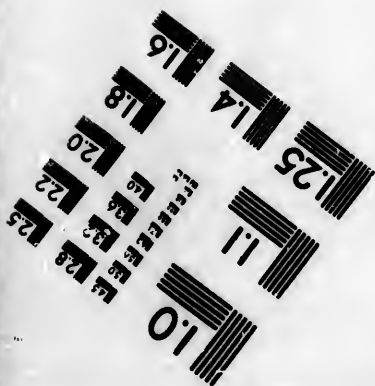
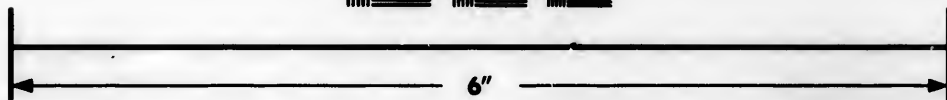
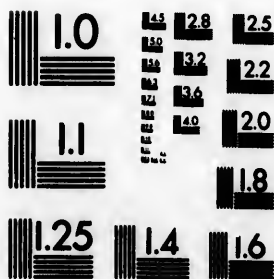


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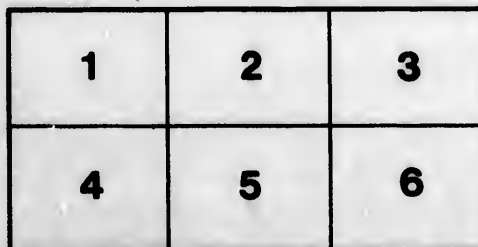
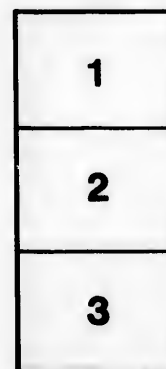
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DEPARTMENT OF THE INTERIOR.  
TENTH CENSUS OF THE UNITED STATES.  
FORESTRY.

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A CATALOGUE  
OF THE  
**FOREST TREES**  
OF  
**NORTH AMERICA.**

BY

CHARLES S. SARGENT,  
ARNOLD PROFESSOR OF ARBORICULTURE IN HARVARD COLLEGE,  
SPECIAL AGENT TENTH CENSUS.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1880.

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It is proposed to join to the Report on the Forest Wealth of the United States, now in course of preparation, a Catalogue of the Forest Trees of North America, with special reference to their geographical distribution and economic properties and uses.

Knowledge of this nature in regard to our trees is still so imperfect that it is impossible to make such a catalogue at all exhaustive without the assistance of botanists, and others interested in trees and their products, in every part of the country.

Information on the following points is particularly needed.

1. The extreme geographical range of any species.
2. The region and elevation where any species is principally multiplied and reaches its greatest perfection.
3. The geological formation most favorable to the multiplication and development of any species.
4. Dimensions of remarkably developed specimens of any species.
5. The common or local name of any species in addition to those already given.
6. The purposes, however unimportant, for which the wood of any species is employed.
7. Products of any species other than wood, such as tannin, charcoal, dyes, potash, edible fruit, forage, &c.

Any information or corrections which will serve to make the final publication more exact and complete will be gratefully received and duly acknowledged.

To facilitate the collection and preservation of such information the present preliminary catalogue is now published. The blank pages are intended for field-notes and corrections. After these are written in, the whole catalogue, or the notes and observations separately, as may be most convenient, should be returned to—

CHARLES S. SARGENT,  
*Brookline, Mass.*



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**FOREST TREES OF NORTH AMERICA.**

28 July 81

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## MAGNOLIACEÆ.

1. **Magnolia acuminata, L.**  
CUCUMBER TREE.

Western New York to Jefferson County, Indiana; southward along the Alleghany Mountains to Georgia and Middle Tennessee.

Wood soft, close-grained; preferred for pump logs.

A large tree, 60 to 80 feet in height, with a trunk 2 to 4 feet in diameter.

2. **Magnolia cordata, Michx.**

Ashe County, North Carolina, along the flanks of the Alleghany Mountains to the Savannah River, and in Northern Alabama.

A small or medium-sized tree.

3. **Magnolia Fraseri, Walt.**

*M. auriculata*, Lam.

LONG-LEAVED CUCUMBER TREE.

Along the flanks of the Alleghany Mountains, from Virginia southward to Central Alabama.

"Wood soft, spongy, very light, and unfit for use."—(*Michaux f.*)

4. **Magnolia glauca, L.**

SWEET BAY. WHITE BAY.

Essex County, Massachusetts, and from Queens County, Long Island, to Louisiana and Southern Arkansas; generally near the coast.

A small tree; in swamps; the roots yielding a yellow dye.

5. **Magnolia grandiflora, L.**

BIG LAUREL.

Cape Fear River, North Carolina, south to Florida; west to Texas, and ascending the Mississippi River as far as Natchez.

Wood soft, easily worked, very white; probably valuable for interior work and cabinet-making.

A large tree, 60 to 90 feet in height, with a trunk 2 to 3 feet in diameter.

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6. **Magnolia macrophylla**, Michx.  
LARGE-LEAVED MAGNOLIA TREE.

Iredell and Lincoln Counties, North Carolina, to Middle Florida; and west of the Alleghany Mountains, from Southeastern Kentucky southward through Tennessee to Central Alabama.

A small tree, 20 to 40 feet in height, with trunk rarely exceeding one foot in diameter. Rare.

7. **Magnolia Umbrella**, Lam.  
*M. tripetala*, L.

UMBRELLA TREE.

York and Lancaster Counties, Pennsylvania, and southward along the Alleghany Mountains; throughout the Carolinas, Georgia, Northern Alabama, and westward through Kentucky and Tennessee.

A small tree, rarely exceeding 40 feet in height.

8. **Liriodendron Tulipifera**, L.  
TULIP TREE. YELLOW POPLAR. WHITE WOOD.

Bennington County, Vermont, south to Florida, and west to Eastern Kansas.

Wood light, close-grained, strong, easily worked; extensively used for construction, interior work, shingles, carriage panels, &c.

A large tree, 70 to 100 feet in height, with a trunk  $\frac{1}{4}$  to 7 feet in diameter; one of the largest and most valuable trees of the Atlantic forests.

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ANONACEÆ.

9. **Anona glabra**, L.  
DC. Prodr., i. 85. Coult. Bot. Gazette, iii. 2.

Banks of the Caloosa River, and near Miami, Southern Florida (*Garber*), and in the West Indies.

10. **Asimina triloba**, Dunal.  
*Anona triloba*, L.  
*Uvaria triloba*, Torr. & Gray.

PAPAW.

Monroe County, New York, and North Erwinna, Bucks County, Pennsylvania; south to Florida; west to Fremont County, Iowa, and the Indian Territory.

Wood light and spongy.

A small tree, sometimes 30 feet in height, or more often a shrub; fruit sweet and edible.

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## GUTTIFERÆ.

11. *Clusia flava*, L.

Southern Florida, and in the West Indies.

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## TERNSTRÆMIACEÆ.

12. *Gordonia Lasianthus*, L.

LOBLOLLY BAY.

Southern Virginia to Louisiana, near the coast.

Wood reddish, light, brittle, close-grained, of little value.

A tree 50 to 60 feet in height, with a trunk 18 to 20 inches in diameter; in swamps; bark rich in tannin.

13. *Gordonia pubescens*, L'Her.

From the Altamaha River, Georgia, near the coast, south to ?

A small tree, rarely exceeding 30 feet in height. Not common.

---

## TILIACEÆ.

14. *Tilia Americana*, L.

LIME TREE. WHITE WOOD. BASS WOOD.

New Brunswick to the northern shores of Lake Superior, Southern Manitoba, and through the Northern States to Virginia; south along the Alleghany Mountains to Georgia; west to the Missouri River and Eastern Texas.

Wood white, tough, pliable, easily worked; largely employed in interior work, turnery, and the manufacture of wooden ware.

A tree 60 to 80 feet in height, with a trunk 3 to 4 feet in diameter; the inner bark, macerated, is manufactured into coarse cordage and matting. Very common in the forests of Eastern America.

*var. pubescens*, Gray.

*T. pubescens*, Ait.

North Carolina to Florida, near the coast.

Smaller than the species; in swamps or low ground.



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15. *Tilia heterophylla*, Vent.

*T. alba*, Michx. f.  
*T. lasiflora*, Pursh.

WHITE BASS WOOD.

Alleghany Mountains, Pennsylvania, to Georgia, and westward to the valley of the lower Wabash River.

A medium-sized tree, rarely exceeding 50 feet in height.

---

 ZYGOPHYLLACEÆ.
16. *Guaiacum sanctum*, L.

LIGNUM VITÆ.

Southern Florida, and through the West Indies.

Wood exceedingly hard and heavy.

A small tree.

17. *Porliera angustifolia*, Gray, Pl. Wright. i. 28.

*Guaiacum angustifolium*, Engelm.

Southern Texas (San Pedro River, Eagle Pass, Deadman's Hole, Pedernales River), and southward into Mexico.

A small tree.

"The hard and heavy yellowish-brown wood is called *Guajacum* about Saltillo, and is used as a sudorific and in venereal diseases."—(Gregg.)

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 RUTACEÆ.
18. *Xanthoxylum Caribæum*, Lam.

*X. Floridanum*, Nutt.

SATIN WOOD.

Southern Florida.

A small tree.

19. *Xanthoxylum Clava-Herculis*, L.

*X. Carolinianum*, Lam.

TOOTH-ACHE TREE. PRICKLY ASH.

Southern Virginia to Florida, near the coast; west to Eastern Texas and Arkansas.

Wood yellow, solid, close-grained.

A small tree, 12 to 20 feet in height; bark, leaves, and fruit aromatic and intensely pungent, exciting salivation.

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20. **Xanthoxylum Pterota**, H.B.K.

Southern Florida, Southern Texas (Fort McIntosh), and southward to Brazil.

Wood yellow, dense, exceedingly hard and heavy.

A small tree.

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## SIMARUBEÆ.

21. **Simarubra glauca**, H.B.K.

BITTER WOOD.

Southern Florida, and southward through the West Indies to Brazil.

A large tree.

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## BURSERACEÆ.

22. **Bursera gummifera**, Jacq.

WEST INDIAN BIRCH.

Southern Florida, and southward through the West Indies.

Wood "white, soft, brittle, and seldom put to any use but as fuel."—*(Nuttall.)*

A large tree; abounding in resinous gum soluble in alcohol and furnishing a transparent and valuable varnish.

23. **Amyris sylvatica**, Jacq.

*A. Floridana*, Nutt.

TORCH WOOD.

Southern Florida, and southward through the West Indies.

