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Harris Braley Parks' "The Trees of Macoupin County, Illinois"

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Abstract: The size, abundance, habitat, and distribution of 54 tree species, 51 natives and 3 adventives, within Macoupin County, Illinois are described from a manuscript completed by H. B. Parks in 1900 while a student at Blackburn College in Carlinville, Illinois. A copy of this unpublished manuscript was obtained from the Science Library of Blackburn College, and a review of the text determined that annotations for ten tree species were missing. The remaining text describes the distribution and habitats of tree species at a time when old-growth forest remnants were still present. Exceptionally large trees representing several species, and native stands of tulip tree (*Liriodendron tulipifera* L.) are reported; however, two taxa, swamp chestnut oak (*Quercus michauxii* Nutt.) and ground juniper (*Juniperus communis* L.), remain undocumented from Macoupin County. Impacts upon forests by household uses of wood for heating, cooking, farming, building, and light industry, such as wagon manufacturing, are described. The greatest loss of old-growth forest is attributed to railroad construction from 1850 to 1895, a process that occurred throughout Illinois during the last half of the nineteenth century. The entire text of the Parks manuscript is presented in the appendix.

Introduction

Harris Braley Parks (1879-1958) was born on 10 June 1879 to William Stewart Parks and Sarah (Cowdry Braley) Parks in Carlinville, Macoupin County, Illinois. He attended the local schools before beginning studies in the Preparatory School (high school) of Blackburn College in Carlinville in 1893, earning a Bachelor of Science Degree in 1900 (Alex 1959). Parks farmed in Illinois from 1900 to 1903, and in South Dakota from 1903 to 1907 before becoming an instructor and superintendent of the Sheldon Jackson Indian School in Sitka, Alaska from 1907 to 1911. In 1912 he accepted the head position of the Science Department at Palmer College in Albany, Missouri, but left for College Station, Texas in 1917 where he served as an entomologist with the Texas A & M Extension Service. He was named Chief of the Division of Apiculture at what is now Texas A & M University in 1927, becoming curator of the Museum and Botanist of the Tracy Herbarium at this institution in 1945, eventually retiring in 1949.

Parks published several papers during his professional career, including "Valuable Plants Native to Texas" (Parks 1937), a "Catalogue of the Flora of Texas" (Cory and Parks 1937), and "The Fauna and Flora of the Big Thicket" (Parks and Corey 1938). One manuscript, "The Trees of Macoupin County, Illinois", written while a student at Blackburn College in Carlinville in the late 1890s, was never published (Parks 1900). This article remained relatively unknown until 1928 when Parks shared the data with Illinois forester Robert Barclay Miller, a member of the Illinois Department of Conservation, and one of the authors of "Forest Trees of Illinois, How to Know Them" (Fuller et al. 1928).

Macoupin County in west-central Illinois has an area of 552,960 acres (223,796 ha) and lies within the Carlinville Section of the Western Forest-Prairie Division (Schwegman 1973). The original vegetation consisted of a mixture of forest and prairie, with forest occupying ridge tops, hillsides, portions of bottomlands, and dry, relatively flat uplands. Prairie was present in the northern and southern parts of the county and the Macoupin Creek Bottoms. The topography varies from nearly level, poorly drained, former prairie sites in the north to dissected, rolling, forested hills in the south. The creek bottoms, especially those along Macoupin Creek, are wide, sometimes exceeding a mile (1.6 kms). The climate is continental, with an average winter temperature of 31° F (−1° C) and an average summer temperature of 75° F (24.0° C). The growing season averages 175 days, and average annual precipitation is 38.6 inches (98.0 cm), most of which falls as rain from April through September (Tegeler 2004).

Most soils within Macoupin County developed from wind-blown loess with smaller units derived from glacial drift, alluvium, or bedrock residuum. Prairie, forest, and forest-prairie transition vegetation influenced soil development on uplands, and wet prairie-wet forest vegetation influenced soil development in bottomlands

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(Tegeler 2004). Approximately 401,300 acres (162,400 ha) of prairie and 148,300 acres (60,015 ha) of forest were present in Macoupin County in the early 1800s (Iverson et al. 1989). Nearly all prairie has since been converted to agriculture and the extent of forest vegetation reduced to about 85,000 acres (34,398 ha) since the study of Parks (1900). Only 118 acres (47.8 ha) of this total represent high quality forest (Iverson et al. 1989). The forest remnants of today are greatly modified from their original composition as various tree species have increased or decreased in abundance due to diseases and logging practices. The purpose of this article is to publish the annotated list of tree species of H. B. Parks for Macoupin County, Illinois (Parks 1900), and to create awareness of tree sizes and their values within old-growth forest communities once present in west-central Illinois.

Methods

We reviewed the manuscript of H. B. Parks (1900) and updated the taxonomy of all tree species to correspond with Mohlenbrock (2014). Scientific names used by Parks are enclosed in parenthesis for species with taxonomic changes since 1900. We also added family names and arranged the annotations alphabetically by family, genus, and species. We made efforts to locate an original copy of the Parks' manuscript and his voucher specimens deposited in the Blackburn College Herbarium at the completion of his study. Additional herbaria searches were made at the University of Illinois (ILL), Illinois Natural History Survey (ILLS), and the Illinois State Museum (ISM). Metric equivalents were developed for all measurements. The complete manuscript of Parks with the additions mentioned above is included in the appendix.

Field surveys were conducted to locate extant specimens of tulip tree (*Liriodendron tulipifera* L.) in the southern part of Macoupin County. The southern half of Brushy Mound, the large mound that gives the township its name, was searched and interviews were conducted with current and former residents. Portions of the Macoupin Creek Bottoms were searched to locate specimens of swamp chestnut oak (*Quercus michauxii* Nutt.). Interviews were also conducted with researchers regarding these two tree species included in Parks (1900) in attempts to verify them as indigenous to Macoupin County. Neither species has been verified as a part of the flora of Macoupin County.

Results

We found an introduction, a numbered list of species, and numbered annotations corresponding to the list of taxa included in the Parks' manuscript, "Trees of Macoupin County, Illinois". We found pages missing from the manuscript that included annotations for ten species included in the list of species cited by Parks: *Amelanchier arborea* (Michx. F.) Fern. (Juneberry, shadbush), *Cornus florida* L. (flowering dogwood), *Crataegus calpodendron* (Ehrh.) Medic. (woolly haw), *Crataegus crus-galli* L. (cock-spur thorn), *Crataegus mollis* (Torr. & Gray) Scheele (red haw), *Malus coronaria* (L.) Mill. (wild sweet crab apple), *Prunus americana* Marsh (wild plum), *Prunus serotina* Ehrh. (wild black cherry), *Juniperus communis* L. (juniper), and *Sambucus nigra* L. (elderberry). Also missing from the manuscript was a map referenced by Parks delineating forest boundaries in the late 1890s. The remaining text describes, in various levels of detail, 54 woody plants regarded as trees by Parks that were present in Macoupin County in the late 1890s.

Neither a copy of the complete, original manuscript or a retyped version could be located at Blackburn College. We also determined the occurrence of two devastating fires, University Hall in 1927 and Robertson Hall in 1959, that greatly affected the resources of the biology department. Both buildings were destroyed along with extensive collections and archival materials. We were unable to locate any specimens collected by Parks in the current herbarium of Blackburn College, the University of Illinois (ILL), the Illinois Natural History Survey (ILLS), or the Illinois State Museum (ISM). Specimens dating to the late 1800s were absent in the Blackburn College Herbarium despite a known history of plant collecting by botanists at this institution during this time.

