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Agriculture

Forest Service

**Southern Forest
Experiment Station**

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Louisiana

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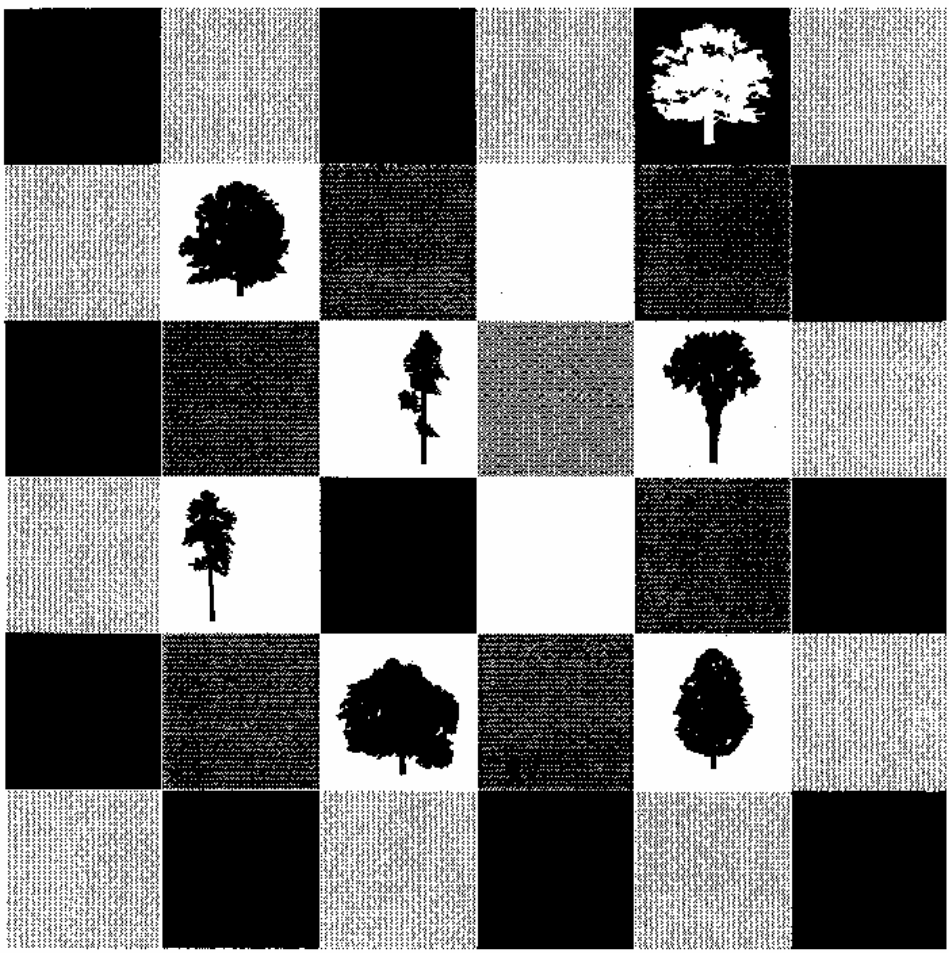
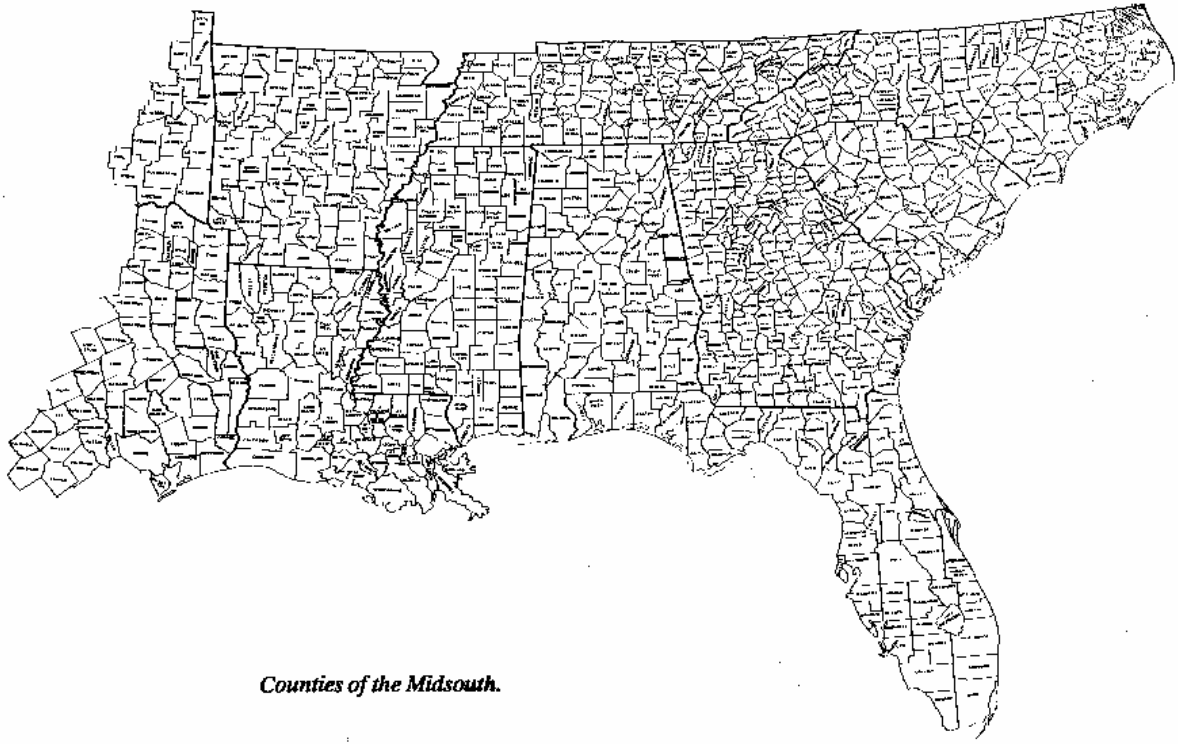
Distribution Maps for Midsouth Tree Species

Roy C. Beltz, and Daniel F. Bertelson





Counties of the Midsouth.

Distribution Maps for Midsouth Tree Species

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The Midsouth is an important timber-producing region, with a wide variety of sites and species. In addition to timber production, increasing demands for nontimber amenities are placed on the region's forests. These maps indicate the distribution of individual species recorded in surveys of the Midsouth conducted by the U.S. Department of Agriculture, Forest Serve. Included are important timber species plus several species that are important primarily from a wildlife, aesthetic, or other nontimber perspective.

Approximately 17,500 forest plots are remeasured during a complete survey cycle of the seven Midsouth states (Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas). These plots, each about 1 acre in size and representing roughly 9 square miles, are depicted in figure 1 in their approximate geographic location.

In the late 1940's and early 1950's, survey plots were established throughout the Midsouth using a 3-mile grid spacing. Permanent plots were installed at forested grid intersections. In some instances, the grid was overlaid on an entire survey unit; in others, single counties (parishes in Louisiana) were overlaid. Coordinates used to depict plot locations were developed by referencing one central point in each county. The latitude and longitude of all plots in the county were subsequently developed from the central coordinate on the basis of the 3- by 3-mile spacing. Thus, the coordinates are crude and serve only to position the plot attributes relative to one another within the Midsouth. Moreover, the actual ground location of a plot may differ from a precise 3- by 3-spacing because of establishment procedures and changes in conditions over several decades.

Prominent features of the region are immediately apparent from the distribution of forest plots. Sparsely forested areas are apparent in the Mississippi Delta in Arkansas, Mississippi, and Louisiana, primarily due to the predominance of agricultural land use. Similarly, the black prairie region extending from southeast Alabama westward and northward to northeast Mississippi is sparsely forested. The same is true of the Red and Arkansas River bottoms.

Other areas are sparsely forested for varying physical reasons. The coastal marshes of Louisiana and Texas, for example, do not support forests. The western extremity of southern forests is limited by the average annual rainfall amounts in Texas and Oklahoma. Dots represent plots where the forest is capable of growing 20 or more cubic feet of wood per acre per year.

To be recorded in the survey, a species must be capable of growing to fit the definition of a tree; i.e., 15 feet tall and having a central stem. Species that do not occur in the region, or that were not identified by survey field crews, were not considered. Some species were grouped because of the difficulty in identifying them or because they occur infrequently in the survey.

Several sources of error could affect the species distribution maps. Since surveys are done year-round, and certain species are hard to identify without leaves, some species identification errors are bound to occur. Seedlings are especially subject to this type of error. Errors are also made when trying to distinguish minor differences between very similar species. In addition, some species are known to exist in the Midsouth, but, unless they happen to be growing on one of the 3- by 3-mile sample plots, they will not be represented in the mapped data.

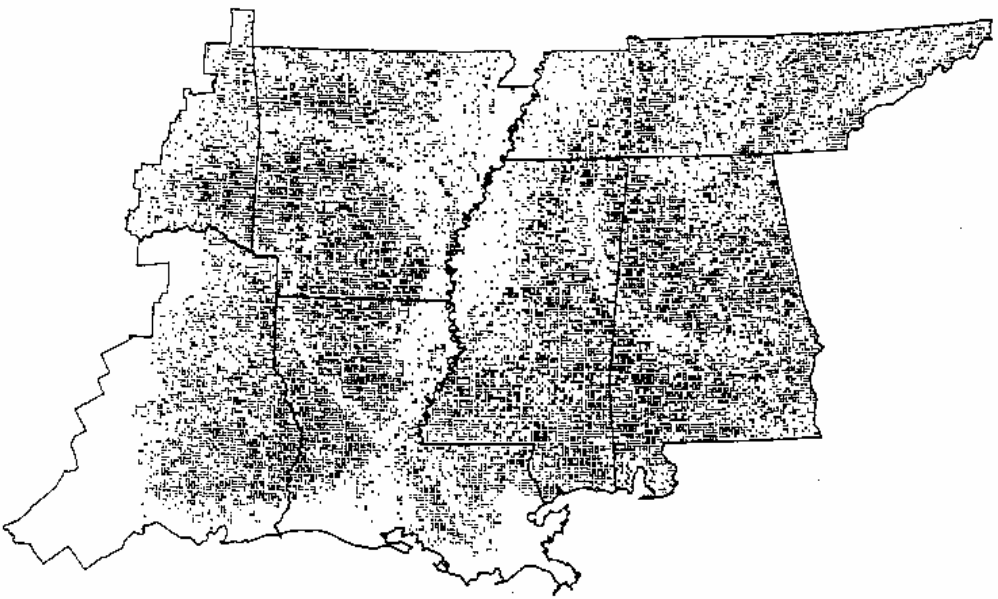
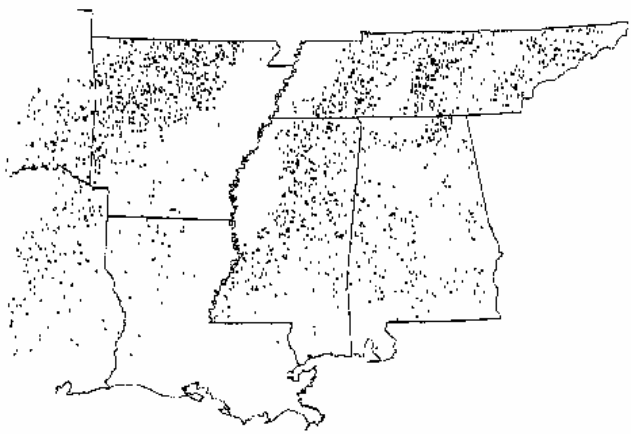


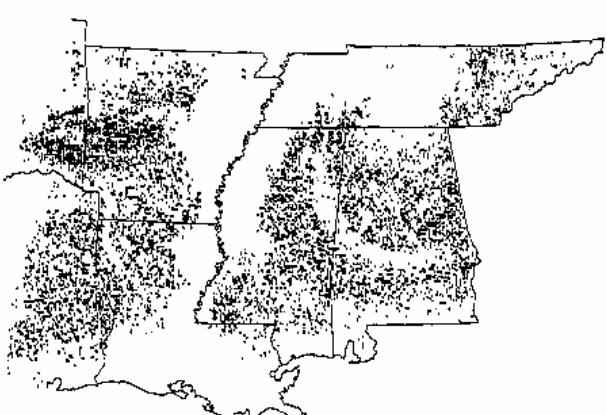
Figure 1.—*Location of forest inventory and analysis plots on timberland.*

Softwoods

Southern redcedar
(Juniperus silicicola)

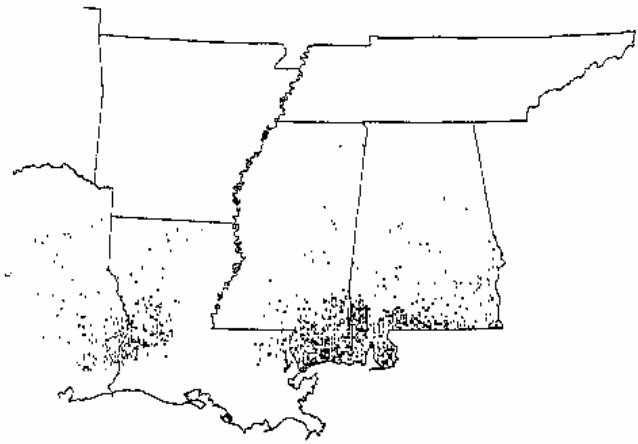
Eastern redcedar
(Juniperus virginiana)

