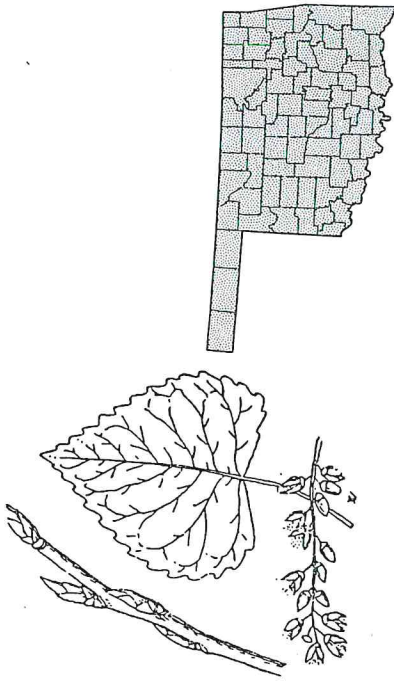


15. EASTERN COTTONWOOD

Populus deltoides Bart. ex Marsh.; cottonwood, Carolina poplar.

Large tree 50-80 ft (15-24 m) high with stout trunk 1-4 ft (0.3-1.2 m) in diameter, often forked into large branches, and with broad irregular open crown. Twigs stout, often angled, green or yellow brown, hairless, with raised triangular leaf-scars. Buds large, long-pointed, light brown, with several shiny scales, resinous.



21. BITTERNUT HICKORY

Carya cordiformis (Wangenh.) K. Koch; bitternut, pignut.

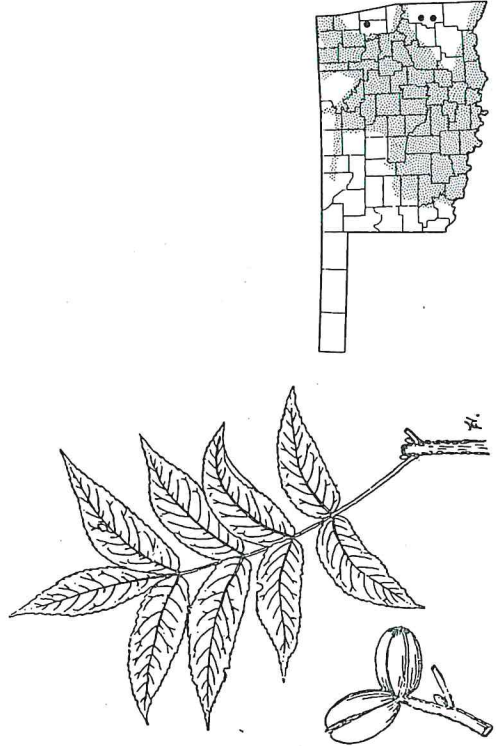
Medium-sized to large tree 60 ft (18 m) high and 1 ft (0.3 m) in diameter, with broad rounded crown. Twigs slender, becoming reddish brown and hairless. End bud bright yellow, narrow and slightly flattened, with paired scales not overlapping.



23. PECAN

Carya illinoensis (Wangenh.) K. Koch

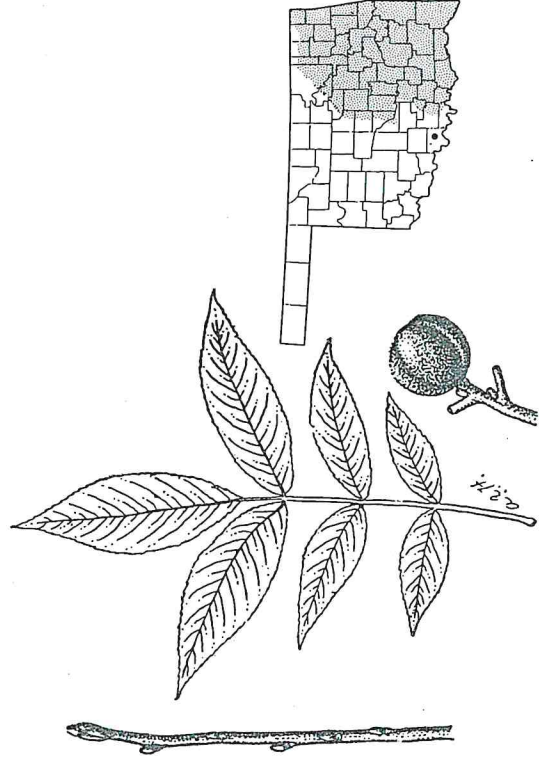
Large tree 70 ft (21 m) high and 2½ ft (0.8 m) in diameter, with broad rounded crown of large spreading branches. Twigs stout, gray brown, becoming hairless or nearly so. End bud narrow, with yellowish hairs and paired scales not overlapping.



27. BLACK HICKORY

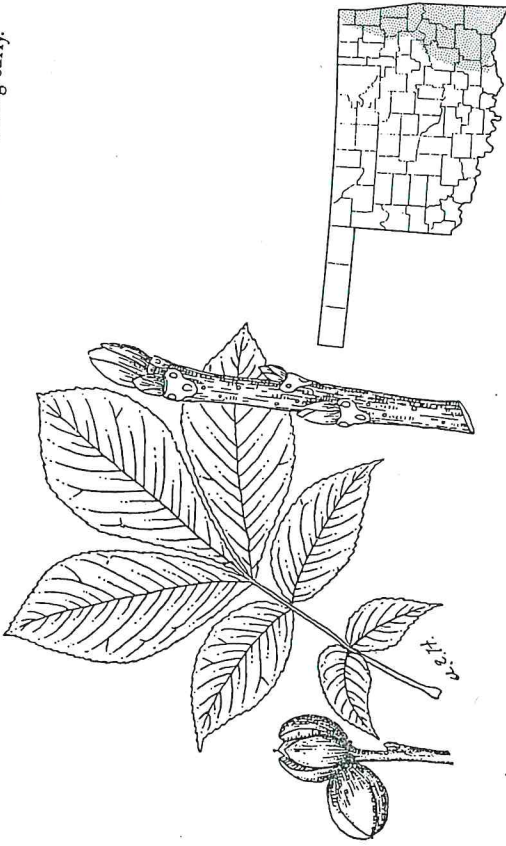
Carya texana Buckl.

Small to medium-sized tree 30 ft (9 m) high and 1 ft (0.3 m) in diameter, with irregular spreading crown. Twigs slender, brown, with rusty hairs when young. End bud egg-shaped, covered with rusty hairy overlapping scales.