Little information was found in the partial manuscript that described the methods used by Parks in his surveys. He defines a tree as a perennial woody plant having a straight trunk whose diameter is greater than two inches (5.1 cm) at a height of six inches (15.2 cm) above the soil in the introduction but does not provide additional explanation on how tree heights and large trunk diameters were determined. He describes searching for tree species within all creek bottoms and their bluffs throughout Macoupin County, suggesting a thorough survey.

Discussion

Data on tree heights and diameters from the late 1800s from old-growth forests in Illinois are scarce. One of the best-known publications from this time describes gigantic trees within the forests of the lower Wabash and White rivers of Illinois and Indiana (Ridgeway 1882). While the Wabash forests were exceptional and unique, especially for the eastern United States, large trees once characterized old-growth forests throughout the nation, including Macoupin County, Illinois (Brugam et al. 2016). Their removal, especially during the period 1850 to 1890, left scattered tracts of original forest plus many widely dispersed, large trees considered defective by lumbermen.

Initially, the removal of trees during the early part of the nineteenth century was limited mostly to household, farm, and small business uses (See Appendix). Tulip tree and hickory (*Carya* spp.) wood was used to make wagons and cooperage hoops, oaks were used for heating, cooking, and building, and Ohio buckeye (*Aesculus glabra* Willd.), a light, strong wood, proved ideal for oxen yokes. Basswood (*Tilia americana* L.), sycamore (*Platanus occidentalis* L.), tulip tree, silver maple (*Acer saccharinum* L.), and elms (*Ulmus americana* L. and *U. rubra* L.) were

planted extensively for shade. Collectively these uses, coupled with forest clearing for agriculture, slowly reduced the extent of the original forests, but their impacts do not compare in magnitude to the rapid removal of huge swaths of old-growth forest by railroad companies. Crews of the Alton and Sangamon Railroad (later the Chicago and Alton) cut vast amounts of timber for ties, bridges, fuel, and buildings. One Macoupin County sawmill supplied this railroad with 500,000 ties cut from oaks (McClain 2012). It was a process repeated during the late 1800s throughout Illinois as railroads crisscrossed the state, resulting in the removal of vast amounts of old-growth forest. Individuals must now diligently search for trees that match the dimensions cited by Parks

A recent survey for large-sized trees in Macoupin County, conducted approximately one hundred years following the study of Parks, identified large white, bur, and post oaks, sycamores, cottonwoods, and other species (Mahan 2002). This study, like that of Parks (1900), investigated all creek bottoms within the county. Large trees were rare and found on sites not readily accessible to lumbermen. Many of these trees were equal in size and height to those reported by Parks (Mahan 2002). One difference between these two studies is the scarcity of old-growth forest remnants like those present at the time of European settlement. Only 118 acres (47.8 ha) of old-growth forest remains in all of Macoupin County (Iverson et al. 1989). Large trees are now less dominant on the landscape due to additional forest clearing and timber management practices that discriminate against large, hollow, and open-grown trees.

The loss of big trees within forest communities has had dramatic detrimental impacts upon wildlife. The demise of large, hollow trees, including sycamores, eliminated nesting and roosting sites for a variety of bird species such as swallows and owls. Small forest remnants are unsuitable nesting habitat for many migratory bird species. More recently, diseases and insect infestations have had devastating effects upon several tree species. Elms (*Ulmus americana*, *Ulmus rubra*), once common in Macoupin County, are less prominent now due to Dutch elm disease (*Ophiostoma ulmi* [Buisman] Nannf. Nairn) and butternut (*Juglans cinerea* L.) has been virtually eliminated due to a canker disease (*Ophiognomonia clavigigneti-juglandacerarum* [Nair, Kostichka & Kuntz] Broders & Boland). The emerald ash borer (*Agrilus planipennis* Fairmaire) is currently infesting ash (*Fraxinus*) trees throughout the county, greatly reducing their numbers. The absence of wildland fire has favored an increase in abundance of species like sugar maple (*Acer saccharum*) at the expense of fire-tolerant oaks (McClain et al. 2006). The advent of exotic, invasive species, such as garlic mustard (*Alliaria petiolata* (Bleb.) Cavara & Grande.) and Amur honeysuckle (*Lonicera maackii* (Rupr.) Maxim.), has altered the understory of many woodlands, making them unsuitable for ground-nesting birds such as whippoorwills and ovenbirds (McClain 2011).

Parks prepared voucher specimens for all tree species included in his study. However, collections dating to the 1800s, including those made by Parks and botany professor W. E. Andrews, were conspicuously absent from the Blackburn College Herbarium. It is thought that the herbarium was destroyed when University Hall, the main campus building, burned to the ground (Carlinville Democrat 1927). A second fire on 10 November 1959 destroyed Robertson Hall, the next location of the biology department. The losses included the Taylor Museum, a 21,000 fossil specimen collection, Native American artifacts, and numerous archival materials (Emory 2019). These fires effectively severed the past from the Blackburn College Biology Department.

The loss of voucher specimens makes it impossible to confirm the identities of three species reported by Parks that are currently undocumented as part of the native flora of Macoupin County (Mohlenbrock and Ladd 1978). One species is tulip tree, reported by Parks from the Macoupin Creek Bottoms, Brushy Mound south of Carlinville, and a grove southwest of Plainview. We believe his identification of this tree is correct due to its unmistakable leaf shape and flowers. This statement is supported by the observation of wild growing tulip trees approximately two feet in diameter south of Carlinville near Brushy Mound (Larry Mahan, pers. com. 2 October 2022). The nativity of the other two species is much less certain. Parks describes the exceptional trunk diameters and heights of swamp chestnut oak (*Quercus michauxii*) trees and their extensive use by the railroad but does not define a locality or habitat. Swamp chestnut oak occurs in southern Illinois but is absent in the northern two-thirds of the state. Its nativity to Macoupin County, in the absence of voucher specimens, remains uncertain, and no trees were found by Mahan (2002) who surveyed the entire county. The habitats of this tree, wet bottomland forests like those once present along Macoupin Creek, have all been destroyed. Parks used the scientific name *Quercus prinus* for this tree and separated it from yellow chestnut oak (*Q. muhlenbergii)* based on size and the resistance of swamp chestnut oak wood to decay.

Another species not known from Macoupin County is *Juniperus communis*, a sprawling shrub currently restricted to the sand dunes of Lake Michigan in northeastern Illinois (Mohlenbrock 2014). The sand dune habitat required by this plant is not present in Macoupin County, causing us to believe that the inclusion of this species in the Macoupin County Flora is incorrect. The only juniper species recorded for the county, which still grows naturally, is eastern red cedar (*Juniperus virginiana* L.). This is the taxon most likely observed by Parks in Macoupin County.

We are unlikely to witness tree sizes in the future like those described by Parks. He includes several woody species, known today as small shrubs, that attained remarkable sizes. Individuals of smooth sumac (*Rhus glabra* L.) reached heights of 25 feet (7.6 m) with trunks large enough for firewood. Lance-leaved buckthorn (*Rhamnus lanceolata* Pursh.), with heights of 30 feet (9.1 m) and trunk diameters of six inches (15.2 cm), grew along Macoupin Creek. Wafer ash (*Ptelea trifoliata* L.) specimens with heights greater than 20 feet (6.1 m) and trunks with diameters greater than four inches (10.2 cm) grew along Honey Creek.