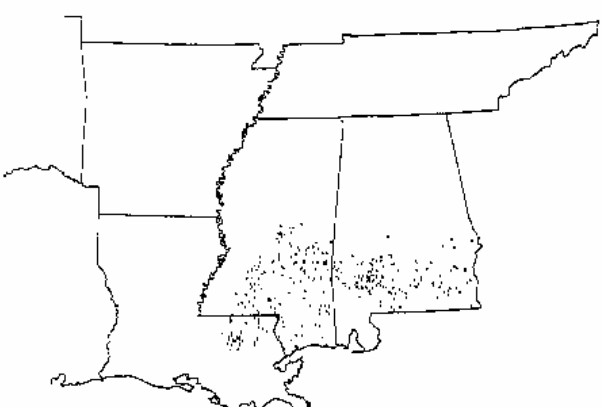




Shortleaf pine
(Pinus echinata)

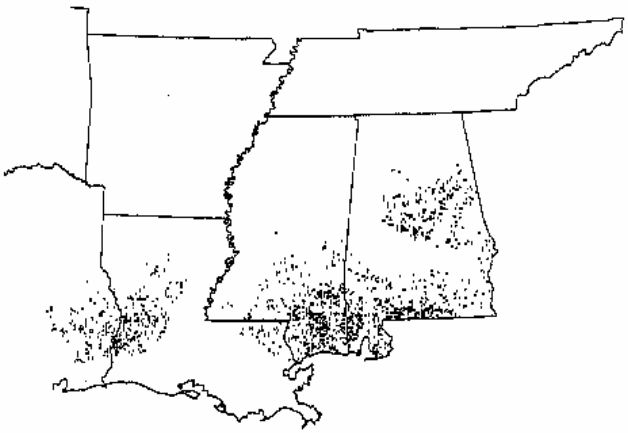
Slash pine
(Pinus elliottii)





Spruce pine
(Pinus glabra)

Longleaf pine
(Pinus palustris)



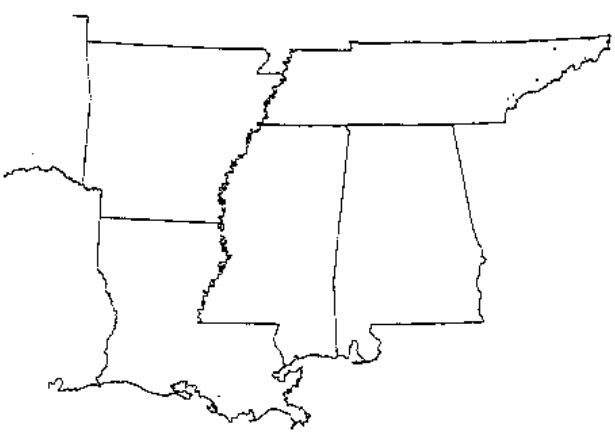
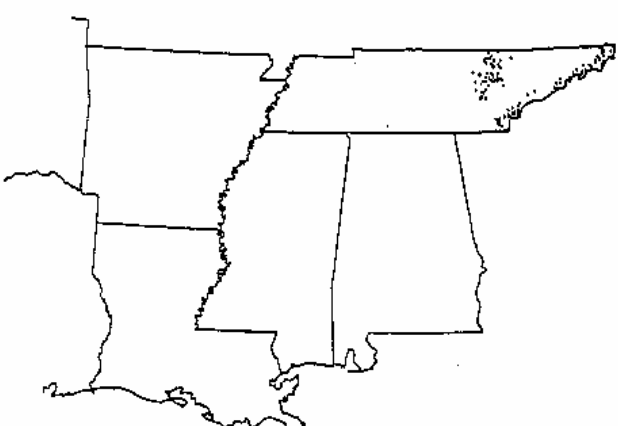


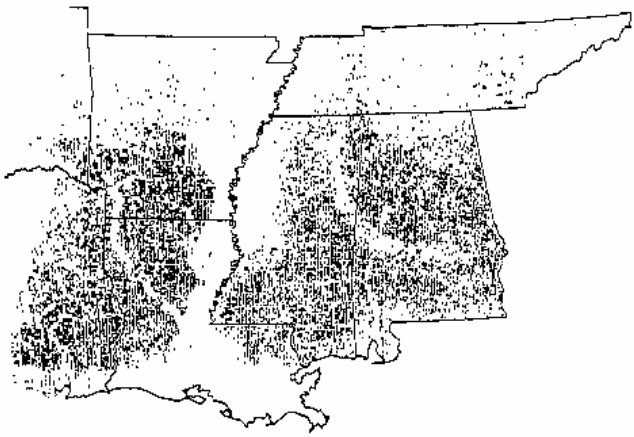
Table-mountain pine
(Pinus pungens)

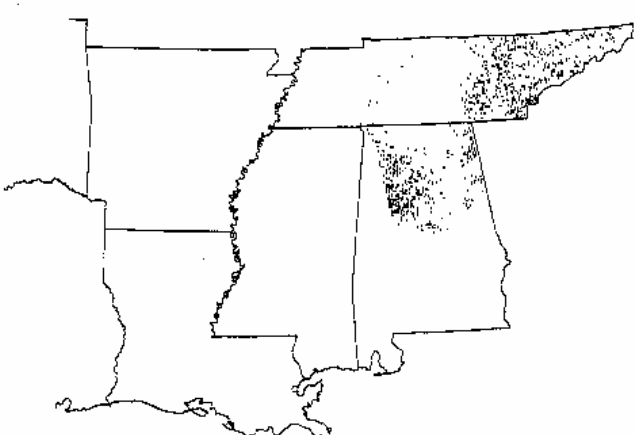
Pitch pine
(Pinus rigida)



Eastern white pine
(Pinus strobus)

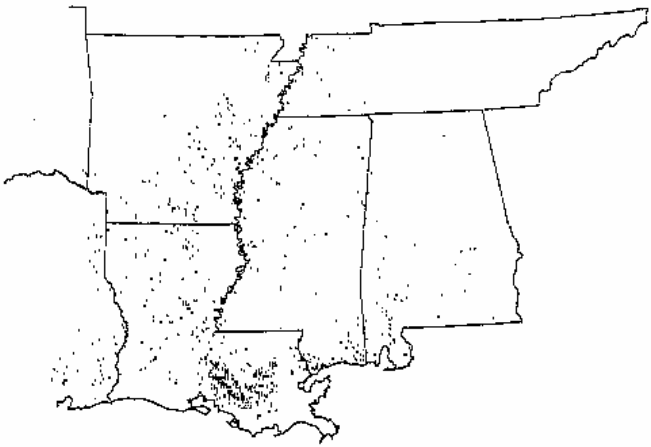
Loblolly pine
(Pinus taeda)

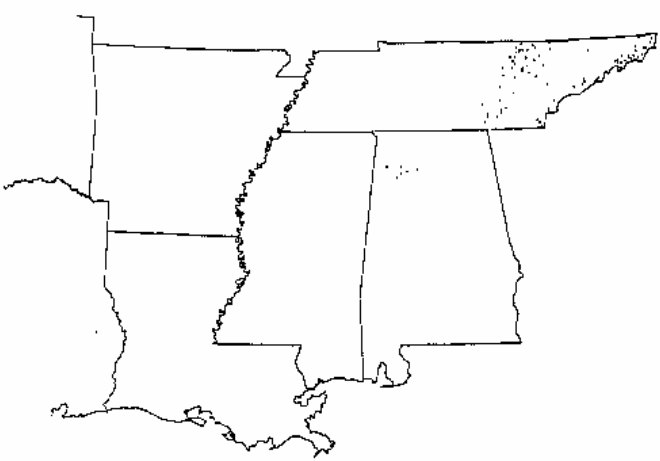




Virginia pine
(Pinus virginiana)

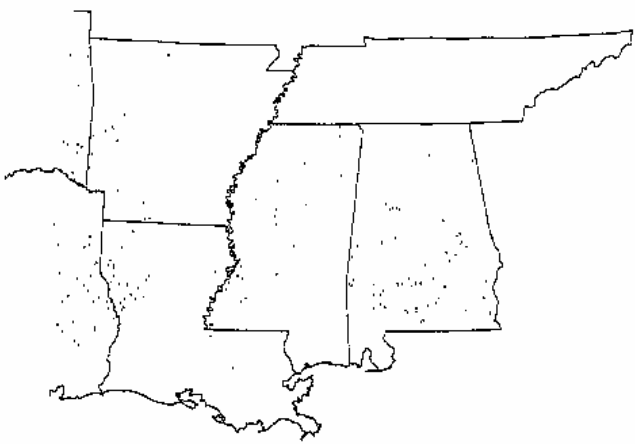
Cypress
(Taxodium spp.*)*



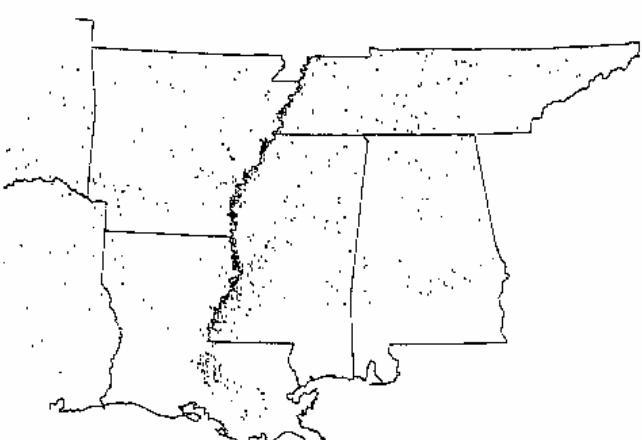


Eastern hemlock
(Tsuga canadensis)

Hardwoods

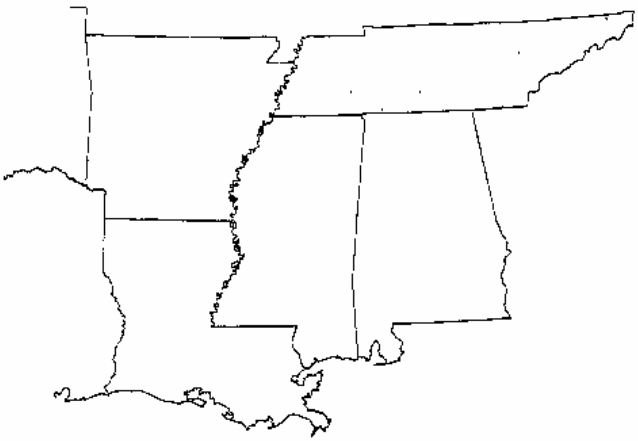


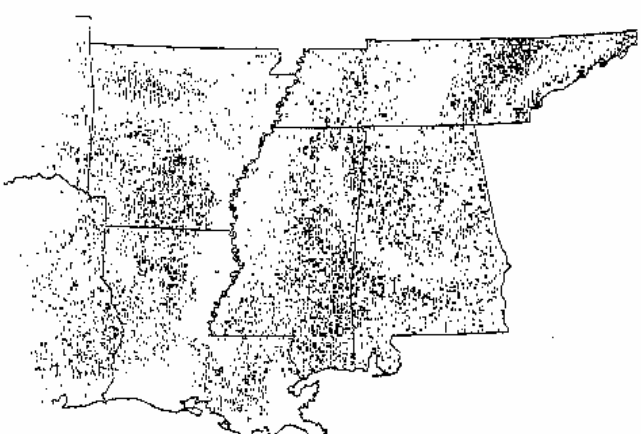
Florida maple
(Acer barbatum)



Boxelder
(Acer negundo)

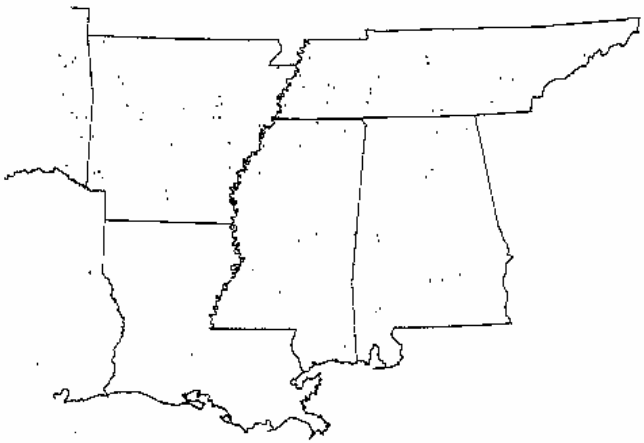
Black maple
(Acer nigrum)

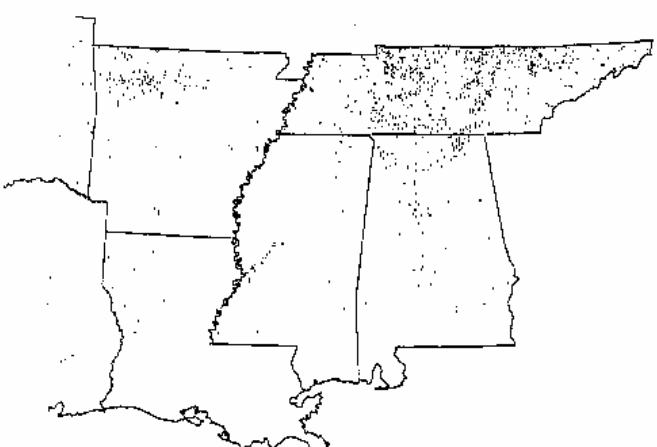




Red maple
(Acer rubrum)

