

- T. Stems prickly ..... Greenbrier (*Smilax*)
- TT. Stems not prickly.
  - U. Flower and fruit clusters longer than wide ..... Grape (*Vitis*)
  - UU. Flower and fruit clusters wider than long .... Heart leaf ampelopsis (*Ampelopsis cordata*)
- SS. Trees or shrubs.
  - V. Leaves lobed half way or more to the middle.
    - W. Lobes ending in a slender bristle.
      - X. Under surface of leaves hairless ..... Spotted oak (*Quercus shumardii*; fig. 21)
      - XX. Under surface of leaves short-hairy ..... Black oak (*Quercus velutina*)
    - WW. Lobes not ending in a bristle.
      - Y. Leaves with teeth as well as lobes; occasional leaves of .... Red Mulberry (*Morus rubra*; fig. 23)
      - YY. Leaves lobed but without teeth ..... Post oak (*Quercus stellata*; fig. 22)
  - VV. Leaves toothed or wavy margined but not deeply lobed.
    - Z. Leaves large (commonly 5 inches or more wide), about as broad as long, angularly lobed ..... American sycamore (*Platanus occidentalis*; fig. 23)
    - ZZ. Leaves more nearly triangular, oval, or narrow or obviously broadest above the middle.
      - a. Leaves broadest above the middle.
        - b. Leaves mostly 3 to 4 inches long.
          - c. Widest portion of the leaves about 1.5 inches ..... Water oak (*Quercus nigra*; fig. 21)
          - cc. Widest portion of the leaves 2.5 inches or more ..... Blackjack oak (*Quercus marilandica*; fig. 21)
        - bb. Leaves mostly 2.5 inches or less long.
          - d. Leaves broadest well above the middle; twigs sometimes thorny; petals 5, in loose clusters at the end of branchlets; fruits with remaining flower parts at the top as in an apple .... Little hip hawthorne (*Crataegus spathulata*)
          - dd. Leaves broadest only slightly above the middle; twigs never thorny; petals 4, flowers mostly single or few in a cluster on short stalks along the stem; fruits with remaining flower parts, if any, at the stem end more nearly like a cherry ..... Possumhaw (*Ilex decidua*)
      - aa. Leaves broadest near the middle or below.
        - e. Leaves broadest near their lop-sided base; 3 major veins arising from the leaf base; leaves 2 to 4 or more inches long, alternating on but two sides of the twigs ..... Hackberry (*Celtis occidentalis*)
        - ee. Leaves differing in one or more ways from the above.
          - f. Leaf stalks commonly 2 inches or more long, as long or longer than the triangular leaf ..... Eastern cottonwood (*Populus deltoides*; fig. 25)
          - ff. Leaf stalks less than 2 inches long, never so long as the leaf.
            - g. Base of leaf on each side of midrib straight and parallel with the straight lateral veins ..... River birch (*Betula nigra*; fig. 22)
            - gg. Base of leaf rounded, tapering, or heartshaped, hence if lateral veins straight, then not parallel to the leaf base.
            - h. Leaves more than 3 inches long.
              - i. Leaves 0.5 inch or less wide ..... Black willow (*Salix nigra*; fig. 22)
              - ii. Leaves an inch or more wide.
                - j. Teeth over 20 on each edge of the leaf.
                  - k. Veins on each side of the midrib fewer than 10 ..... Red mulberry (*Morus rubra*; fig. 23)
                  - kk. Veins on each side of the midrib more than 10 ..... American elm (*Ulmus americana*; fig. 24)
                - jj. Teeth fewer than 15 on each edge of the leaf; leaves sometimes appearing as wavy margined.
                  - l. Veins about 10 on each side of the midrib ..... Chinquapin oak (*Quercus muhlenbergii*; fig. 21)
                  - ll. Veins about 6 on each side of the midrib; leaves often but wavy margined ..... Ozark witch-hazel (*Hamamelis vernalis*; fig. 24)
          - hh. Leaves 3 inches or less long.
            - m. Leaves about as broad as long, broadly triangular to nearly round in outline, sharply toothed; twigs usually thorny ... Downy hawthorne (*Crataegus mollis*)