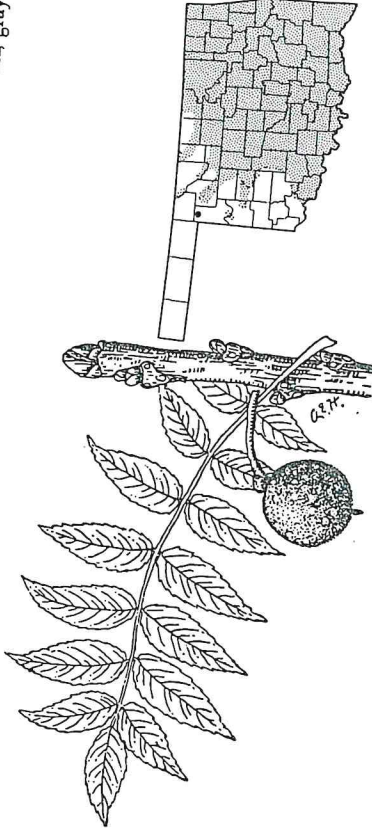
28. MOCKERNUT HICKORY

Carya tomentosa (Poir.) Nutt.; mockernut, white hickory, whiteheart hickory. Medium-sized to large tree 60 ft (18 m) high and 1½ ft (0.5 m) in diameter, with rounded crown. Twigs stout, brown, hairy, with large half-round slightly raised leaf-scars. End bud large, egg-shaped, covered by overlapping gray hairy scales, outer scales falling early.



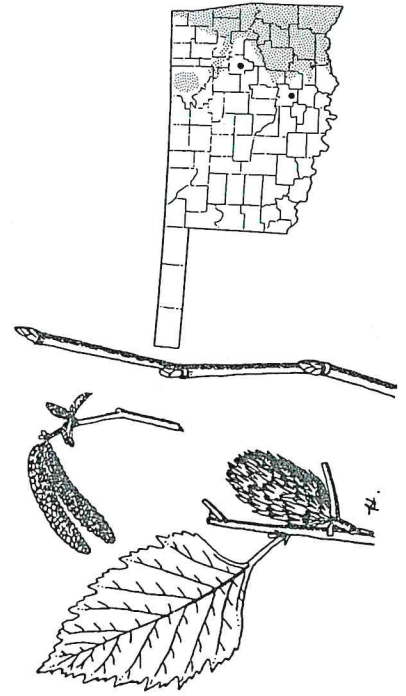
30. BLACK WALNUT

Juglans nigra L. Large tree 50 ft (24 m) high and 2 ft (0.3 m) in diameter, formerly larger, with rounded crown and foliage with distinctive walnut odor. Twigs stout, gray, finely hairy when young, bud narrow, with paired gray hairy scales, and with brown pith divided into plates (chambered). End hairy. side buds paired, rounded, 1 above other, gray



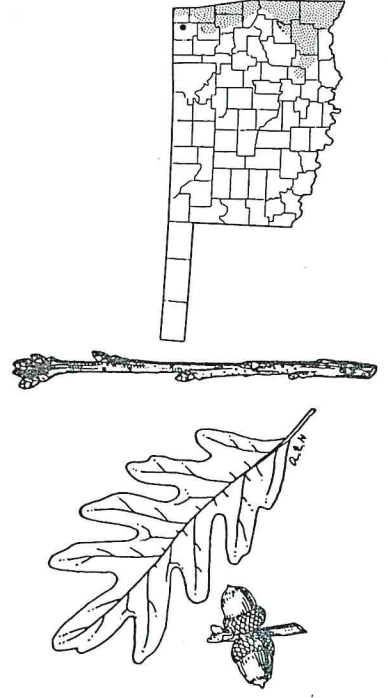
33. RIVER BIRCH

Betula nigra L.; red birch. Medium-sized to large tree 60 ft (18 m) high with straight trunk 1½ ft (0.5 m) in diameter, often leaning over water, and with irregular spreading crown. Twigs slender, slightly zigzag, red brown, hairy when young. Buds short-pointed, hairy when young, becoming shiny brown, with 2-3 scales; end bud usually shedding.



39. WHITE OAK

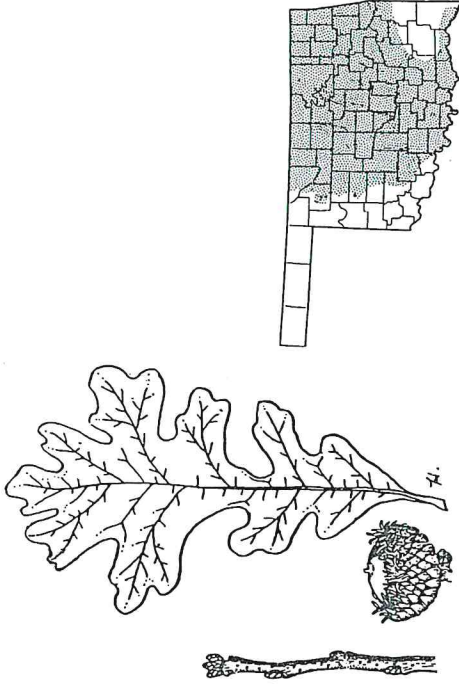
Quercus alba L. Large tree 80 ft (24 m) high, with trunk 2½ ft (0.8 m) in diameter, irregularly divided into spreading stout branches, and with rounded crown. Twigs slender, gray, becoming hairless, with star-shaped pith, ending in cluster of small broadly egg-shaped blunt brown hairless buds.



46. BUR OAK

Quercus macrocarpa Michx.; mossycup oak.

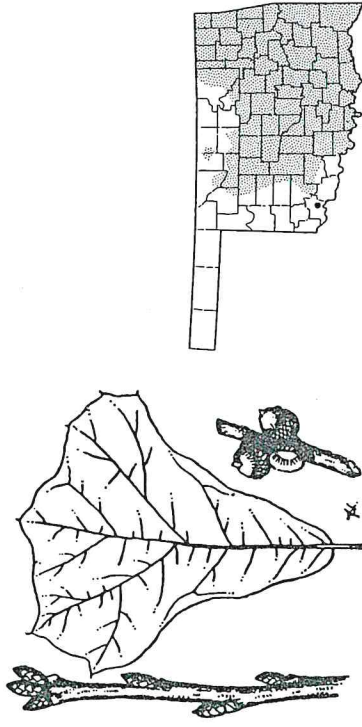
Small to large tree 60 ft (18 m) high and 1½ ft (0.5 m) in diameter, with broad rounded open crown of stout spreading branches. Twigs stout, gray hairy, sometimes with corky wings or ridges, ending in cluster of broadly egg-shaped blunt gray, soft hairy buds.



47. BLACKJACK OAK

Quercus marilandica Muenchh.; blackjack.

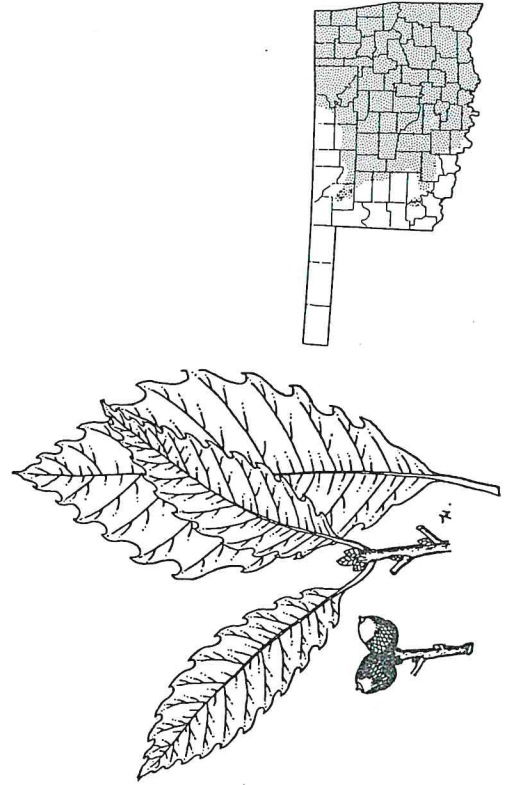
Small, sometimes medium-sized tree 20-60 ft (6-18 m) high and 1 ft (0.3 m) in diameter, with irregular spreading open crown of crooked stiff branches and many dead twigs. Twigs slender, finely hairy when young, light brown, ending in cluster of angled pointed rusty brown hairy buds.