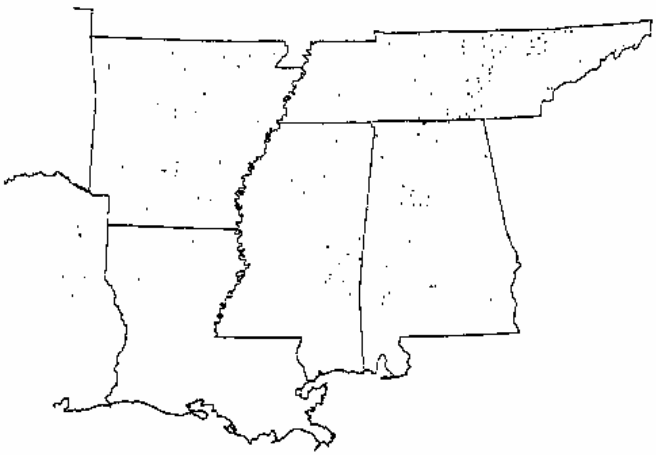
Silver maple
(Acer saccharinum)

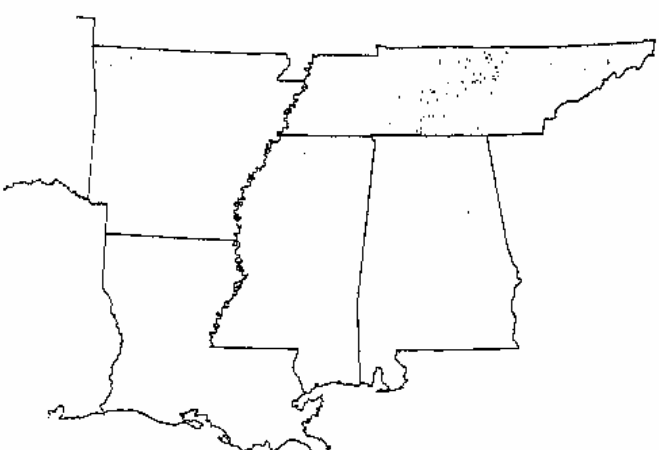




Sugar maple
(Acer saccharum)

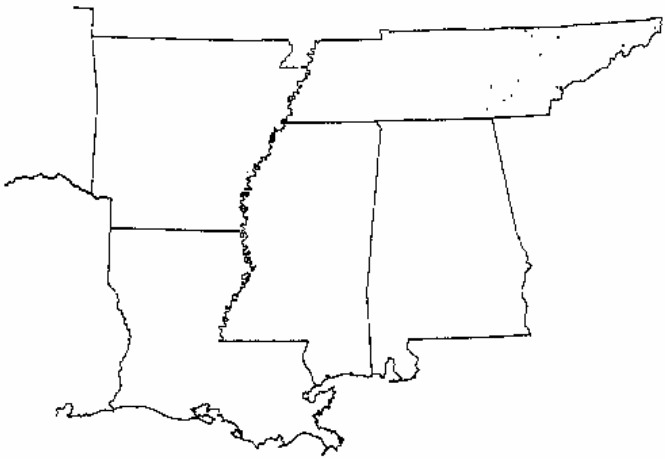
Buckeyes
(Aesculus spp.*)*

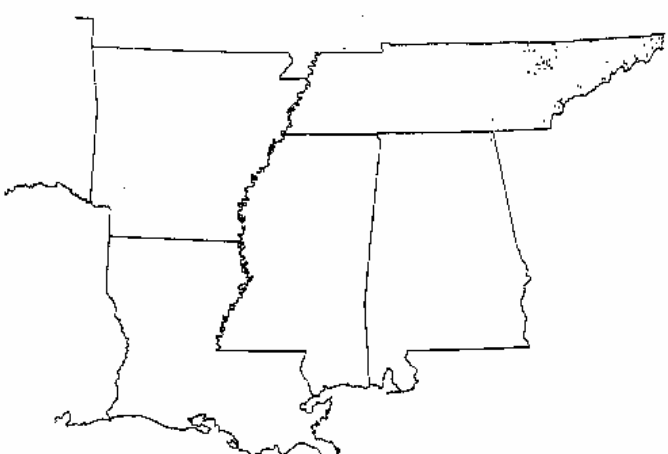




Tree-of-heaven
(Ailanthus altissima)

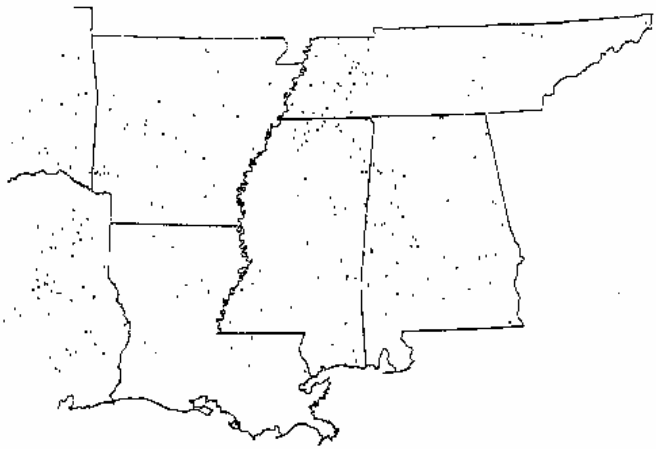
Yellow birch
(Betula alleghaniensis)

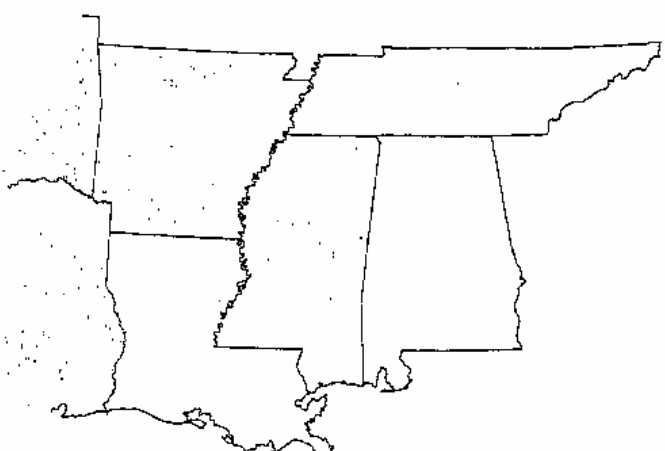




Sweet birch
(Betula lenta)

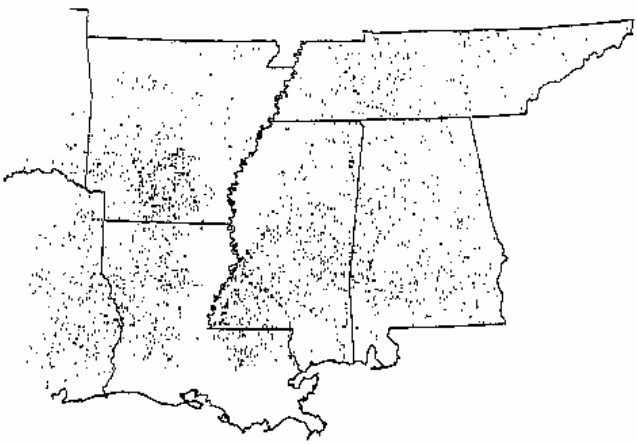
River birch
(Betula nigra)

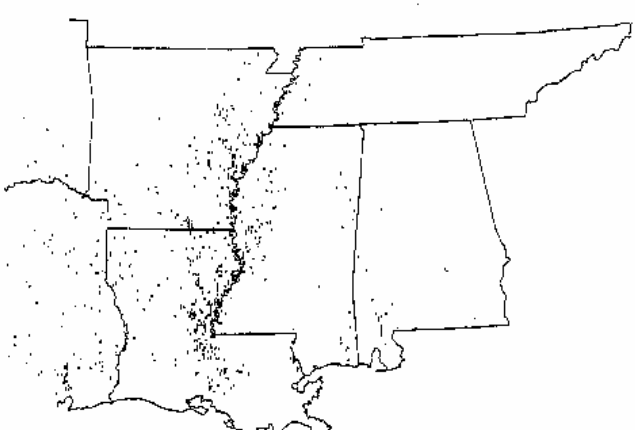




Bumelia, chittamwood
(Bumelia spp.*)*

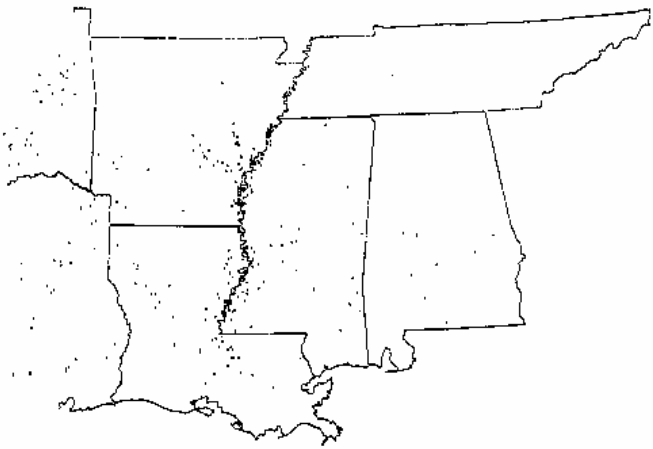
Bluebeech, American hornbeam
(Carpinus caroliniana)

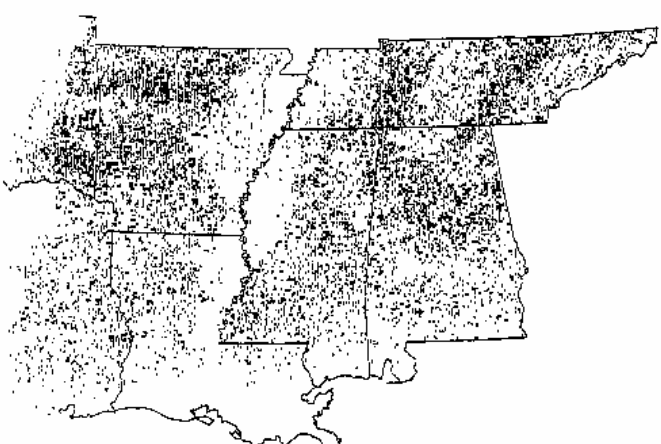




Water hickory
(Carya aquatica)

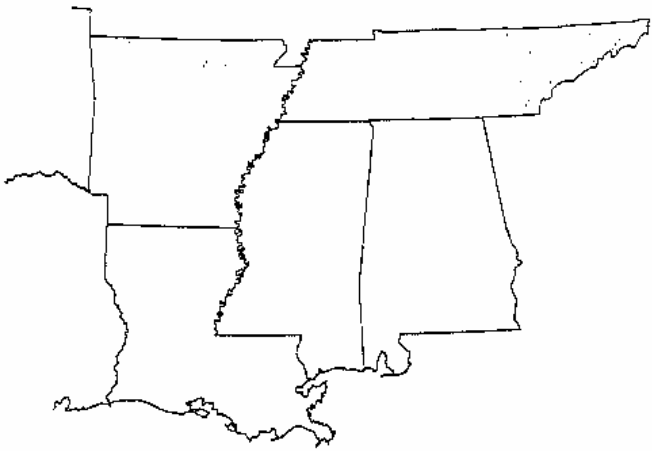
Pecan
(Carya illinoensis)

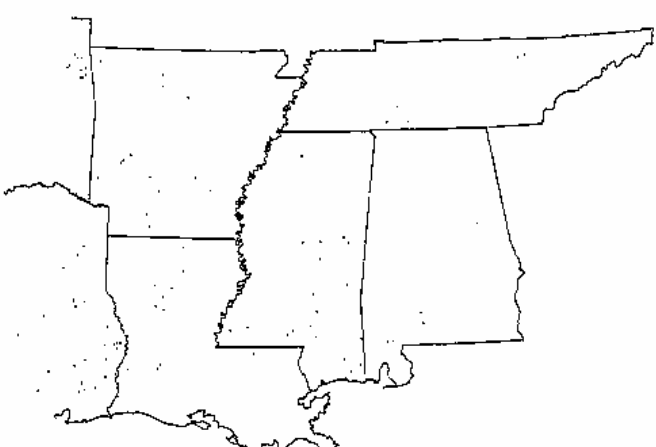




Hickory
(Carya spp.*)*

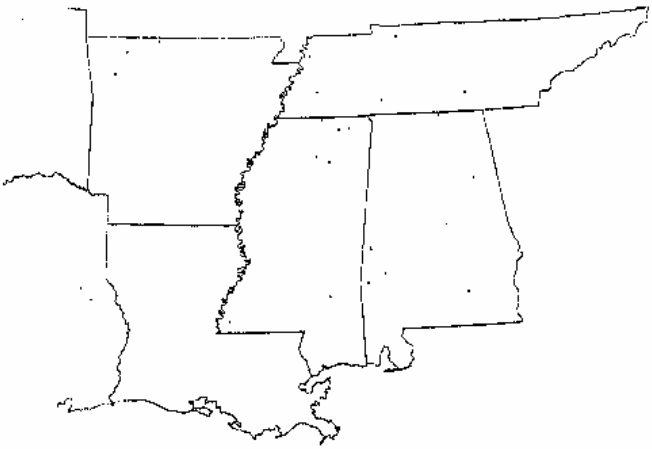
American Chestnut
(Castanea dentata)

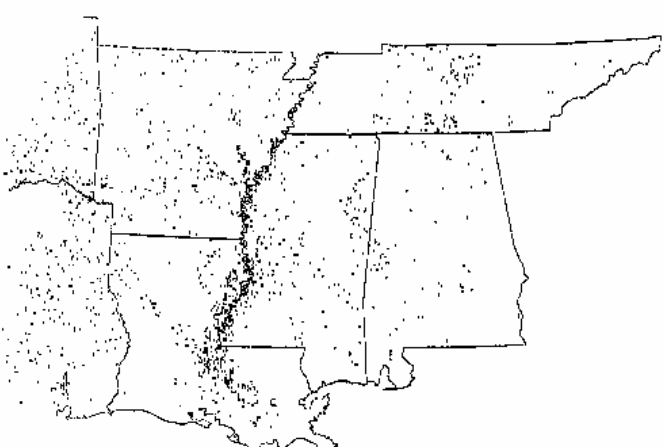




Chinkapin
(Castanea spp.)

