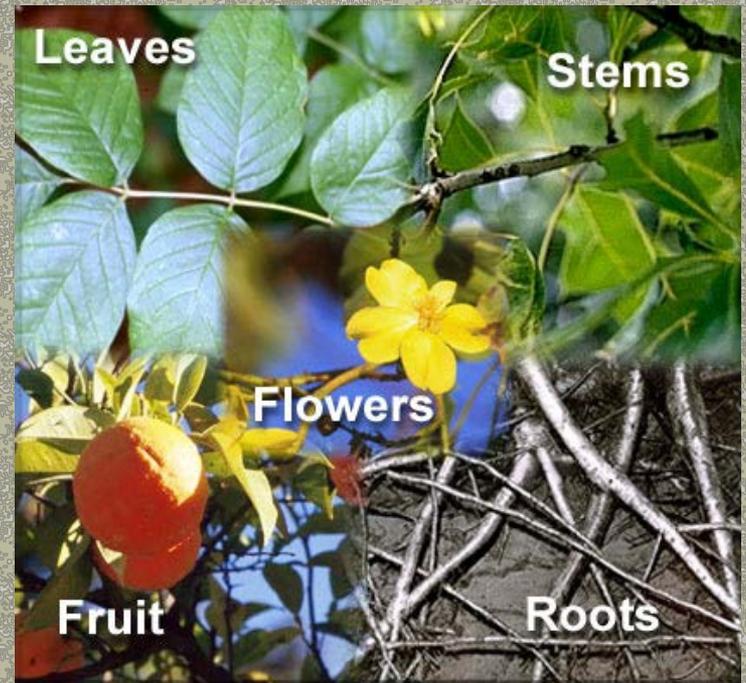
- Foliage
 - Broadleaf
- Reproduction
 - Flowers
- Examples
 - maple, oak, pecan, walnut





Tree Identification Features

- Leaves
- Twigs and stems
- Bark
- Flowers
- Fruit and seeds
- Cones





Tree Identification

Leaf Characteristics

- Part
- Type
- Shape
- Arrangement on the stem
- Venation
- Shape of apex and base
- Margin
- Surface