The sizes listed for several trees are equally impressive. A specimen of sassafras, known mostly as a small tree today, had a diameter of five feet (1.5 m) and a height of nearly 150 feet (45.7 m). Diameters of four (1.2 m) to six feet (1.8 m) and heights of 50 (15.2 m) to 60 feet (18.2 m) were reported for American and red elms, including one American elm near Macoupin Station that had a diameter of six feet (1.8 m) at a height of eight feet (2.4 m) above the ground. A sycamore east of Carlinville, damaged in a storm, had a hollow top five feet (1.5 m) in diameter at a height of sixty feet (18.2 m). White oaks four feet (1.2 m) in diameter and seventy-five feet (22.9 m) in height were common and post oaks up to five feet (1.5 m) in diameter were scattered throughout pastures. The largest trees were those of swamp chestnut oak, a species whose nativity in Macoupin County remains questionable. Individuals of this tree, having immense diameters of eight (2.4 m) to ten feet (3.0 m), were cut to furnish lumber for the construction of the Alton and Sangamon Railroad in the 1850s (McClain 2012).

Parks mentions, in correspondence with R. B. Miller, that additional species could be added to the manuscript "Trees of Macoupin County". Absent from his list are redbud (*Cercis canadensis* L.), and green ash (*Fraxinus lanceolata* Borkh.). Redbud is common along forest edges and fence rows and green ash is found along the creeks of the county. Several invasive exotic tree species are now naturalized in Macoupin County, including callery pear (*Pyrus calleryana* Decne.), white popular (*Populus alba* L.), and mimosa (*Albizia julibrissin* Durazz.). These trees may be found along roads, fences, and disturbed sites, and have been increasing in abundance and distribution within the state in recent years (McClain et al. 2012; Mohlenbrock 2014; White et al. 2005).

We consider the tree heights and diameters described by Parks to be remarkable. It is our hope that his study will create interest and efforts to increase the number and distribution of large trees representing many species within our forest remnants. Their presence would provide enjoyment, enhance wildlife habitat, and create educational opportunities. His study may also encourage the reconstruction of certain communities, such as bottomland pin oak forests, that once characterized portions of the Macoupin Creek floodplain.

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Appendix

Annotated list of tree species for Macoupin County, Illinois by H. B. Parks, prepared during 1895-1900 while a student at Blackburn College, Carlinville, Illinois. The annotations for each species are from the manuscript of Parks with very minor editing to provide greater clarity.

The Trees of Macoupin County, Illinois

An annotated list of the larger woody plants which occur in this county, together with notes on their former occurrence and history of removal and replacement.

By
H. B. Parks
Carlinville, Illinois
Presented before and printed by the Science Club
Blackburn University
1900

The Trees of Macoupin County

The most marked feature of any landscape is its trees, either singly, in groups, or as the forest's vast extent. To grow a forest cover takes hundreds of years. In these years of growth, the lesser plants, the birds, the animals, the insects, and even the fishes gradually adapt themselves to the new and agreeable surrounding and nature finds a balance, where for countless seasons there is little change save in the replacement of dead individuals by a similar number of the same kind. When man arrives with his axe and plow, a year will see the destruction a dozen centuries work. Nature is suddenly thrown out of tune and a barren, plague-stricken landscape is the result.

In 1815, David Coop made the first (European) settlement in Macoupin County. As has been the case with all early settlers, he chose the wooded part of the land to the prairie. Here on the side of that beautiful rise of land that now bears the name of Coop's Mound, he cut out his fields. What a change has eighty-five years have brought about! So changed is the original terrain that it is with the great difficulty that the boundaries of the old forest can be traced. Every year sees more and more of the forest cover removed and yet a hopeful note that can be heard above that of the axe is the sound of the spade setting out trees to replace those that have disappeared and to grace the prairies where none have existed before.

In 1894, W. E. Andrews, Professor of Botany at Blackburn University, Carlinville, Illinois, published in the Carlinville Enquirer a checklist of the flowering plants that he had collected in this county up to that date. In the six years that have passed since that list was printed the writer has seen acre after acre of the forest cover of this same area give way to the progress of agriculture and knows of the eradication of several species of plants from the county. The loss of such plants as the white lady's slipper (orchid), the yellow lady's slipper (orchid), wild pansy, wild hydrangea, and the wild honeysuckle are to be deplored and charged up to man's ignorance. That Prof. Andrew's record might be kept up to date and supplemented, the writer, in 1895, began the list that is herein given. He has followed the nomenclature used by Prof. Andrews and each species given was verified by Prof. Andrews. Herbarium specimens of all species recorded are deposited in the Biological Laboratory of Blackburn University. The notes on occurrence and history, especially the boundaries of the old forests, are mostly the work of the writer, although some of them were made in connection with Prof. W. E. Andrews, and Dr. C. Robertson.

In order that this article be of convenient length, it was decided to include in it a record of those woody plants that are commonly called trees. As everyone knows, it is very had to say where a bush ends, and a tree begins. So, for the sake of convenience, a tree, as spoken of in this list, is any woody perennial plant that attains a diameter of two inches or more six inches above the ground. The local history of the occurrence and destruction of trees, as well as the limits of the almost forgotten forest, have come in part from the old settlers and part of the files of the county newspapers. To complete this history of the woody plants, a paper on the "Shrubs and Woody Vines of Macoupin County" is in preparation.

H. B. Parks
Feb. 1, 1900

The Trees of Macoupin County

Table of Contents

CORNACEAE

12. Cornus florida L. (flowering dogwood) - missing from manuscript

CORYLACEAE

13. Carpinus caroliniana Walt. (hornbeam)
14. Ostrya virginiana (Mill.) K. Koch (hop hornbeam)

CUPRESSACEAE

15. Juniperus communis L. (ground juniper) - missing from manuscript

EBENACEAE

16. Diospyros virginiana L. (persimmon)

FABACEAE

17. Gleditsia triacanthos L. (honey locust)
18. Gymnocladus dioica (L.) K. Koch. (*G. canadensis* Lam., Kentucky coffee tree)
19. Robinia pseudoacacia L. (black locust)

FAGACEAE

20. Quercus alba L. (white oak)
21. Quercus bicolor Willd. (swamp white oak)
22. Quercus imbricaria Michx. (shingle oak)
23. *Quercus macrocarpa* Michx. (bur oak)
24. *Quercus marilandica* Muench. (*Q. nigra* L., blackjack oak)
25. *Quercus michauxii* Nutt. (*Q. prinus* L., chestnut oak)
26. *Quercus muhlenbergii* Engelm. (yellow oak)
27. Quercus palustris Muench. (pin oak)
28. Quercus rubra L. (red oak)
29. Quercus stellata Wangh. (post oak)
30. Quercus velutina Lam. (*Q. coccinea* Wang., black oak)

HIPPOCASTANACEAE

31. Aesculus glabra Willd. (buckeye)

JUGLANDACEAE

32. Carya cordiformis (Wangenh.) K. Koch (bitternut or pig nut)
33. Carya illinoinensis (Wangenh.) K. Koch. (*C. olivaeformis* Nutt., pecan)
34. Carya laciniosa L. (*C. sulcata* Nutt., kingnut or big shellbark)
35. Carya ovata L. (*C. alba* Nutt., shellbark hickory)
36. Carya tomentosa Nutt. (mockernut)
37. Juglans cinerea L. (butternut, white walnut)
38. Juglans nigra L. (black walnut)

LAURACEAE

39. Sassafras albidum (Nutt.) Nees (sassafras)

MAGNOLIACEAE

40. Liriodendron tulipifera L. (tulip tree or yellow poplar)

MORACEAE

41. Maclura pomifera L. (Osage orange, hedge)
42. Morus rubra L. (mulberry)

OLEACEAE

43. Fraxinus americana L. (white ash)

PLATANACEAE

44. Platanus occidentalis L. (sycamore)

RHAMNACEAE

45. Rhamnus lanceolata Pursh. (buckthorn)

ROSEACEAE

46. Amelanchier arborea (Michx. F.) Fern. (*A. canadensis* Torr. & Gray, serviceberry) - missing from manuscript.
47. Crataegus calpodendron (Ehrh.) Medic. - (*C. tomentosa* L., wooly haw) - missing from manuscript.
48. Crataegus crus-galli L. (cock-spur thorn) - missing from manuscript.
49. Crataegus mollis (Torr. & Gray) Scheele (*C. coccinea* L. var. *mollis* Torr. & Gray, red haw) - missing from manuscript.
50. Malus coronaria (L.) Mill. (*Pyrus coronaria* L., wild crabapple) - missing from manuscript.
51. Prunus americana Marsh. (wild plum) - missing from manuscript.
52. Prunus serotina Ehrh. (wild cherry) - missing from manuscript.

