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BUR-OAKS AND COTTONWOODS.

# THE TREES AND SHRUBS OF OKLAHOMA. By C. W. SHANNON.

NORMAN March, 1913.

# OKLAHOMA GEOLOGICAL SURVEY.

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THE TREES AND SHRUBS OF OKLAHOMA.

By C. W. SHANNON.

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NORMAN March, 1913. Who does his duty is a question
Too complex to be solved by me
But he, I venture the suggestion,
Does part of his, that plants a tree.

—Lowell.

He who plants an oak looks forward to future ages, and plants for posterity.—Irving.

## THE TREES AND SHRUBS OF OKLAHOMA.

## INTRODUCTION.

## Scope of the Work.

Various phases of educational work come within the scope of the work of the Geological Survey of the State. The Survey originated as a Geological and Biological Survey of Oklahoma Territory. In the regular work of members of the Survey a large amount of material and information is gathered concerning the natural resources of the State. This information is given to the citizens of the State chiefly through articles in the papers, and by the publication of circulars and bulletins.

Early in 1912 the Geological Commission directed that a study of the trees of the State be undertaken at once. This work was assigned to the writer. The information so far collected has been secured while carrying on field work in connection with the regular work of the survey. This report is only preliminary. The work will be continued throughout the year along with other investigations, and it will be arranged to give a part of the year entirely to the work. Some consideration has been given to the trees and shrubs, and the condition of growth in sixty-six counties of the State. A preliminary list of the trees and shrubs was prepared and typewritten copies were furnished to a number of persons over the State, who were interested in gathering information concerning the trees. This list has proven to be in considerable demand and it is thought best to put it in more convenient form pending the publication of the final report. In the preparation of this work the writer has endeavored to give such general information as will make this report of value to the schools of the State, and to the public in general, until a more complete publication can be prepared.

In the present report the family, genus, scientific, and common names of the trees and shrubs are given, and in addition are notes on the general and specific occurrence of each plant included in the report. The names of a few vines and other plants having a close relation and association with the trees are given. An herbarium is being prepared of all the native plants included in the list. A large number of photographs of the trees have been taken and many of these will be used in the complete publication. Any additions, corrections, or suggestions will be gladly received.

## Previous Work and Publications.

There is no person in the State who is making tree study or forestry his business. To the present time nothing has been published which can be called a catalogue of the trees or other plants of Oklahoma. There has been very little published which will give

any information as to the part of the State in which certain plants

may be found.

In the Second Biennial Report of the Department of Geology and Natural History, Territory of Oklahoma, for 1901-1902, Dr. A. H. VanVleet, head of the Department of Botany in the State University, gives a list of "Plants of Oklahoma." This list gives only the scientific names and includes about 1,000 plants of the Territory which were then in the herbarium of the department. The herbarium was later destroyed by fire. The list includes about sixty trees and shrubs.

In the Transactions of the Kansas Academy of Science, Vol. XVIII, 1901-1902, there is a short paper by Dr. C. N. Gould, entitled "Notes on trees, shrubs, and vines in the Cherokee Nation." This article includes the names of about 50 plants which occur in

the Cherokee Nation.

In his "Geography of Oklahoma," Dr. Gould gives the occurrence and distribution of a number of trees and other plants. This work has proved of great value to the schools of the State, and has been the only available information along this line for the general public.

## Value of Tree Study.

The rapid destruction of the forests in our country called the attention of students of forestry to the dangers which confronted us. The rapid development of the agricultural and industrial interests of the country has been accomplished by a sacrifice of our forests. At the present time people have been brought to a realization of the importance of systematic effort to prevent further devastation.

Forestry laws are being passed and many forest reserves have been formed. The United States now has reserves amounting to 50 million acres. Arbor Day observance is being instituted throughout the states, the prime object of which is the planting of trees for the beautifying of public and private grounds, and highways. Many universities and agricultural colleges have put in courses in forestry, and several schools of forestry have been established. The movement has reached the high schools and common schools, and farmers and owners of forest lands are giving their attention to the work.

It is of special importance that a careful study be made of our native trees, both from a scientific and an economic point. The general neglect and failure to ornament school grounds by the planting of trees and flowers has not escaped notice. School grounds

should be made the most attractive places possible.

One of the problems in our tree study is to discover what trees may be transplanted and grown in the treeless parts of the State. The inhabitants desire shade and it is important that trees be secured which will meet the conditions. This problem will receive special attention in the final report.

# A LIST OF THE TREES AND SHRUBS OF OKLAHOMA.

# Sub-kingdom SPERMATOPHYTA.

SEED-BEARING PLANTS.

# CLASS I. GYMNOSPERMAE.

NAKED SEEDS.

The Gymnosperms are an ancient group of plants. They are found among the fossils of the Silurian age, and are most numerous in Triassic time. They are now repersented by about 450 species of trees and shrubs. They are flowering plants in which the ovules, or seeds, are not inclosed in an ovary, but are borne naked upon an open scale. This scale is a modified leaf. The plants have a resinous juice, and chiefly parallel-veined, needle-shaped, or scale-like evergreen leaves. By far the larger number of the Gymnosperms are Coniferous (Pinaceae or Coniferae including some shrubs) or cone-bearing trees, the fruit being called a cone because of its form. This family of the class is the only one represented in our area.

## PINE FAMILY. PINACEAE.

PINES. CONIFERS.

Pinaceae. Coniferae.

The trees belonging to this family are commonly known as Evergreens, because with the exception of the Larch and the Bald Cvpress they do not shed their leaves during the winter. The Pines are a survival from the Devonian age. They were contemporaries of the Lycopods, the Sigillarids, and the Cycads which constitute the chief remains of vegetation found in the coal measure formations. The Pines still retain the simplicity of floral structure which was characteristic of the vegetation of early times. The fertilization of these trees depends upon the wind.

## THE PINES. Genus PINUS.

The name is a Latin word from Celtic pin or pen, a crag.

The Pines are evergreen trees with two kinds of leaves, the primary ones scale-like, deciduous, the secondary ones narrow linear, needle-like, in group of 2-5 united at the base by the bud scales. There are about 35 species found in the United States. Many of these are of the greatest economic value. In our area at least two are known as natives.

## LOBLOLLY PINE. OLD FIELD PINE. ROSEMARY PINE.

Pinus Taedea.

Taeda, the torch, was the classical name of a resinous pine tree.

This tree grows with a tall straight trunk, from 60 to 100 feet in height. The leaves are in clusters of threes, slender and stiff. Found in the southeastern part of the State from the lowlands to the uplands. In places the small growth is abundant.

# YELLOW PINE. SHORT-LEAF PINE. NORTH CAROLINA PINE. SPRUCE PINE.

Pinus echinata.

L., echinatus, prickly; from echinus, a hedge hog.