Wood "yellowish-white, close-grained, and capable of receiving a high polish."—*(Nuttall.)*

A small tree; exceedingly balsamiferous.

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## MELIACEÆ.

24. **Swietenia Mahogoni**, L.

MAHOGANY.

Lignum Vitæ Key, east coast of Florida (*Garber*), Key West, and through the West Indies and Central America.

Wood reddish brown, hard, heavy, very durable, and highly prized for cabinet work.

A large and very valuable timber tree.

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## OLACINEÆ.

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*Ximenia Americana*, L.

MOUNTAIN PLUM. HOG PLUM.

Southern Florida, and southward through the West Indies.

Wood yellow.

A small tree; fruit an edible, plum-shaped, yellow drupe.

26.

*Schœpfia arborescens*, R. & S.

DC. Prodr. iv. 319. Coult. Bot. Gazette, iii. 3.

Banks of the Caloosa River, Southern Florida, and through the West Indies.

A small tree.

## ILICINEÆ.

27.

*Ilex Dahoon*, Nutt.

DAHOON HOLLY.

Southeastern Virginia to Florida, and west to Louisiana near the coast.

A shrub or small tree, sometimes 25 feet in height.

28.

*Ilex opaca*, Ait.

AMERICAN HOLLY.

Quincy, Massachusetts, south to Florida; west to Arkansas, Southern Missouri, and Eastern Texas; at the north only near the coast.

Wood white; the heart-wood brown, close-grained, heavy; used in cabinet work, turnery, &amp;c.

A small tree, rarely 40 feet in height.

## CYRILLACEÆ.

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*Cyrilla racemiflora*, Walt.*C. Caroliniana*, Richard.

North Carolina to Florida and Alabama, near the coast.

A small tree, 20 to 30 feet in height.

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30. *Cliftonia ligustrina*, Banks.  
*Mylocartum ligustrinum*, Willd.

## BUCKWHEAT TREE.

From the Savannah River, Georgia, south to Florida and Alabama.  
A shrub or sometimes a small tree, 10 to 20 feet in height; along the borders of streams and swamps in the low districts.

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 CELASTRACEÆ

31. *Schæfferia frutescens*, Jacq.  
*S. completa*, Swartz.  
*S. buxifolia*, Nutt.

## CRAB WOOD. FALSE BOX.

Southern Florida, and in the West Indies.  
Wood hard and close-grained.  
A small tree.

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 RHAMNACEÆ.

32. *Zizyphus obtusifolius*, Gray.  
*Paliurus Texensis*, Scheele.

New Braunfels, Texas, to New Mexico.  
A small tree or shrub.

33. *Condalia obovata*, Hook. Icon., t. 28.

## BLUE WOOD. LOG WOOD.

Common in Eastern Texas, Western Texas, and Southern New Mexico.  
A small tree.

34. *Rhamnus Caroliniana*, Walt.  
*Frangula Caroliniana*, Gray.

Queens County, New York, south to Florida; west to the Rocky Mountains and Western Texas.  
A small tree, or more commonly a shrub.



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35. *Rhamnus Purshiana*, DC.*Frangula Purshiana*, Cooper.

BEAR BERRY.

Mendocino County, California, north to Puget Sound.

A small tree, sometimes 20 feet in height.

36. *Ceanothus spinosus*, Nutt.

RED WOOD.

California, in the Coast Ranges, from Santa Barbara to Los Angeles.

A small tree.

37. *Ceanothus thyrsiflorus*, Eschscholtz.

CALIFORNIA LILAC.

California, in the Coast Ranges, from Monterey to Humboldt County.

A small tree.

## SAPINDACEÆ.

38. *Æsculus Californica*, Nutt.

California, from Mendocino County and Mount Shasta, south to San Luis Obispo, and east to the foot-hills of the Sierra Nevada.

Wood "soft and brittle."

A small tree, or more often a wide-spreading shrub.

39. *Æsculus flava*, Ait.*Pavia flava*, Moench.*Æ. sarguta?* Buckley, Proc. Acad. Phil. 1860, 443.

SWEET BUCKEYE.

Mountains of Virginia, southward along the Alleghany Mountains to Georgia and Northern Alabama; westward to Jefferson County, Indiana, and the Indian Territory; most common west of the Alleghany Mountains.

A tree, sometimes 60 feet in height, with a trunk 2 to 3 feet in diameter.

40. *Æsculus glabra*, Willd.*Æ. Ohioensis*, Mich. f.

FETID BUCKEYE. OHIO BUCKEYE.

Western Pennsylvania, Virginia, and Tennessee, and west to Western Missouri.

A small or medium-sized tree; along streams.

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41. *Ugnadia speciosa*, Endl.  
Texas and Eastern New Mexico.  
A small tree, or often a shrub.
42. *Sapindus marginatus*, Willd.  
SOAP BERRY.  
Georgia to Southern Florida, near the coast; west to Arkansas, Texas, Southern New Mexico, Arizona, and in Sonora.  
A small tree.
43. *Sapindus Saponaria*, L.  
SOAP BERRY.  
Southern Florida, and through the West Indies.  
A small tree; the fruit rich in saponin, and used in the West Indies as a substitute for soap.
44. *Hypelate paniculata*, Cambess.  
*Melicocca paniculata*, Juss.  
MADEIRA WOOD. HONEY BERRY. GENIP TREE.  
Southern Florida, and through the West Indies.  
A small tree.
45. *Hypelate trifoliata*, Swartz.  
Southern Florida, and through the West Indies.
46. *Acer circinatum*, Pursh.  
VINE MAPLE.  
Northern California to Puget Sound.  
"Wood fine, white, close-grained, very tough, and susceptible of a good polish."  
A tree, 30 to 40 feet in height, or sometimes a shrub forming impenetrable thickets along streams, the vine-like stems taking root wherever they touch the ground.
47. *Acer dasycarpum*, Ehrh.  
*A. eriocarpum*, Michx.  
WHITE MAPLE. SILVER MAPLE.  
Northern Vermont, south to Florida; west to Minnesota, Eastern Nebraska, and the Indian Territory; most common west of the Alleghany Mountains.  
Wood soft, white; of little value.  
A large tree, 60 to 80 feet in height, with a trunk 6 to 8 feet in diameter; along streams. Maple-sugar is occasionally manufactured from the sap of this species.

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48. **Acer grandidentatum**, Nutt.

Headwaters of the Columbia River, cañons of the Wasatch Mountains, and Southern Utah to Ash Creek, Arizona.

Wood resembling that of the Sugar Maple.

A small tree.

49. **Acer macrophyllum**, Pursh.

Santa Barbara, California, to latitude 55° north. In California, in the Coast Ranges and on the western slope of the Sierras; in Oregon and Washington Territory, west into the Cascade Mountains.

Wood valuable, hard, close-grained, susceptible of a good polish; the best substitute in the Pacific forests for eastern hickory.

A tree, 80 to 100 feet in height, with a trunk sometimes 5 feet in diameter; in California much smaller. From the inner bark, mats, hats, and baskets of excellent quality are made; maple-sugar is manufactured from the sap of this species.

50. **Acer Pennsylvanicum**, L.

*A. striatum*, DuRoi.

STRIPED MAPLE. MOOSE WOOD. STRIPED DOGWOOD.

Lake Saint John, latitude 47° N. (*Michaux*); southward throughout New England, and along the Alleghany Mountains to Northern Georgia, and west along the northern boundary of the United States to Wisconsin.

Wood white, close-grained, very hard.

A tree, 20 to 30 feet in height, with a trunk 6 to 8 inches in diameter

51. **Acer rubrum**, L.

*A. Drummondii*, Hook. & Arn.

RED MAPLE. SWAMP MAPLE.

Latitude 47° N. (*Michaux*); southward to Florida; west to Minnesota, Eastern Nebraska, the Indian Territory, and Eastern Texas.

Wood whitish or rose-colored, close-grained, moderately hard, susceptible of a fine polish; largely used in cabinet-making, for turnery, and wooden ware; the variety with undulating grain, known as "curled maple," is highly valued.

A large tree; generally in swamps. Common in all the forests east of the Mississippi River.

52. **Acer saccharinum**, Wang.

SUGAR MAPLE. ROCK MAPLE.

Northern New Brunswick to the western shores of Lake Superior southward through the Northern States and along the Alleghany

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Mountains to Georgia; west to Minnesota, Eastern Nebraska, and Arkansas. Most common at the North.

Wood hard, close-grained, smooth, compact, susceptible of a fine polish; extensively used for flooring, cabinet-work, and turnery; preferred for shoe-lasts. Two accidental forms, "curled maple" and "bird's-eye maple", are highly valued for cabinet-work.

A tree, 60 to 80 feet in height, with a trunk 2 to 4 feet in diameter; in uplands. Maple-sugar is principally made from the sap of this species; the ashes of its wood are rich in alkali, yielding large quantities of potash.

53. *Negundo aceroides*, Mœnch.

*Acer Negundo*, L.

BOX ELDER. ASH-LEAVED MAPLE.

Shores of Lake Champlain in Vermont, near Ithaca, New York, Eastern Pennsylvania, and south to Florida and Southern Texas; northwest to Wisconsin, Minnesota, and the Saskatchewan in latitude 54° N.; west to the Wasatch Mountains, Utah, New Mexico, and Arizona.

Wood soft and of little value.

A tree, 30 to 50 feet in height, with a trunk rarely 2 feet in diameter; along streams.

54. *Negundo Californicum*, Torr. & Gray.

BOX ELDER.

California, northward in the Coast Ranges to ?

A small tree. Common along streams.

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## ANACARDIACEÆ.

55. *Rhus Metopium*, L.

CORAL SUMACH. MOUNTAIN MANCHINEEL. BUMWOOD.

Southern Florida, and through the West Indies.

A small tree; like many of the genus, poisonous to the touch.

56. *Rhus typhina*, L.

STAGHORN SUMACH.

From Northern New England south to Georgia, and west to Wisconsin, Arkansas, and Louisiana.

Wood orange-colored, aromatic, brittle.



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A small tree, rarely 30 feet in height, or more often a shrub; leaves and bark astringent, rich in tannin.

57. *Pistacia Mexicana*, HBK.

Near the mouth of the river Pecos, Western Texas (*Bigelow*), and southward into Mexico.

A small tree.

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LEGUMINOSÆ.

58. *Robinia Pseudacacia*, L.

LOCUST.

Southern Pennsylvania, southward along the Alleghany Mountains to ? west to ? Now extensively naturalized in all the Eastern States.

Wood reddish, greenish-yellow, or white, according to locality; very hard, strong, and impervious to decay; largely employed in naval architecture, for posts, construction, and turnery; preferred to all other woods for treenails, and in this form largely exported.