RUTACEAE

53. Ptelea trifoliata L. (wafer ash)
54. Zanthoxylum americanum Mill. (prickly ash)

SALICACEAE

55. Populus deltoides Marsh. (*P. monilifera* Ait., cottonwood)
56. Populus tremuloides Michx. (trembling aspen)
57. Salix amygdaloides Anderss. (peach-leaved willow)
58. Salix nigra Marsh. (black willow)

SIMAROUBACEAE

59. Ailanthus altissima (Mill.) Swingle. (tree-of-heaven)

STAPHYLEACEAE

60. Staphylea trifolia L. (bladdernut)

TILIACEAE

61. Tilia americana L. (basswood)

ULMACEAE

62. Celtis occidentalis L. (hackberry)
63. Ulmus americana L (white elm)
64. Ulmus rubra L. (*U. fulva* Michx., slippery elm)

Species Annotations

ACERACEAE

1. Acer negundo L. (*Negundo aceroides* Moench., boxelder) - This tree is common along the water courses. It is seldom found on the upland with the exception of one place in Barr Township where several acres (ha) of this species are present around a prairie lake. The tree does not reach a large size and has nothing to mark it as peculiar.

2. Acer saccharinum L. (*A. dasycarpum* Ehrh., silver, white maple) - This is the most common maple tree of the county and is the most common tree planted for shade in this section of the state. Its rapid growth, thick shade, and wonderful coloring in autumn make it desirable as an ornamental tree. Its greatest drawback is the fact that the wood is weak and in wind or ice storms will fill the streets with broken limbs. The bright red of the new branches and of the blossom which appear in February or March make this tree very conspicuous in the spring forest. The seed which are produced in large quantities germinate very readily and any abandoned field will soon show a growing maple forest. The trees very often reach an immense size and the wood is utilized for box making and stove wood. The tree is a native of the creek bottoms land, (and) is seldom found growing on uplands, unless planted.

3. Acer saccharum Marsh. (sugar maple) - This tree is very common in Macoupin County, but nowhere are the stands large enough to warrant the tapping for sugar. Many large specimens can be found in the Macoupin Creek bottoms. These will range from three to five feet (0.9 to 1.5 m) in diameter. Trees growing in the river (creek) bottoms are generally very tall with a central trunk. The majority of sugar maples, however, grow in isolated localities on rich hillsides. Here they form a round topped tree, which seldom reaches a height of more than fifty feet (15 m). This tree is the latest blooming of the maples, and the blossoms appear the latter part of May.

ANACARDIACEAE

4. Rhus copallina L. (winged dwarf sumac) - This variety of sumac is not common, but there are a few large thickets in Carlinville, South Otter, and South Palmyra Townships. It is generally found in the vicinity of prairie lakes where it very often reaches the size designated as the lower limits for trees specified in this paper. This sumac blooms later than *Rhus glabra* and the flowers are white instead of yellow. The seed clusters are much smaller and darker in color. The plant furnishes material for tanning leather, and it is reported that the species was largely killed out by the continued collecting of its new growth for dying purposes.

5. Rhus glabra L. (sumac) - This plant hardly deserves a place in this list. It must, however, be included as many specimens are greater than two inches (5.0 cm) in diameter at the ground. There are many thickets of this plant on both the uplands and creek bottoms in the county. On the rich black lands in the north part of the county specimens 25 feet (7.6 m) in height are not uncommon. Sections of the trunks were seen that were large enough to be used as cord wood. This tree blooms in June and July. The flowers are followed by the beautiful flame-colored clusters of seeds that hang on all winter, furnishing food to the few birds that remain in the county throughout the winter. The small boys rely on this plant for material to make pop guns. In an early day the new shoots of his plant and the seed clusters were colored (collected) and used in the dying of leather.

ANNONACEAE

6. Asimina triloba (Dunal) L. (papaw) - The pawpaw is a native of the recently moved alluvial soils along the creeks of the county. There is no record of its occurrence in the upland. It will grow, however, in almost any location if it is protected while young. It has been used to good effect as an ornamental in the yards in Carlinville and Bunker Hill. Because of the cutting of the forests and the straightening of the water courses, this tree is now restricted to the overflow lands along the larger creeks. The largest specimen known stands near the bridge of the Chicago and Alton Railroad a mile (1.6 km) south of Macoupin Station. This tree will soon disappear from the county with the exception of those specimens maintained for ornament or fruit. As the seedlings must be grown in the shade and as the tree puts out no sprouts when cut off at the ground. This tree is worthy of propagation for its fruit. The fruits from different trees vary little in size but a great deal in the number of seeds per fruit and in flavor. The manager of Otwell's Nursery reports that the plants come true to seed, are easily propagated, and bear the fourth year. The blooming period is April and May.

BETULACEAE

7. Betula nigra L. (red birch) - The red or river birch is common only in Barr and Western Mound Townships where it is found in the flat timberland around sloughs. These swampy locations are covered with a heavy growth of this birch, cottonwood, willow, and persimmon. It is very probable that this birch was brought in by the migratory birds as its natural home seems to be along creek and river bottoms. A most careful search along the Macoupin, Cahokia, and Apple creeks failed to reveal a single specimen, yet on the uplands there are a good many acres (ha) of pure stands of this birch.

BIGNONIACEAE

8. Catalpa bignonioides Walt. (catalpa) - The catalpa tree occurs only in the vicinity of farms and cities and undoubtedly the trees, which seem native, came from seed of imported stock. There are a number of very large catalpas, ranging from two to three feet (0.61 to 0.91 m) in diameter, growing within the county, but these are all on old farmsteads and local history says they were planted about 1830. The majority of these old trees are hollow and while the trees are recommended for cultivation as a fence post tree, this habit of becoming hollow is very detrimental. In Hilyard Township there is a large catalpa grove. The trees are not over twenty years of age, and their origin is a number of planted trees on a farmstead in the vicinity.

CAPRIFOLIACEAE

9. Sambucus nigra L. (*S. canadensis* L., elder) - missing from manuscript

10. Viburnum prunifolium L. (black haw) - This small tree is restricted to the partially wooded uplands, especially to thickets at edges of prairies. It is one of the first plants to put out its flowers in the spring and its black fruits hang on throughout the winter. This plant is very common in the county but is rapidly disappearing as farms are being increased in size and partially wooded land is being cleared. This tree lends itself to landscape gardening, and there are several specimens of it already in cultivation in Carlinville.

CELASTRACEAE

11. Euonymous atropurpureus Jacq. (wahoo) - The word delicate is the only adjective that will describe this beautiful little tree. It has a true tree form including a straight upright trunk and almost horizontal branches. Its smooth, green bark, delicate green leaves, clusters of small red flowers and large red seed pods, make it an ornamental of the first class. It is found in all situations where rich soil can be found throughout the county. It is easily transplanted and responds very readily to cultivation. It blooms in May and June and the seed pods turn red in August. These are persistent and hang on throughout the winter.