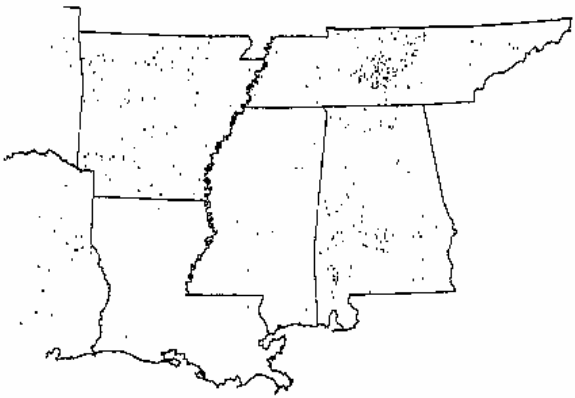
Catalpa
(Catalpa spp.*)*

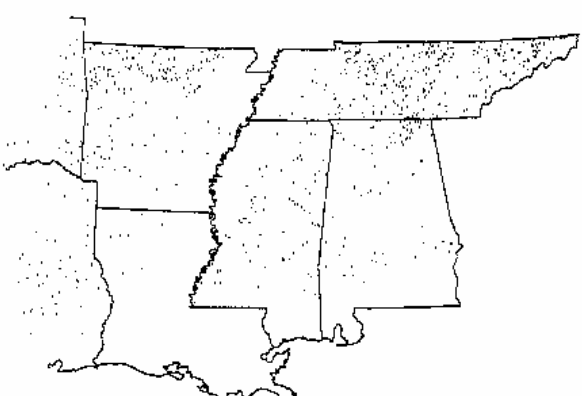




Sugarberry
(Celtis laevigata.)

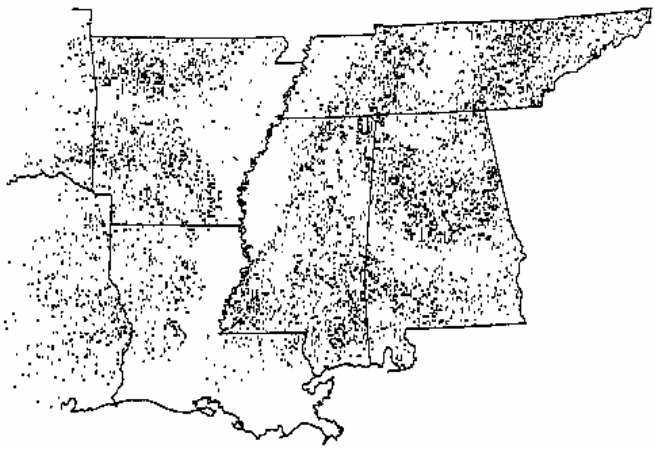
Hackberry
(Celtis occidentalis)

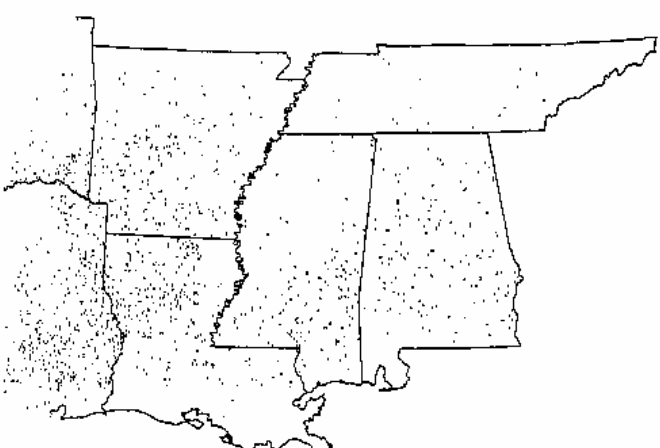




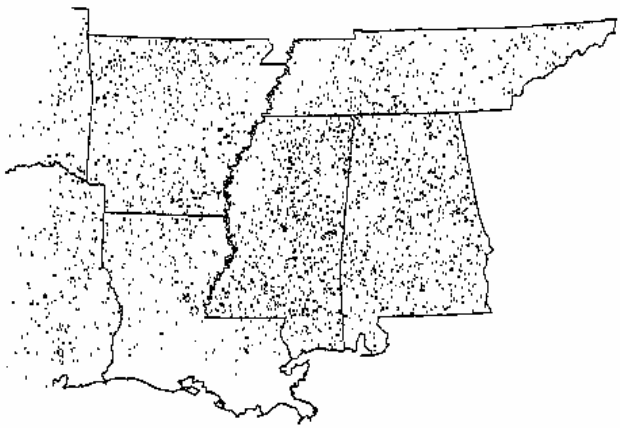
Eastern redbud
(Cercis canadensis)

Flowering dogwood
(Cornus florida)

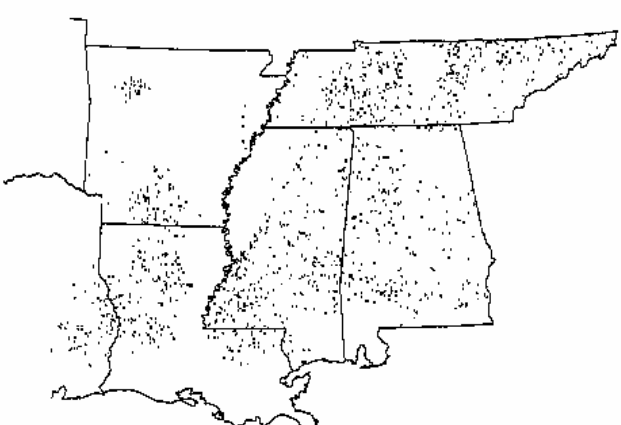




Hawthorn
(Crataegus spp.*)*

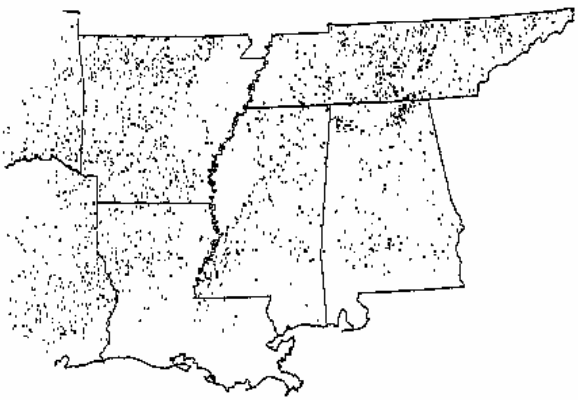


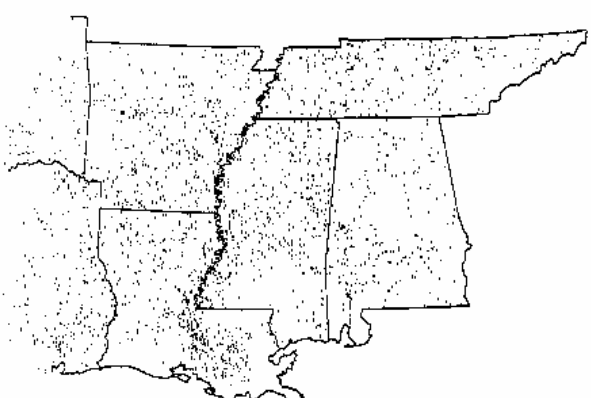
Common persimmon
(Diospyros virginiana)



American beech
(Fagus grandifolia)

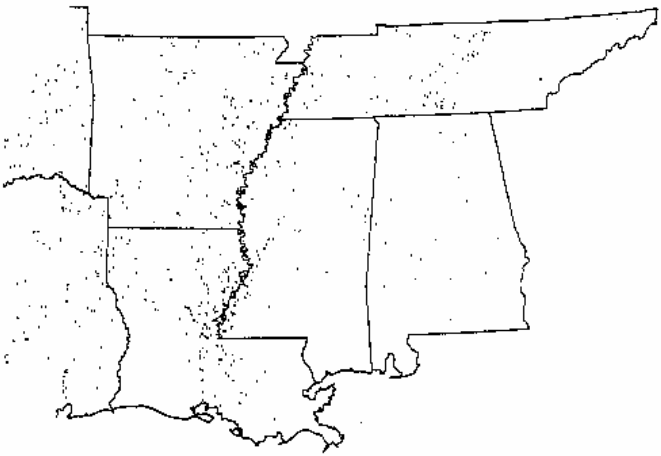
White ash
(Fraxinus americana)

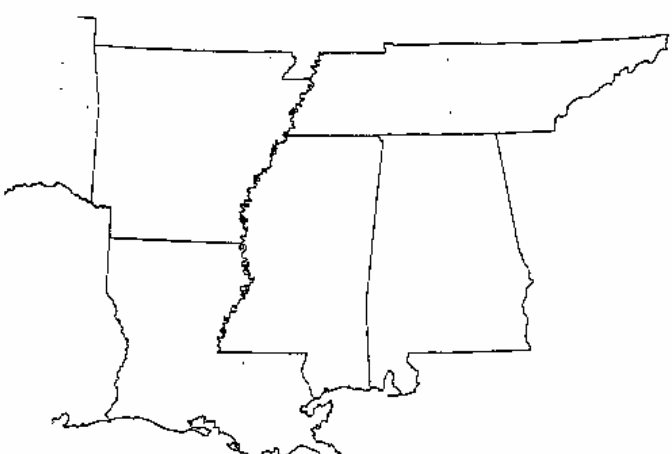




Green ash
(Fraxinus pennsylvanica)

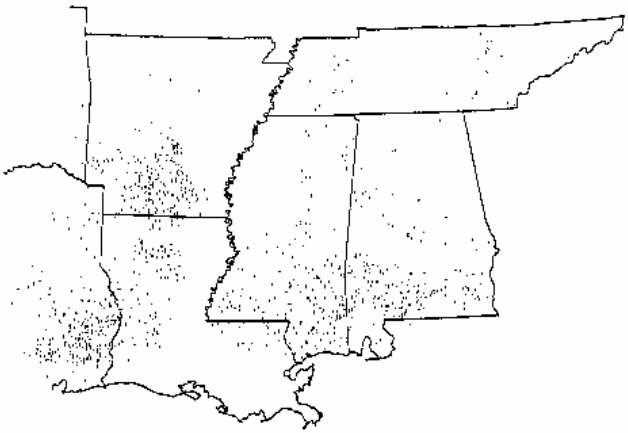
Locust
(Gleditsia spp.*)*

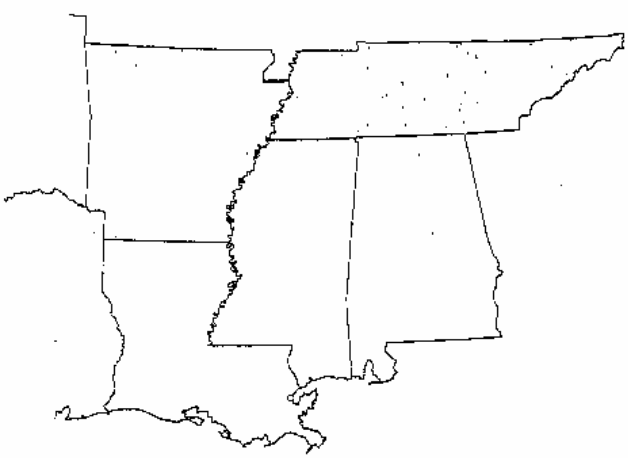




Kentucky coffeetree
(Gymnocladus dioicus)

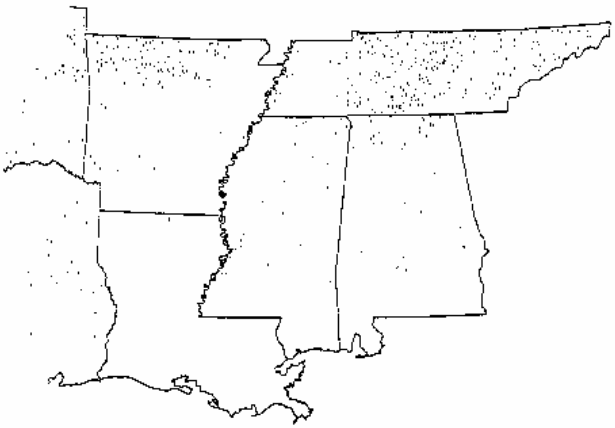
American holly
(Ilex opaca)