A tree, 70 to 80 feet in height, with a trunk 3 to 4 feet in diameter.

59. *Robinia viscosa*, Vent.

CLAMMY LOCUST.

In the high mountains of the Carolinas and Georgia, west to ?

Wood said to possess the same qualities as that of the last species.

A tree, 40 to 50 feet in height.

60. *Olneya Tesota*, Gray.

ARBOL DE HIERRO.

Common in the valleys of the lower Colorado and Gila Rivers, Southwestern Arizona, and the adjacent portions of California.

A small tree.

61. *Piscidia Erythrina*, L.

JAMAICA DOGWOOD.

Southern Florida, and through the West Indies to Central America.

"Wood heavy, hard and resinous, coarse, cross-grained, and of a light brown color; it is very durable either in or out of water."—(*Nuttall*.)

A small tree; a tincture prepared from the bark is an intense narcotic.

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*Cladrastis tinctoria*, Raf.*Virgilia lutea*, Michx. f.

## YELLOW WOOD.

From Central Kentucky, on the banks of the Kentucky River, south to Middle and Eastern Tennessee.

Wood of a clear yellow color, said to split with difficulty, and to make valuable fuel.

A small or medium-sized tree; principally along streams, or on rich hillsides. Rare, and in danger of extermination for fuel.

63.

*Sophora affinis*, Torr. & Gray.*Styphnolobium affine*, Walp.

"Prairies of Arkansas on the Red River"; Eastern and Southern Texas.

"A small tree, 10 to 12 feet in height; the trunk 4 to 8 inches in diameter; rarely a small shrub; the wood very heavy."—(*Lindheimer*. Gray, Pl. Lindh. 178.)

64.

*Sophora secundiflora*, Lag.*S. speciosa*, Benth.

Western shores of Matagorda Bay to Western Texas.

"A small tree, about 30 feet in height; the wood yellow, hard, and heavy, called *Lignum Vitæ*. Flowers showy, blue, sweet-scented, exhaling nearly the odor of violets. The tree forms small groves on the shores of Matagorda Bay, where it is the only firewood. The wood dyes yellow."—(*Lindheimer*. Gray, Pl. Lindh. 178.)

An exceedingly poisonous alkaloid, to which the name of Sophorin has been given, is produced from the seed of this species.—(*Rothrock*, Coult. Bot. Gazette, ii. 133.)

65.

*Gymnocladus Canadensis*, Lam.

## KENTUCKY COFFEE TREE.

From Western New York and the province of Ontario, south to Tennessee, west to Wisconsin, Eastern Nebraska, and the Indian Territory.

Wood rose-colored, close-grained, compact, very tough, with little sapwood; susceptible of a high polish, although cross-grained and difficult to season and work. Its specific gravity .609.

A tree, 60 to 80 feet in height, with a trunk sometimes 2 feet in diameter.

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66. *Gleditschia monosperma*, Nutt.  
WATER LOCUST.  
South Carolina to Florida, near the coast; and from Southern Illinois to Northern Alabama, Louisiana, and Eastern Texas.  
A small tree; in deep swamps.
67. *Gleditschia triacanthos*, L.  
HONEY LOCUST. THREE-THORNED ACACIA.  
Western Pennsylvania to Eastern Nebraska, the Indian Territory, Louisiana, and Florida; probably not east of the Alleghany Mountains.  
Wood hard, heavy, coarse-grained.  
A large or medium-sized tree; in rich bottom land.
68. *Parkinsonia florida*, Watson, Proc. Amer. Acad. xi. 135.  
*Cercidium floridum*, Benth.  
Southern Texas.  
A small tree or shrub; not to be confounded with the next species.
69. *Parkinsonia Torreyana*, Watson, Proc. Amer. Acad. xi. 135.  
*Cercidium floridum*, Torr.  
PALO VERDE. GREEN-BARK ACACIA.  
Common in the valleys of Southeastern Arizona and the adjacent portions of California.  
Wood hard, furnishing a valuable fuel.  
A small tree, often 30 feet in height.
70. *Cercis Canadensis*, L.  
RED BUD. JUDAS TREE.  
New York, south to Florida; west to Minnesota, Wyoming, Louisiana, and the Indian Territory.  
Wood hard, compact, susceptible of a good polish.  
A small tree, rarely exceeding 30 feet in height.
71. *Cercis occidentalis*, Torr.  
*C. Californicum*, Torr.  
RED BUD. JUDAS TREE.  
California, Mount Shasta and Mendocino County, southward along the foothills of the Sierras to San Diego.

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A small tree, or more frequently a large shrub. A small shrubby variety (*C. reniformis*, Engelm.) occurs in Southern Texas and New Mexico.

72. *Prosopis juliflora*, DC.

*Algarobia glandulosa*, Torr. & Gray.

ALGAROBA. MESKIT. HONEY LOCUST.

Valley of the Guadalupe, plains of Western Texas, to San Felipe Cañon, Southern California; north to Southern Colorado and Southern Nevada; and southward through Mexico.

Wood hard, very heavy and durable, affording fuel of the best quality and excellent charcoal. The unripe and pulpy pods edible and a valuable forage. A gum resembling gum arabic is produced by this tree, and the seeds are rich in grape-sugar.

"Trees 30 to 40 feet high, with few and large erect branches; the trunk often from one to two and one half feet in diameter; the heartwood dark reddish-brown; but often occurring as a small tree or shrub. Important as furnishing the only firewood in Western Texas, and also for its edible fruit."—(*Lindheimer*. Gray, Pl. Lindh. 181.)

73. *Prosopis pubescens*, Benth.

*Strombocarpa pubescens*, Gray.

TORNILLA. SCREW BEAN. SCREW-POD MESQUIT.

Southern New Mexico, along the valley of the Rio Grande; west to San Diego County, California; north to Ash Meadows, Southern Nevada; and southward into Mexico.

Wood resembling that of the last species.

A small tree; the seeds affording excellent forage; or ground into flour, Indian food.

74. *Acacia Greggii*, Gray.

Western Texas, through Southern New Mexico and Arizona to San Diego, California.

A small tree, 10 to 20 feet in height.

75. *Pithecolobium Unguis-Cati*, Benth.

*Inga Unguis-Cati*, Willd.

*P. Guadalupense*, Nutt.

CAT'S-CLAW.

Southern Florida, and through the West Indies.

A small tree, 10 to 20 feet in height.



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## ROSACEÆ.

- 76.** *Prunus Americana*, Marshall.  
WILD PLUM. CANADA PLUM.  
From Hudson's Bay to Florida; west to Denver City, Colorado, Shawneetown, Indian Territory, and Central Texas.  
Wood reddish, hard.  
A small tree; often cultivated for its red or yellow acid fruit.
- 77.** *Prunus Caroliniana*, Ait.  
*Cerasus Caroliniana*, Michx.  
MOCK ORANGE.  
North Carolina to Florida, near the coast, and west to Louisiana, Arkansas, and Eastern Texas.  
Wood rose-colored, fine-grained, brittle.  
A small tree, sometimes 40 feet in height; often cultivated for ornament.
- 78.** *Prunus Chicasa*, Michx.  
*Cerasus Chicasa*, Sering.  
CHICKASAW PLUM.  
Probably native in the regions immediately east and southeast of the Rocky Mountains, but now widely naturalized in all the Atlantic States south of Pennsylvania and Illinois.  
A small tree, or often a shrub; frequently cultivated for its globose, red and yellowish fruit.
- 79.** *Prunus emarginata*, Walpers, var. *mollis*, Brewer.  
*P. mollis*, Walpers.  
*Cerasus mollis*, Dougl.  
Northern California to Puget Sound, and east into the Cascade Mountains.  
A small tree, sometimes 30 feet in height. Common in Oregon and Washington Territory.  
The shrubby *P. emarginata*, Walpers, is the common form of California.
- 80.** *Prunus Pennsylvanica*, L.  
*Cerasus borealis*, Michx.  
*Cerasus Pennsylvanica*, Sering.  
WILD RED CHERRY.  
From Newfoundland to the headwaters of the Saskatchewan; throughout the New England and Northern States; on the high mountains of North Carolina, and in the Rocky Mountains of Colorado.

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A small tree, sometimes 30 to 40 feet in height. In Northern New England taking possession of the immense tracts annually cleared of the coniferous forests by fire.

81. *Prunus serotina*, Ehrh.

*Cerasus Virginiana*, Michx.

*Cerasus serotina*, Loisel.

*P. Capollin*, Zucc. ?

WILD BLACK CHERRY.

Hudson's Bay, south to Florida, and from the Atlantic coast to Eastern Nebraska, the Indian Territory, Eastern Texas, and probably further southwest.

Wood light red, becoming darker with age, close-grained, compact, light, easily worked, and not liable to warp; its specific gravity .454; largely employed in cabinet-making, for which it is one of the most valuable of North American woods.

A tree, 60 to 80 feet in height, with a trunk often 4 feet in diameter; reaching its greatest perfection in the valley of the Ohio.

82. *Prunus umbellata*, Elliott.

South Carolina, to Florida and Alabama.

A small tree, often a shrub; "in very dry and sandy soils."—(Elliott.)

83. *Nuttallia cerasiformis*, Torr. & Gray.

OSO BERRY.

From San Luis Obispo, California, north to Puget Sound; along the Coast Ranges in California; in Oregon and Washington Territory, east into the Cascade Mountains.

A small tree, or often a shrub.

84. *Cercocarpus ledifolius*, Nutt.

MOUNTAIN MAHOGANY.

Wasatch Mountains, Utah, west to the eastern slopes of the Sierra Nevada; and from the 36th parallel north into Oregon and Idaho.

Wood mahogany-colored, very hard, remarkably heavy, and susceptible of a beautiful polish, although too brittle and difficult to work to be useful in the arts; furnishing the most valuable fuel of Nevada; its specific gravity 1.117.

A small tree, sometimes 40 feet in height, and often only a shrub. Very common in all the mountain ranges of the "Great Basin" at 6,000 to 8,000 feet elevation.

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85. *Pirus Americana*, DC.*Sorbus Americana*, Marsh.

## AMERICAN MOUNTAIN ASH.

Greenland and Labrador, south through the New England and Northern States, to Wisconsin; on the high peaks of the mountains of North Carolina.

A small tree; in swamps and moist woods.

86. *Pirus angustifolia*, Ait.*Malus angustifolia*, Michx.

## NARROW-LEAVED CRAB APPLE.

From ———? Pennsylvania, to Florida and Mississippi; probably confined to the low country and not ascending or crossing the Alleghany Mountains.

A small tree.

87. *Pirus coronaria*, L.*Malus coronaria*, Mill.