CORNACEAE

12. Cornus florida L. (flowering dogwood) - missing from manuscript.

CORYLACEAE

13. Carpinus caroliniana Walt. (hornbeam) - This tree does not in any way resemble its near relative which is described below. It grows in the rich creek bottom lands, especially around sloughs, river bottoms and lakes. The smooth, dark green bark and ridged trunk of the tree give it the name of hornbeam, and they closely resemble the horn of an elk or deer. The wood has always been highly prized by farmers for use as hand spikes and hay poles. This tree would make a wonderful ornamental in localities where it can be grown.

14. Ostrya virginiana (Mill.) K. Koch (hop hornbeam) - This small tree, which is commonly mistaken for an elm, is found wherever the original forest remains. It grows on the points of the limestone hills where it reaches its best development. The ordinary sized tree is about eight inches (20.3 cm) in diameter and thirty feet (9.1 m) high. The fruits resemble clusters of hops and as they are light green in color make a contrast to the dark green of the leaves. This tree has been used to some extent as an ornamental in St. Louis.

CUPRESSACEAE

15. Juniperus communis L. (juniper) - missing from manuscript. **Note**: This is considered to be *Juniperus virginiana* L.

EBENACEAE

16. Diospyros virginiana L. (persimmon) - This is a common but not abundant tree in the county. It occurs in the creek bottoms and on the uplands in about the same numbers. It is a lover of damp situations as the upland localities are always near the prairie lakes. Persimmon trees growing in the lowlands are generally tall and straight trees, reaching heights of nearly 75 to 80 feet (22.8 to 24.3 m), while those on the uplands are generally wide-spreading and seldom reach a height greater than 50 feet (15.2 m). The creek bottom trees generally bear larger fruit than those on the upland. This may be due to one of two things. The more rapid growth of the trees in the lowlands would make a tree appear much older than it really is and the size of the fruit seems to depend on the age of the tree. There is a great variation in the fruit and undoubtedly there are some strains that it would pay to cultivate. One of the trees known in the county the fruits vary from one half inch (1.3 cm) in diameter up to two inches (5 cm) in diameter. The amount of sugar contained is also extremely variable. The great variation in the fruit suggests that it would pay to cultivate some strain.

FABACEAE

17. Gleditsia triacanthos L. (honey locust) - The honey locust is fairly common throughout the county. It is found on the uplands and in the creek bottoms. The trees growing in the creek bottoms grow much taller than the ones on the upland and have fewer thorns. They, however, produce a greater number of seed pods. The honey locust, as it grows in the upland timber flats, is a low growing, round topped tree, protected by immense thorns. It is common in every township in the county. It is most prevalent in Brushy Mound Township than elsewhere. The tree blooms in June but has nothing to recommend it as an ornamental shade tree or for timber. The wood is weak and of little value. As the tree is almost impossible to kill by cutting off and grubbing, it is a pest to a farmer who has cut his farm out of the timber land.

18. Gymnocladus dioica (L.) K. Koch. (*G. canadensis Lam.,* Kentucky coffee tree) - This is a rather common tree in the county. It is found only in the most densely wooded parts of creek bottoms, and then only as an occasional tree. Such a thing as a pure stand or a group of trees is unknown. The coffee tree grows to great heights, often more than a hundred feet (30.5 m). The straight, upright manner of growth, the large clusters of terminal white flowers, and huge beans make it a very beautiful ornamental where it can be induced to grow. The bean pods are about six inches (15.0 cm) in length, two inches (5.0 cm) in width, and three-fourths of an inch (2.0) in thickness. The beans are very hard and do not germinate readily. It is only after long-continued overflows of the river bottoms that young coffee trees were noted. It must be that they seeds require soaking before they will sprout. The only example of this tree growing on the uplands was observed in the white oak flats just east of Carlinville.

19. Robinia pseudoacacia L. (common locust) - It is doubtful that this tree is a native to the county. Almost every farmstead has a grove or lanes of this tree which were set out many years ago. There are many examples that might be considered native, but all evidence seems to point to the fact that the trees were noticed by the early settlers from the Southeast and that the trees which are seemingly native are only escapes. The waste land around almost any town in the county is very largely grown up to this species, as there is a growing demand for locust for fence and telephone posts. This species may prove a paying wood crop on the pure clay lands through the center of the county. Their longevity and masses of white flowers in June make them very beautiful ornamental trees.

FAGACEAE

20. Quercus alba L. (white oak) - The white oak is one of the most beautiful trees in Macoupin County. It is found in all situations, but it reaches its best development on the open hill upland.

There are still some of the original white oaks left that show the enormous size of the individuals that made up the original forest. In the hills between Carlinville and Macoupin Creek on the east are many white oaks that are four feet (1.2 m) in diameter and reach a height of 75 feet (22.9 m). The wood of the white oak has been used for dimension timber and quarter-sawed oak. The demand has been so great that there are, but few marketable trees left excepting those reserved by farmers for fence posts. This tree has an ornamental value far above any of its close relatives. It leaves are persistent and hold their color from the time of the first frost until the growing buds of the next spring force the old leaves from the trees.

21. Quercus bicolor Willd. (swamp white oak) - This tree grows only in the creek bottoms, and is confused by the lumbermen with the common white oak. In fact, there is no distinction made in the lumber of these two trees. Young trees of this species are sought out by the basket makers and the very best baskets on the market come from the wood of this oak. The larger specimens of this tree in the county are at the north end of Rob-Roy Lake southeast of Carlinville.

22. Quercus imbricaria Michx. (shingle oak, laurel oak) - The shingle oak is fairly common on the rich uplands. It does not occur in pure stands but is generally associated with bur oak and white oak. The tree has a quick growth and has a central trunk. There are a few good specimens of this tree still standing, because of its quick growth and straight trunk the wood splits very easily. The pioneers and farmers have taken advantage of this fact and this tree supplies them with shingles, shakes, clapboards, and rails. And even at the present date as fast as a tree reaches a diameter of eighteen inches (45.7 cm) to two feet (61.0 cm), it is cut down and made into clapboards.

23. Quercus macrocarpa Michx. (bur oak) - The bur oak has likewise followed the road of the white and the post oaks. Its wood has been used largely for flooring and quarter-sawed lumber. Some very large trees can be found along the valleys of the larger creeks where they have escaped cutting because their location was such that it would be very hard to remove the logs. The acorns of this tree are highly sought after by cattle and hogs. It is very probable that it would pay anyone to plant these oaks for their acorns alone. They are very prolific yielders and commence to bear fruit during their tenth year. Mr. Theo Brown, living south of Carlinville, has several acres (ha) of land planted in bur oaks which are now fifteen years of age and are yielding six bushels of acorns per tree. He says that the land is worth more for the acorns produced than it would be if planted in corn.

24. Quercus marilandica Muench. (*Q. nigra* Marsh*.,* blackjack, scrub oak) - This oak is a rare tree in the county. It is found only along the edges of prairie slews (sloughs) and the gravelly points of hills. It is never found in pure stands, but always as a single tree that presents an appearance of being more dead than alive. The lower branches are always dead and do not break from the tree but hang downward, forming a brush pile around the base of the trunk. This protection makes the blackjack oak a city of refuge for birds, squirrels, mice and rabbits. The wood is of so little value that the farmer seldom cuts these trees unless it is in his way. These lone oaks mark the boundary of the old forest line and can be found all along the edge of the now obliterated forest. The majority of oaks come readily from the seed, but for some unknown reason this oak seldom produces acorns, and the acorns will not grow.