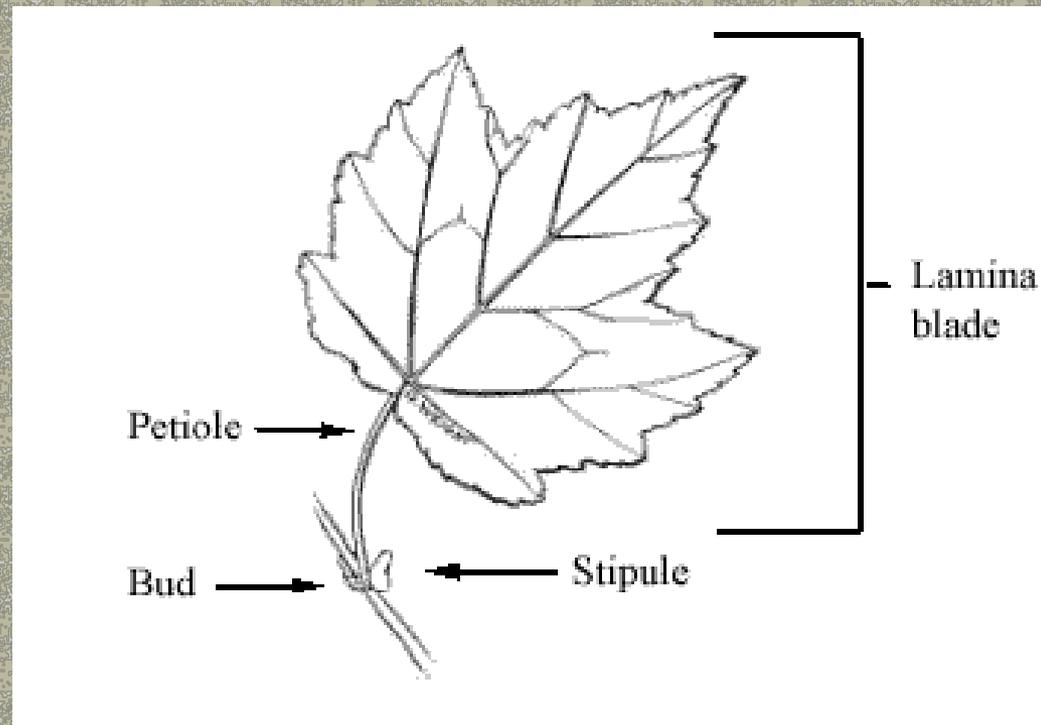




Tree Identification

Leaf Characteristics

■ Parts

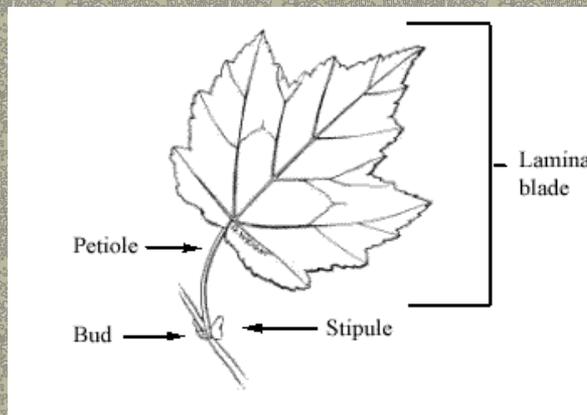




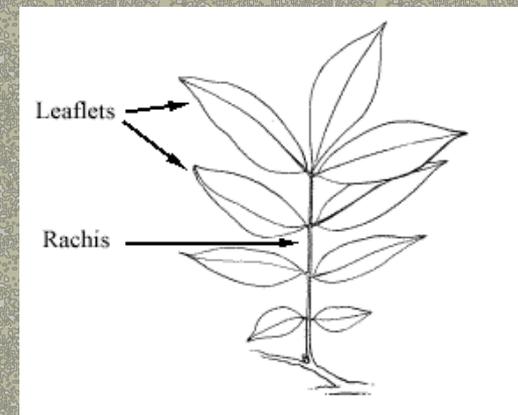
Tree Identification

Leaf Characteristics

- Type
 - Hardwood



Simple Leaf



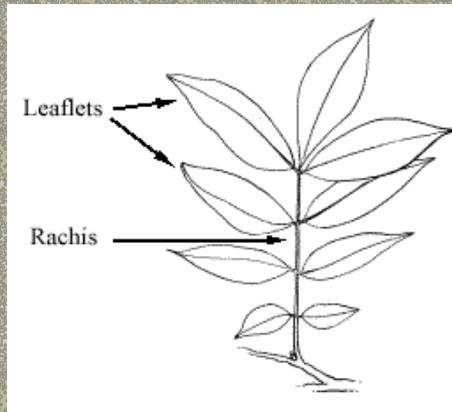
Compound Leaf



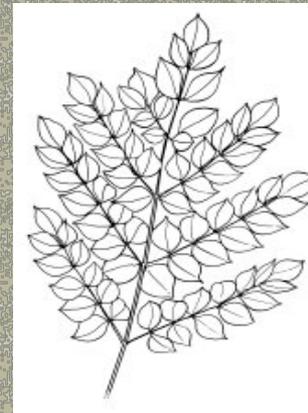
Tree Identification

Leaf Characteristics

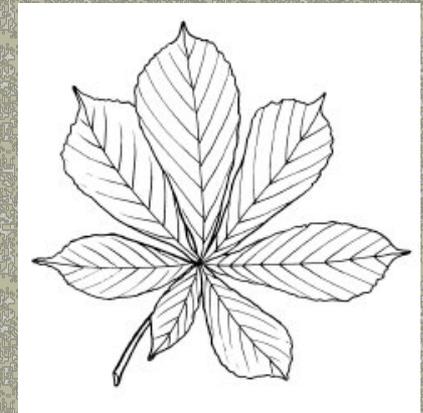
- Type
 - Hardwood - Compound



Pinnate



Bipinnate



Palmate



Tree Identification

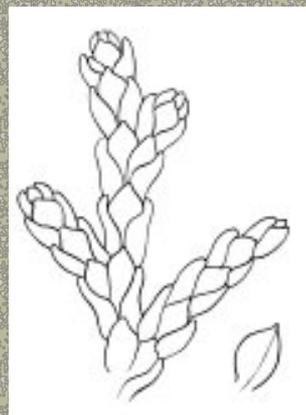
Leaf Characteristics

- Type

- Softwood



Awl-like



Scale-like



Needle-like



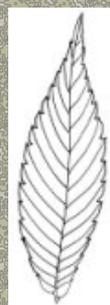
Tree Identification

Leaf Characteristics

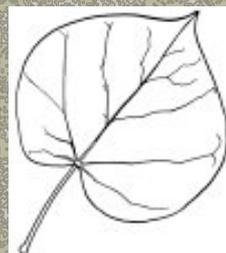
■ Shape



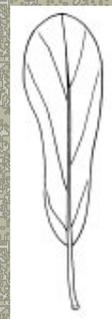
Ovate



Lanceolate



Cordate



Spatulate



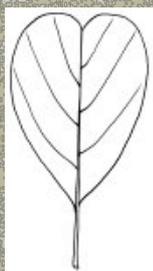
Elliptical



Obovate



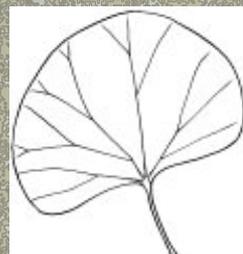
Oblanceolate



Obcordate



Oblong



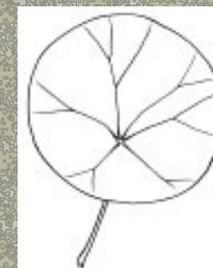
Reniform



Linear



Cuneate



Peltate



Hastate



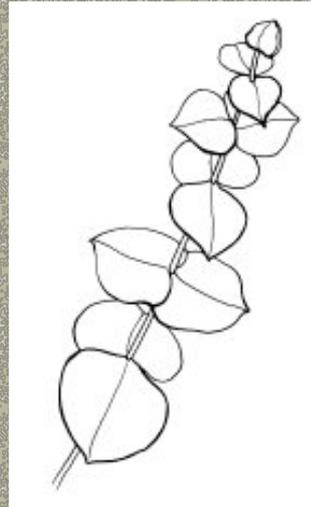
Tree Identification

Leaf Characteristics

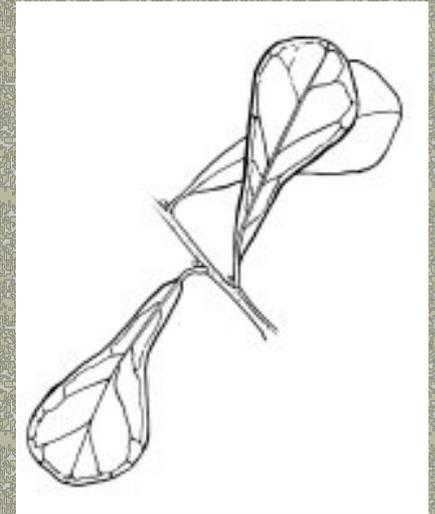
- Arrangement on the stem



Opposite



Whorled



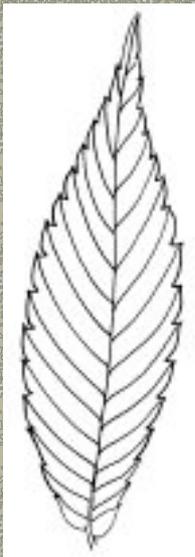
Alternate



Tree Identification