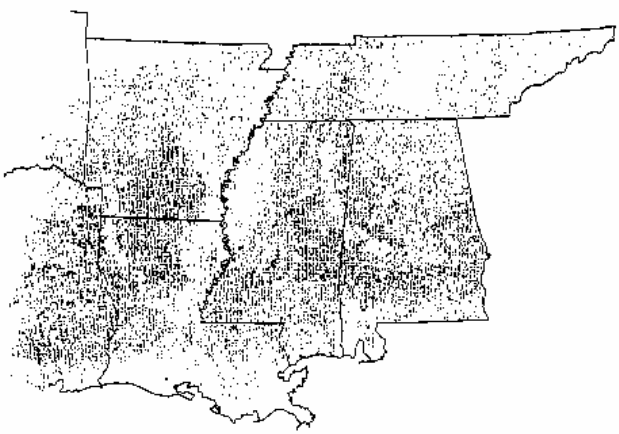




Butternut
(Juglans cinerea)

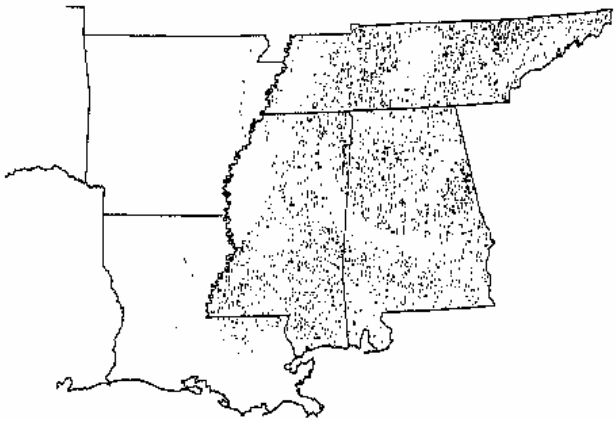
Black walnut
(Juglans nigra)

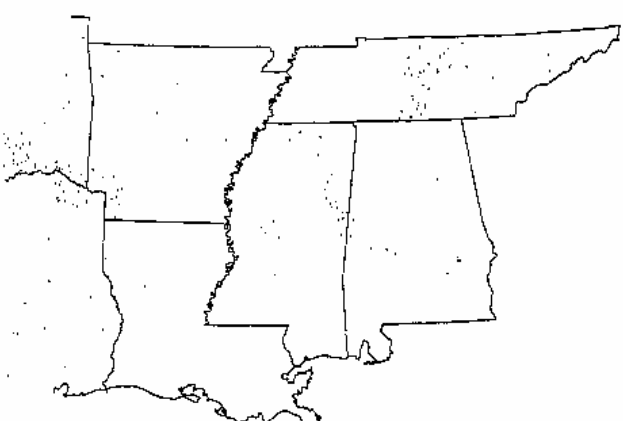




Sweetgum
(Liquidambar styraciflua)

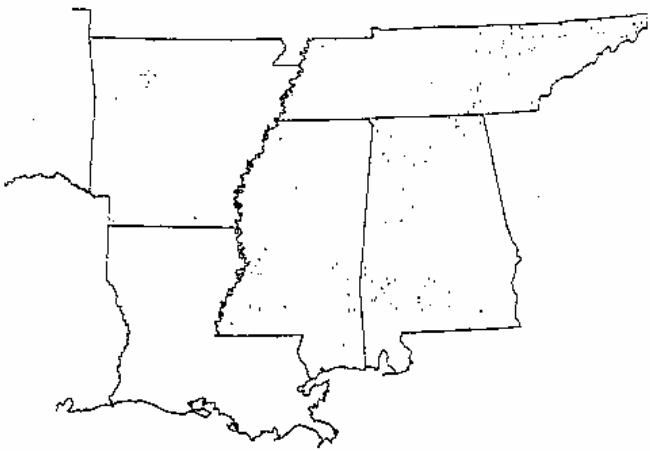
Yellow-poplar
(Liriodendron tulipifera)

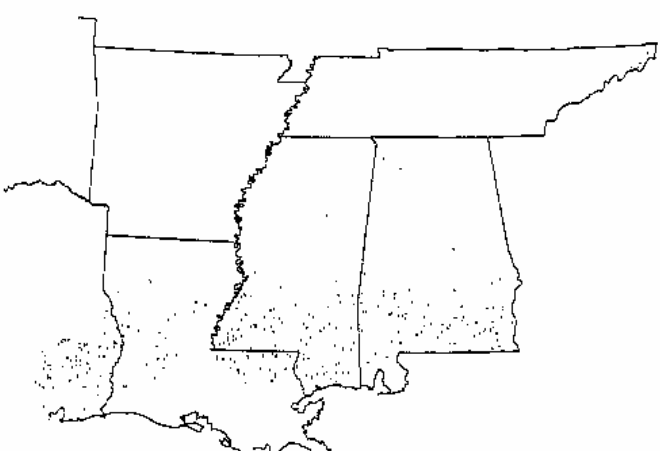




Osage-orange
(Maclura pomifera)

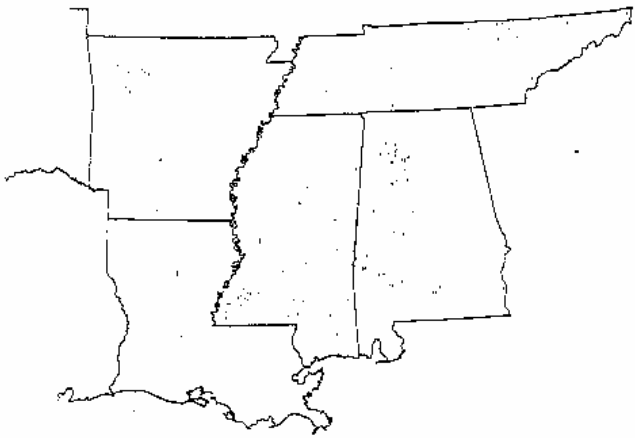
Cucumbertree
(Magnolia acuminata)

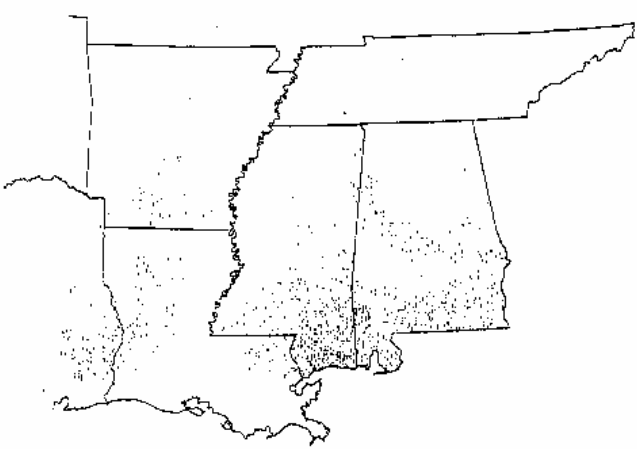




Southern Magnolia
(Magnolia grandiflora)

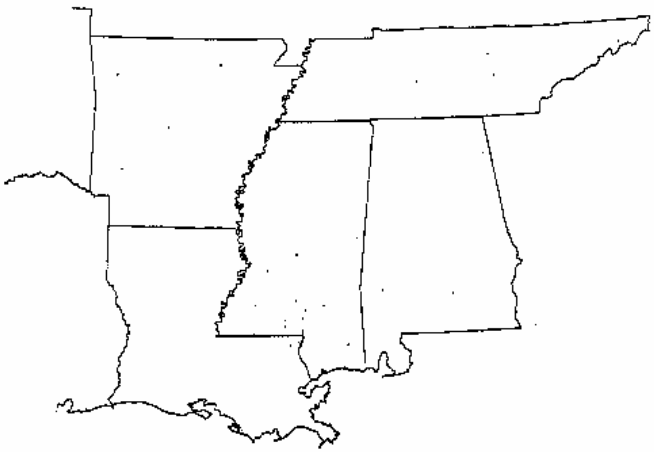
Bigleaf magnolia
(Magnolia macrophylla)

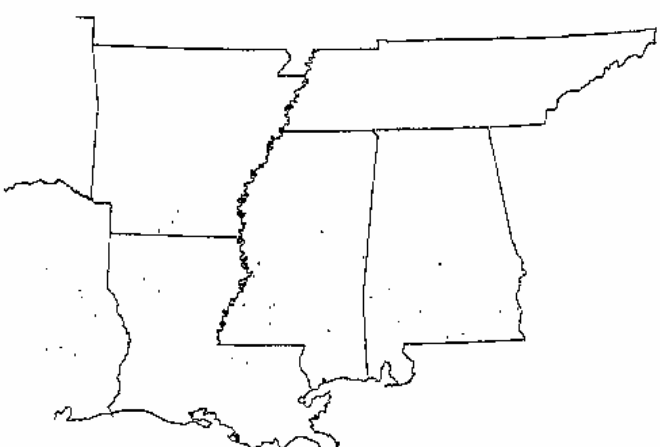




Sweetbay
(Magnolia virginiana)

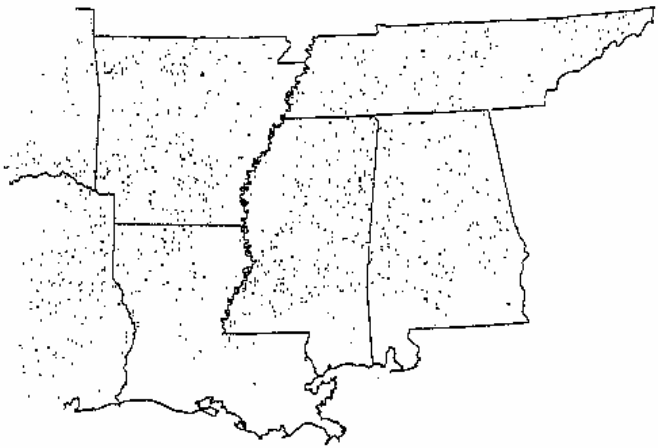
Apple
(Malus spp.*)*

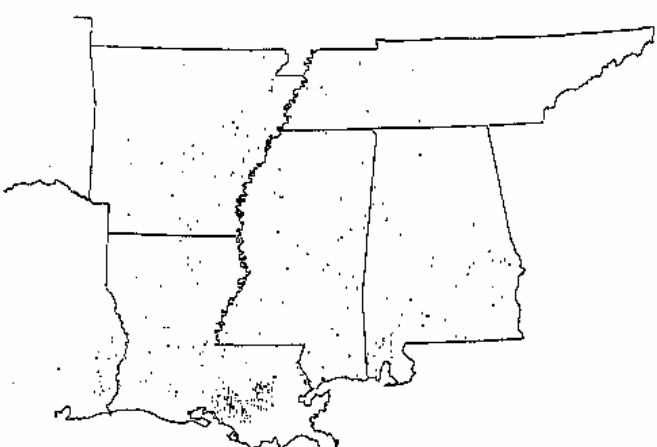




Chinaberry
(Melia azedarach)

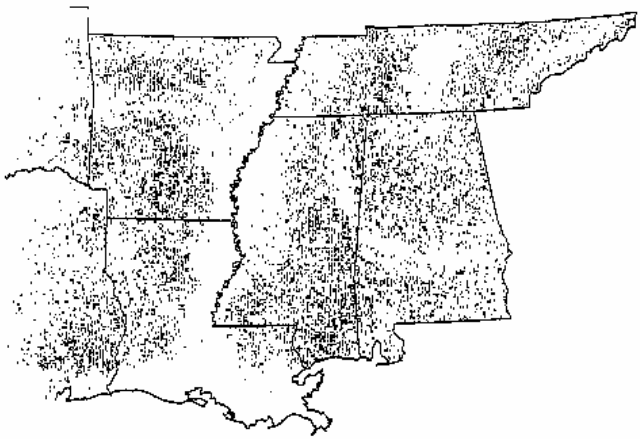
Mulberry
(Morus spp.*)*

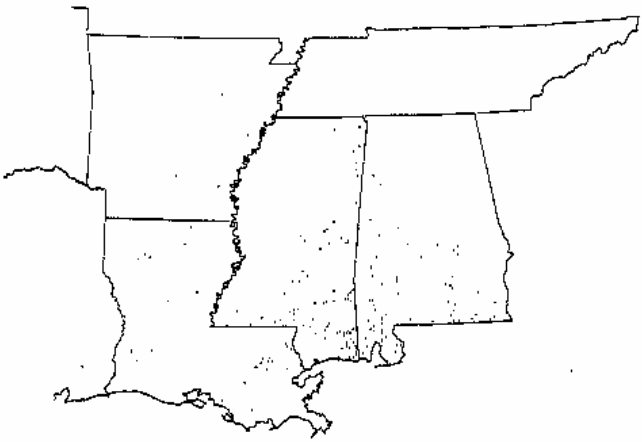




Water tupelo
(Nyssa aquatica)

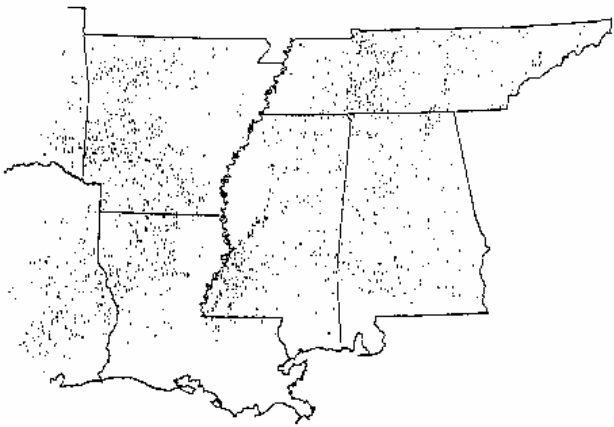
Blackgum
(Nyssa sylvatica)