50. CHINKAPIN OAK

Quercus muehlenbergii Engelm.

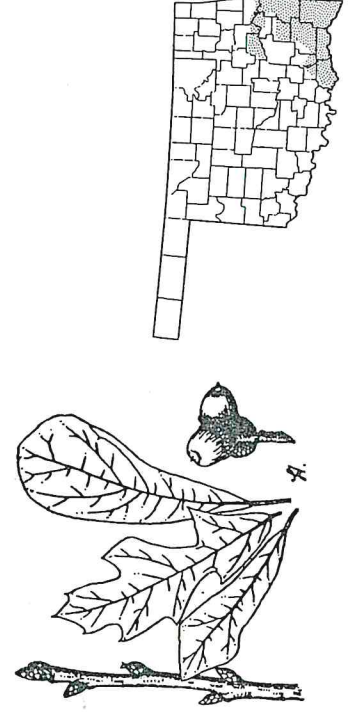
Large tree 60 ft (18 m) high and 1 ft (0.3 m) in diameter, with narrow rounded crown. Twigs slender, gray hairless, ending in cluster of pointed light brown hairless buds.



51. WATER OAK

Quercus nigra L.

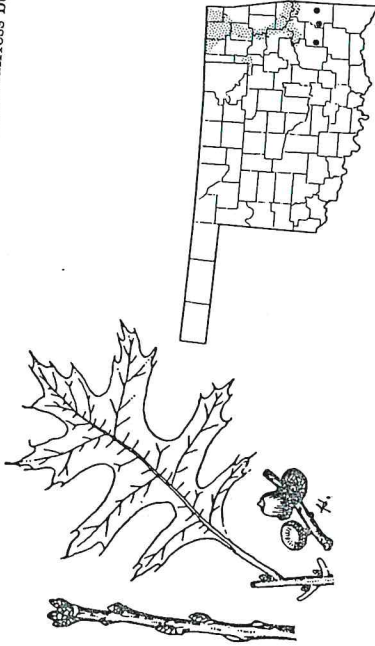
Medium-sized to large tree 80 ft (24 m) high and 2 ft (0.6 m) in diameter, with rounded crown. Twigs slender, gray brown, hairless, ending in angled pointed, dark red finely hairy buds.



53. PIN OAK

Quercus palustris Muenchh.

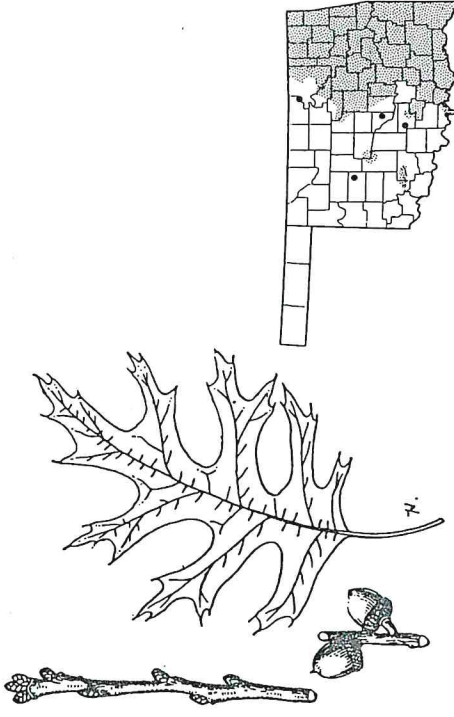
Medium-sized to large tree 70 ft (21 m) high, with straight trunk 1½ ft (0.5 m) in diameter, compact conical crown of slender nearly horizontal branches often remaining reddish brown, when dead, and with many short twigs like pins. Twigs slender, shiny dark reddish brown, ending in cluster of narrow short-pointed dark brown hairless buds.



56. SHUMARD OAK

Quercus shumardii Buckl.; spotted oak, red oak.

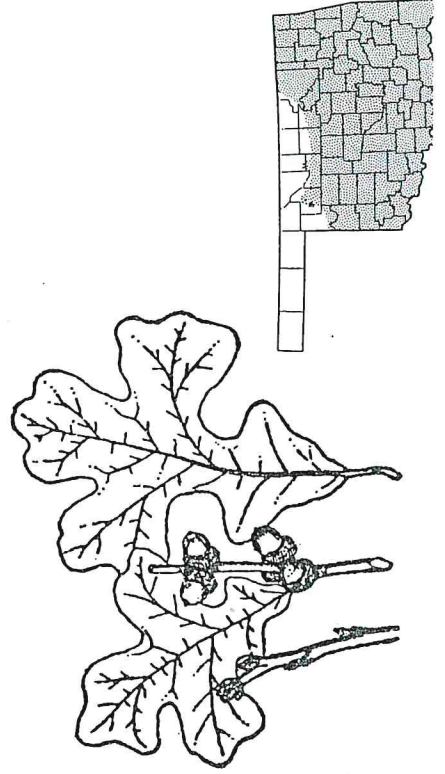
Medium-sized to large tree 80 ft (24 m) high, with straight trunk 1½ ft (0.5 m) in diameter and broad rounded crown. Twigs slender, gray, hairless, ending in cluster of narrow pointed gray hairless buds.



57. POST OAK

Quercus stellata Wangenh.

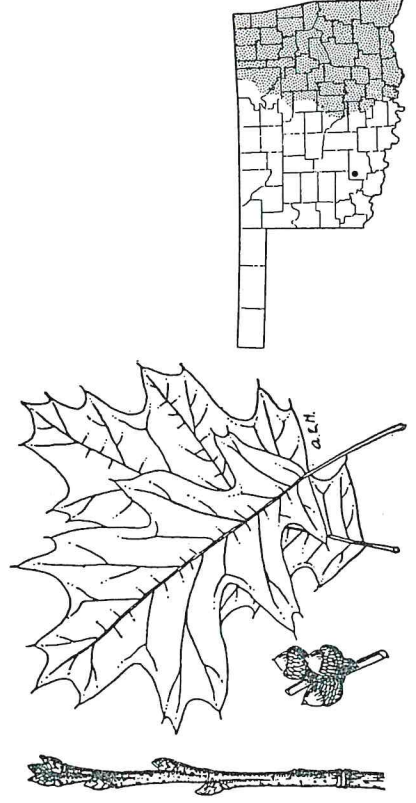
Small or medium-sized tree 20-60 ft (6-18 m) high and 1½ ft (0.5 m) in diameter, with spreading rounded dense crown, sometimes a shrub. Twigs stout, gray, hairy when young, ending in cluster of broad blunt light reddish brown buds, nearly hairless.