## AMERICAN CRAB APPLE.

From Oneida County, New York, west to Wisconsin, and south to Georgia, Arkansas, and Louisiana; in the South Atlantic States, only along the Alleghany Mountains.

A small tree, sometimes 30 feet in height; fruit small, yellowish green, and exceedingly austere.

88. *Pirus rivularis*, Dougl.*Malus rivularis*, Desne.

## OREGON CRAB APPLE.

From Sonoma County, California, north to Alaska; in Oregon and Washington Territory, east into the Cascade Mountains.

Wood hard, tough, susceptible of a good polish.

A small tree, sometimes 30 feet in height; more often shrubby, and forming low, impenetrable thickets; fruit small (the size of a pea), sweet, edible. Common along streams in moist ground.

89. *Pirus sambucifolia*, Cham. & Schlect.*Sorbus sambucifolia*, Rœm.

On the high mountains of New England, and far northward; along the northern frontier of the United States; in the Rocky Mountains of Colorado and Utah; on the East Humboldt Range of Nevada; in the Sierra Nevada, from "Big Tree Road" northward, and in all mountain ranges north to Sitka, and in Kamtschatka.

A small tree.

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*folia*, Torr.

90. **Cratægus cestivalis**, Torr. & Gray.  
MAY HAW. APPLE HAW.  
South Carolina to Florida; west to Louisiana and Arkansas.  
A small tree, sometimes 30 feet in height; margins of streams and ponds, in sandy soil.
91. **Cratægus apiifolia**, Michx.  
Virginia ? to Florida, near the coast; west to Louisiana, Arkansas, and Eastern Texas.  
A small tree.
92. **Cratægus arborescens**, Elliott.  
Near Fort Argyle, on the Ogeechee River, Georgia (*Elliott*), to Florida, Louisiana, and Eastern Texas.  
A small tree, 20 to 30 feet in height; on banks of streams.
93. **Cratægus berberifolia**, Torr. & Gray, Fl. i. 469.  
Prairies of Opelousas, Louisiana. (*Prof. Carpenter.*)  
A small tree, 20 to 25 feet in height.
94. **Cratægus coccinea**, L.  
SCARLET-FRUITED THORN.  
Canada and Northern Vermont, southward to Florida, and west to Eastern Nebraska.  
A small tree, 10 to 20 feet in height, running into various forms; the best marked var. *populifolia*, Torr. & Gray, Fl. i. 465, and var. *viridis*, Torr. & Gray, l. c.
95. **Cratægus cordata**, Ait.  
WASHINGTON THORN.  
Virginia and Kentucky, southward to Georgia.  
A small tree.
96. **Cratægus Crus-galli**, L.  
COCKSPUR THORN.  
Canada and Northern Vermont, south to Florida; west to Missouri, Arkansas, and Eastern Texas.  
A small tree, 10 to 20 feet in height, running into various forms; the best marked var. *pyricanthifolia*, Ait. Hort. Kew. ii. 170; var. *ovalifolia*, Lindl. Bot. Reg. xxii. t. 1860; var. *linearis*, DC. Prodr. 2, 626; and var. *prunifolia*, Torr. & Gray, Bot. Reg. xxii. t. 1863.



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97. **Cratægus Douglasii**, Lindl.  
*C. sanguinea*, var. *Douglasii*, Torr. & Gray.  
 On Pit River, California, northward to Puget Sound, and east to Montana.  
 A small tree, 10 to 20 feet high; common in Oregon and Washington Territory along streams.
98. **Cratægus flava**, Ait.  
 SUMMER HAW.  
 Virginia, southward to Florida, and west to Southern Arkansas.  
 A small tree, 10 to 20 feet in height; "in shady, sandy places."—(*Torrey & Gray*.)
99. **Cratægus rivularis**, Nutt.  
 Sierra and Plumas Counties, California; north to Puget Sound, and probably east to Montana.  
 A small tree, 10 to 20 feet in height.
100. **Cratægus spathulata**, Michx.  
*C. microcarpa*, Lindl.  
 Virginia, southward to Florida, and west to Louisiana, Arkansas, and Eastern Texas.  
 A small tree, 10 to 20 feet in height, or often a shrub.
101. **Cratægus subvillosa**, Schrad.  
*C. coccinea*, var. *mollis*, Torr. & Gray.  
*C. tomentosa*, var. *mollis*, Gray.  
*C. mollis*, Scheele.  
 Davenport and in Fremont County, Iowa; south through the valley of the Mississippi River; Shawneetown, Indian Territory, and San Antonio, Texas; the range of this species still obscure.  
 A small tree.
102. **Cratægus tomentosa**, L.  
 BLACK THORN. PEAR THORN.  
 Northern Vermont, to Georgia; west to Iowa and Arkansas.  
 A small tree, or more often a shrub.  
 var. *punctata*, Gray. (*C. punctata*, Jacq.)  
 Canada and Northern Vermont, to Georgia and Alabama; west to Wisconsin, Eastern Nebraska, and Arkansas.  
 Wood hard, heavy, close-grained.  
 A small tree, sometimes 30 feet in height.

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103. *Crataegus* species.

A *Crataegus* of the Rocky Mountains of Colorado, Utah and Wyoming, and the Clover Mountains of Nevada, which has been generally referred to *C. rivularis*, Nutt., will probably be found to be a distinct species.

104. *Heteromeles arbutifolia*, Rømer.

*Crataegus arbutifolia*, Poir.

*Aronia arbutifolia*, Nutt.

*Photinia arbutifolia*, Lindl.

*Mespilus arbutifolia*, Link.

*Photinia salicifolia*, Presl.

*H. Fremontiana*, Desne.

## TOYON. TOLLON.

California, Mendocino County to San Diego, in the Coast Ranges, and east to the foothills of the Sierra Nevada.

A shrub, or near San Diego a "tree 12 to 20 feet high."—(*Rothrock*.)

105. *Amelanchier Canadensis*, Torr. & Gray.

*Mespilus arborea*, Michx. f.

## JUNE BERRY. SHAD BUSH. SERVICE TREE.

Hudson's Bay, south to Florida, and west to Nebraska and the Indian Territory.

Wood exceedingly hard, heavy, strong.

A small tree, sometimes 40 feet in height, or often a shrub, running into many forms, the best marked var. *Botryapium*, Torr. & Gray; var. *oblongifolia*, Torr. & Gray. The small fruit sweet and edible.

## HAMAMELACEÆ.

106. *Liquidambar Styraciflua*, L.

## LIQUIDAMBER. SWEET GUM. BILSTED.

Greenwich, Fairfield County, Connecticut, south to Florida, and southwest to Missouri and Arkansas; in Mexico and Central America.

Wood reddish, compact, fine-grained, moderately tough and solid.

A tree, 40 to 60 feet in height, with a trunk 3 to 5 feet in diameter.

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Southe  
A sma

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Valley  
A tree

## RHIZOPHORACEÆ.

107. **Rhizophora Mangle**, L.  
MANGROVE.  
Southern Florida, Louisiana, Texas, and southward through Tropical America.  
A small tree; always in maritime swamps.
108. **Conocarpus erecta**, L.  
BUTTON TREE.  
Tampa Bay, Florida, and southward through the West Indies to Brazil.  
A small tree or shrub; along muddy marine shores.
109. **Laguncularia racemosa**, Gertn.  
BLACK BUTTON WOOD. WHITE MANGROVE.  
Southern Florida, and through the West Indies to Brazil.  
A small tree, or more often a shrub.

## MYRTACEÆ.

110. **Eugenia buxifolia**, Willd.  
Southern Florida, and through the West Indies.  
A small tree.
111. **Eugenia dichotoma**, DC.  
Southern Florida, and through the West Indies to Central America.  
A small tree.
112. **Eugenia procera**, Poir.  
Southern Florida, and through the West Indies.  
A small tree.

## CACTACEÆ.

113. **Cereus giganteus**, Engelm.  
Am. Jour. Sci. (2 ser.), 14. 335, and 17. 231.  
Valley of the Gila River, Southwestern Arizona; and in Sonora.  
A tree 25 to 60 feet in height, with a trunk sometimes 2 feet in diameter.

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## ARALIACEÆ.

114.

*Aralia spinosa*, L.

ANGELICA TREE. HERCULES' CLUB.

Pennsylvania and Kentucky; south to Florida, west to Missouri and Eastern Texas.

A shrub or "tree, which in rich soils (Louisiana) attains the height of 30 to 40 or even 60 feet, with a diameter of 3 to 12 inches" (*Professor Carpenter*); the bark yielding a diaphoretic stimulant.

## CORNACEÆ.

115.

*Cornus Florida*, L.

FLOWERING DOGWOOD.

Canada to Florida, west to Eastern Kansas; southwest to Arkansas and Eastern Texas.

Wood hard, heavy, fine-grained, susceptible of a beautiful polish.

A small tree, sometimes 30 to 40 feet in height; the bark used as a tonic and astringent.

116.

*Cornus Nuttallii*, Audubon.

In California, Monterey and Mendocino Counties, and from Mariposa County north to Puget Sound; in Oregon and Washington Territory east into the Cascade Mountains.

Wood very hard, close-grained, strong.

In California, a small tree; at the north, often 70 to 80 feet in height.

117.

*Nyssa capitata*, Walt.*N. candicans*, Michx.

OGEECHEE LIME. SOUR TUPELO.

Ogeechee River, Georgia, south to Florida, and west to Louisiana and Southern Arkansas.

A small tree, rarely 30 feet in height; in swamps and on the banks of streams. A conserve, known as "Ogeechee Limes," is prepared from the large, acid fruit of this species.

118.

*Nyssa Caroliniana*, Poir.*N. aquatica*.

GUM TREE.

North Carolina to Florida, and west to ?

Wood firm, close-grained, very unwedgable; employed for hubs of wheels, hatters' blocks, and similar uses.

A small or medium-sized tree; in swamps and wet ground.



119.

N. a  
N. t

West  
and Ark  
Wood  
A sma

120.

N. a  
N. t

Banks  
to Florid  
A larg

121.

N. a  
N. t  
N. g

Southe  
tucky ?,  
Wood  
that of t  
A larg

122.

Throu  
Montana  
to the W  
A sma

123.

Hudsc  
ern Stat  
ghany M  
A sma

119. *Nyssa multiflora*, Wang.*N. aquatica*, L. in part.*N. biflora*, Michx.

TUPELO. SOUR GUM. PEPPERIDGE.

West Milton, Vermont, south to Florida; west to Michigan, Missouri, and Arkansas.

Wood very unwedgable; employed for hubs of wheels, &c.

A small or medium-sized tree; in swamps and low ground.