A valuable timber tree, reaching the height of 75 to 100 feet or even more. The leaves are borne in clusters of 2, and occasionally 3, rarely 4, varying in length from 3-5 inches. This tree is very common, and in places makes up almost the entire forest area, in the eastern part of the State south of the Arkansas River.

Other varieties of pine may be found in the pine region of the eastern part of the State. The pines of the State have produced much valuable timber for interior work and general construction work. In the northern part of the area the pine timber is sparsely scattered, and does not attain a very large diameter. To the southward it increases in abundance and in size. Much of the rough stony land, as well as parts of the lowlands originally had a heavy growth of a good quality of pine. There are very few areas that have not been cut over. For the most part the remaining trees are under 14 inches in diameter, except where the trunks of the trees show injury from disease or fire, and have been passed by in the work of the lumberman.

# SOUTHERN OR BALD CYPRESS. DECIDUOUS CYPRESS.

Taxodium distichum.

Taxodium, from the Greek indicating the resemblance of the leaves to those of the Yew tree.

The cypress grows in swamps and along streams from Delaware

to Florida, along the coast and in the Mississippi Valley as far north as Southern Indiana. The cones are round, hard, closed, 1 inch in diameter. The leaves are deciduous.

The trunk of the tree spreads at the base and is ridged. Conical shaped projections called "knees" grow up from the roots. This tree is common in the southeast corner of the State in the Red River Flats and along the tributaries extending to the north through McCurtain County. Some trees of large size are found.

## RED CEDAR. COMMON CEDAR. JUNIPER.

Juniperus Virginiana.

Juniperus, classical Latin name of the Juniper.

Evergreen, varying from a shrub to a high tree. It is readily distinguished from any other tree. The wood is very valuable. It is found throughout this State, probably with the exception of the extreme west and northwest. It varies from a small snarly shrub on rocky cliffs to fairly large trees 50 feet or more in height. It is also largely grown for ornament and wind protection. A fungus growth known as Cedar Apple is found on many of the trees. This fungus attacks the young twigs.

## JUNIPER. GROUND CEDAR.

Juniperus communis.

Evergreen, varying from a low spreading shrub, to a small tree. It is a very widely distributed tree in the United States, but in Oklahoma, it occurs only in the extreme west and northwest part of the State.

#### ARBOR VITAE. WHITE CEDAR.

Thuja occidentalis.

Thuja is of Greek derivation, meaning, to sacrifice, the wood having been used in sacrifical offerings, because of its agreeable odor. Occidentalis, western, Arborvitae, Tree of Life, is supposed to have been given because the bark and twigs have been used in medicine.—Harriett L. Keeler.

The Arbor Vitae is a native of the northeastern United States and southeastern Canada. Many trees still of small size are found throughout Oklahoma where they have been planted for ornamental purposes. Several nursery varieties are planted. It grows well and is a very desirable tree to plant for the evergreen variety.

## OTHER TREES OF PINE FAMILY AND ITS ALLIES.

Some small varieties of pine, and a considerable number of spruce, hemlock, and fir are being grown about lawns, city parks, and other public grounds over the State. The Gingko, a naturalized Chinese tree, belonging to the Yew family, has not been tried in this

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State, to the knowledge of the writer, but is successfully grown in neighboring states, and should be used as an ornamental tree in this State. It is a very beautiful tree. The leaves resemble those of the maiden hair fern. They are not evergreen but turn yellow and drop in late autumn, in this respect resembling the Bald Cypress. The nut contained in the fruit is edible when roasted.

# CLASS II. ANGIOSPERMAE.

## ENCLOSED SEEDS.

The class, Angiospermae, includes all the flowering plants except the pines and their allies. The plants of this class are of more recent origin than those of the Gymnospermae. The ovules, or seeds, are borne in a closed cavity, the ovary. The ripened ovary and its ad-

herent parts constitute the fruit.

This class is divided into two sub-classes, viz., Monocotyledons and Dicotyledons. The former division includes those plants in which the embryo contains a single cotyledon, or seed-leaf, the first leaves being alternate, the leaves are parallel veined, the parts of the flowers are in 3s, the stem shows no distinct divisions into wood, pith, and bark; and the wire-like fibers of woody tissue (fibro-vascular bundles) are promiscuously distributed through the stem. The corn stalk is an illustration of this kind of stem. Among trees the Palmetto of the Southern states is a representative of this class. The Dicotyledons are plants in which the embryo contains two cotyledons. The leaves are mostly netted veined, the flowers are usually 4 or 5 parted and the stem is divided into bark, wood, and pith. This subclass includes the greater part of the flowering plants, including all the trees of the northern temperate region except the Gymnospermae.

# MAGNOLIA FAMILY. MAGNOLIACAE.

Magnolia was the name given to this family of plants by Linnaeus in honor of Pierre Magnol, an eminent botanist of the 17th century.

To the knowledge of the writer, the Magnolias have not been found native to this State, but since several species occur in Arkansas and Texas, in the lowlands and adjacent hill sides near the Oklahoma border, some varieties may be found native in the swamps and wet soils of the southeast corner of the State. Several varieties are grown for ornament, especially in the southeastern part fo the State. They are to be recommended very highly for such purposes.

## Genus LIRIODENDRON.

## TULIP TREE. YELLOW POPLAR. TULIP POPLAR.

Liriodendron tulipifera.

Liriodendron, from the Greek meaning lily and tree. Tulipifera, tulip-

This tree is not a native of this State, as its range is confined to the states east of the Mississippi. A very few of these trees have been planted in the State. It is a very suitable tree to plant, for lawn and park. A good rich soil is required for good growth. Both the leaves and the flowers, as well as the shape of the tree make it a very desirable tree. It may be grown from the seed or cuttings and is readily transplanted.

## CUSTARD APPLE FAMILY. ANONACEAE.

Small trees and shrubs of many species, chiefly tropical or subtropical. Two genera only are represented in North America, one in southern Florida and the West Indies and the other in the United States, chiefly in the western part.

## THE PAPAWS. Genus ASIMINA.

Asimina, Latin form of the Indian name asimin, for Papaw.

#### COMMON PAPAW.

Asimina triloba.

Triloba, refers to the flower.

Found in the eastern part of the State, not widely distributed. In some localities in thickets. Fruit large and edible. Flowers not conspicuous, dull, purple, and with disagreeable odor. Suitable for ornamental purposes and planting in groves. There is a yellow and a white fruited variety.

## TAMARISK. TAMARISCINEAE.

The Tamarisks are sub-evergreen, shrubs or small trees, with very small pinkish flowers, in spike like clusters, or thickly grouped along the slender drooping branches. The leaves are very small and scale like. There are several species in cultivation, and numerous names have been applied by nursery men. A minute study of the flowers is necessary to determine the species. These plants have a tendency to grow in the form of spread out shrubs, but can be trained tree-like. Many of the members of this family are found growing escaped from cultivation about old building places. Some of the varieties are now being used to considerable extent for hedges about lawns and gardens. They continue to bloom through a good part of the growing season, and the forms with drooping branches are very beautiful.