Leaf Characteristics

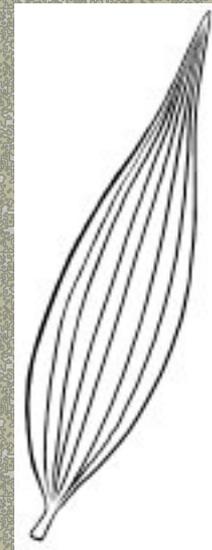
■ Venation



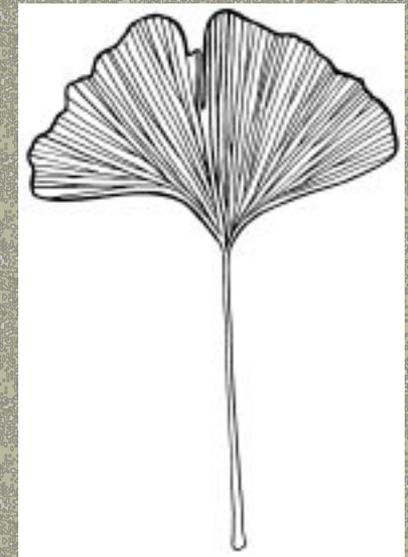
Pinnate



Palmate



Parallel



Dichotomous

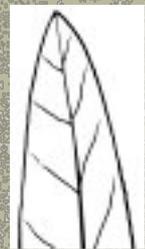


Tree Identification

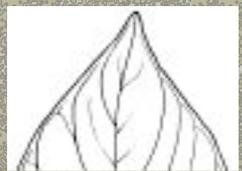
Leaf Characteristics

- Shape of apex and base

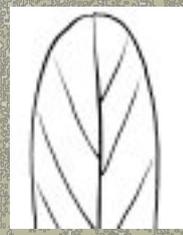
Apices



Acute



Acuminate



Obtuse



Truncate



Emarginate



Cuspidate

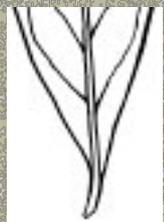
Bases



Obtuse



Acute



Cuneate



Oblique



Cordate



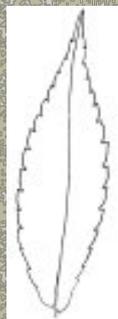
Tree Identification

Leaf Characteristics

■ Margin



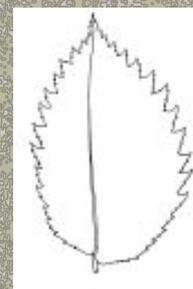
Entire



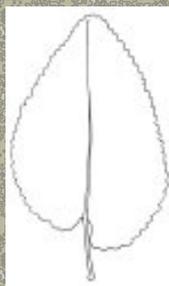
Serrate



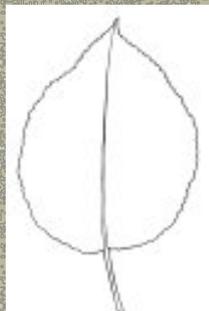
Serrulate



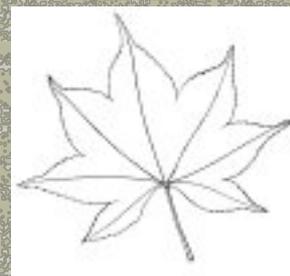
Doubly-serrate



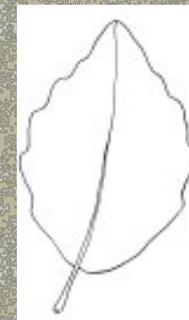
Dentate



Crenate



Incised (lobed)



Sinuate

1. American Basswood

- Hardwood
- Simple
- Alt
- Heart w/oblique base
- toothed
- Dangling leave with berry



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2. American beech

- Hardwood
- Simple
- Alternate
- Leaf shape with distinct parallel veins, toothed
- beechnut



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3. American elm

- hardwood
- Simple
- Alternate
- Offset leaf base with teeth and distinct veins
- Small seeds with flat wing



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4. American holly

- hardwood
- , but evergreen
- Simple
- Alternate
- Thick Leaves with prickles/spines
- Red berries on female plants- plants are dioecious



5. baldcypress

- Softwood
- Needled, but deciduous
- Feather like
- Ball shaped cones



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6. black cherry

- hardwood
- Simple
- Alternate
- Leaf shape
 - With toothed margin and gland at base
- Fruit is a black berry



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7/18/18 Start here

7. Blackgum

- Hardwood
- Simple
- Alternate
- Green, glossy leaf shape
- Smooth edge
- 2 purple/black berries attached by long stem



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8. black locust

- Hardwood
- Compound- innate
- alternate
- 11-19 Rounded oval leaflets
- Bean pod



9. black oak

- Hardwood
- Simple
- Alternate
- 5 to 9 inches long and have 5 to 7 irregular bristle tipped lobe



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10. black walnut

- hardwood
- Compound-even pinnate
- Alternate
- 12-16 leaflet



11. black willow

- hardwood
- Simple
- Alternate
- Long narrow leaves
- Found near creeks and bottoms



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12. boxelder

- Hardwood
- Compound
- Opposite-Maple family
- Poison ivy like
- Toothed
- Samaras (helicopters)