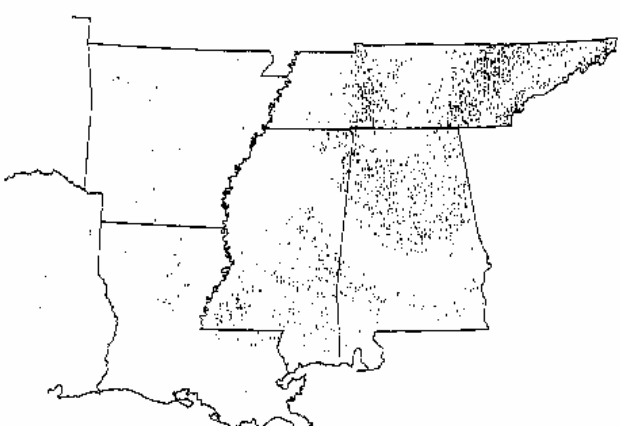




Swamp tupelo
(Nyssa sylvatica var. *biflora)*

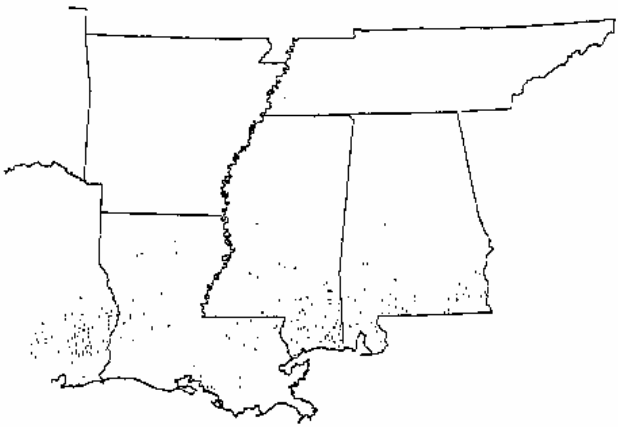
Ironwood
(Ostrya virginiana)

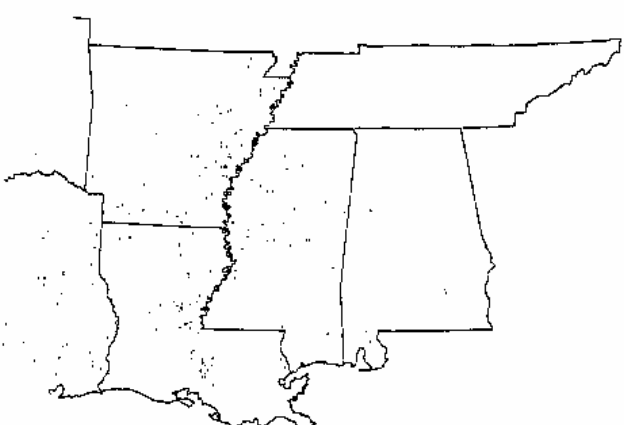




Sourwood
(Oxydendrum arboreum)

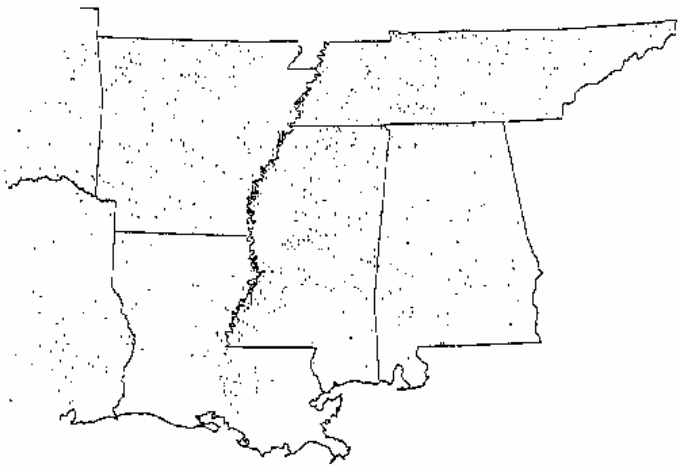
Redbay
(Persea borbonia)

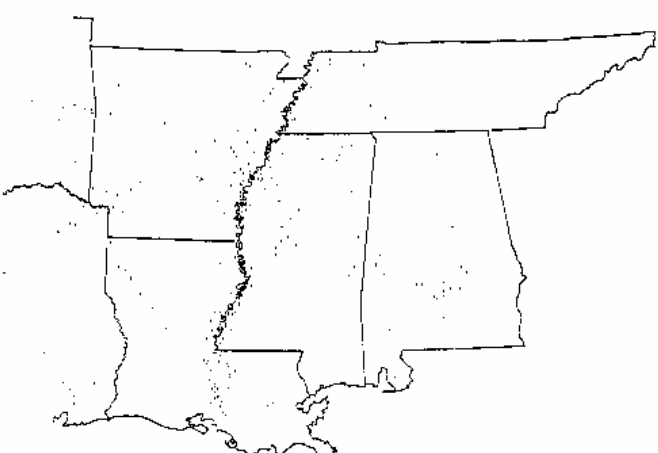




Water-elm
(Planera aquatica)

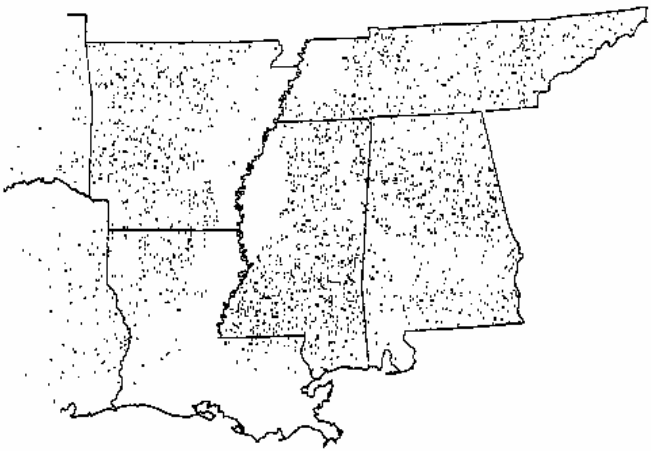
American sycamore
(Platanus occidentalis)

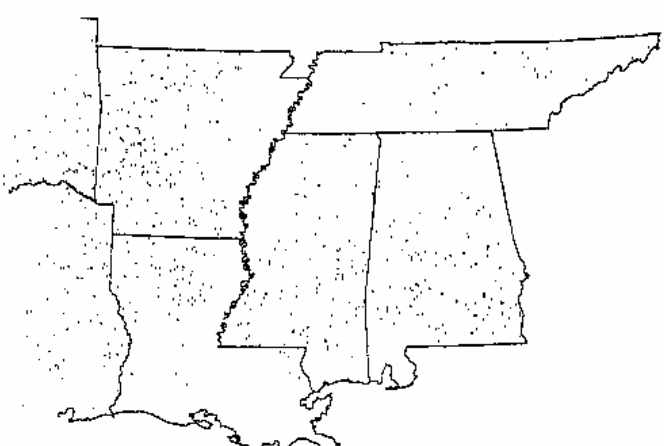




Cottonwood
(Populus deltoides)

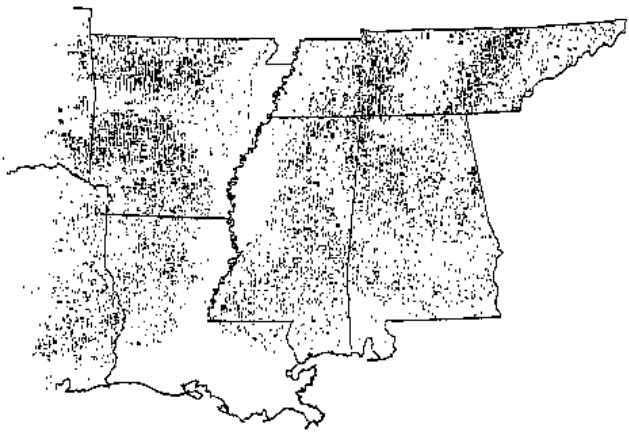
Black Cherry
(Prunus serotina)

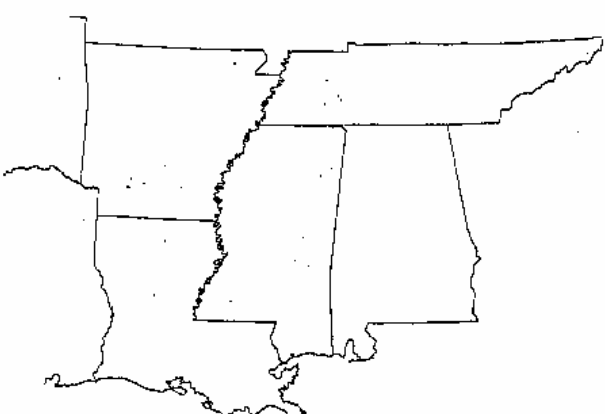




Plum and cherries
(Prunus spp.*)*

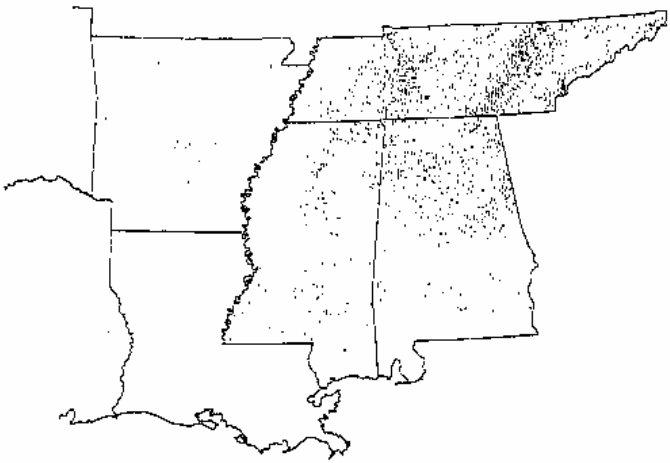
White oak
(Quercus alba)

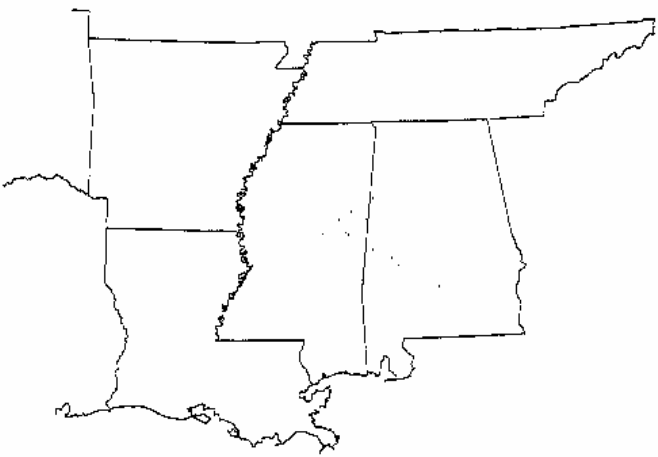




Swamp white oak
(Quercus bicolor)

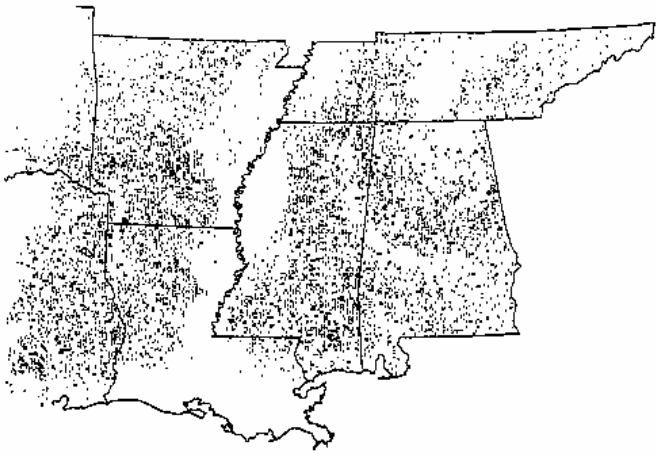
Scarlet oak
(Quercus coccinea)

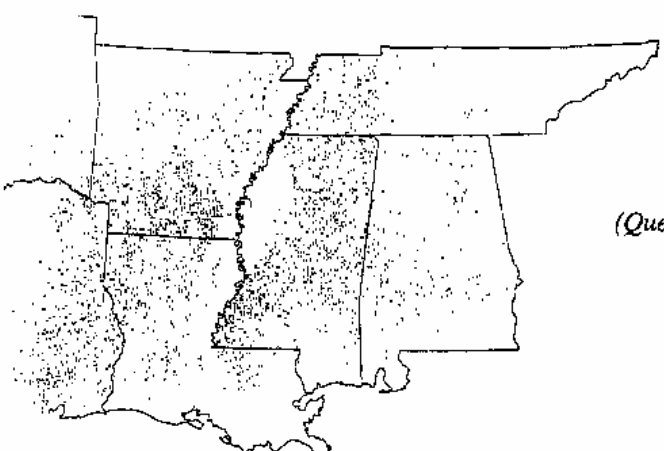




Durand oak
(Quercus durandii)