25. Quercus michauxii Nutt. (*Q. prinus* L., swamp chestnut oak) - The largest trees of the original forest that covered Macoupin County belonged to this species. There still stand in the county a number of specimens that measure more than eight to ten feet (2.4 to 3.0 m) in diameter, which were left by the lumbermen because of defects. The stumps of chestnut oak cut in 1853 and 1859 are still very common. The wood does not disintegrate quickly, and the stumps are often seen almost covered by the growth of other varieties of trees. When the Chicago and Alton Railroad (originally the Alton and Sangamon Railroad) was built, a contract was made with a sawmill firm in this county for 500,000 ties sawed from chestnut oak. It was this contract, and other similar ones by the same railroad, that removed the original oak forest from the county.

26. Quercus muhlenbergii Engelm. (yellow oak chestnut) - The yellow or chestnut oak is found in mixed stands of trees throughout the county. Because of its straight growth, it is a favorite with the farmer for fence posts and fence rails. In the days when tanning was one of the industries of Carlinville, the bark of this oak was used in the process of the tanning of leather. Some of the finest specimens of this tree can be found on the Birk land north and east of Carlinville. Between 1885 and 1890 a hardwood lumber firm from St. Louis purchased many of the best trees of this species in the vicinity of Carlinville. The logs were shipped to St. Louis and were sawed up into flooring. In the early day many of these trees went for railroad ties and railroad timbers.

27. Quercus palustris Muench. (swamp oak, Spanish oak or pin oak) - This oak is not well known. Where it does grow, it occurs in pure stands. It is found only in the creek valleys, especially in swampy places where it occurs in pure stands. It is a rapidly growing tree, with a central trunk and often attains a height of a hundred feet (30.5 m) or more. There was formerly considerable acreage of this tree in the county but from 1885 to 1895 almost every group of this species was cut out for pilings by the railroad companies. These companies hired men to seek good stands of this oak and wherever it was found, the timber was bought and removed. The removal of these forests from swampy localities gave the owners the opportunity to drain the land and the former swampy Spanish oak forests are now bottomland farms.

28. Quercus rubra L. (red oak) - This oak is found only on the uplands and in some places on the rich side hills leading down to the deeper creek valleys. This oak grows to a medium-sized tree and in late years has been cut for dimension timber especially for the making of floors for bridges and culverts. In the western part of the county this oak surpasses all others and pure stands of red oak are very common in Western Mound, Barr, and Scottville townships.

29. Quercus stellata Wangh. (post oak) - This oak is common on all the upland sections of the county. It is seldom encountered in the creek valleys. Like the white oak, the lumbermen have removed the entire first crop of this tree. Only a few specimens of the original forest remain, and these are generally defective trees. The farmer is also responsible for the destruction of this oak as he looks upon it as the source of his best fence posts. There are numerous examples of this tree five feet (1.5 m) in diameter in many of the wooded pastures in the county.

30. Quercus velutina Lam. (*Q. coccinea* Wang. Var*. tinctoria* Gray*,* black oak, Spanish oak) - The black oak is a very common tree in the black uplands near the edges of the prairies. It is also found in the creek bottoms where it makes a much larger tree.

The acorns make up a large part of the" mast" so frequently spoken of as hog feed. The wood from this tree is very heavy and easily split, making excellent stove wood. Most of the larger trees have been removed to satisfy the demands of the kitchen.

HIPPOCASTANACEAE

31. Aesculus glabra Willd. (Ohio buckeye) -The buckeye is a very common tree in all the creek bottoms in the county. One or two specimens are known growing on the uplands. This tree grows to a very large size in thick growths of timber, but singly it forms a round-topped tree seldom reaching more than fifty feet (15.2 m) in height. The wood is soft and is now used for no purpose but firewood. In the pioneer days, however the wood was used extensively for ox yokes, as it is light and strong. The buckeye, as the seed of this tree is called, are said to be poisonous and many farmers have cut out these trees from their pastures because of the fear that their cattle might be poisoned. This species will maintain itself through long periods of time, as it sprouts readily from the cut-off stem and the seed will germinate in most any kind of soil.

JUGLANDACEAE

32. Carya cordiformis (Wangenh.) K. Koch (*Carya amara* Nutt., bitternut or pignut) - The bitternut or pignut is common in both creek bottoms and uplands. The fruits vary in size, thickness of hull, and bitterness. Some of these trees produce fruits that are edible while the majority produce fruits that are extremely bitter. The trees vary also in their habit of growth, some of them being tall with a central stalk and others much branched. It is very probable that the trees included within this species could be divided into three or four legitimate species, as this tree produces fruit within shell, large amounts of meat, and in great quantities. It offers a better prospect for improvement by the horticulturists than the other species of hickory.

33. Carya illinoiensis (Wangenh.) K. Koch. (*C. olivaeformis* Nutt., pecan) - The pecan is found only in the western edge of the county. There are a number of large trees in Chesterfield Township near the bridge of the Chicago, Peoria, and St. Louis Railway. From that point down the creek to the edge of the county there are many groves of this tree.

34. Carya laciniosa L. (*C. sulcata* Nutt., kingnut, big shellbark) - The big shellbark or king nut is restricted to the lower creek bottoms. It is quite common along Honey, Macoupin, and Apple Creeks. These trees grow to an immense size and produce large amounts of fruit. The nuts which range from two to three inches in length (5.0 to 7.5 cm) are of little use as they contain so little meat, and the shell is so very hard. The wood of this tree is not as good as that of *Carya ovata* for wagon building, but nevertheless most of these trees have been cut out for wagon timber. Differing from *Carya ovata*, this species does not easily replace itself while *Carya ovata* will sprout out from the stump and comes readily from seed. In fact, where a mixed stand of hickory and oak are removed, the forest is replaced by a pure stand of hickory. This condition can be seen in many places along the Macoupin Creek hills east of Carlinville.

35. Carya ovata L. (*C. alba* Nutt., shellbark hickory) - The shellbark hickory is the best known and the most popular tree in this county. It is a tree of the uplands where it grows to a height of from 50 to 100 feet (15.2 to 30.5 m) and a diameter of three or four feet (0.9 to 1.2 m). Just after the Civil War, when Carlinville was the center of manufacture for wagons and buggies, a large amount of this hickory was cut to furnish material for wagon building. Much of the second growth hickory has been cut for hop-poles. In many parts of the county the cutting of these poles is quite a paying occupation during the winter months. The nuts from this tree are of fine flavor and have a fairly thin shell. They are in great demand by the produce men who ship them to the St. Louis market. The production per tree is not large but there are many individual trees that it would pay to propagate from as their fruits are thin-shelled and large.

36. Carya tomentosa Nutt. (mockernut) - The mockernut, or white-heart hickory, also called sour land hickory, is very common in the oak flats in all sections of the county. It is never found in creek bottoms or in rich land. It presents a ragged appearance and seldom reaches a height greater than thirty feet (9.1 m). The fruits are quite large in size but are almost solid wood. The timber of this tree generally goes to the cord-wood pile. It was formerly a member of the sour land association of trees that has been removed from much of the flat land of this county.

37. Juglans cinerea L. (white walnut, butternut) - The butternut is not a common tree. It is restricted to the creek bottoms and even there is found only in isolated localities. The tree seldom grows to a height of more than fifty feet (15.2 m) and a diameter of three feet (0.9 m). It is not much sought after by the lumber men, and one is at a loss to understand just why it has disappeared from our flora. The nuts are eagerly sought for and bring about twice the price of the black walnut. As nearly as can be found, Macoupin Creek is the north boundary of the occurrence of the butternut in this part of the state.