58. BLACK OAK

Quercus velutina Lam.

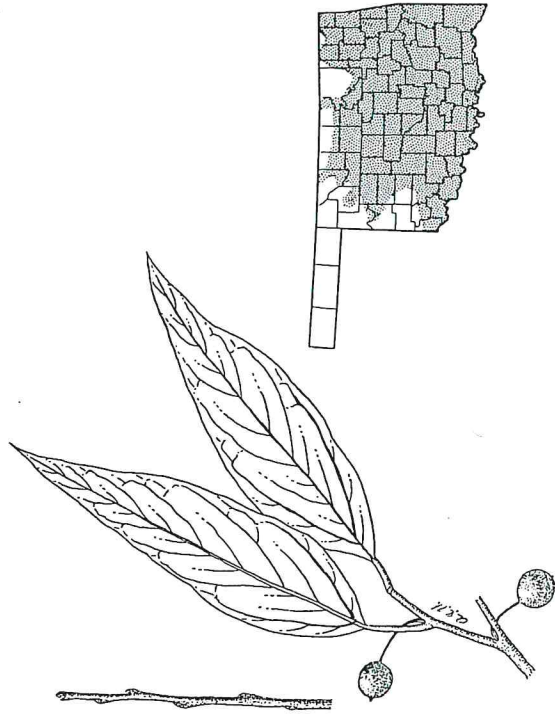
Medium-sized to large tree 70 ft (21 m) high and 1½ ft (0.5 m) in diameter, with wide-spreading open crown. Twigs stout, brown, hairy when young, ending in cluster of large 5-angled blunt, brown gray hairy buds.



60. SUGARBERRY

Celtis laevigata Willd.; hackberry, southern hackberry.

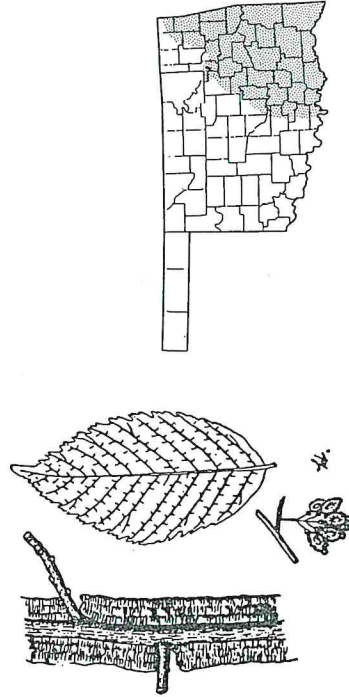
Medium-sized to large tree 60 ft. (18 m) high and 2 ft. (0.6 m) in diameter, with widespreading irregular crown. Twigs slender, slightly zigzag, brown, becoming hairless; pith with chambers and plates. Buds slightly flattened and pressed against twig, pointed, light brown, slightly hairy, with about 4 scales in 2 rows; no end bud.



65. WINGED ELM

Ulmus alata Michx.; cork elm, wahoo.

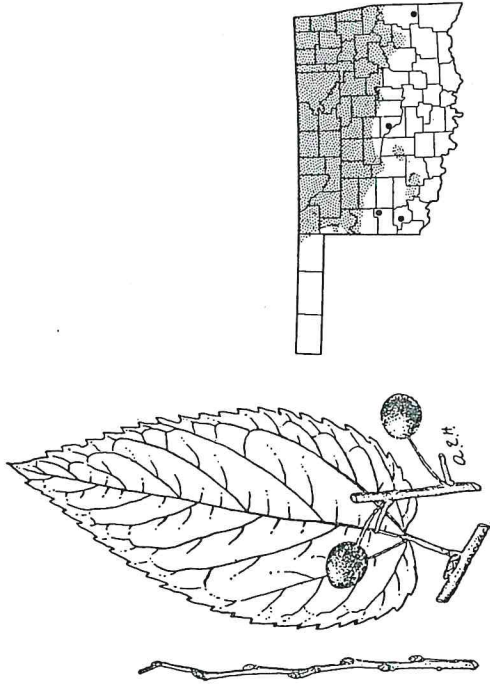
Small to medium-sized tree 50 ft (15 m) high and 1 ft (0.3 m) in diameter with rounded open crown. Twigs very slender, gray, hairless, often forming 2 flat corky ridges or wings. Buds egg-shaped, pointed to side, covered by hairy brown scales in 2 rows; no end bud.



61. HACKBERRY

Celtis occidentalis L.; northern hackberry.

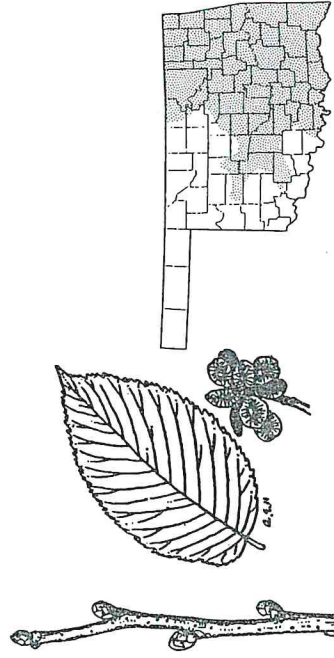
Medium-sized to large tree 60 ft. (18 m) high and 2 ft (0.6 m) in diameter, with rounded spreading open crown. Twigs slender, slightly zigzag, light brown, hairless; pith with chambers and plates. Buds slightly flattened and pressed against twig, pointed, light brown, with about 4 scales in 2 rows; no end bud.



70. SLIPPERY ELM

Ulmus rubra Muhl. (*U. fulva* Michx.); red elm, soft elm.

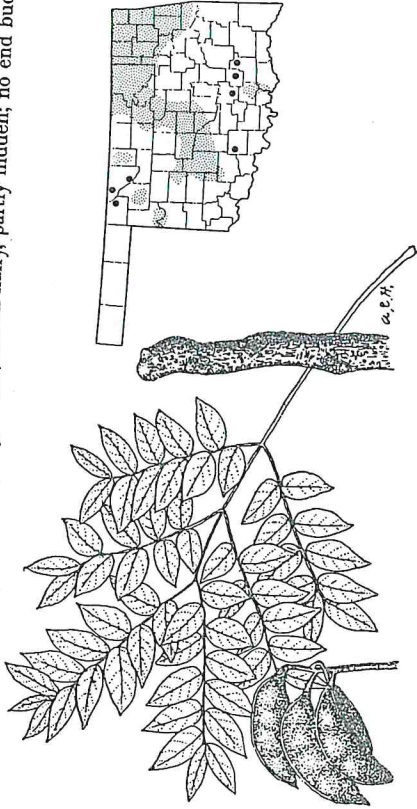
Medium-sized to large tree 60 ft (18 m) high and 1½ ft (0.5 m) in diameter, with open flat-topped crown of long widespreading branches. Twigs moderately stout, light brown, slightly zigzag, soft hairy, mucilaginous when crushed. Buds large, blunt, brown, rusty hairy, covered by several scales in 2 rows; no end bud.