120. *Nyssa sylvatica*, Marsh.*N. villosa*, Michx.*N. multiflora*, var. *sylvatica*, Watson, Index.

BLACK GUM.

Banks of the Schuylkill River, Philadelphia (*Michaux f.*); southward to Florida, and west through Kentucky and Tennessee.

A large tree; its specific characters not yet satisfactorily defined.

121. *Nyssa uniflora*, Wang.*N. aquatica*, L. in part.*N. tomentosa*, Michx.*N. grandidentata*, Michx.f.

LARGE TUPELO. COTTON GUM.

Southeastern Virginia, south to Florida, near the coast; west to Kentucky?, Louisiana, and Southern Arkansas.

Wood light, soft, unwedgable; somewhat employed for wooden ware; that of the roots very light, supplying a substitute for cork.

A large tree; in water or deep swamps.

## CAPRIFOLIACEÆ.

122. *Sambucus glauca*, Nutt.

ELDER.

Throughout California, Oregon, and Washington Territory; east into Montana and Idaho; on the mountain ranges of the "Great Basin"; east to the Wasatch Mountains, and in Southern New Mexico.

A small tree, sometimes 20 feet in height, or often a shrub.

123. *Viburnum Lentago*, L.

SHEEP BERRY.

Hudson's Bay and the Saskatchewan, southward through the Northern States; west to Fremont County, Iowa, and south along the Alleghany Mountains to Georgia.

A small tree, 15 to 20 feet in height. Most common at the North.

124.

Fairfield  
to Florida  
Eastern  
A small

125.

South  
A small  
Cinchona

126.

A. J.  
A. J.  
A. J.

Puget  
to South  
Wood  
A large

127.

South  
Wood  
polish;  
A shrub

Ariz.  
Oregon  
Wasatch  
The c

124. **Viburnum prunifolium, L.**  
BLACK HAW.

Fairfield County, Connecticut, and Fishkill Landing, New York, south to Florida, and west to Saint Louis County, Missouri, Arkansas, and Eastern Texas.

A small tree, 15 to 20 feet in height.

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RUBIACEÆ.

125. **Pinckneya pubens, Michx.**  
GEORGIA BARK.

South Carolina to Middle Florida; in swamps near the coast.

A small tree; the bark with the taste and medicinal properties of Cinchona.

---

ERICACEÆ.

126. **Arbutus Menziesii, Pursh.**  
*A. laurifolia*, Lindl.  
*A. procera*, Dougl.  
*A. Texana*, Buckley.

MADRONA.

Puget Sound, southward through the Coast Ranges of California to Southern Arizona, and in Western Texas and Mexico.

Wood white, hard, brittle.

A large tree at the North, rarely more than a shrub at the South.

127. **Arctostaphylos pungens, HBK.**  
MANZANITA.

Southern California, Southern Utah, Arizona, and south into Mexico.

Wood hard, heavy, mahogany-colored, and susceptible of a brilliant polish; employed in the best cabinet work.

A shrub, often 20 feet in height, or probably sometimes a small tree.

**var. platyphylla**, Gray.

*Arctostaphylos glauca*, Watson, King Rep. v. 210 [not Lindl.].

Oregon, south through California to Western Arizona, and in the Wasatch Mountains.

The common Manzanita of Northern and Central California.

128.

California  
Wood p  
A shrub  
foot or more

129.

*Andr*

Pennsylvania  
principally  
A small

130.

Canada  
and Alabama  
Tennessee  
Wood of  
of tools, and  
General  
a tree 30

131.

Nova Scotia  
along the  
Wood  
General  
tree 30 to

132.

*M. J*  
*M. J*  
*Rap*  
*Sam*

Southern  
A shrub

128. **Arctostaphylos glauca**, Lindl.

MANZANITA.

California, Monterey and through the southern portion of the State.

Wood probably similar to that of the last species.

A shrub or small tree, sometimes 25 feet in height, with a trunk a foot or more in diameter.

129. **Oxydendrum arboreum**, DC.*Andromeda arborea*, L.

SORREL WOOD. SOUR WOOD.

Pennsylvania and Ohio, south to Florida, Mississippi, and Arkansas; principally in the Alleghany Mountains.

A small tree, sometimes 40 to 60 feet in height.

130. **Kalmia latifolia**, L.

LAUREL. CALICO BUSH. SPOON WOOD. IVY.

Canada, Maine, and Northern Vermont; south to Western Florida and Alabama; west to Wisconsin (*Lapham*), and through Kentucky and Tennessee to Arkansas.

Wood exceedingly hard, heavy, close-grained, strong; used for handles of tools, and furnishing a valuable fuel.

Generally a shrub; in the southern Alleghany Mountains sometimes a tree 30 to 40 feet in height, with a trunk 1 to 2 feet in diameter.

131. **Rhododendron maximum**, L.

GREAT LAUREL. ROSE BAY.

Nova Scotia, Southern Canada, Northern New England, and south along the Alleghany Mountains; never on limestone.

Wood hard, heavy, very close-grained.

Generally a shrub; in the southern Alleghany Mountains often a tree 30 to 40 feet in height, with a trunk a foot or more in diameter.

## MYRSINACEÆ.

132. **Myrsine Rapanea**, Rem. & Schult.*M. floribunda*, Griseb.*M. Floridana*, A.DC.*Rapanea Guyanensis*, Anbl.*Samara floribunda*, Willd.

Southern Florida, and through the West Indies to Southern Brazil.

A shrub or small tree.

133

*Cyru*  
*Pick*

Easter  
Genera

134.

Southe  
through  
A sma

135.

*C. n*

Southe  
A sma

136.

*S. p*  
*Bum*  
*Bum*

Charlo  
West In

137.

*Ach*  
*Bum*

Keys  
A tree

138.

*B. n*  
*B. f*  
*B. e*  
*B. n*

Southe  
the Rio  
A sma

133. **Ardisia Pickeringia**, Torr. & Gray.

*Cyrilla paniculata*, Nutt.  
*Pickeringia paniculata*, Nutt.

Eastern and Southern Florida, and through the West Indies to Mexico.  
 Generally a shrub; on the Florida Keys a small tree 20 feet in height.

## SAPOTACEÆ

134. **Chrysophyllum microphyllum**, DC.

Southern Florida, Caloosa River, and near Miami (*Garber*); and  
 through the West Indies.  
 A small tree.

135. **Chrysophyllum oliviforme**, Lam.

*C. monopyrenum*, Swartz.

Southern Florida, and through the West Indies.  
 A small tree.

136. **Sideroxylon mastichodendron** Jacq.

*S. pallidum*, Spreng.  
*Bumelia pallida*, Swartz.  
*Bumelia foetidissima*, Nutt.

Charlotte Harbor and Key West, Southern Florida, and through the  
 West Indies.

137. **Dipholis salicifolia**, A. DC.

*Achras salicifolia*, L.  
*Bumelia salicifolia*, Swartz.

Keys of Southern Florida, and through the West Indies to Brazil.  
 A tree, 60 feet in height.

138. **Bumelia cuneata**, Swartz.

*B. myrsinifolia*, A. DC.  
*B. parvifolia*, A. DC.  
*B. angustifolia*, Nutt.  
*B. reclinata*, Torr.

Southern Florida, Tampa Bay to Key West; Texas, from Laredo on  
 the Rio Grande to the mouth of that river, and southward into Mexico.  
 A small tree, 20 to 30 feet in height.



139.

*B. tom*  
*B. oblo*  
*B. ferr*

Georgia  
bama; Mi

A small  
diameter.

140.

Coast of  
A small

141.

North C  
Wood l  
A small

142.

*M. di*  
*Acras*

Keys of  
A small  
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143.

Light-  
Alabama  
Wood  
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A tree  
austere t

139. **Bumelia lanuginosa**, Pers.

*B. tomentosa*, A. DC.  
*B. oblongifolia*, Nutt.  
*B. ferruginea*, Nutt.

Georgia and Florida; Southern Illinois (opposite Saint Louis) to Alabama; Missouri, Arkansas, and Eastern Texas.

A small tree, 20 to 30 feet in height, with a trunk sometimes 2 feet in diameter.

140. **Bumelia lycioides**, Gaertn.

IRON WOOD. SOUTHERN BUCKTHORN.

Coast of Virginia and Southern Illinois, to Florida and Eastern Texas.  
 A small tree, 20 to 30 feet in height.

141. **Bumelia tenax**, Willd.

North Carolina to Florida, near the coast; in sandy soil.  
 Wood hard, heavy, very tough.  
 A small tree, 20 to 30 feet in height.

142. **Mimusops Sieberi**, A. DC.

*M. dissecta*, Griseb.  
*Aceris Zapotilla*, var. *parviflora*, Nutt.

NASEBERRY.

Keys of Southern Florida, and through the West Indies.  
 A small tree, sometimes 30 feet in height; the edible and agreeable fruit the size of a pigeon's egg.

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 EBENACEÆ.
143. **Diospyros Virginiana**, L.

PERSIMMON.

Light-House Point, New Haven, Connecticut, south to Florida and Alabama; Ohio to Iowa, Missouri, Kansas, and south to Louisiana.

Wood brownish, hard, heavy, very close-grained; employed in turnery, for shoe lasts, &c.

A tree, 20 to 70 feet in height; the yellow edible fruit exceedingly austere until after frost, then becoming sweet and luscious.

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Kansas.  
A small  
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146.

Georgia  
A small

147.

West V  
and Flori  
A small  
times exc

148.

*F. ac*  
*F. a*  
*F. ju*  
*F. ep*  
*F. C*

Nova S  
perior; s  
Kansas.

144. **Diospyros Texana**, Scheele.  
MEXICAN PERSIMMON.

Southern and Western Texas, and southward into Mexico.

Wood white and heavy.

A small tree, 10 to 30 feet in height; "fruit globose, black, luscious, ripe in August."—(*Gray, Syn. Fl. 1. 70.*)

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STYRACACEÆ.

145. **Symplocos tinctoria**, L'Her.  
*Hopca tinctoria*, L.

HORSE SUGAR. SWEET LEAF.

Southern Delaware to Florida; west to Louisiana and Southern Arkansas.

A small tree or shrub; leaves sweet to the taste, greedily eaten by cattle and horses, and yielding a yellow dye.

146. **Halesia diptera**, L.

Georgia to Florida, Louisiana, and Southern Arkansas.

A small tree or shrub.

147. **Halesia tetraptera**, L.

SNOW-DROP TREE. SILVER-BELL TREE.

West Virginia to Southern Illinois; south to Arkansas, Louisiana, and Florida; principally along the southern Alleghany Mountains.

A small or, in the mountains, medium-sized tree, with a trunk sometimes exceeding 18 inches in diameter.