38. Juglans nigra L. (black walnut) - The black walnut was at one time one of the most plentiful and largest of the forest trees of this county. Because of the beauty and usefulness of its wood, it has been sought out until hardly a tree of any dimensions is left. It is very evenly scattered over the county in the upland and creek bottoms. A number of very large trees which are hollow or otherwise disfigured have been left by the lumbermen. There is one tree on the Taggart Land east of Carlinville that is six feet (1.8 m.) in diameter and is broken off about fifty feet (15.2 m) from the ground, apparently during a storm in 1857. Since the black walnut has been reduced in numbers there has developed quite a market for its fruits. The nuts find ready sale on the produce market and to the nurseryman.

LAURACEAE

39. Sassafras albidum (Nutt.) Nees (*S. officinale* Ness., sassafras) - Sassafras is very common throughout the county as a bush. As a tree, it is more rare. It is a species growing on the uplands and generally along the edges of the prairies. It is very persistent and when once cut off it sends up a large number of sprouts which seem impossible to grub out. A patch of sassafras sprouts will persist twenty-five or more years of intense cultivation. As the sassafras trees grow in locations that have mostly been cut off, the large trees are a thing of the past. There are, however, a number of immense sassafras trees within the county. Near Miles Station there is standing a specimen of this species which is five feet (1.5 m) in diameter and must be nearly 150 feet (45.7 m) high. This tree is all that remains of the former forest, the trees having all been cut away and this noble specimen left. The only reason that it exists is that it is the corner tree of the township. The

white flowers appear in April and are followed by the red berries with their spicy-like odor in July and September.

MAGNOLIACEAE

40. Liriodendron tulipifera L. (yellow popular, Indiana popular, tulip tree) - This beautiful tree occurs very frequently as a cultivated tree in the yards at Carlinville. There are now no native tulip trees near this city as the Macoupin Creek seems to have been the northern and western limit of this tree. There were numerous large tulip trees in the Macoupin and Honey Creek valleys prior to the general clearing of this section by the sawmill men between 1857 and 1865. Poplar, as the wood of the tulip tree was called, was in great demand by the wagon makers, the cabinet makers, and the pattern makers. There exists in Carlinville numerous pieces of furniture made from this wood, the origin of which was the wooded side of Brushy Mound. All that remains of this once common tree is at present a few moldering stumps and scattering trees that remain as ornamentals around the farmsteads. In southwest Macoupin County, however, there are still standing a number of tulip trees in their native groves. In 1898 the writer visited one of these groves located five miles (8.05 km) southwest of Plainview. There were about six acres (2.4 ha) of tulip at this place. The tree is a quick growing symmetrical one and is covered in May with yellow tulip-like flowers that rival the garden tulip.

MORACEAE

41. Maclura pomifera L. (Osage orange, hedge) - This tree is not a native of the county. Popular tradition says the first hedge plants were introduced in 1857. The "hedge fever" kept up until about 1875 when the farmers realized that a fence could never be made from Osage orange. In many places hedges that were not cared for grew into trees and the seed from these trees had been scattered by birds and water, so that now Osage orange is a rather common tree in the creek valleys. Osage orange is now common in the creek valleys. Because of the recent introduction of this species, no large trees are known. Some few ten or twelve inches (25.4 to 30.5 cm) in diameter can be seen in the neighborhood of old farmsteads.

42. Morus rubra L. (red mulberry) - The red mulberry, like the persimmon, is not a widely disappearing tree in this county. The small boy can be depended upon to give full information as to the location of every tree as during June and July these trees receive his daily visits in quest of fruit. It is to be supposed that the mulberry has been very largely reduced in numbers as the majority of the larger ones have been cut for fence posts. This tree grows more often on the upland than in the river bottoms, although some fine examples can be seen near Dickinson Bridge east of Carlinville.

OLEACEAE

43. Fraxinus americana L. (white ash) - The white ash is a rare tree in Macoupin County. Such a thing as a clump or a pure stand of this species does not exist. It is generally found in oak woods on the tops of the highest ridges. There is a tradition of the county that at one time there were several large ash trees which were cut out between 1850 and 1870 for use for wagon material. There is, however, no direct evidence of this fact.

PLATANACEAE

44. Platanus occidentalis L. (sycamore) - The sycamore is very common along the larger creeks of the county but no upland specimens growing naturally are known along the creeks. It reaches an immense size, but as it increases in size, the majority of these immense trees become hollow from top to bottom. There is one tree on the Walker Land east of Carlinville that is sixty feet (16.7 m) in height but has a hollow five feet (1.5 m) in diameter at the top where the tree is broken off. For many years this tree has been the home of chimney swallows. Their nests are placed on a side of the cavity generally at a height of about twelve feet (3.6 m) from the ground. This tree has been utilized for a shade tree to such an extent that is very well scattered all over the county on the upland.

RHAMNACEAE

45. Rhamnus lanceolata Pursh. (buckthorn) - This large bush reaches the dimensions of a tree along the bluffs of Macoupin Creek. Specimens six inches (15.2 cm) in diameter and thirty feet (9.1 m) high are not uncommon. It is a little-known plant because of its inconspicuous yellow flowers which occur in May and June. It has nothing to mark it out as distinct from many of the varieties of bushes occurring as under-brush in the river bottoms. Very few people have a name for it. During the early fall it is covered with very small, red berries which are attractive to migrating birds. The finest specimen of this plant seen is in Brushy Mound Township on Honey Creek, near the wagon bridge over that stream. If one does not look closely, this tree is easily mistaken for a large cherry tree.

ROSEACEAE

46. Amelanchier arborea (Michx. F.) Fern. (*A. canadensis* Torr. & Gray, serviceberry) - missing from manuscript.

47. Crataegus calpodendron (Ehrh.) Medic. R (wooly haw) - missing from manuscript.

48. Crataegus crus-galli L. (cock-spur thorn) - missing from manuscript.

49. Crataegus mollis (Torr. & Gray) Scheele (*C. coccinea* L. var. *mollis* Torr. & Gray, red haw) - missing from manuscript.

50. Malus coronaria (L.) Mill. (wild sweet crab apple) - missing from manuscript.

51. Prunus americana Marsh. (wild plum) - missing from manuscript.

52. Prunus serotina Ehrh. (wild cherry) - missing from manuscript.

RUTACEAE

53. Ptelea trifoliata L. (wafer ash) - The only reason that this plant is included in this list is the existence of several specimens growing along Honey Creek which have a diameter of more than four inches (10.1 cm) and a height of better than 20 feet (6.1 m). The ordinary height of this shrub is less than six feet (1.8 m). It occurs very commonly in damp locations along the river (creek) bottoms and is found to some extent in a dwarfed form on the

uplands. The blooms which are not showy appear in April and May and the seed pods which are extremely ornamental are developed by the first of August. As these are persistent and do not fall off until the next spring, this bush should be used as an ornamental in all landscape work.

54. Zanthoxylum americanum Mill. (prickly ash) - The prickly ash is a rather common shrub or tree on the uplands of the county. It is generally found in a mixed stand of oaks and hickories. The largest specimens are seldom more than twenty feet (6.1 m) high and have a diameter of less than four inches (10.1 cm). This tree has no commercial value but will make an ornamental tree that is very attractive. It is covered with small yellow flowers during April and May, and these are followed by bright red berries during the summer. During the wintertime these berries open and the shiny black seeds add color to the plant the year round. This tree comes as near being a bright leafed evergreen as can be found in the county. It does not occur in any great quantities and is nowhere found in pure stands. From the peculiarity of its occurrence, one is led to suspect that the seeds are scattered by birds.