108. KENTUCKY COFFEETREE

Gymnocladus dioica (L.) K. Koch; coffeetree.

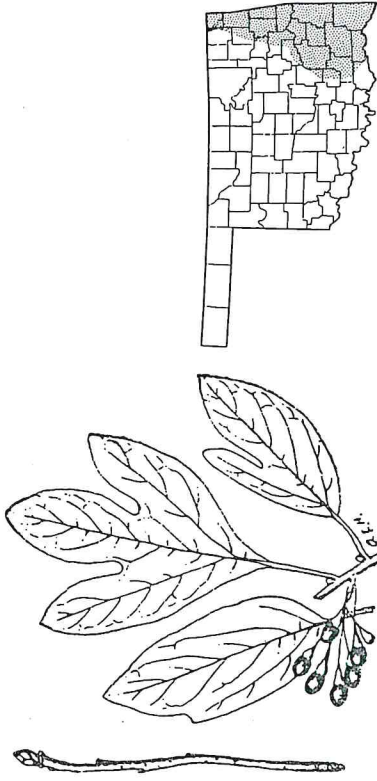
Medium-sized to large tree 60 ft (18 m) high with short trunk 1½ ft (0.5 m) in diameter and narrow open crown of stout branches and coarse graceful foliage. Twigs long, very stout, dark brown, hairy when young, with large heart-shaped leaf-scars and thick pinkish brown pith. Buds 2 at node, tiny, round, brown hairy, partly hidden; no end bud.



80. SASSAFRAS

Sassafras albidum (Nutt.) Nees

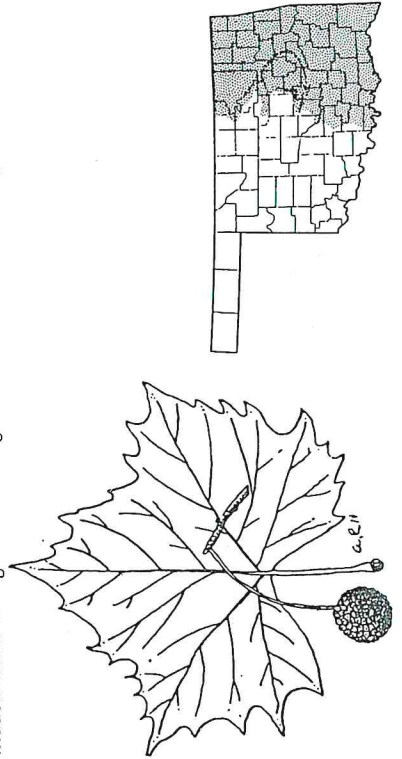
Small to medium-sized tree 40 ft (12 m) high and 8 in (0.2 m) in diameter, with narrow crown of spreading branches and aromatic foliage with *spicy taste*, also forming shrub thickets from root sprouts. Twigs slender, light green, mostly hairless, often branching first year, ending in rounded greenish bud with about 4 scales.



83. SYCAMORE

Platanus occidentalis L.

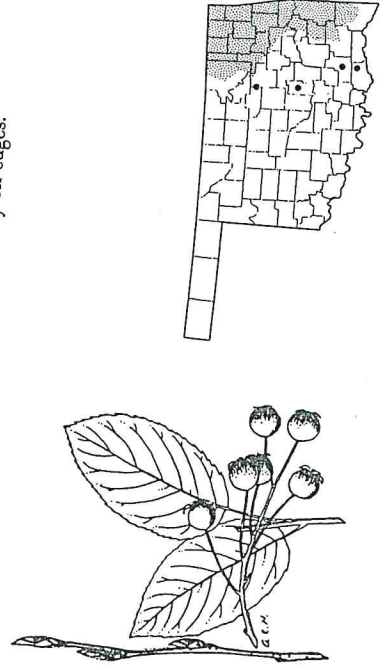
Large tree 60-80 ft (18-24 m) high with stout straight trunk 3 ft (0.9 m) in diameter, sometimes much thicker, and with broad irregular open crown of stout spreading, often crooked, branches. Twigs slender or slightly stout, slightly zigzag, orange brown, hairy when young, with rings at nodes. Buds conical, orange brown, hairless, covered by 1 shiny scale and hidden inside enlarged base of long leafstalk, which forms a ring leaf-scar; no end bud.



84. DOWNY SERVICEBERRY

Amelanchier arborea (Michx. f.) Fern.; serviceberry, sarvis.

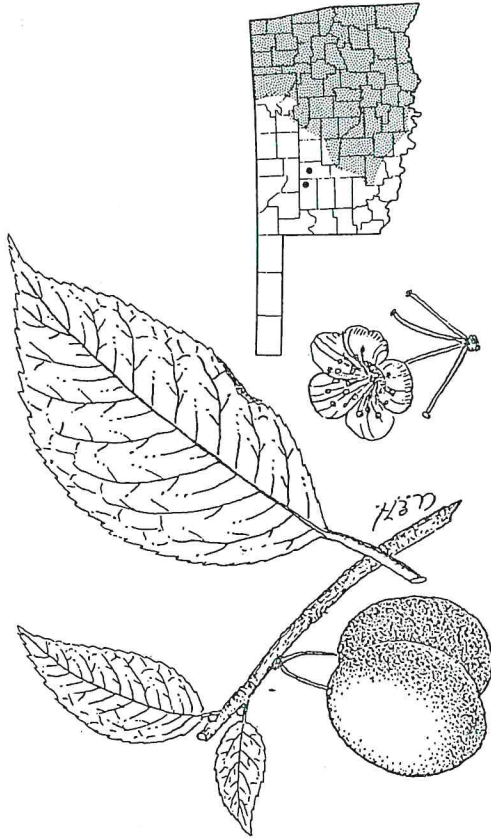
Shrub or small tree 30 ft (9 m) high and 6 in (15 cm) in diameter, with irregular narrow crown. Twigs slender, slightly zigzag, brown or gray, whitish hairy when young. Buds long narrow, red brown, with several scales often hairy on edges.



99. MEXICAN PLUM

Prunus mexicana Wats.; wild plum.

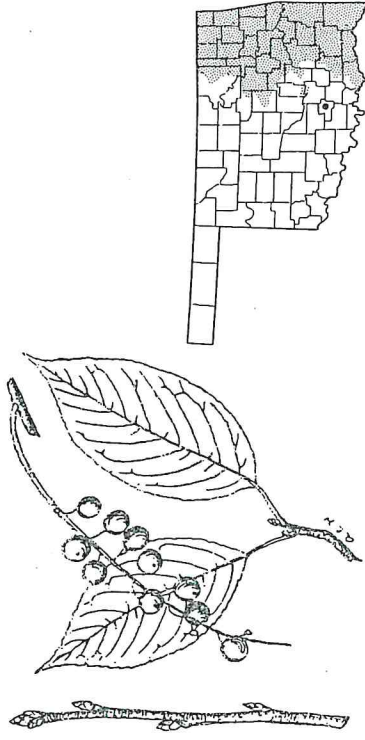
Small tree 20 ft (6 m) high with single trunk 6 in (15 cm) in diameter and rounded open crown, not forming thickets. Twigs slender, light brown, hairless, when crushed with odor and taste almond. Buds narrow, hairless, scaly; no end bud.