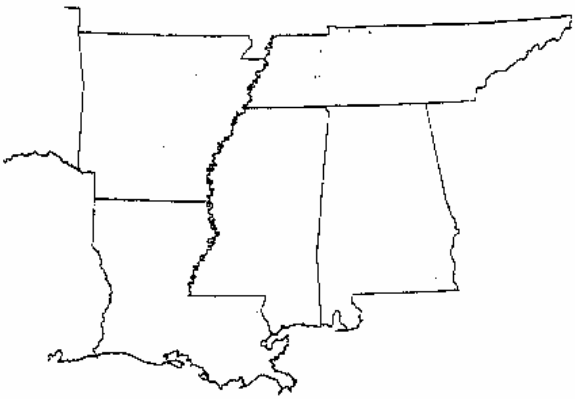
Southern red oak
(Quercus falcata)

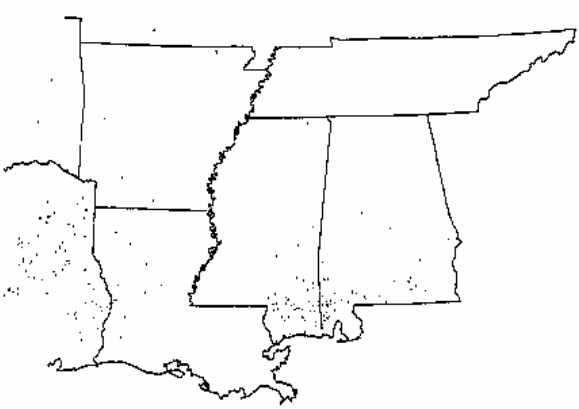




Cherrybark oak
(Quercus falcata var. *pagodifolia)*

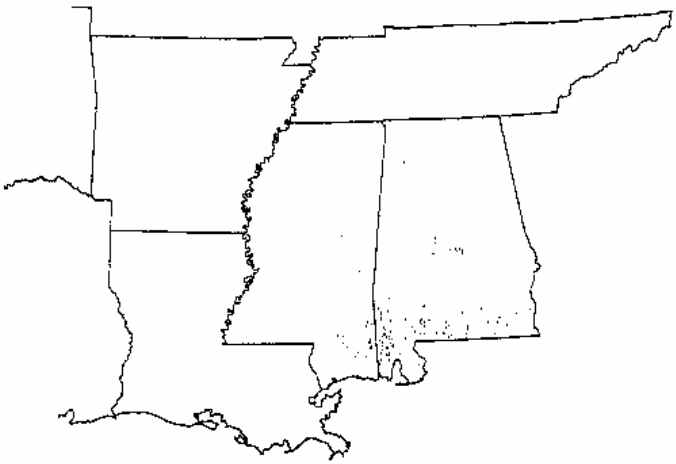
Shingle oak
(Quercus imbricaria)

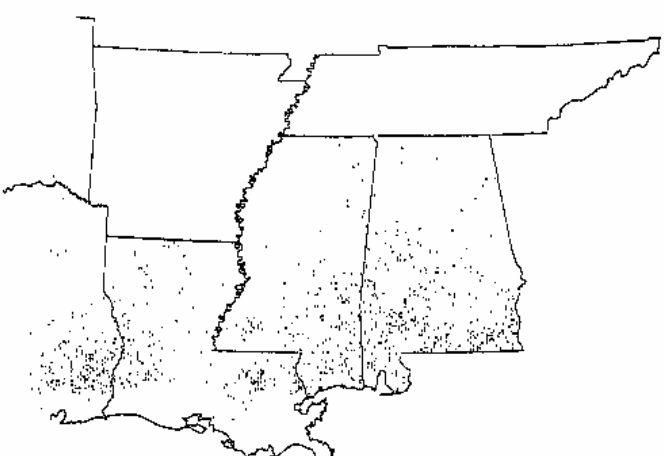




Bluejack oak
(Quercus incana)

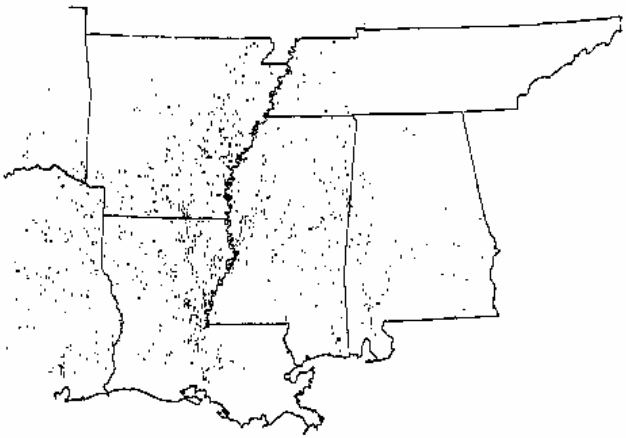
Turkey oak
(Quercus laevis)

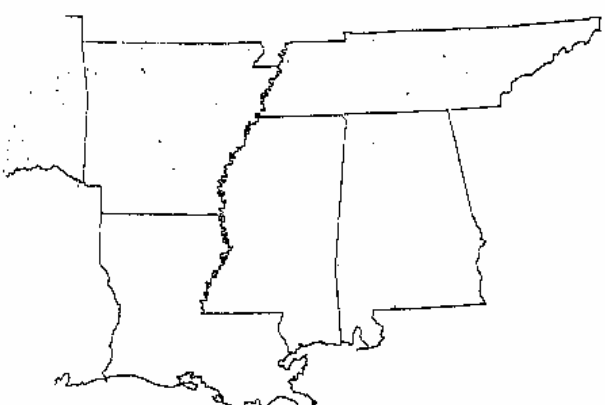




Laurel oak
(Quercus laurifolia)

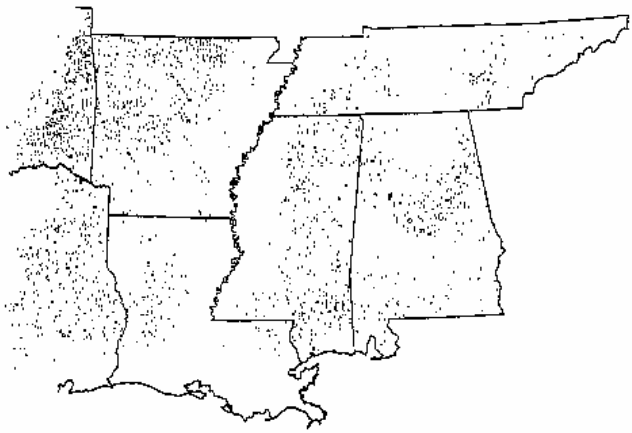
Overcup oak
(Quercus lyrata)

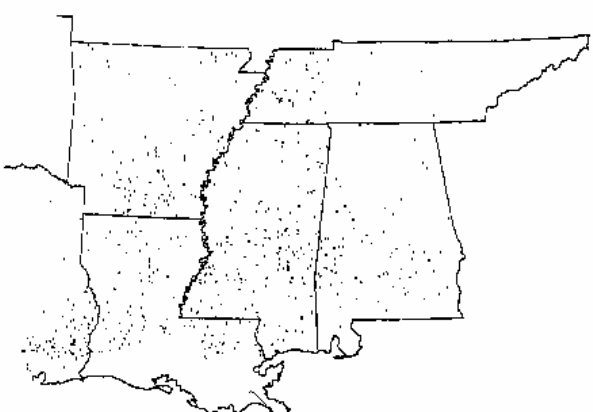




Bur oak
(Quercus macrocarpa)

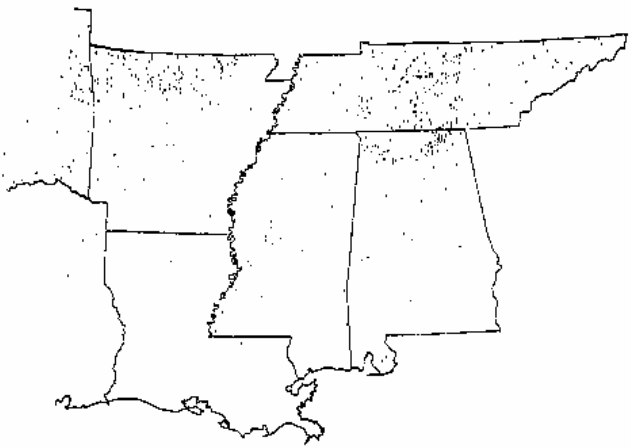
Blackjack oak
(Quercus marilandica)

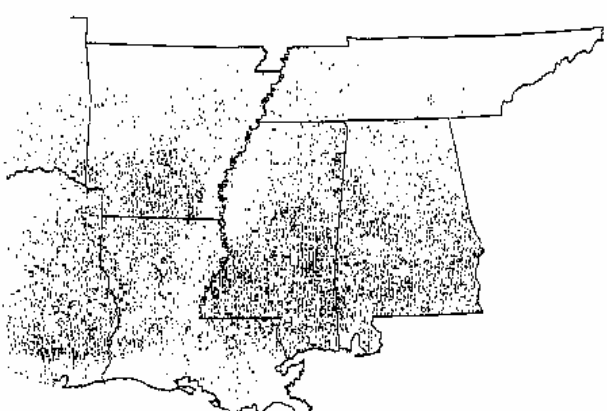




Swamp chestnut oak
(Quercus michauxii)

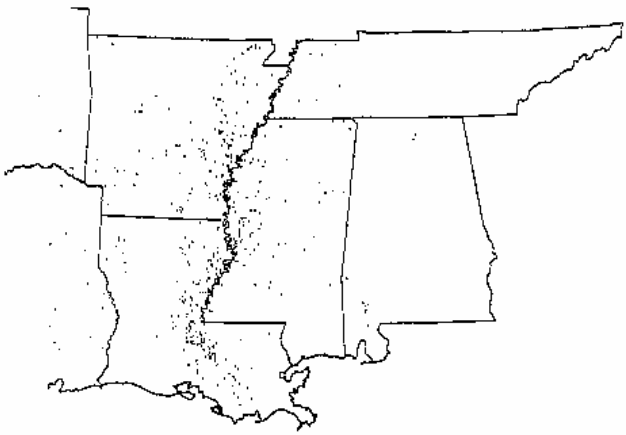
Chinkapin oak
(Quercus muehlenbergii)

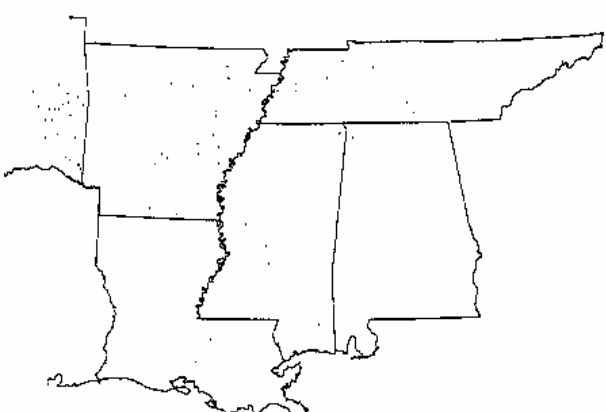




Water oak
(Quercus nigra)

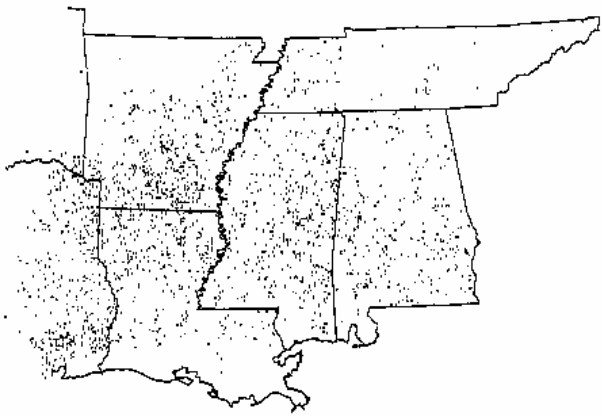
Nuttall oak
(Quercus nuttallii)

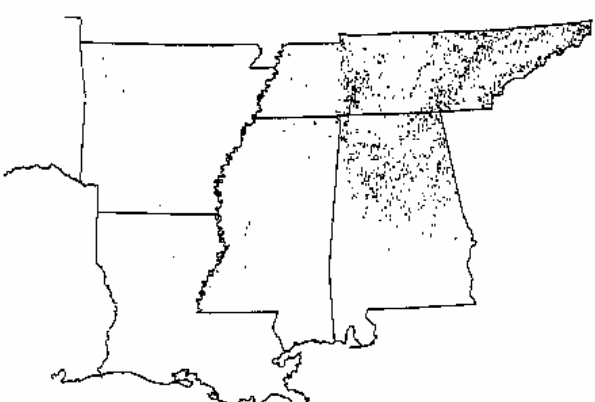




Pin oak
(Quercus palustris)

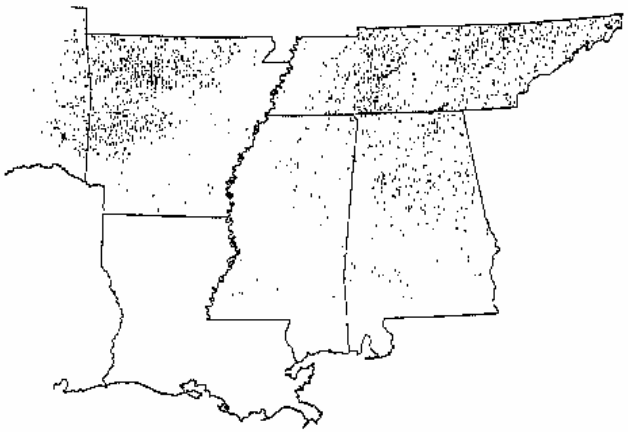
Willow oak
(Quercus phellos)