SALICACEAE

55. Populus deltoides Marsh. (*P. monolifera* Ait., cottonwood) - The cottonwood is not a forest forming tree. It occurs as individual specimens all over the county. It is just as much at home at the edge of the prairie pond, miles from other timber, as it is along the edges of our largest creeks. It is rather hard to say just where it reaches its best development. Along Macoupin Creek there many specimens five and six feet through (1.5 to 1.8 m) and 150 feet high (45.7 m), and yet specimens the same size can be found in the prairie townships. In swampy places along the creeks, it is not uncommon to find a pure stand of cottonwoods of a few acres (ha) in extent. Of these groups, one or two overtop the rest which die from the common fungus disease which attacks cottonwoods and willows. The cottonwood is the tree beloved by wild animals and birds. Its large trunk and great branches are generally hollow or partially so. These cavities become the home of many species of small animals and birds. Owls and buzzards find in these tree cavities that make them permanent homes because of the height to which the trees grow and the inaccessible treetop of the cottonwood becomes the nesting place of the larger hawks.

56. Populus tremuloides Michx. (aspen) - The trembling aspen is a very rare tree in Macoupin County. While it may occur elsewhere, the only grove of this species known is about three miles (4.8 km) north and east of Carlinville where a strip of these trees about a half mile (0.80 km) by a hundred yards (91.4 m) in dimension lie between the oak forest and the prairie. This peculiar island of trees has been long known and many young trees have been dug from it to be used as ornamentals in Carlinville. None of the specimens in this island are more than six inches (15.2 cm) in diameter nor have a height of over thirty feet (9.1 m). This leads one to believe that this island came from some parent tree that has disappeared at a very recent time.

57. Salix amygdaloides Anderss. (peach-leaved willow) - This is the willow tree that is found along the edges of the prairie sloughs and artificial ponds. The tree has a central trunk with a smooth bark and grows to a height of sixty to seventy feet (18.2 to 21.3 m). It is generally found in combination with cottonwood and has been used to a considerable extent for planting purposes. There are a number of these trees used for ornamentals in the City of Carlinville.

58. Salix nigra Marsh. (black willow) - This is the common willow tree found along the creek bottoms throughout the county. It has a rough bark and a branched trunk. It seldom reaches a height of over 40 feet (12.1 m) and a diameter of two to three feet (0.6 to 0.9 m). The wood is very soft and the tree rots easily causing the older specimens to break off near the ground. Because of its growing along the creek banks, the tree seldom reaches its full growth as it is either washes away or is cut away by the farmers in removing the brush from the creek banks. The wood has no other use than that of stove wood.

SIMAROUBACEAE

59. Ailanthus altissima (Mill.) Swingle. (*A. glandulosus* Desf., tree-of-heaven) - This tree is not a native to the county and was introduced as an ornamental shade tree a great many years ago. Some of these original trees have reached a diameter of three feet (0.9 m) or more. One of them, located on East Main Street in Carlinville, is forty inches (101.6 cm) in diameter and has a height of 70 feet (21.3 m). This tree is able to maintain itself and seedling trees are found over much of the county as the seed is wind borne as well as carried by water. The tree has a bad habit of sending out root sprouts. This, in connection with the odor which comes from bruised leaves, has not made it a favorite as a shade tree. It is now cut out as a weed in the streets and alleys of the cities where it was once cultivated. Where one wishes a highly ornamental tree and is ready to care for the land where it is grown, one can find no better than this tree. It is of quick growth; has large showy pinnate leaves, and the clusters of flowers and seeds make an ornamental that cannot be overlooked.

STAPHYLEACEAE

60. Staphylea trifolia L. (bladdernut) - This plant is neither a tree nor a bush. It is about half between a tall bush and a vine. The straight stems often reach a diameter of three inches (7.6 cm) and a length of 30 to 40 feet (9.1 to 12.1 m). It grows in thick stands of timber and its trunk must be supported by the surrounding trees. Where it grows by itself, it has more the character of a bush and seldom reaches a height of over five or six feet (1.5 to 1.8 m). While the plant is young it has straight, light green stems striped with white, and its pale green leaves make it a beautiful ornamental. Clusters of cream-colored flowers which appear in April and May are very beautiful and are attractive to butterflies. These are followed in mid-summer by three cornered wafer-like pods which are persistent until frost. These pods are three-celled with one hard seed to the cell. The seeds break loose in the cell and when the pod is moved, they make a rattling sound. The school children call these pods "cat bells". A tradition says that the slender new shoots of this tree were used by the Indians for arrow shafts. One may believe this as the wood is straight and tough.

TILIACEAE

61. Tilia americana L. (basswood) - This tree is a common resident of the county and blooms during the latter part of May and early part of June. It is found growing in the uplands and creek

bottoms. It is very common along Macoupin Creek in Shaw's Point Township and in Brushy Mound along Honey Creek. As the timber from this tree does not occur in quantities and the wood is soft, these trees were left by the men that cut off the original forest. Some of our largest trees are of this species. During the fifties, when the English settlement was made in the southwestern part of the county, these people set out many groves and avenues of this tree which was so abundant along the creeks, and which reminded them of the linden of old England. These trees under the care of the farmers have produced some magnificent specimens. The finest example of this early plant can be seen at the home of H. N. Challacombe in Chesterfield Township. This tree is of quick growth but of long life, and as it is a native of the county, should receive the attention of anyone wishing to plant shade trees.

ULMACEAE

62. Celtis occidentalis L. (hackberry) - The hackberry or sugarberry is not very common in the county. It is found along the larger creek bottoms and occasionally on the uplands but does not occur in numbers sufficient to be a familiar tree. It grows to a large size and is very prolific in the production of berries. As these fruits are persistent, this tree becomes the feeding grounds for many of the migrating birds during autumn. There is a marked difference between the trees growing on the upland and those in the river (creek) valley. The river valley (creek) specimens have a fairly smooth bark, while those growing on the upland have a very heavily ridged bark, showing ridges sometimes two inches (5.0 cm) in depth.

63. Ulmus americana L (white elm) - The white elm reaches its perfection along the Macoupin Creek Bottoms. Specimens six feet (1.8 m) in diameter and 150 feet (45.7 m) are not uncommon. There is one tree near the bridge across Macoupin Creek between Macoupin Station and Plainview that measures six feet (1.8 m) in diameter eight feet (2.4 m) from the ground. This tree is found throughout the county and is on the increase. It is one of the first trees to put in its appearance along fence rows or abandoned fields. Its rapid manner of growth makes it very popular as a tree for planting. It is very probable that this tree is the most common of all of the trees occurring within this county.

64. Ulmus rubra L. (*U. fulva* Michx., slippery elm) - The slippery elm is one of the earliest blooming elms which occur in this county. It is very easily distinguished from the American elm by its short, heavy-set trunk. The diameter of the trunk is often four or five feet (1.2 to 1.5 m), but the height of the tree is rarely more than 50 to 60 feet (15.2 to 18.2 m). Because of the remarkable toughness of the wood, this elm has been spared in many cases. Many trees are now standing because of the inability of the farmer to work up the trunk and branches into stove wood. The tree is well known because of its glutinous bark. In the vicinity of most towns there are certain of these trees which have become famous as the producers of slippery elm bark which is the delight of the small boy and of some value to the medical profession. The slippery elm is one of the most common trees in the county. The larger specimens are found in the creek bottoms, but the greatest number are found in the open uplands.