## MALLOW FAMILY. MALVACEAE.

The Hibiscus or Rose Mallows comprise a large family of mainly herbaceous plants with large holly-hock-like flowers. There is but one cultivated species in this region which has woody structure and tree-like appearance. This is the Shrubby Allhea or Hibiscus Syriacus commonly called Tree Hibiscus or Rose of Sharon. This was originally introduced from Syria. There are many varieties with single or double flowers of many colors,—white, pink, red, purple, and variegated. A large number of these have been planted for ornament over the State and some have been observed which had reached a height of 15 to 20 feet.

## LINDEN FAMILY. TILIACEAE.

About 20 species of this family are known, but not more than six are among the trees of the eastern part of North America. They are not found in western America.

# THE LINDENS or BASSWOOD. Genus TILIA. BASS WOOD. WHITE WOOD. LINDEN. LIME TREE.

Tilia Americana.

Tilia, the ancient classical name for Linden. Basswood has reference to the use of the inner bark for mats and cordage.

This tree is a native of rich woods, and grows to large size in much of its range. In the lower Ohio Valley, it becomes 130 feet in height, but the ordinary height is about 70 feet. It is a tree of great economic importance. The wood is soft and white; the inner bark very fibrous and tough. Its range extends through the eastern half of Oklahoma, but it is not abundant, but is found scattering here and there in the areas of good soil. It is also in cultivation in the State. Another tree probably a variety of the above is found in cultivation. This is Tilia pubescens, small leaved Basswood. Severa introduced species and nursery varieties are much valued for their dense foliage, odd shaped leaves and slender branches.

## RUE FAMILY. RUTACEAE.

This group comprises a large number of plants in warm regions. Of the trees not more than two or three will be found native to the State.

## THE PRICKLY ASHES. Genus XANTHOXYLUM.

Xanthoxylum from two Greek words meaning Yellow Wood.

Trees and shrubs of a large number of species, five of which are found in the United States.

#### PRICKLY ASH. TOOTH-ACHE TREE.

Xanthoxylum Clava-Hercules.

This tree of small size has been reported as occuring in the southeastern corner of the State, but has not been found by the writer. The peculiar color and appearance of the bark are very characteristic "This is smooth and studded with scattered barnacle-like corky bossess each tipped with a thick sharp spine which, however, finally falls away. A fancied resemblance in these spiked trunks to the club of Hercules has suggested its specific name, and the hooked spines of its branches has given it its apt colloquial names, "Wait-a-bit" and "Tear-blanket," while its pungent bark has given it the ame "Stingtongue" among the southern negroes. This property, too, as a source of relief in tooth-ache has caused it to be known as "Tooth-ache Tree."—Hough.

## THE WAFER ASHES. Genus PTELEA.

Small trees and shrubs. Five or six species are native to United States and Mexico. Only one grown tree-like, but it is wildly distributed.

## WAFER ASH. HOP-TREE. SHRUBBY TREFOIL.

Ptelea trifoliata.

Ptelea, from the Greek, classical name of the elm and applied to this genus because of the elm like fruit. Trifoliata, the three parted compound leaf.

This shrub often growing with the true shape of a tree never attains a height of more than a few feet (6-10). The fruit resembles that of the elm but is larger. The fruit and the compound leaf of three leaflets readily characterizes this tree. It is known to occur from the east side to as far west as Alva in Woods County.

## Genus PHELLODENDRON.

#### CHINESE CORK TREE.

Phellodendron Amurense.

An introduced tree with compound leaves resembling those of the

Tree of Heaven. The cork tree is being planted in some of our city parks, and grows fairly well.

#### MELIA FAMILY. MELIACEAE.

Tropical trees including the Mahogany.

Genus MELIA.

## CHINA-TREE. CHINA-BERRY TREE. PRIDE OF INDIA.

Melia Azedarach.

A tree introduced from Persia. It is now planted throughout as a shade tree. It is quick growing and has a good shape. It does not seem to be well adapted to drouth conditions, as it was observed that many trees of this species died as a result of the excessively dry season of 1911. Sprouts grow up rapidly from the stumps of trees, note being made of four such sprouts which attained a height of 6 to 8 feet during growing season 1912. The fruit is globular, about the size of cherries, greenish yellow when ripe, remains on through the winter.

## QUASSIA FAMILY. SIMARUBACEAE.

A group of introduced trees and shrubs, represented by a single tree in our area.

## Genus AILANTHUS.

## TREE OF HEAVEN. PARADISE TREE. CHINESE SUMAC.

Ailanthus glandulosus.

Ailanto, Tree of Heaven, Glandulosus, refers to the characteristic glands on the leaves.

This tree was originally introduced from China and Japan, but it is now widely cultivated and naturalized. It is found growing wild in many places having escaped from cultivation. It is a very rapid-growing tree and hardy throughout. At all times of year it has a good appearance and is well adapted for shade and ornamental purposes. The leaves are very large, compound, 2 to 5 feet long. In many cases especially on young trees, the leaves have as many as 60 leaflets. The fruit grows in clusters, is broadly winged, with the seed in the center.

This tree may be grown readily from root cuttings or from suckers which grow up from the roots. Only a part of the trees have fruit, as some have only staminate flowers. These staminate flowers

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are very ill scented and only the pistillate trees should be used. Great care should be taken in this regard in securing roots or suckers for planting.

## HOLLY FAMILY. ILICINAE.

Theophrastus and other Greek authors named the Holly, agria, meaning wild or of the field. The term aquifolium is also applied from, aculum, sharp, and folium, a leaf. The name Holly is probably from the word "holy" since some writers speak of it as the Holy Tree.

## THE HOLLIES. Genus ILEX.

 $\it llex$  from the resemblance of its leaves to the true Ilex of Virgil,—the  $\it Holly~Oak$ .

## AMERICAN HOLLY. CHRISTMAS HOLLY.

Ilex apaca.

This holly is found over a limited area in the southeast corner of the State.

## SWAMP HOLLY. DECIDUOUS HOLLY.

Ilex decidua.

Abundant in southeast part and to be found scattering through eastern third south of Arkansas River. Noticeable because of the red fruit, 1-4 inch in diameter, ripening in autumn and persisting until spring. Branches silvery gray.

#### INK BERRY.

Ilex glabra.

A shrub 3-6 feet high in sandy lowlands and edges of sand hills along rivers in central part of State.

## STAFF-TREE FAMILY. CELASTRACEAE.

Trees, shrubs, and vines of a large number of species.

Genus EUONYMUS.

The genus name is the classical Greek of a European species.