102. BLACK CHERRY

Prunus serotina Ehrh.; wild cherry.

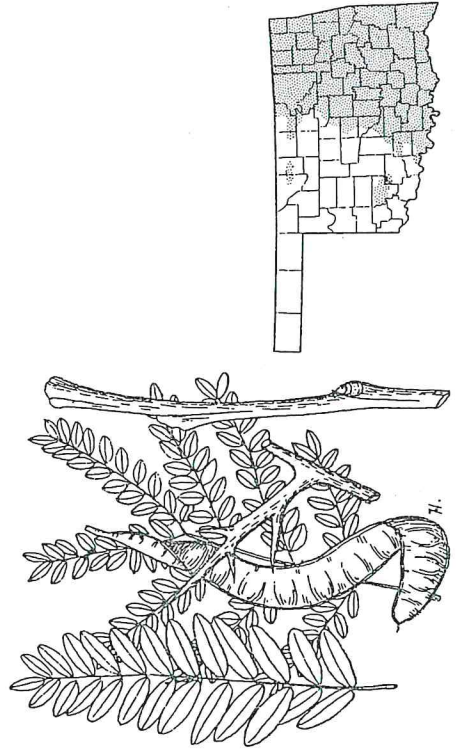
Medium-sized to large tree 50-70 ft (15-21 m) high and 1½ ft (0.5 m) in diameter, with narrow oblong crown; foliage aromatic with odor and taste of almond when crushed. Twigs slender, red brown, with several scales, hairless. Buds small, blunt, shiny red brown, hairless.



107. HONEYLOCUST

Gleditsia triacanthos L.

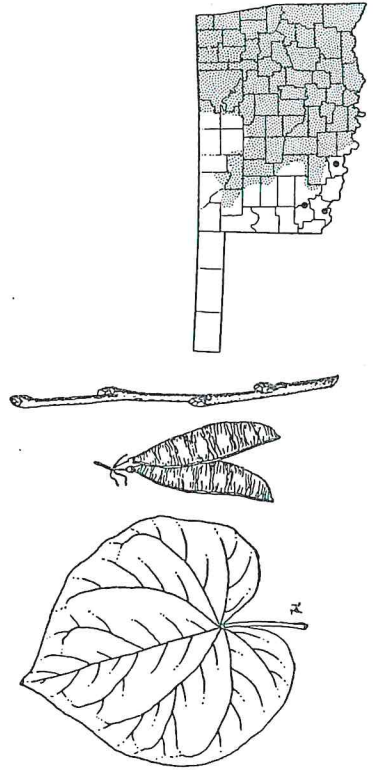
Large spiny tree 70 ft (21 m) high and 1½ ft (0.5 m) in diameter, with open flattened crown and with large stout shiny dark brown spines, slightly flattened, usually branched, on trunk, branches, and twigs. Twigs slender, slightly zigzag and swollen at nodes, shiny brown, hairless, bearing stout flattened long-pointed spines, often 3-forked. Buds few together, partly hidden, tiny, hairless; no end bud.



105. EASTERN REDBUD

Cercis canadensis L.; redbud, Judas tree.

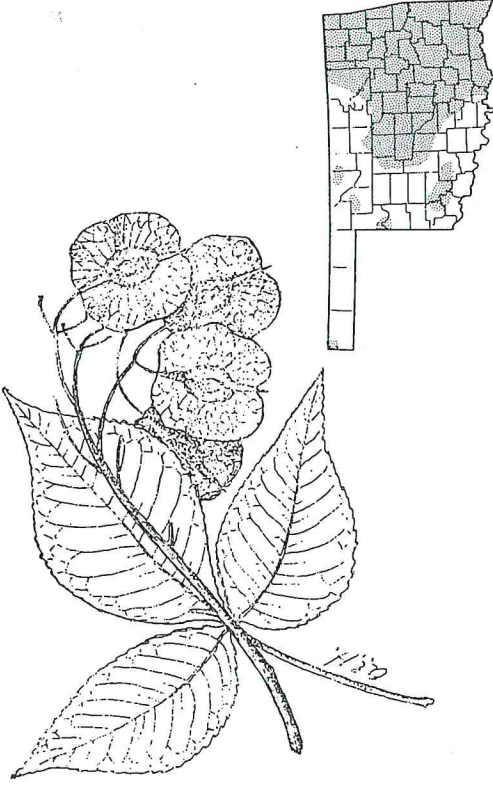
Small or medium-sized tree 35 ft (10.7 m) high, with short trunk 10 in (25 cm) in diameter and rounded crown of spreading branches. Twigs long, slender, zigzag, brown, hairless. Buds blunt, red brown, with 2 hair scales; no end bud.



112. COMMON HOPTREE

Ptelea trifoliata L.; wafer-ash.

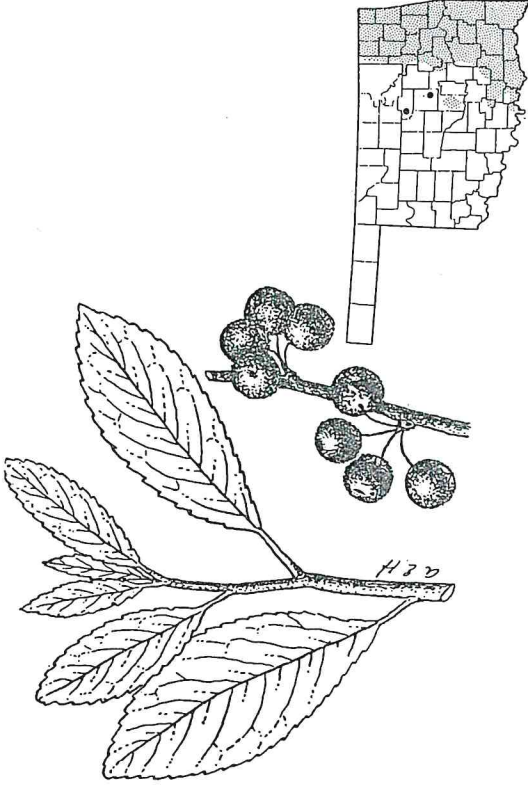
Shrub or sometimes small tree 6-20 ft (1.8-6 m) high and 6 in (15 cm) in diameter, with rounded open crown. Twigs slender, dark reddish brown, hairless or finely hairy, slightly warty. Buds small, sunken whitish hairy, neatly surrounded by leaf-scar; no end bud. Crushed foliage and twigs with *strong odor*, unpleasant or like lemon.



121. POSSUMHAW

Ilex decidua Walt.; deciduous holly, winterberry.