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13. buckeye

- Hardwood
- Compound
- Opposite
- Leaflets like fingers around a palm, toothed
- Buckeye nut



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14. catalpa

- Hardwood
- Simple
- Alternate
- Heart shaped, bright green with fuzzy feel
- Smooth edge
- Long beans



15. chestnut oak

- Hardwood
- Simple
- Alternate
- Leaf shaped-
wavy edge
- Acorns



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16. common persimmon

- Hardwood
- Simple
- Alternate
- Leaf shape
- Smooth
- Persimmon-
orange when ripe



17. eastern cottonwood

- Hardwood
- Simple
- Alternate
- Flat bottomed leaf with point
 - Like a Hershey's kiss shape



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18. eastern hemlock

- Softwood
- Short needles (less than 1 inch)
 - Arranged like a feather on stem
 - White stripes on back
- Cone-less than 1 inch long



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19. eastern redbud

- Hardwood
- Simple
- Alt
- Heartshaped with Smooth margin
- Beanpod



20. eastern redcedar

- Softwood
- Needled
- Scale like needles
- Berry like fruit/blue



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21. eastern white pine

- Softwood
- Needles-
Fascicles of 5-
2.5-5 inches long,
Blue-green color
- Cones are 4-8
inches long



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22. flowering dogwood

- Hardwood
- Simple
- Opposite
- Elliptical with smooth margin and curved veins
- Cluster of red berries



23. live oak

- Hardwood-also evergreen
- Simple
- Alternate
- Long narrow leaf-thick and glossy
- Acorns



24. loblolly pine

- Softwood
- Needles- Fascicles of 3
- Needles are 7 inches long
- Cones are 5 inches long



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25. longleaf pine

- Softwood
- Needles- Fascicles of 3
- Needles very long-up to 17 inches
- Cones are 11 inches long



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26. mockernut hickory

- hardwood
- Compound-odd pinnate
- alternate
- 5-7 leaflets
- Hickory nut
- Fuzzy-velvety petioles (leaf stem) and bud
- Round nut



27. pecan

- hardwood
- Compound- odd pinnate
- 11-15 leaflets that curve downward
- pecan



28. pignut hickory

- hardwood
- compound- odd pinnate
- Alternate
- 5-7 leaflets with smooth petiole (leaf stem) and bud
- Hickory nut that looks like a jug



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29. post oak

- Hardwood
- Simple
- Alternate
- Cross shape
- Smooth
- acorn



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30. red maple

- Hardwood
- Simple
- Opposite
- 3 lobes, red petiole (sometimes)
- Winged Samara (helicopters)



31. red mulberry

- Hardwood
- Simple
- Alternate
- Heartshaped, toothed, some have lobes (mitten and ghost)
- Berry (drupe)



32. river birch

- Hardwood
- Simple
- Alternate
- Like an arrowhead
- Toothed



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33. sassafras

- hardwood
- Simple
- Alternate
- 3 leaf shapes-ghost, mitten, leaf
- Root smells like root beer



34. shortleaf pine

- Softwood
- Needles-
Fascicles of 2
(sometimes 3)
- Needles are 2-5
inches long
- Cones are 2
inches long



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35. silver maple

- Hardwood
- Simple
- Opposite
- 5 points
- Lobed



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36. slash pine

- Softwood
- Needles- Fascicles of 2 (sometimes 3)
- Needles are 9 inches long
- Cones are 7 inches long



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37. southern magnolia

- hardwood
- Simple
- Alternate
- Evergreen thick, wide with reddish brown hairy underside
- cone of follicles



36. southern red oak-start here 6/26

- Hardwood
- Simple
- Alternate
- Long w/bell shaped base



39. Sweetgum

- Hardwood
- Simple
- Alternate
- Star shaped-5 pointed lobes
- “Gumballs”



40. sycamore

- Hardwood
- Simple
- Alternate
- Wide/pointed in 3-5 places
- Lobed
- Round ball



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41. Virginia pine

- Softwood
- Needles-
Fascicles of 2
- Needles are 2
inches long and
twisted
- Cones are 2
inches long w/
purple lip inside
scales



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42. water oak

- Hardwood
- Simple
- Alternate
- Spatulate with a single bristle tip
- Acorns



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43. white oak

- Hardwood
- Simple
- Alternate
- 7-10 round lobes.
Lobes lack bristle tips and sinuses range from deep to shallow.
- Acorns