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OLEACEÆ.

148. **Fraxinus Americana**, L.

*F. acuminata*, Lam.

*F. alba*, Marsh.

*F. juglandifolia*, Lam.

*F. euptera*, Michx.

*F. Curtissii*, Vasey.

WHITE ASH.

Nova Scotia and New Brunswick, to the western shores of Lake Superior; south to Florida and Louisiana; west to Eastern Nebraska and Kansas.

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the man  
work, &c  
A tree,  
the first  
149.

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Vergen, I  
A sma

150.  
*Ornu*

A sma

151.  
*F. p*  
*F. g*

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Wood  
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nia.

152.

Southe  
A sma  
Wheeler. H

*F. r*  
*F. o*

Ash M  
A sma

153.

*F. C*  
*F. A*  
*F. P*  
*F. H*  
*F. I*

Southe  
and Sou  
A sma

Wood light, tough, very strong, elastic; extensively employed in the manufacture of agricultural implements, carriages, oars, cabinet work, &c.

A tree, 60 to 80 feet in height, with a trunk 4 to 6 feet in diameter; of the first economic value.

149. *Fraxinus anomala* Torr.

Watson, King Rep. v. 283.

Labyrinth Cañon, Colorado River, and near Saint George on the Rio Virgen, Southern Utah.

A small tree, 10 to 20 feet in height.

150. *Fraxinus dipetala*, Hook & Arn.

*Ornus dipetala*, Nutt.

A small tree. Common in California, west of the Sierra Nevada.

151. *Fraxinus Oregana*, Nutt.

*F. pubescens*, var., Hook, Fl. Bor. Am. ii. 51.

*F. grandifolia*, Benth. Bot. Sulph. 33.

OREGON ASH.

Puget Sound; south near the coast to Fresno County and the neighborhood of San Francisco, California.

Wood said to equal that of the White Ash.

A large tree in Oregon and Washington Territory, smaller in California.

152. *Fraxinus pistaciæfolia*, Torr.

Southern and Western Texas, to Ash Creek, Southern Arizona.

A small tree, "20 feet high, with a diameter of 18 inches."—(*Rothrock*, Wheeler. Rep. vi, 186.)

var. *coriacea*, Gray, Syn. Fl. i. 74.

*F. retulina*, Torr. in Emory Rep. 1848, 1849.

*F. coriacea*, Watson. Am. Nat. vii, 302. *Rothrock* Wheeler, Rep. vi. 186, t. 22.

Ash Meadows, Nevada, and Southern Arizona.

A small tree.

153. *Fraxinus platycarpa*, Michx.

*F. Caroliniana*, Lam.

*F. Americana*, Mursh.

*F. pallida*, Bosc.

*F. pauciflora*, Nutt.

*F. triptera*, Nutt.

WATER ASH.

Southeastern Virginia to Florida, near the coast, and west to Louisiana and Southern Arkansas; in the West Indies.

A small tree, 30 to 40 feet in height; in deep river swamps.

154.

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*F. n*  
*F. to*

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States.

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Wood  
employed

A sma

156.

Michig

Wood

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*F. ju*  
*F. C*  
*F. ea*

Canada

A sma

*F. B*

Texas.

158.

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Pennsyl

A str

159.

*Ole*

South

Wood

A sma

154. **Fraxinus pubescens**, Lam.  
*F. Pennsylvanica*, Marsh.  
*F. nigra*, DuRoi.  
*F. tomentosa*, Michx.f.  
 Canada to Florida; west to Dakota; most common in the Eastern States.  
 A medium-sized tree; borders of swamps, and in low ground.
155. **Fraxinus sambucifolia**, Lam.  
 BLACK ASH.  
 Newfoundland to the southern shores of James Bay; south to the mountains of Virginia; west to Wisconsin and Arkansas.  
 Wood brownish, very tough, elastic; easily separable into thin layers; employed in basket-making, &c.  
 A small or medium-sized tree; in swamps and along low river banks.
156. **Fraxinus quadrangulata**, Michx.  
 BLUE ASH.  
 Michigan and Wisconsin; south to Northern Alabama.  
 Wood said to equal that of the White Ash.  
 A large tree.
157. **Fraxinus viridis**, Michx.f.  
*F. concolor*, Muhl.  
*F. juglandifolia*, Willd.  
*F. Caroliniana*, Willd. †  
*F. expansa*, Willd.  
 Canada to Florida; west to Dakota, Texas, and Arizona.  
 A small or medium-sized tree; along streams, or in low ground.  
 var. **Berlandieriana**, Gray, Syn. Fl. i. 75.  
*F. Berlandieriana*, DC. Prodr. vii. 273.  
 Texas.
158. **Chionanthus Virginica**, L.  
 FRINGE TREE.  
 Lancaster County, and banks of the Brandywine, Chester County, Pennsylvania; Southern Ohio (*Newberry*), south to Florida and Texas.  
 A shrub or small tree, sometimes 20 to 30 feet in height.
159. **Osmanthus Americanus**, Benth. & Hook.  
*Olea Americana*, L.  
 DEVIL WOOD.  
 Southeastern Virginia to Florida and Alabama, near the coast.  
 Wood exceedingly hard, close-grained, difficult to split or cut.  
 A small tree or shrub.



160.

Extrem  
and in M  
A sma

161

*C. sp*  
South  
A sma

162.

*Ehr*  
*B. t*  
*Ehr*  
*Pitt*  
*Ehr*  
*B. s*  
Florid  
A sma

*B. r*  
*B. t*  
*Ehr*  
Cor

Keys

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*C.*  
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## BORRAGINACEÆ

160. *Cordia Boissieri*, DC.

Extreme Southwestern Texas, the adjacent portion of New Mexico, and in Mexico.

A small tree, 15 to 20 feet in height.

161 *Cordia Sebestena*, L.

*C. speciosa*, Willd.

Southern Florida, and in the West Indies.

A small tree, or often a shrub.

162. *Bourreria Havanensis*, Miers.

*Ehretia Havanensis*, Willd.

*B. tomentosa*, var. *Havanensis*, Griseb.

*Ehretia tomentosa*, Lam.

*Pittonia similis*, Catesb.

*Ehretia Beurreria*, Chapman, [not L.]

*B. succulenta*, Jacq.

Florida Keys and in the West Indies.

A small tree.

var. *radula*, Gray, Syn. Fl. i. 181.

*B. radula*, Don.

*B. virgata*, Griseb. [not Swartz ex Miers.]

*Ehretia radula*, Poir.

*Cordia Floridana*, Nutt. Sylv. ii. 147, t. 107.

Keys of Southern Florida, and in the West Indies.

163. *Ehretia elliptica*, DC.

Texas, Corpus Christi, and along the valley of the lower Rio Grande.

A small tree, 20 to 30 feet in height, with a trunk often a foot in diameter.

## BIGNONIACEÆ.

164. *Catalpa bignonioides*, Walt.

Gray, Manual, 5 ed., 321, and Syn. Fl. i. 319, in part.

*Bignonia Catalpa*, L.

*C. cordifolia*, Jaume.

*C. syringifolia*, Sims.

Western Georgia, Florida, and perhaps west to Louisiana.

Wood very light, close-grained, remarkably durable; its specific gravity .405; valuable for fence-posts and cabinet work.

A medium-sized tree.

165.

South  
Southea  
Wood  
ity .462  
placed in  
posts, &  
A lar  
4 feet i  
forest.

166.

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C.

South  
A sh  
courses

167.

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A.

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and so  
A sn

168.

Sou

165.

**Catalpa speciosa**, Warder.

Engelm. in Coult. Bot. Gazette, v. 1.

## WESTERN CATALPA.

Southern Indiana and Illinois, Western Kentucky and Tennessee, Southeastern Missouri, and possibly southward through Louisiana.

Wood rather heavier than that of the last species its, specific gravity .462; valuable for cabinet work, and almost imperishable when placed in contact with the soil; largely employed for railway ties, fence-posts, &c.

A large tree in rich bottom-lands, often 80 feet in height, with a trunk 4 feet in diameter; one of the most valuable trees of the American forest.

166.

**Chilopsis saligna**, Don.*C. linearis*, DC.*Bignonia linearis*, Cav.*C. glutinosa*, Engelm.

## DESERT WILLOW.

Southern Texas to Southern California, and south into Mexico.

A shrub or small tree, sometimes 20 feet in height; along water courses in the dry districts.

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 VERBENACEÆ.

167.

**Avicennia nitida**, Jacq.*A. tomentosa*, Meyer [not Jacq.]*A. oblongifolia*, Nutt.?

## WHITE MANGROVE.

Southern Florida; Louisiana, at the mouth of the Mississippi River; and southward to Brazil.

A small tree; along the sea-coast in saline marshes.

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 POLYGONACEÆ.

168.

**Coccoloba Florida**, Meisner.*C. parvifolia*, Nutt. [not Poir.]

## PIGEON PLUM.

Southern Florida; Miami River (*Garber*), Key West, &c.

169.

Southe  
West Ind  
Wood  
A large

170.

*Laur*  
*Laur*  
*P. B.*

Southe  
Wood  
brilliant  
cabinet-m  
A tree,  
15 to 20 i

171.

*Laur*  
*Perse*

Canada  
sas, and  
Wood  
aromatic  
A tree  
bark, em  
ulant. T  
in impar

172.

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*Tet*  
*Dri*

MOUNTA

Oreg  
the wes  
Wood

169. *Coccoloba unifera*, Jacq.  
SEA GRAPE.

Southern Florida, Miami River (*Garber*), Key West; and through the West Indies.

Wood violet-colored, very hard, heavy, valuable for cabinet-making. A large tree; the edible fruit of an agreeable subacid flavor.

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LAURACEÆ.

170. *Persea Carolinensis*, Nees.  
*Laurus Borbonica*, L.  
*Laurus Carolinensis*, Catesb.  
*P. Borbonica*, Spr.

RED BAY.

Southern Delaware to Florida and Eastern Texas; near the coast.

Wood rose-colored, very durable, strong, compact, susceptible of a brilliant polish; formerly somewhat employed in ship-building and for cabinet-making.

A tree, in the Gulf States, sometimes 70 feet in height, with a trunk 15 to 20 inches in diameter.

171. *Sassafras officinale*, Nees.  
*Laurus Sassafras*, L.  
*Persea Sassafras*, Spreng.

SASSAFRAS.

Canada and Northern Vermont, to Florida; west to Missouri, Arkansas, and Eastern Texas.

Wood white or reddish, according to soil, light, very durable, slightly aromatic.