## WAHOO. BURNING BUSH. SPINDLE TREE.

Euonymus atropurpureus.

Fuenymus, from the Greek, signifying of good repute.

Atropurpureus, dark purple, pertaining to the flower.

A shrub, usually growing from two to six feet. In Arkansas and Oklahoma it often grows tree-like and reaches a height of from 10-20 feet. To be found throughout the tree growing area, and very common in some localities, for example along the Canadian River west of Norman. The name burning bush is from the bright colored fruit which remains long after the leaves have fallen. The Indians called the plant Waahoo, and used the wood in making arrows.

## Genus CELASTRUS.

## BITTER SWEET. WAXWORK.

Celastrus scandens.

Common throughout. Usually growing as a vine, sometimes as a shrub, often so in cultivation.

## SOAPBERRY FAMILY. SAPINDACEAE.

A group of trees and shrubs represented by one species in our area.

## Genus SAPINDUS.

## SOAPBERRY. WESTERN SOAPBERRY. WILD CHINA TREE.

Sapindus Drummondi.

Name, Sapo Indicus, Indian Soap, from the soapy quality of the berries.

A small tree common throughout the State, except extreme northwest. Rare in some localities. Easily distinguished by its clusters of fruit remaining more or less shrivelled, on the tree until spring. The largest tree observed was in the Grand River Valley and was 10 inches in diameter and more than 30 feet high. Often a large number of the trees are found growing together.

## HORSE-CHESTNUT FAMILY. HIPPOCANTANACEAE.

Trees and shrubs with compound leaves. Fruit large, leathery coated, often rough with one or more large chestnut-like but bitter seeds.

Genus AESCULUS.

COMMON HORSE CHESTNUT.

Aesculus Hippocastanum.

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Aesculus, from csca, nourishment. Hippocastanum, from hippos, a horse, and castanea, a chestnut.

Found native in the northeast part of the State and in cultivation. Leaves of 7 leaflets. Very common in Grand River bottoms.

## OHIO BUCKEYE. SWEET BUCKEYE. FETID BUCKEYE.

Aesculus glabra.

Glabra, smooth, referring to fruit when mature.

Northeast part of State, and in cultivation. Leaflets 5 to 7.

#### YELLOW BUCKEYE. SWEET BUCKEYE.

Aesculus octandra.

Eastern part. Leaflets 5, occasionally 6 or 7. This variety is also grown for shade and ornament. The buckeyes make very desirable trees for parks and lawn. There are several small varieties on the market.

## Genus KOELREUTERIA.

Koelreuteria paniculata.

A cultivated tree from China. Hardy throughout. Leaves compound, with many leaflets, irregularly toothed. Fruit a three celled bladdery pod. An excellent tree for lawns and parks.

## MAPLE FAMILY. ACERACEAE.

Trees with watery and saccharine sap. Include a large number of species and are widely distributed.

## THE MAPLES. Genus ACER.

Acer, classical name of maple tree.

There are about 100 species of maple, of which about a dozen are found in North America. Several are of value for the sugar which can be made from the sap and most of these are valuable timber trees.

#### SILVER MAPLE. SOFT MAPLE. WHITE MAPLE. RIVER MAPLE.

Acer saccharinum.

Native to central and eastern part of State and extensively cultivated throughout. A good shade tree, making a rapid growth. Bark smooth on young trees, on old trees very flaky.

# RED, SCARLET or WATER MAPLE. SWAMP MAPLE.

Acer rubrum.

In swamps and low grounds in east side of State. A good tree for cultivation but not commonly used.

## HARD MAPLE. SUGAR or ROCK MAPLE. SUGAR-TREE.

Acer saccharum.

The common sugar maple. The most valuable one of the maples for the making of maple sugar. Is found in the eastern side of the State. Common in the Grand River Valley.

## BLACK MAPLE. SUGAR MAPLE.

Acer nigrum.

Found growing with the Rock Maple. Leaves not so deeply or sharp lobed. Both varieties are excellent for shade but are rarely used in this State.

## BOX ELDER. ASH-LEAVED MAPLE.

Acer negundo.

Native to a large part of the State and common in cultivation. Grows well and makes a good shade tree.

THE NORWAY MAPLE, acer platanoides and CUT LEAVED JAPAN-ESE MAPLE, acer palmatum, are in cultivation, but so far have not made very successful growth, in the localities where planted.

## BLADDER-NUT FAMILY. STAPHGLEACEAE.

## AMERICAN BLADDER-NUT.

Staphylea trifoliata.

Occasionally found in the northeastern part of the State in moist shaded woodlands.

# CASHEW FAMILY. ANACARDIACEAE.

A family of trees and shrubs represented in our area by one genus.

## THE SUMACHS. Genus RHUS.

Rhus, from a Celtic word meaning red. Sumac, from the Arabic, Sumaq. Shrubs often growing tree-like. The plants have a milky juice, 19

compound leaves, fruit small, drupes in clusters.

#### SMOOTH SUMAC. UPLAND or SCARLET SUMAC.

Rhus glabra.

Common throughout the State except extreme west and northwest.

## DWARF. BLACK or MOUNTAIN SUMAC. UPLAND SUMAC.

Rhus copallina.

Common over the State except extreme west and northwest. In many places covering large tracts with dense growth.

#### POISON SUMAC. POISON DOGWOOD. POISON ELDER.

Rhus Venenata.

Has been reported for eastern side of State. This plant is very poisonous to the touch.

#### CUT-LEAVED SUMAC.

Rhus lacinata.

Few in cultivation in public grounds.

## ILL SCENTED SUMAC. SKUNK BUSH.

Rhus trilobata.

Common as a very low shrub except far northwest corner. Barren, sandy and rock soils.

#### FRAGRANT or SWEET SCENTED SUMAC.

Rhus aromatica.

Found in eastern two-thirds of State.

## POISON IVY. POISON OAK. CLIMATH. THREE LEAF IVY.

Rhus radicans.

Common throughout the State as a vine or shrub.

## WILD or AMERICAN SMOKE TREE. CHITTAM WOOD.

Rhus cotinoides.

Grown for ornament and reported native northeast corner of State.

## PULSE or PEA FAMILY. LEGUMINOSAE.

A large order of trees, shrubs and herbs. The fruit is a legume. All the representatives in this region growing as trees or shrubs are of importance for shade and ornamental purposes.

## THE LOCUSTS. Genus ROBINA.

The genus name is from Jean and Vaspasian Robin, herbalists, who first cultivated the Locust tree in Europe.

# COMMON LOCUST. YELLOW LOCUST. BLACK LOCUST. SILVER CHAIN.

Robina pseudacacia.

Pseudacacia, false acacia or like the acacia.

Native in the east and central part of the State. Common throughout in cultivation for shade, especially along streets. In many places escaped from cultivation.