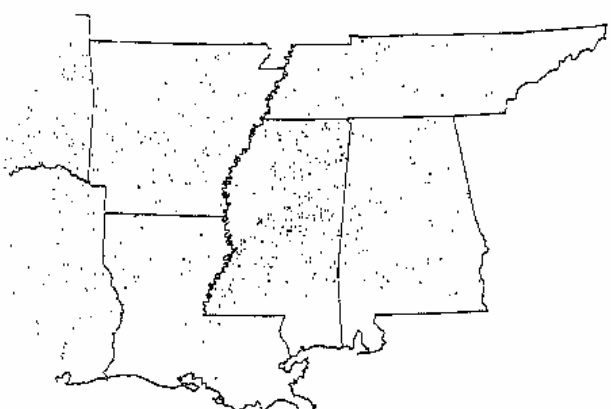




Chestnut oak
(Quercus prinus)

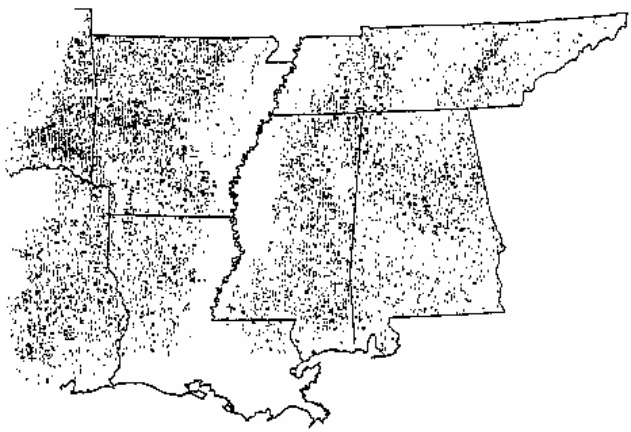
Northern red oak
(Quercus rubra)

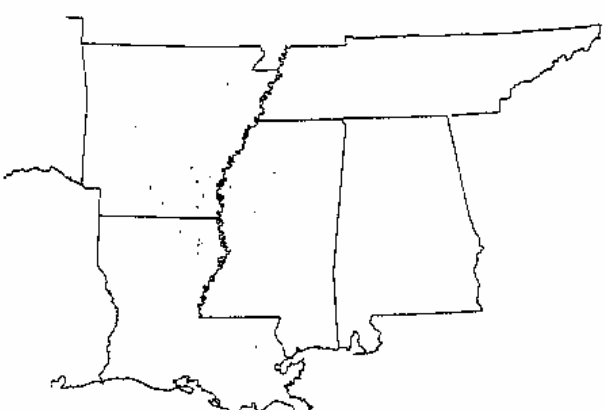




Shumard oak
(Quercus shumardii)

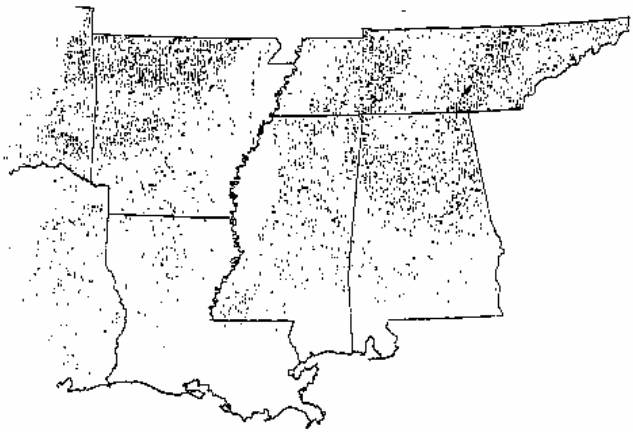
Post oak
(Quercus stellata)

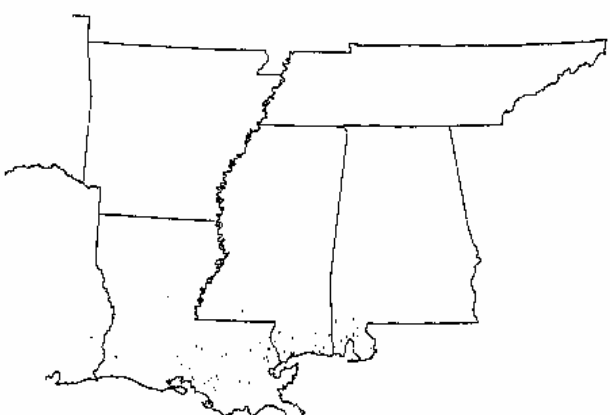




Delta post oak
(Quercus stellata var. *paludosa)*

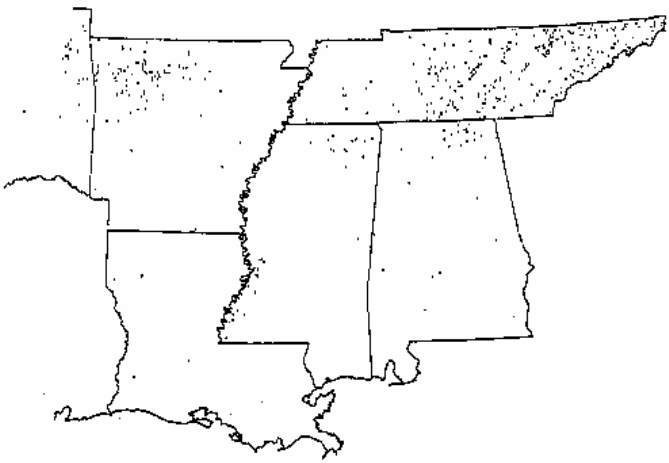
Black oak
(Quercus velutina)

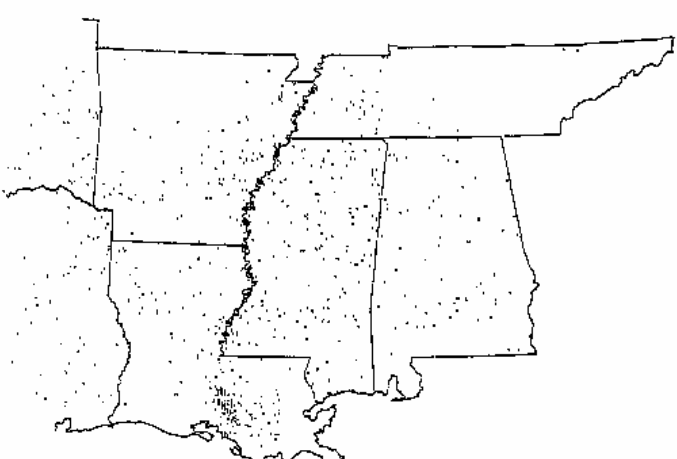




Live oak
(Quercus virginiana)

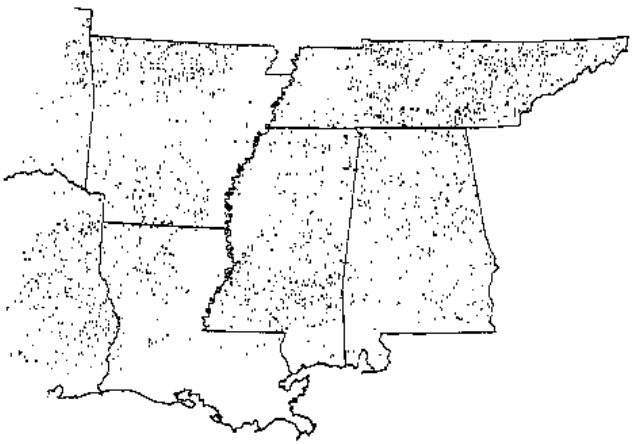
Black Locust
(Robinia pseudoacacia)

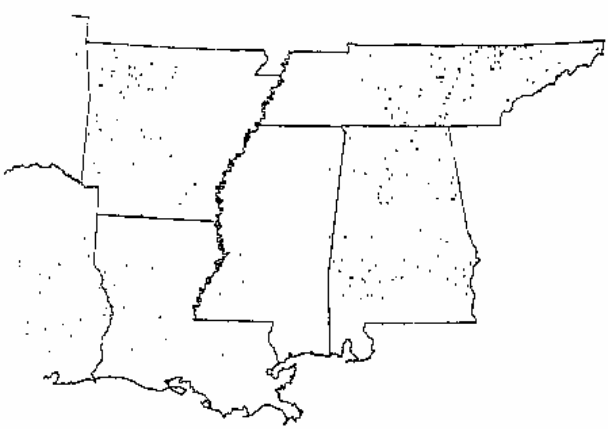




Willow
(Salix spp.*)*

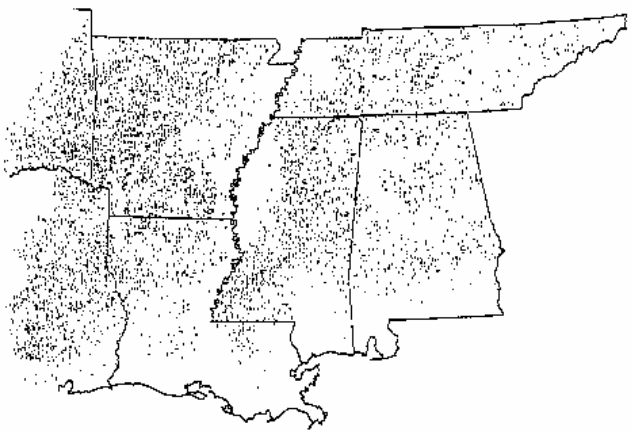
Sassafras
(Sassafras albidum)

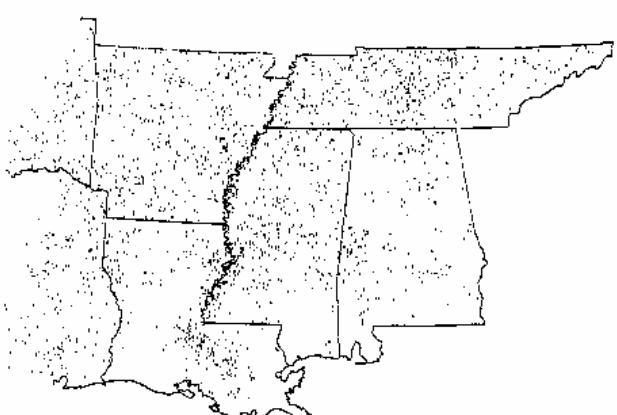




American basswood
(Tilia americana)

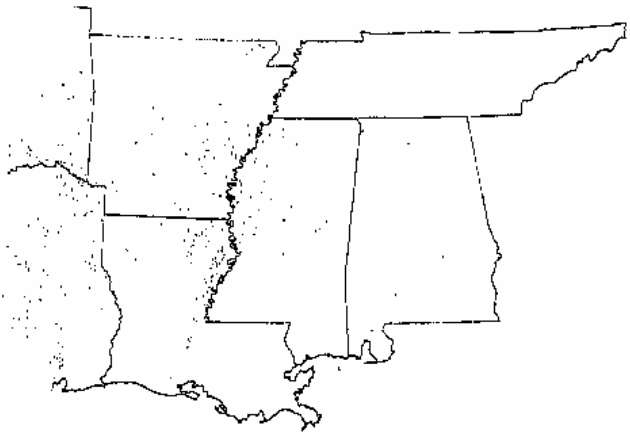
Winged elm
(Ulmus alata)

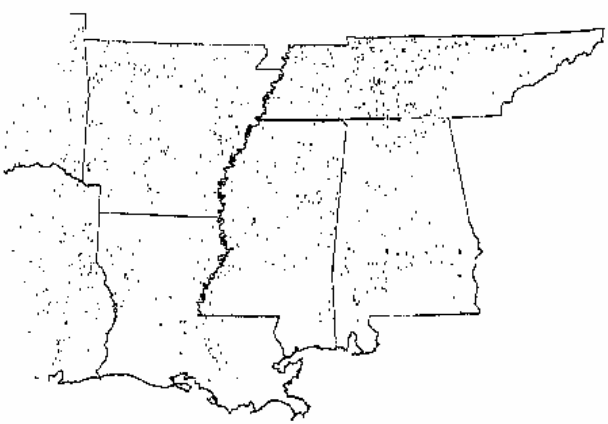




American elm
(Ulmus americana)

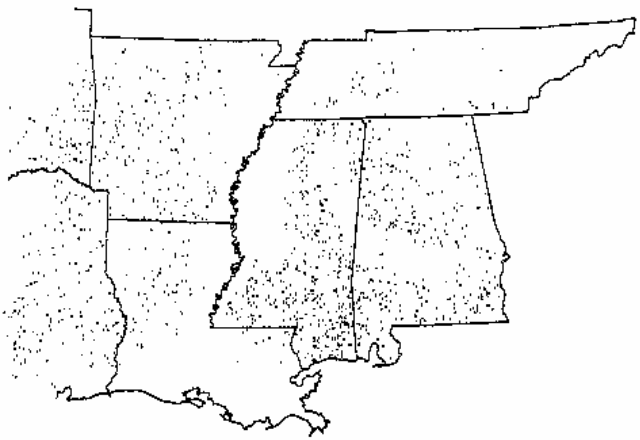
Cedar elm
(Ulmus crassifolia)





Slippery elm
(Ulmus rubra)

Sparkleberry
(Vaccinium arboreum)



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Beltz, Roy C.; Bertelson, Daniel F. 1990. Distribution maps for Midsouth tree species. Resour. Bull. SO-151.New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 56 p.

Depicts the location of tree species recorded in the U.S. Department of Agriculture, Forest Service, forest survey of the Midsouth.

Keywords: Maps, species, tree.

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