A tree, sometimes 50 feet in height; the roots, and especially their bark, enter largely into commerce, and afford a powerful aromatic stimulant. The oil of sassafras, distilled from the roots, is largely employed in imparting a pleasant flavor to many articles of domestic use.

172. *Umbellularia Californica*, Nutt.

*Oreodaphne Californica*, Nees.  
*Tetranthera Californica*, Hook & Arn.  
*Drimyphyllum pauciflorum*, Nutt.

MOUNTAIN LAUREL. CALIFORNIA LAUREL. SPICE TREE. CAJEPUT.  
CALIFORNIA OLIVE.

Oregon to San Diego, California, in the Coast Ranges, and along the western flank of the Sierra Nevada.

Wood brownish, close-grained, susceptible of a fine polish, and highly

esteemed,  
for this  
forests.

In Oregon  
leaves yield

173.

*Schop*

Southern

A shrub

174.

*Gymn*

*Exco*

Southern

"Wood

A small

175.

Southern

to the Pacific

Wood

shades of

ing.

A tree,

caustic,

176.

*U. P.*

Southern

Territory

Wood

A small

esteemed, especially that of the roots, for cabinet-making, and yielding for this purpose the most valuable material produced by the Pacific forests.

In Oregon a tree, 60 to 100 feet in height, smaller in California; the leaves yield a volatile oil, *Orcodaphne* (Am. Journ. of Pharm. xlvi. 105.)

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## EUPHORBIACEÆ.

173. **Drypetes crocea**, Polt.

*Schafferia lateriflora*, Sw.

Southern Florida, Key West, and through the West Indies.  
A shrub, or on Key West becoming a large tree (*Blodgett*).

174. **Sebastiania lucida**, Mnell.

*Gymnanthes lucida*, Sw.

*Excoecaria lucida*, Sw.

POISON WOOD.

Southern Florida and through the West Indies.  
"Wood yellowish white, hard, and close-grained."—(*Nuttall*.)  
A small tree.

175. **Hippomane Mancinella**, L.

MANCHINEEL.

Southern Florida, and through the West Indies and Central America to the Pacific.

Wood heavy, durable, close-grained, and beautifully variegated with shades of brown, white, and yellow; highly esteemed for cabinet-making.

A tree, 30 to 40 feet in height; abounding in white, milky, exceedingly caustic, poisonous sap.

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## URTICACEÆ.

176. **Ulmus alata**, Michx.

*U. pumila*, Nutt.

WHAHOO. WINGED ELM. SMALL-LEAVED ELM.

Southern Virginia to Florida; west to Eastern Nebraska, the Indian Territory, and Southwestern Texas.

Wood hard, compact, unwedgable; employed for hubs of wheels, &c.  
A small tree, 30 to 40 feet in height.



177.

*U.*

Southern  
latitude  
Florida; west  
Wood  
in the main  
A tree  
generally

178.

*U. o.*

Southern  
territory, and  
River.  
A small

179.

*U. r.*

Canada  
iana.  
Wood  
A small  
inner bark  
anal preparation

130.

Province  
(*Robbins*)  
Wood  
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177. ***Ulmus Americana*, Willd.***U. Florida*, Chapman.

WHITE ELM. AMERICAN ELM.

Southern Newfoundland, Northern New Brunswick, Lake Nipigon (in latitude 50° N.), south through all the Eastern United States to Florida; west to Nebraska, Kansas, and Eastern Texas.

Wood brown, moderately strong, very tough, unweigable; employed in the manufacture of hubs, water-pipes, &c.

A tree 60 to 80 feet in height, with a trunk 6 to 9 feet in diameter; generally in deep, moist soil, or low woods.

178. ***Ulmus crassifolia*, Nutt. Trans. Am. Phil. Soc. (n. ser.)***U. opaca*, Nutt.

Southern and Western Arkansas, adjacent portions of the Indian Territory, and south to Southern Texas, from San Antonio to the Pecos River.

A small tree.

179. ***Ulmus fulva*, Michx.***U. rubra*, Michx. f.

RED ELM. SLIPPERY ELM. MOOSE ELM.

Canada to Florida, west to Eastern Nebraska, Arkansas, and Louisiana.

Wood reddish, hard, heavy, very tough, durable.

A small or medium-sized tree; along streams and in low woods; the inner bark mucilaginous, and extensively employed in various medicinal preparations.

180. ***Ulmus racemosa*, Thoms.**

ROCK ELM. AMERICAN CORK ELM.

Province of Ontario, south to Kentucky, and from Western Vermont (*Robbins*) to Eastern Nebraska.

Wood fine-grained, compact, flexible, very heavy, strong, susceptible of a beautiful polish; its specific gravity .832; largely employed in the manufacture of heavy agricultural implements, furniture, and for all purposes requiring a material combining strength, toughness, and solidity.

A large tree; of the first economic value.

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**Planera aquatica**, Gmel.*P. Gmelini*, L. C. Rich.*P. ulmifolia*, Michx.f.*Anonymos aquatica*, Walt.

PLANER TREE.

Cape Fear River, North Carolina, and Southern Kentucky, south to Florida and Louisiana.

A small tree, 30 to 50 feet in height; along streams. Rare.

182.

**Celtis brevipes**, Watson, Proc. Am. Acad. xiv. 297.

Rothrock, Wheeler Rep. vi. 238.

Near Camp Grant, Southern Arizona (*Rothrock*).

"A small tree, becoming 20 feet high and 18 inches in diameter."

183.

**Celtis Mississippiensis**, Bosc.*C. occidentalis*, var. *tennifolia*, Pers.*C. laevigata*, Willd.*C. occidentalis*, var. *integrifolia*, Nutt.*C. integrifolia*, Nutt.*C. longifolia*, Nutt.

Valley of the Mississippi River, from Southern Missouri and Kentucky, south and southwestward to Eastern Texas.

A large tree.

184.

**Celtis occidentalis**, L.*C. crassifolia*, Lam.*C. occidentalis*, var. *crassifolia*, Gray.

SUGAR BERRY. HACKBERRY. FALSE ELM.

Northern Vermont, south to Western Florida, and west to Nebraska, the Indian Territory, and Texas.

Wood white, soft, and probably of little value; somewhat employed as a substitute for American elm.

A small, or, at the West, often a very large tree.

The limits of this and the last species are not yet satisfactorily defined, and the attention of American botanists is called to the importance of studying in the field, and especially in the valley of the Mississippi, this difficult genus, to which further investigation may restore one or possibly two species, or reduce it even still further.

185.

**Celtis Tala**, Gillies, var. **pallida**, Planch.

DC. Prodr. xvii. 191.

*Celtis (Mamisia) pallida*, Torr. Bot. Mex. Bound. 203, t. 50.

In the valley of the lower Rio Grande, and westward through Southern New Mexico to Sonora; and in Southern Florida (*Garber*, 1879).

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Generally a shrub, 6 to 10 feet in height; but as seen by Dr. Garber in Southern Florida, a small tree, sometimes 20 feet in height.

186. *Ficus aurea*, Nutt.

Southern Florida, Key West, Indian River (*Palmer*), Miami (*Garber*)  
A large tree.

187. *Ficus brevifolia*, Nutt.

Southern Florida, Key West, Miami (*Garber*).  
A small tree.

188. *Ficus pedunculata*, Ait.

Southern Florida, and common in the West Indies.  
A large tree.

189. *Morus rubra*, L.

*M. Canadensis*, Lam.

RED MULBERRY.

Western Vermont, Western Massachusetts, Long Island, New York, and south to Florida; west to Dakota, Kansas, Western Texas, New Mexico, and Chihuahua.

Wood yellowish, heavy, exceedingly durable; valuable for posts, tree-nails, &c.; formerly somewhat employed in ship-building.

A small or medium-sized tree, sometimes 70 feet in height, with a trunk 2 feet in diameter, or in the far Southwest reduced to a shrub; the large, dark purple fruit sweet and edible.

190. *Maclura aurantiaca*, Nutt.

OSAGE ORANGE. BOIS D'ARC.

Southwestern Missouri, south to Natchitoches County, Louisiana, and west into the Indian Territory and Eastern Texas.

Wood yellow, solid, heavy, elastic, exceedingly durable; valuable for construction, railway ties, fence posts, &c.

A medium-sized tree, sometimes 50 to 60 feet in height, with a trunk 2 to 3 feet in diameter. Very common, and attaining its greatest perfection in the rich bottom lands of the Red and Kiamesna Rivers; now extensively planted as a hedge plant, especially in the Western States.

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PLATANACEÆ.

191. *Platanus occidentalis*, L.

AMERICAN PLANE TREE. SYCAMORE. BUTTONWOOD.

Along the northern shores of Lakes Ontario and Erie in the Province of Ontario; Northern Vermont, Southern Maine, Eastern New Hamp-

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shire, and Massachusetts; south to Florida; west to Eastern Nebraska, Kansas, and Texas (Devil River Valley, *Bigelow*).

Wood not durable when exposed to the weather, reddish, close-grained, liable to warp, very unwedgable.

The largest tree of the Atlantic forests, reaching its greatest dimensions in the rich bottom lands bordering the Ohio and Mississippi Rivers, where specimens occur 80 to 100 feet in height, with trunks 10 to 14 feet in diameter.

**192.                    *Platanus racemosa*, Nutt.**

Sacramento Valley to Southern California and Arizona.

Wood said to be more valuable than that of the last species.

A large tree, sometimes 100 feet in height.

**193.                    *Platanus Wrightii*, Watson, Proc. Am. Acad. x. 349.**

In Southeastern Arizona, near the San Pedro River.

A large tree (*Wright*).

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## JUGLANDACEÆ.

**194.                    *Juglans Californica*, Watson, Proc. Am. Acad. x. 349.**

*J. rupestris*, var. *major*, Torr. in Sitgr. Rep. 171, t. 16.

Valley of the Sacramento River, and in the neighborhood of San Francisco, California; eastward through Southern Arizona, New Mexico; and in Sonora.

A large shrub, or sometimes a tree 40 to 60 feet in height.

**195.                    *Juglans cinerea*, L.**

*J. oblonga*, Mill.

*J. cathartica*, Mich. f.

### BUTTERNUT. WHITE WALNUT.

Northern shores of Lakes Erie and Ontario, Northern Vermont; south to Northern Alabama, and west to Missouri and Arkansas. Rare at the South, except along the mountains.

Wood brownish, light, soft, easily worked, susceptible of a beautiful polish, very durable; extensively used in cabinet-making.

A small or medium-sized tree; a tincture used as a cathartic is prepared from the inner bark, which also yields a valuable dye.



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*Juglans nigra*, L.

BLACK WALNUT.

Southern portions of the Province of Ontario, Western Vermont; south to Florida; west to Eastern Nebraska, Kansas, the Indian Territory, and Eastern Texas.