## THE REDBUDS. Genus CERCIS.

## JUDAS TREE. REDBUD.

Cercis Canadensis.

Common throughout except far western part of State. Grows as a shrub to small tree, reaches height of 20 feet. Excellent for lawn planting.

## THE COFFEE TREE. Genus GYLMNOCLAUDUS.

The genus name is from two Greek words meaning naked branch.

## KENTUCKY COFFEE TREE. COFFEE-NUT.

Gymnocladus Canadensis.

Common throughout the State, except extreme northwest. Is a good ornamental and shade tree.

## THE HONEY-LOCUSTS. Genus. GLEDITSCHIA.

The generic name is in honor of J. G. Gleditsch, a German botanist of 18th century.

## HONEY LOCUST.

Gleditschia triacanthos.

Common in most parts of the State. Very common in cultivation. The wild form is usually very thorny. There is a variety without thorns in cultivation; also one with drooping foliage.

#### WATER LOCUST.

Gleditschia aquatica.

This locust may be found in the southeast corner of the State, but has not been observed by the writer.

## ROSE FAMILY. ROSACEAE.

This family consists of trees, shrubs and herbs of more than 1,500 species and 90 genera. Ten genera are represented among the trees of the United States.

#### PEACHES, PLUMS and CHERRIES. Genus PRUNUS.

Prunus is the ancient Latin name for the Plum tree.

#### COMMON PEACH.

Prunus Persica.

Many varieties in cultivation. Often growing wild escaped from cultivation.

## NECTARINE. SMOOTH SKINNED PEACH.

Prunus lacvis.

In cultivation. It is a variety of the peach with smooth skin.

# PIGEON CHERRY. PIN CHERRY. BIRD CHERRY. WILD RED CHERRY.

Prunus Pennsylvanica.

This tree is planted in a few places in the State for shade and ornament. It is also found escaped from cultivation. Is not native to the region.

## WILD BLACK CHERRY. CABINET or RIVER CHERRY.

Prunus serolina.

Native to central part and east half of State.

#### AMERICAN PLUM. WILD PLUM.

Prunus Americana.

Widely distributed over the State in low places and along river banks.

#### WILD GOOSE PLUM. RIVER PLUM.

Prunus hortulana.

Native in the eastern part of the State.

## CHICKASAW PLUM.

Prunus Augustifolia.

A shrub to small tree common throughout.

## WATSON'S PLUM. SAND PLUM.

Prunus Watsoni.

#### LOW PLUM.

Prunus gracilis.

## WESTERN SAND CHERRY. BESSY'S CHERRY.

Prunus Besseyi.

The last three named and others are among the low wild plums in various parts of the State.

## CHOKE CHERRY.

Prunus Virginiana.

In many parts of the State in low, moist soils.

# THE APPLES and PEARS. Genus PYRUS.

Pyrus is the ancient Latin for the pear.

## COMMON APPLE.

Pyrus malus.

Hundreds of named varieties in cultivation. Orginally introduced from Europe.

# AMERICAN or GARLAND CRAB. FRAGRANT CRAB.

Pyrus coronaria.

Found in central part and east half of State.

#### PRAIRIE CRAB.

Pyrus isensis.

Reported from east half of State.

## SOULARD CRAB.

Pyrus soulardi.

Found in central part of east half.

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## AMERICAN or SMALL FRUITED ASH.

Pyrus Americana.

A good small tree for ornamental purposes now rare in cultivation.

## ELDER-LEAVED or LARGE FRUITED MOUNTAIN ASH.

Pyrus sambricifolia.

Has been observed in central part of State in parks and college grounds.

#### COMMON PEAR.

Pyrus communis.

Several varieties in cultivation. The pear is a native of Europe.

Genus AMELANCHIER.

The genus name is from the popular name of the European species.

## JUNE-BERRY. SERVICE-BERRY. SHAD BUSH.

Amelianchier Canadensis.

Reported from east side of State. Some in cultivation. Commonly called "Sarvis' berry.

#### THE HAWS or THORNS. Genus CRATAEGUS.

Crataegus is of Greek derivation and has reference to the strength of the wood.

#### GREEN HAW.

Crataegus viridis.

This haw is abundant in the Red River bottoms.

#### WASHINGTON THORN.

Cratacgus cordata.

This is probably the one found throughout the eastern half of the State. Small fruit, red, remaining on tree late in winter. Many slender thorns.

## DOTTED FRUITED HAWTHORN.

Crataegus punctata.

This one may be common but has been observed only on the ridges south of Sulphur in Platte National Park.

## Genus RUBUS.

Includes the wild and cultivated raspberries, blackberries, and dewberries.

## WITCH HAZEL FAMILY. HAMAMELIDEAE.

## Genus HAMAMELIS.

The genus name was applied to a tree which blossomed at the same time as the apple tree. Witch is a modern spelling of the Saxon wich or wych, probably pendulous, drooping. Two trees are so named—the wich elm and wych hazel.—Harriett L. Keeler.

#### WITCH HAZEL.

Hamamelis Virginiana.

Found in central east side, north of Arkansas River. Largest observed was south of Marble City.

# Genus LIQUIDAMBAR.

## SWEET GUM. BILSTED. RED GUM.

Liquidambar styraciflua.

The genus name is derived from liquidus and the Arabic word amber, referring to the balsamic juices of the tree. Styraciflua, from the name of the ancient balsam.

This tree is found in the east side of the State south of the Arkansas River. It is abundant along the Poteau and the Kiamichi Rivers and their tributaries. It is a tree worthy of extensive cultivation.

## GINSENG FAMILY. ARALIACEAE.

Genus ARALIA.

## ANGELICA TREE. HERCULES CLUB.

Aralia spinosa.

The range of this tree would include the southeastern corner of the State, however, so far as known it has not been found. It is used for ornamental planting and is worthy of extensive use.

## DOGWOOD FAMILY. CORNACEAE.

The name is from cornu, horn referring to the hardness of the wood.

# THE DOGWOODS or CORNELS. Genus CORNUS.

## FLOWERING DOGWOOD.

Cornus florida.

Throughout the eastern half of the State; increasing in abundance to the eastcentral part. Fruit red.

## ROUGH LEAF or WHITE FRUITED DOGWOOD.

Cornus asperifolia.

Common over the State except far northwestern part.

THE TUPELOS. Genus NYSSA.

The genus name is that of a water nymph, and has been applied because of the water loving character of this species.

## PEPPERIDGE. BLACK or SOUR GUM.

Nyssa sylvatica.

In eastern side of State. Some observed in Impson Valley 2-3 feet in diameter and 75 feet high.

## HONEY-SUCKLE FAMILY. CAPRIFOLIACEAE.

Trees, shrubs and vines of about 300 species.

THE NANNY-BERRIES. Genus VIBURNUM.