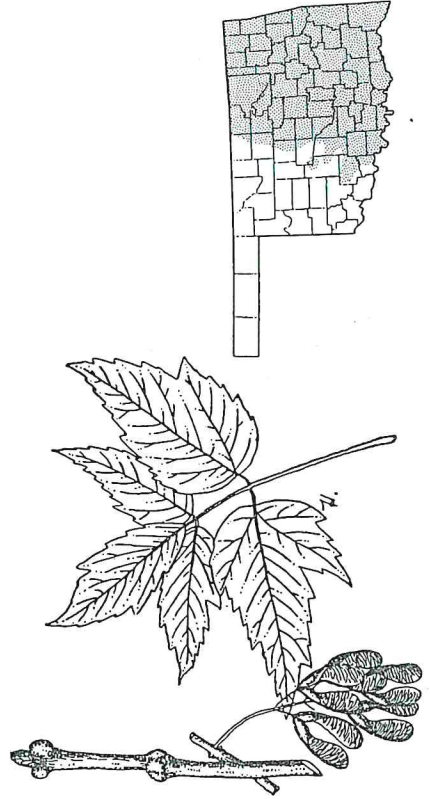
Shrub or small tree 20 ft (6 m) high and 4 in (0.1 m) in diameter, with spreading crown. Twigs slender, light gray, hairless, with many short side twigs or spurs. Buds tiny, blunt, with 2 light gray scales.



127. BOXELDER

Acer negundo L.

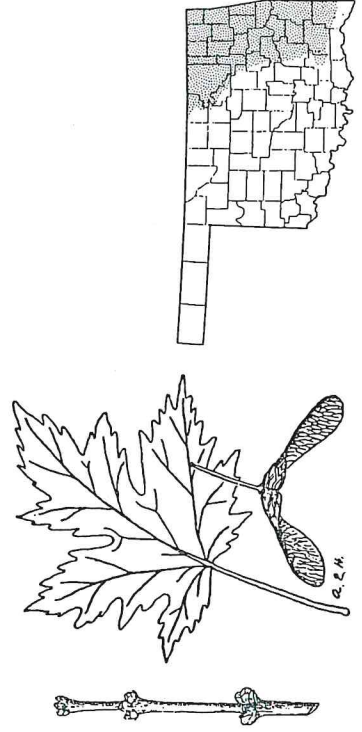
Medium-sized tree 60 ft (18 m) high, with short trunk 2 ft (0.6 m) in diameter and broad rounded crown. Twigs slender, *shiny green* with rings at nodes, mostly hairless (hairy in a variation). Buds small, pointed, greenish gray, densely hairy, with few paired scales.



129. SILVER MAPLE

Acer saccharinum L.; soft maple.

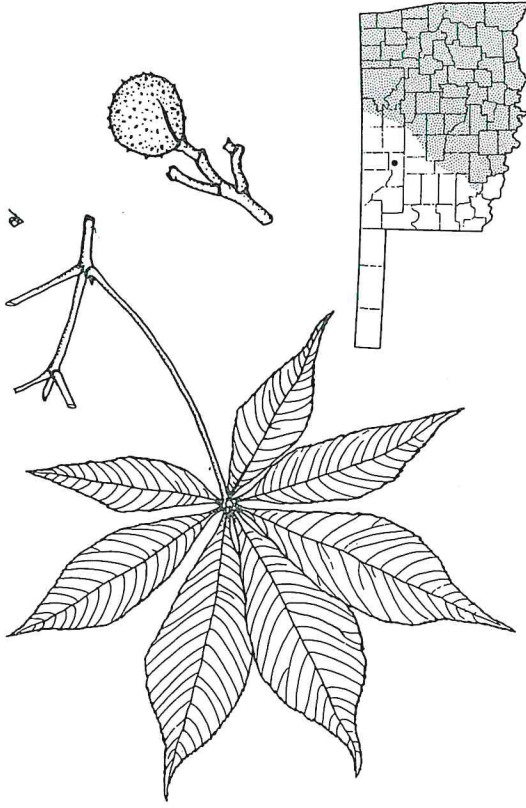
Medium-sized to large tree 60 ft (18 m) high, with short stout trunk 2 ft (0.6 m) in diameter, becoming hollow in age, with few large forks, and spreading irregular open crown of long curving branches. Twigs long, spreading and often slightly drooping, light green to brown, hairless, with unpleasant odor when broken. Buds small, blunt, reddish, with several paired scales.



131. TEXAS BUCKEYE

Aesculus glabra Willd. var. *arguta* (Buckl.) Robins. (*A. arguta* Buckl., *A. glabra* var. *sargentii* Rehd.)

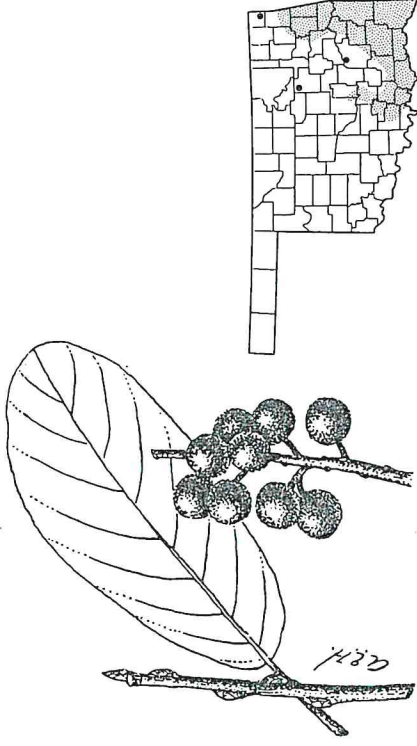
Shrub or sometimes small tree 15 ft (4.6 m) high and 4 in (0.1 m) in diameter, with rounded open crown of stout branches. Twigs stout, reddish brown, becoming hairless, with paired large triangular leaf-scars and large pith. Buds large, long-pointed, with about 6 pairs of light brown scales in 4 rows.



133. CAROLINA BUCKTHORN

Rhamnus caroliniana Walt.; Indian-cherry.

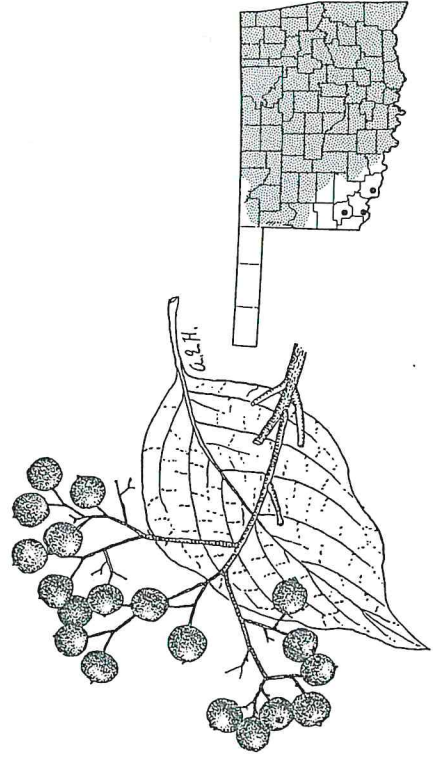
Large shrub or small tree 20 ft (6 m) high and 4 in (0.1 m) in diameter, with spreading crown of many slender branches. Twigs slender, slightly angled, gray, becoming hairless, with unpleasant odor when crushed. Buds small, narrow, densely hairy, without scales (naked); no end bud.