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44. yellow-poplar

- Hardwood
- Simple
- Alternate
- with 4-6 lobes and a square, notched apex
- cone-like cluster of samaras



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45. American hornbeam-Senior only

- hardwood
- Simple
- Alternate
- Leaf shape
- Paper lantern fruit
- Muscular bark



46. blackjack oak –Senior Only

- Hardwood
- Simple
- Alternate
- leathery w up to 3 large, bristle-tipped lobes, dark green on surface, very hairy below, fan shaped
- acorns



47. butternut Senior only

- hardwood
- Compound-odd pinnate
- 7-15 leaflets
- Nut like a fuzzy pecan



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48. cucumbertree

- Hardwood
- Simple
- Alternate
- Large, oblong, smooth edge
- acorns



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49. deodor cedar-Senior Tree

- Softwood
- Needled tree
- Needles are blue-green and short (2 inches or less)



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50. ginkgo – Senior Tree

- Softwood
- Simple
- Alternate
- Fan shaped
- Lobed
- Round cone



51. hackberry – Senior only

- hardwood
- Simple
- Alternate
- Leaf has 3 main veins from the bottom form fork
- Small berry



52. hawthorn – senior only

- Hardwood
- Simple
- Alternate
- small leaves are narrowed or tapered at the base, tips are round pointed and coarsely toothed



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53. hazel alder – senior only

- Hardwood
- Simple
- Alternate
- Leaf shape
- Produces a fruit that looks like a 1 inch cone



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54. honey locust Senior Only

- Hardwood
- Compound
- Alternate
- Pinnately-double compound
- May have thorns
- Bean pod-flat



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55. mimosa

- Hardwood
- Compound
- Alternate
- Pinnately-double compound
- Pink fuzzy flowers
- Bean pod-flat with ridges



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56. northern red oak –Senior only

- Hardwood
- Simple
- Alternate
- 7-11 bristle-tipped lobes that go less than 1/2 way to the midrib
- Acorns



57. northern white-cedar-Senior only

- Softwood
- Scales- flat and filigree sprays made up of tiny, scaly leaves.
- Fruit is a small cone 1/2 inch long and upright from scales



58. overcup oak -Senior only

- Hardwood
- Simple
- Alternate
- with 5-9 smooth and irregular lobes.
- Acorns



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59. pitch pine –Senior only

- Softwood
- Needles-
Fascicles of 3
sometimes 2
- Needles are 4
inches long, blue-
green and twisted
- Cones are 3
inches long



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60. red spruce – Senior Only

- Softwood
- four-sided, short, yellowish green needles on woody pegs.
- cones, are 1.5 inches long.



61. sawtooth oak

- Hardwood
- Simple
- Alternate
- Leaves up to 7 inches long, elliptical, and with bristle-tipped teeth.
- Acorns with long “hair-like” scales



62. scarlett oak – Senior only

- Hardwood
- Simple
- Alternate
- Leaves up to 7 inches long, elliptical, and with bristle-tipped teeth.
- Acorns with long “hair-like” scales



63. slippery elm – senior only

- Hardwood
- Simple
- Alternate
- Leaf shape with obtuse (offset) base
- Name is deceiving-not slippery to the touch-scratchy



64. sourwood- Senior only

- Hardwood
- Simple
- Alternate
- Leaf-
long, droopy
- smooth



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65. sugar maple- Senior Tree

- Hardwood
- Simple
- Opposite
- Like the Canadian flag maple leaf
- Lobed
- Samaras (helicopters)



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66. sweet birch – Senior only

- Hardwood
- Simple
- Alternate
- Leaves doubly saw-toothed margins.
- fruit consists of cone-like strobili



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67. white ash - Senior only

- Hardwood
- Compound
- Opposite
- 5-9 ovate leaflets.
- Winged samara



UGA0008290

68. Willow Oak –Senior Tree

- Hardwood
- Simple
- Alternate
- Long and narrow
- Smooth
- acorn



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69. winged elm – Senior only

- Hardwood
- Simple
- Alternate
- Leaf doubly serrate, 1-3 inches long
- fruit is a notched samara



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70. Yaupon holly – senior only

- Hardwood, but evergreen
- Simple
- Alternate
- Small leaves, no prickles
- berries



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