## RUSTY NANNY BERRY. SOUTHERN NANNY BERRY.

Viburnum rufidulum.

A shrub or small tree widely distributed over the State.

## SMALL BLACK HAW.

Viburnum globosum.

Abundant in southeast corner, especially in Red River bottoms.

## CRANBERRY TREE. SNOW BALL or GUELDER ROSE.

Viburnum opulus.

Cultivated for ornament, also growing wild about old building sites.

Genus SYMPHORICARPOS.

CORAL-BERRY.

Symphoricarpos Symphoricarpos.

Common throughout the State except extreme west and north-west.

#### WOLFBERRY.

Symphoircarpos occidentalis.

Found along rocky bluffs near Bromide Spring in Platte National Park.

## Genus LONICERA.

## TARTARIAN BUSH HONEYSUCKLE.

Lonicera Tatarica.

Grown for ornament. Many varieties.

#### HONEYSUCKLE.

Lonicera.

Many varieties in cultivation as vines or often trained as shrubs.

## Genus DIERVILLA.

## BUSH HONEYSUCKLE.

Diervilla diervilla.

In cultivation. Withstands drought well.

#### Genus SAMBUCUS.

## AMERICAN ELDER. SWEET ELDER. ELDERBERRY.

Sambucus Canadensis.

Found throughout except probably extreme northwest.

## SAPODILLA FAMILY. SAPOTACEAE.

Trees, shrubs and vincs of wide distribution. One species produces gutta percha. All of the family grow in rather warm climates.

## THE BUMELIAS. Genus BUMELIA.

Genus name is from the classical Greek for the ash-tree.

# WOOLLY BUMELIA. CHITTIM WOOD. BUCKTHORN. GUM ELASTIC.

Bumelia languinosa.

A shrub to small tree 20 feet high common through eastern two-thirds of State. Fruit black.

## BUCKTHORN FAMILY. RHAMNACEAE.

# THE BUCKTHORNS. Genus RHAMNUS. YELLOW BUCKTHORN. INDIAN CHERRY.

Rhamnus Caroliniana.

Found usually along streams and moist rich lands, occasionally in rocky uplands near heads of small ravines, widely distributed through the southeastern part of State, and rarely found throughout eastern half.

## Genus CEANOTHUS.

## NEW JERSEY TEA. RED ROOT.

Ceanothus Americanus.

A small shrub in the northeastern part of the State, observed along railroads. Has panicles of small white flowers.

## EBONY FAMILY. EBENACEAE.

## THE PERSIMMONS. Genus DIOSPEROS.

The genus name of Greek derivation, means the wheat or fruit of Jove. Persimmon is the Indian name.

#### COMMON PERSIMMON.

Diosperos Virginiana.

"When they are not fully ripe they are harsh and chokie, and furre in a man's mouth like alum, howbeit, being taken fully ripe, yt is a reasonable pleasant fruiet, somewhat luscious."

Common throughout. Most abundant in central part. A seedless variety was found by the writer, in Cleveland County along the Canadian River.

## JAPAN PERSIMMON.

Diosperos Kaki.

A variety in cultivation. Leaves large, leathery and shiny. Fruit yellow, large. (2 inches diameter.)

## STORAX FAMILY. STYRACACEAE.

## THE SILVER BELL TREES. Genus MOHRODENDRON.

Genus name in honor of Dr. Chas. Mohr, botanist, author of "Flora of Alabama."

#### SILVER BELL TREE. SNOW DROP TREE.

Mohrodendron Carolinum.

The range of this tree covers the eastern part of the State, but its occurrence has not been verified by the writer.

## **OLIVE FAMILY.** OLEACEAE.

## THE ASHES. Genus FRAXINUS.

The genus name is the ancient Latin name of the ash-tree.

#### WHITE ASH.

Fraxinus Americana.

Found in the east side of the State. Also grown for shade.

#### BLUE ASH.

Fraxinus quadrangulata.

Native in northeastern part and common in cultivation.

#### SWAMP ASH or WATER ASH.

Fraxinus platycarpa.

Found rarely in eastern half of State. Some in cultivation. Not very good for shade.

## GREEN ASH.

Fraxinus viridis.

Native to eastern two-thirds of the State and extensively cultivated throughout.

## FORESTIERA. Genus ADELIA.

## ADELIA. FORESTIERA. SWAMP PRIVET.

Adelia acuminata.

Red River bottoms southeast corner of State.

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## PRIVET. Genus LIGUSTRUM.

## PRIVET. PRIM.

Ligustrum Vulgari.

Many nursery varieties in cultivation used for ornament and hedges.

## SYRINGIA. Genus SYRINGIA.

#### COMMON LILAC.

Syringia vulgaris.

Several varieties in cultivation. Often escaped from cultivation.

## JAPAN LILAC.

Syringia Japonica.

Grown for ornament. Is a good flowering shrub.

## Genus CHIONANTHUS.

#### FRINGE TREE.

Chionanthus Virginica.

Is found in cultivation in parks and public grounds. Is native to Arkansas and Texas.

## FIGWORT FAMILY. SCROPHULARIACEAE.

Genus PAULOWNIA.

## IMPERIAL PAULOWNIA. PAULOWNIA TREE.

A broad flat-headed tree, of rapid growth. A few are found in some of the city parks. It is a native of Japan. Is hardy throughout.

## BIGNONIA FAMILY. BIGNONIACAE.

THE CATALPAS. Genus CATALPA.

The name is that given the American catalpas by the Cherokee Indians.

## INDIAN BEAN. SOUTHERN CATALPA.

Catalpa bignonioides or Catalpa catalpa.

A tree native to the southern states. Is much planted in cultiva-

tion.

#### HARDY CATALPA. WESTERN CATALPA. CATAWBA TREE.

Catalpa speciosa.

A native of the central states. Widely planted throughout for shade, ornament and fence posts.

#### JAPANESE CATALPAS.

Catalpa Kaempferi and Catalpa Bungei.

Dwarf forms growing from 5 to 10 feet, umbrella shaped tops. Grown in cities and parks. Some in Oklahoma City and Muskogee.

#### LAUREL FAMILY. LAURACEAE.

## BAY TREE. Genus PERSEA.

#### RED BAY.

Persea Borbonia.

A native of Arkansas and Texas and the southeastern states. Planted for ornament.

## SASSAFRAS. Genus SASSAFRAS.

The name was applied by the early French settlers in Florida.

#### SASSAFRAS.

Sassafras sassafras of Sassafras officinale.

Common in the eastern third of the State, and in some localities in the east half, also, in cultivation. There is a variety with red wood and bark and a less common variety with lighter bark and white wood.

## Genus LINDERA.

## SPICE BUSH. BENJAMIN BUSH.

Lindera Benzoin,

In the eastern part of the State in moist woodland soils. Good for cultivation because of its early flowering in spring, and red fruit in autumn.