139. ROUGHLEAF DOGWOOD

Cornus drummondii C. A. Meyer

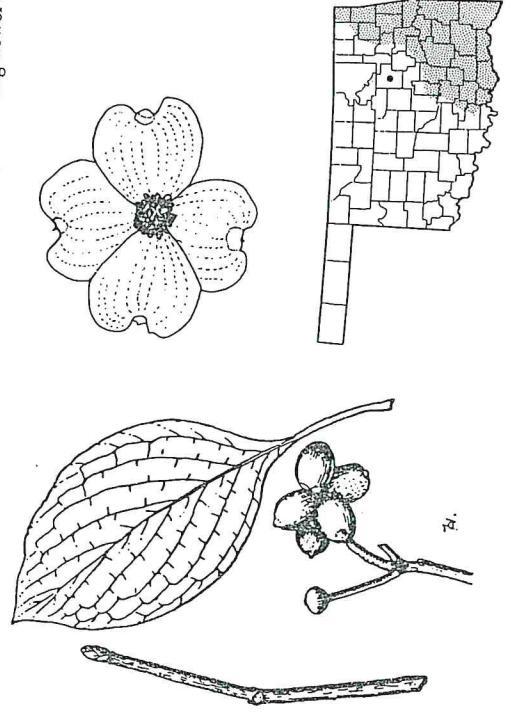
Shrub or sometimes small tree 20 ft (6 m) high, with short trunk 6 in (15 cm) in diameter and open spreading crown, forming thickets. Twigs slender, light green and finely hairy when young, turning gray or reddish brown, with brownish pith. Buds narrow, flattened, pointed, with 2 finely hairy scales.



140. FLOWERING DOGWOOD

Cornus florida L., dogwood.

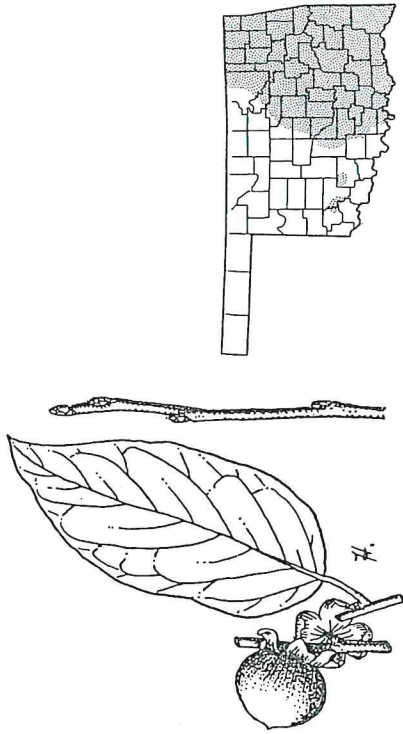
Small tree 25 ft (7.6 m) high and 8 in (0.2 m) in diameter, with round or irregular crown of spreading or nearly horizontal branches. Twigs slender, green or reddish, becoming hairless, with rings at nodes. Buds dark red or purplish, end bud covered by 2 scales, with tiny side buds; some end buds stalked, rounded and flattened, containing flower cluster.



144. COMMON PERSIMMON

Diospyros virginiana L.; persimmon, simmon.

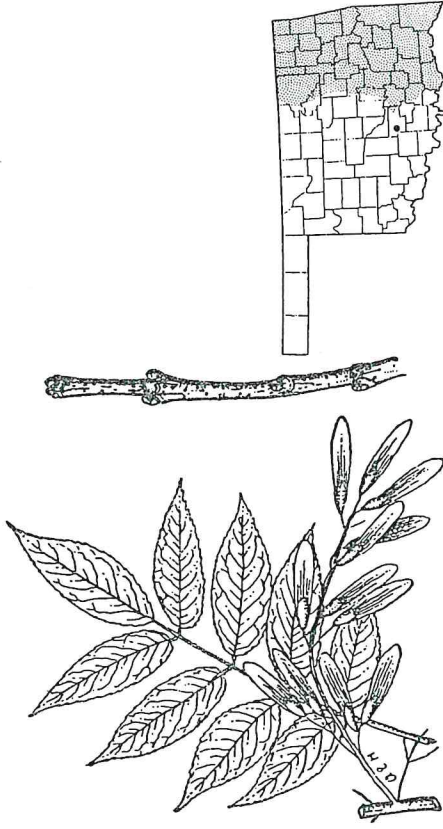
Small to large tree 60 ft (18 m) high and 1½ ft (0.5 m) in diameter, with cylindrical or rounded dense crown, also a thicket-forming shrub. Twigs slender, slightly zigzag, brown to gray, often hairy, pith often with horizontal lines or plates. Buds small, pointed, with 2 shiny dark brown scales; no end bud.



149. WHITE ASH

Fraxinus americana L.

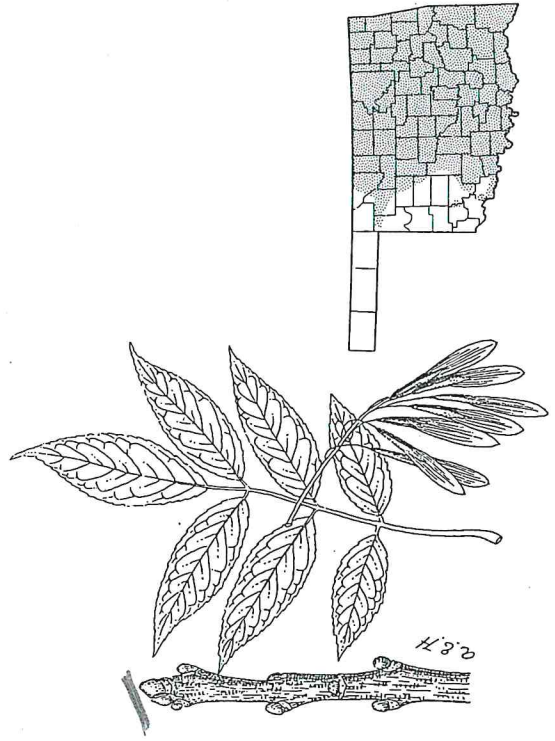
Medium-sized to large tree 60 ft (18 m) high, with straight trunk 1½ ft (0.5 m) in diameter and with conical or rounded dense crown of whitish green foliage. Twigs stout, gray or brown, mostly hairless; leaf-scars raised, crescent-shaped with side bud in notch at tip. Buds rounded, dark brown, finely hairy, with 2-4 pairs of scales.



150. GREEN ASH

Fraxinus pennsylvanica Marsh.; red ash.

Medium-sized to large tree 70 ft (21 m) high and 2 ft (0.6 m) in diameter, with rounded or irregular dense crown. Twigs stout, gray, hairless or hairy; leaf-scars raised, half-round with top nearly straight. Buds rounded, reddish brown, finely hairy, with 2-3 pairs of scales.



155. BUTTONBUSH

Cephalanthus occidentalis L.

Clump-forming shrub with many upright and spreading branches or sometimes small tree 15 ft (4-6 m) high and 4 in (0.1 m) in diameter, with irregular open crown. Twigs mostly in 3's, slender, sometimes hairy, shiny reddish brown; nodes with rings and 3 rounded raised leaf-scars. Buds tiny, sunken; no end bud.