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## OLEASTER FAMILY. ELAEAGNACEAE.

Several members of the family in cultivation. A specimen of the RUS-SIAN OLIVE or OLEASTER, was observed, which was at least 20 feet in height. The DESERT WILLOW, chilopsis linearis, from Texas is found in Oklahoma City. The BUFFALO BERRY or RABBIT BERRY has been found by the writer growing along the Canadian in the western part of Cleveland County.

## NETTLE FAMILY. URTICACEAE.

#### THE ELMS. Genus ULMUS.

The genus name is the ancient name applied to the elm tree.

## AMERICAN or WHITE ELM.

Ulmus Americana.

Common throughout the State, especially along streams. Extensively used for shade.

#### SLIPPERY or RED ELM.

Ulmus fulva or U. pubescens.

Throughout in moist soils. Much used for shade.

#### WAHOO or WINGED ELM.

Ulmus alata.

Very abundant as a shrub and tree in the eastern half of the State. Some trees as much as 14 inches in diameter and 50 feet high. In many places grows in thickets as shrubs or small trees.

## Genus PLANERA.

## PLANER TREE. WATER ELM.

Planera aquatica.

Probably found in the low lands of southeast corner.

## THE HACKBERRIES. Genus CELTIS.

Celtis, the tree having been known to the ancient Celts.

## SUGAR BERRY. HACKBERRY.

Celtis occidentalis.

Native to the eastern two-thirds of the State, more abundant central east part. Grown for shade throughout.

#### MISSISSIPPI HACKBERRY. SUGAR HACKBERRY.

Celtis Mississippiensis.

Native eastern two-thirds and cultivated throughout.

#### HACKBERRY.

Celtis Var?

At least two other forms of the hackberry have been found but they have not been identified.

# OSAGE ORANGE. Genus MACLURA. OSAGE ORANGE. BOW-WOOD, BOIS D'ARC.

Toxylon pomiferum, or Machira aurantiaca.

Toxylon, refers to the use of the wood in the manufacture of bows by Indians. Maclura, given in honor of Wm. Maclure, a scientist.

Common in east third; abundant in southeast. Much grown for hedge.

## THE MULBERRIES. Genus MORUS.

## RED MULBERRY.

Morus rubra.

Widely distributed in its native growth, and considerably used for shade.

#### WHITE MULBERRY.

Morus alba.

Grown for shade. The largest known in the State is in Norman. This tree is a foot in diameter and 50 feet high.

#### RUSSIAN or BARREN MULBERRY.

A variety which does not produce fruit. It is extensively grown for shade. It is a rapid grower and a good tree to plant.

## Genus BROUSSONETIA.

#### PAPER MULBERRY.

Broussonetia papyrifera.

Widely grown for ornament. Many varieties with drooping branches, the *Weeping Mulberries*. Remarkable for the great variation in the form of the leaves.

#### FRENCH MULBERRY.

Callicarpa Americana.

A shrub reported as occurring in the northeast corner of the State. Does not belong with Mulberry family.

## PLANE-TREE FAMILY. PLATANACEAE.

Genus PLATANUS.

#### SYCAMORE. BUTTONWOOD.

Platanus occidentalis.

Platanus, from platus, broad, refers to the leaf.

Common along streams in eastern two-thirds. Recently being extensiely planted. The ORIENTAL PLANE, Platanus orientalis, an imported variety is probably better for shade.

## WALNUT FAMILY. JUGLANDACEAE.

Juglans is from Jovis, Jove's and glans, a mast, or acorn.

# THE WALNUTS. Genus JUGLANS. BUTTERNUT. WHITE WALNUT.

Juglans cinerea.

Will probably be found in northeastern part of the State.

#### BLACK WALNUT.

Juglans nigra.

Common throughout the State. More abundant in some localities than others. There are at least two or three varieties if not different species. Difference in growth, size and appearance of fruit.

## THE HICKORIES. Genus CARYA or HICORIA.

Hickory is derived from the Indian name of the liquor obtained by pounding the kernels.

Carya in honor of Carya, daughter of the King of Laconia, who was changed by Bacchus into a walnut tree.

## BITTERNUT HICKORY. SWAMP HICKORY.

Hickory minima.

Found in east side of State.

## WATER HICKORY. SWAMP HICKORY.

Hicoria aquatica.

Occurs in southeast corner, in Red River bottoms.

#### BIG SHELL BARK HICKORY. KING NUT.

Hicoria ovata or Carya sulcata.

East side in lowlands. Not abundant or widely distributed.

## MOCKER-NUT HICKORY.

Hicoria alba or Carya tomentosa.

In eastern two-thirds, abundant especially on rocky and sandy uplands.

#### PIGNUT HICKORY.

Hicoria glabra or Carya porcina.

Throughout eastern third of State.

#### PECANS.

Hicoria Pecan.

Common except parts of far west and northwest parts of State. Along many of the streams in central part of State grows very abundant.

#### PALE-LEAF HICKORY.

Hicoria villosa.

Only in the extreme southeast corner.

## WILLOW FAMILY. SALICACEAE.

THE WILLOWS. Genus SALIX.

## PEACH of ALMOND-LEAF WILLOW. WESTERN BLACK WILLOW.

Salix amygdaloides.

Found along streams throughout the State.

LONG-STALKED WILLOW. WARD WILLOW.

Salix longipes.

Throughout the State.

#### BLACK WILLOW.

Salix nigra.

Common throughout the State. Some 50 feet high, 14 inches in diameter.

# NARROW or LONG-LEAVED WILLOW. SAND-BAR WILLOW. RING WILLOW.

Salix longifolia or S. fluviatilis.

Found throughout the State. Very abundant along the sands of the Canadian and Cimarron. There is a variety with curly leaves in cultivation.

## THE POPLARS. Genus POPULUS.

Populus, from Pallo, to shake or vibrate, or from Roman derivation, arbor populi, tree of the people.

## WHITE POPLAR. ABELE TREE. SILVER-LEAF POPLAR.

Populus alba.

In cultivation in parks and lawns.

## COTTONWOOD. NECKLACE POPLAR. CAROLINA POPLAR.

Populus deltoides.

Common throughout the State along streams and widely planted for shade.

## WESTERN COTTONWOOD.

P. deltoides occidentalis.

A western form of the cottonwood, its range in the State is not determined.

#### LOMBARDY POPLAR.

Populus nigra Italica or P dilatata.

In cultivation to some extent throughout.

## SWAMP POPLAR. DOWNY-LEAVED POPLAR.

Populus heterophylla.

In lowlands southeast corner of State.

# LANCE-LEAF COTTONWOOD and NARROW-LEAF COTTONWOOD

Populus acuminata. Populus angustifolia.

These two poplars occur to the vestward of the Panhandle of

Oklahoma about the heads of the streams which find their way into the State and it is very probable that some of these trees may be found in the far northwestern part of the State along the streams.

## THE OAK FAMILY. CUPULIFERAE.

## THE BIRCHES. Genus BETULA.

Betula, derived from bitumen. Birch is from Betu the Celtic name, or from batuere, to beat.

## RIVER BIRCH, WATER BIRCH, RED BIRCH.

Betula nigra.

Common along many of the streams in eastern half, chiefly small growth; some large, fifty feet high, two feet in diameter.

#### EUROPEAN WHITE BIRCH.

Betula alba.

In cultivation under several names which indicate the character of growth or foliage, as "Weeping Birch."

## THE ALDERS. Genus ALNUS.

#### SEA SIDE ALDER.

Almus maratima.

Along Red River and tributaries southeastern corner of State.

#### SMOOTH ALDER.

Alnus rugosa or A, serrulata.

Along streams and hillsides in eastern and southeastern part of State. It was found growing high up in the hills north of Quinton.

## THE HAZELNUTS. Genus CORYLUS.

#### WILD HAZELNUT or COMMON HAZELNUT.

Corylus Americana.

Found in a limited area near the center of east side.

#### THE HORNBEAMS. Genus CARPINUS.

## AMERICAN HORNBEAM. BLUE or WATER BEECH.

Carpinus Caroliniana.

Found in eastern part of State but not so common as the Iron-wood.

# THE HOP HORNBEAM. Genus OSTRYA. IRON-WOOD. AMERICAN HOP-HORNBEAM.

Ostrya Virginiana.

Common along streams and hillsides eastern part of State.

## THE OAKS. Genus QUERCUS.

Quercus probably from the Celtic words, quer, fine, and cuex, a tree. "Jove's own tree."—Virgil.

#### RED OAK.

Quercus rubra.

Found in east side of State.

## SOUTHERN RED OAK. SCHNECK'S OAK.

Quercus Texana.

Common throughout in eastern third.

## PIN OAK. SWAMP OAK.

Quercus palustris.

In east and northeast part of State.

## YELLOW OAK. BLACK OAK. QUERCITRON OAK.

Quercus velutina.

Found in eastern half.

## SPANISH OAK.

Ouercus digitata, or Quercus falcata.

Found in east side and also in cultivation.

## BLACK JACK OAK. BARREN OAK.

Quercus Marilandica or Quercus nigra.

Abundant in eastern two-thirds and in scattering clumps on sand hills further to west. The most abundant tree in the State.

## WATER OAK. DUCK OAK. POSSUM OAK.

Quercus nigra or Quercus aquatica.

Found in east and southeast part of State.

## WILLOW OAK.

Quercus Phellos.

East side south of Arkansas River. Very abundant in some localities.

#### SHINGLE OAK.

Quercus imbricaria.

Reported as occurring in northeast corner.

#### WHITE OAK.

Quercus alba.

In northeast part and east side. Not so common or widely distributed as most of the oaks.

#### POST OAK. ROUGH or BOX WHITE OAK.

Quercus minor or Q. obtusiloba or Q. Stellata.

In east half and irregular patches through central part and occasionally westward. The second most abundant in the State.

## BURR OAK. MOSSY CUP OAK.

Quercus macrocarpa.

Eastern half and occasionally farther west. Found as far west as Clinton.

#### OVER-CUP OAK.

Quercus lyrata.

Found eastern third, chiefly north of Arkansas River.

## SWAMP WHITE OAK.

Quercus platanoides.

Near center eastern side.

## COW OAK. BASKET OAK.

Quercus Michauxii.

Eastern half and irregular line into central part, extending northwestward.

## CHESTNUT OAK. CHINQUAPIN OAK. YELLOW OAK.

Quercus acuminata or Q. Muhlenbergii.

Found in east half and occasionally westward.

#### LIVE OAK.

Quercus Virginiana.

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Reported in southeast corner.

## DWARF CHESTNUT OAK. SCRUB OAK.

Quercus prinoides.

At least two varieties of this oak occur in the State. One in the western part with coarsely toothed, bright green leaves, grows about 2-10 feet high, forms broad clumps. Common about Foss and Elk City. The other variety has very small leaves, wavy toothed, grows 2-6 feet. This one has been found only on top of ridge south of Sulphur in Platt National Park.

## THE CHESTNUTS. Genus CASTANEA.

From Castanea, a town in Thessaly.

## CHESTNUT.

Castanea sativa or C. dentata.

Occasionally one found in eastern part of State, in cultivation.

## CHINQUAPIN.

Castanea pumila.

Reported along eastern margin. A dwarf form is found in cultivation.

## THE BEECHES. Genus FAGUS.

## AMERICAN BEECH.

Fagus Americana.

A small area in the east side of LeFlore County, near Holland.

## HUCKLEBERRY FAMILY. VACCINICACEAE.

Genus BATODENDRON.

FARKLEBERRY. TREE HUCKLEBERRY. SPARKLEBERRY.

Batodendron arboreum.

Found in east side of State.

## MADDER FAMILY. RUBIACEAE.

Genus CEPHALANTHUS.

Cephalanthus occidentalis.

Widely distributed over the State from the lowest river bottoms to the highest mountain streams.

## HYDRANGA FAMILY. HYDRANGEACEAE.

Genus HYDRANGEA.

WILD HYDRANGEA.

Hydrangea arborescens.

Occurs sparsely throughout the timbered area.

Genus PHILADELPHUS.

SYRINGA.

Philadelphus.

Several varieties in cultivation and in some places growing wild about old habitations.

## GOOSEBERRY FAMILY. GROSSULARIACEAE.

Genus RIBES.

GOOSEBERRIES.

Ribes.

Several varieties of garden gooseberry.

SLENDER GOOSEBERRY.

Ribes gracile.

Rare in east part.

MISSOURI GOOSEBERRY.

Ribes Missouriensis.

Probably a variety found growing rare in east part.

THE COMMON CURRANTS in cultivation.

Ribes rubrum and ribes nigrum.

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## GOLDEN BUFFALO or MISSOURI CURRANT. CLOVE BUSH.

Ribes aureum chrysococcum.

In central part, probably widely distributed.

# MISCELLANEOUS. PRAIRIE MESQUITE.

Prosopis glandulosa.

Western part, known to occur as far east as Okarche.

## FALSE or BASTARD INDIGO.

Amorpha fruticosa,

Widely distributed over the State.

## LEAD PLANT. SHOESTRINGS.

Amorpha canescens.

Prairie lands central and western, very abundant.

## TRUMPET FLOWER or TRUMPET CREEPER.

Tecoma radicans.

Throughout except west part. Grows as a vine or shrub.

## AMERICAN MISTLETOE.

Phoradendron flavescens.

Parsitic principally on elm, also found on black gum, honey locust and bois d'arc. Widely distributed.