Wood dark brown, light, soft, easily worked, susceptible of a beautiful polish, very durable; its specific gravity .577; more extensively used in cabinet-making and for gun-stocks than that of any other American tree.

A tree, 60 to 80 feet in height, with a trunk 4 to 6 feet in diameter; of the first economic value. Rare at the east; most common in the valley of the Mississippi and its tributaries; but now everywhere becoming scarce.

197.

*Juglans rupestris*, Engelm.

Bot. Sitgr. Rep. 171, t. 15.

Devil's River, Western Texas; Southern Arizona, and Walnut Grove, Arizona.

A shrub, or small tree, sometimes 20 feet in height.

198.

*Carya alba*, Nutt.

SHELL-BARK HICKORY. SHAG-BARK HICKORY.

Canada; York County, Maine, to the upper districts of Georgia, and Northern Alabama; west to Eastern Nebraska, Kansas, and Arkansas.

Wood very heavy, strong, tenacious, elastic; furnishing the most valuable fire-wood of the Atlantic forests; extensively employed in the manufacture of agricultural implements, carriages, baskets, &c.; its specific gravity .838.

A medium-sized tree, 50 to 70 feet in height, with a trunk 2 to 5 feet in diameter; of the first economic value, producing, next to the Pecan, the most highly esteemed of North American nuts.

*Carya microcarpa* (Nutt. Gen. ii. 221), will probably on further investigation be found not specifically distinct from this species, with which it occurs from Pennsylvania and Delaware, south to the upper districts of Georgia.

199.

*Carya amara*, Nutt.*Juglans angustifolia*, Lam. Dict. iv. 504.*Juglans amara*, Michx.

BITTER NUT. SWAMP HICKORY. WHITE HICKORY.

Canada and Northern Vermont, south to Florida, and west to Eastern Nebraska, Kansas, and Eastern Texas.

Wood with the general characteristics of the last species, but lighter, and in every way less valuable.

A small or medium-sized tree; generally in low grounds; the nut thin-shelled, exceedingly bitter, not edible.

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200. *Carya aquatica*, Nutt.*Juglans aquatica*, Michx.

WATER HICKORY.

North Carolina, in the low districts, to Florida, and Alabama; and in Southern Arkansas?

Wood probably of little value in comparison with that of the other species of the genus.

A small tree, 30 to 50 feet in height; in low swamps.

201. *Carya myristicæformis*, Nutt.*Juglans myristicæformis*, Michx.

NUTMEG HICKORY.

"South Carolina, at Goose Creek" (*Michaux*), "Berkeley District" (*Ravenel*), and in Western Louisiana.

A small tree; in swamps or low ground.

202. *Carya porcina*, Nutt.*Juglans glabra*, Wang.*Juglans porcina*, Michx.f.*Juglans obcordata*, Willd.*C. glabra*, Torr. & Gray.

PIG NUT. BROWN HICKORY.

Canada to Southern Florida, west to Eastern Nebraska, Kansas, and Eastern Texas.

Wood very similar to that of *Carya alba*.

A large or medium-sized tree; in dry uplands.

203. *Carya sulcata*, Nutt.

WESTERN SHELL-BARK HICKORY. THICK SHELL-BARK HICKORY.

Lancaster County, Pennsylvania, and west to Eastern Kansas.

Heart wood lighter colored, but similar to that of *Carya alba*.

A large tree in rich bottom lands. Rare east of the Alleghany Mountains; more common in the valley of the Mississippi River; the large thick-shelled nuts sweet and edible.

204. *Carya tomentosa*, Nutt.

MOCKER NUT. WHITE-HEART HICKORY.

Canada and Northern New England, south to Florida; west to Eastern Nebraska and Arkansas.

Wood resembling that of the last species.

A medium-sized tree; in dry uplands, or more rarely along the banks of streams in deep and often submerged soils; a fine variety, bearing large, thin-shelled, valuable nuts, is known in the valley of the Genesee River, New York, as "King Nut."

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## MYRICACEÆ.

- 205.
- Myrica Californica*
- , Cham. & Schl.

Sacramento River, California, north to Washington Territory.

A shrub or small tree, "sometimes attaining a height of 30 to 40 feet, with a diameter at base of two feet or more."—(*Watson*, Bot. Cal. ii. 81, *ined.*)

## CUPULIFERÆ.

- 206.
- Quercus agrifolia*
- , Née.

ENCENO.

California, near the coast, principally south of San Francisco, and occasionally reaching Mendocino County.

"A large tree, with a stout, low trunk, often 8 to 12 feet, sometimes 16 to 21 feet, in circumference (base of Monte Diablo, *Brewer*), and with a spread of branches of 120 feet"—(*Engelm.* in Bot. Cal. ii. 98, *ined.*); also occurring as a small shrub.

- 207.
- Quercus alba*
- , L.

WHITE OAK.

Southwestern Nova Scotia, Southern New Brunswick, Canada in the latitude of Quebec (rare), and west along the Manitoulin Islands, and the northern shore of Lake Michigan to Wisconsin; south to Northern Florida, and west to Western Missouri, Arkansas, and Eastern Texas.

Wood light-colored, strong, heavy, elastic, durable; its specific gravity .662; largely employed in ship-building, construction of all sorts, cabinet-making, cooperage, for which purpose and basket-making it is preferred to all other American woods; also very largely in the manufacture of agricultural implements, carriages, &c., and for railway ties, piles, posts, and fuel.

A large tree, 60 to 80 feet in height, with a trunk 6 to 8 feet in diameter; of the very first economic value, and superior to all other North American Oaks in the quality and value of its wood.

- 208.
- Quercus aquatica*
- , Nutt.

WATER OAK.

Maryland, and Sebastian County, Arkansas, south to Florida and Eastern Texas.

Wood tough, but probably of little value.

A small tree, 30 to 50 feet in height; in low ground, along streams and ponds.

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209. **Quercus bicolor**, Willd.*Q. Prinus*, var. *tomentosa*, Michx.*Q. Prinus*, var. *discolor*, Michx.f.

## SWAMP WHITE OAK.

Canada, Northern Vermont, and Wisconsin, south through the Northern States, and along the Alleghany Mountains to Georgia; west to Eastern Nebraska and Arkansas ("bottoms of the Washita River," *Lesquerieux*).

Wood said to equal that of the White Oak.

A large tree, with a trunk sometimes, although rarely, exceeding 30 feet in circumference ("Wadsworth oak," Geneseo, N. Y.); in swamps and along streams, in deep alluvial soil.

var. **Michauxii**, Engelm. Trans. St. Louis Acad. iii. 390.

*Q. Prinus palustris*, Michx.*Q. Michauxii*, Nutt.

From Delaware and Southern Illinois, south to Northern Florida. In low ground.

210. **Quercus Catesbæi**, Michx.

## TURKEY OAK. SCRUB OAK. FORKED-LEAF BLACK JACK.

North Carolina to Florida and Southern Alabama.

A small tree, rarely exceeding 25 feet in height; only in sandy barrens, near the coast.

211. **Quercus cinerea**, Michx.*Q. Phellos*, var. *cinerea*, Spach.

## UPLAND WILLOW OAK. BLUE JACK.

North Carolina to Florida and Eastern Texas, near the coast.

A small tree, rarely exceeding 30 feet in height; in sandy barrens; the bark yielding a yellow dye.

212. **Quercus chrysolepis**, Liebm.*Q. fulrescens*, Kellogg.*Q. crassipocula*, Torr.

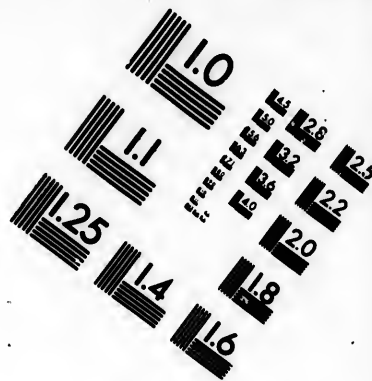
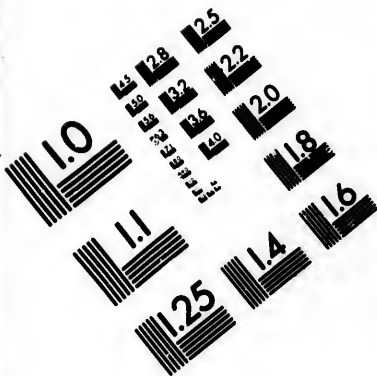
## CALIFORNIA LIVE OAK.

California, in the Coast Ranges and along the western slopes of the Sierra Nevada.

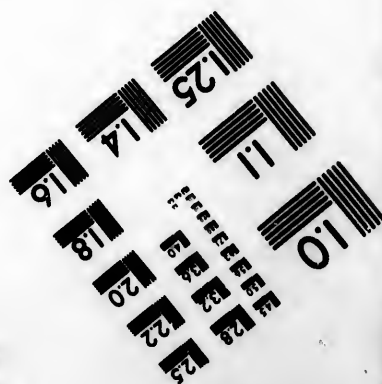
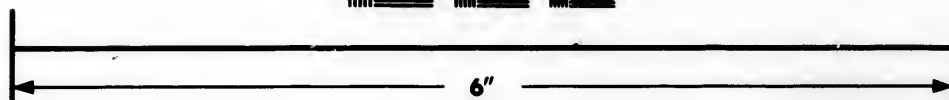
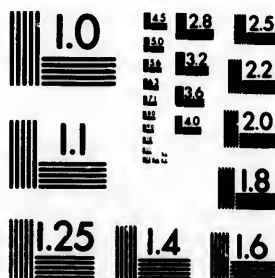
A large tree, 3 to 5 feet in diameter; or, at higher elevations, reduced to a shrub, [var. ? *vacciniifolia*, Engelm. Trans. St. Louis Acad. iii. 393. *Q. vacciniifolia*, Kellogg].







**IMAGE EVALUATION  
TEST TARGET (MT-3)**



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*Quercus coccinea*, Wang.

SCARLET OAK.

Eastern Massachusetts, southward near the coast, in light sandy soils; and in Minnesota (*Engelmann*).

The range of this species, often confounded with the forms of *Q. tinctoria* with deeply-cut leaves, is still obscure, and especially deserves the attention of botanists.

214.

*Quercus densiflora*, Hook. & Arn.*Q. echinacea*, Torr.

California, "from the Santa Lucia Mountains (*Palmer*), through the Coast Ranges, and especially among the Red Woods, to the Shasta region.

"A pretty large tree, 50 to 60, or rarely 80, feet high (Santa Cruz Mountains, *Brewer*), and a foot or two in diameter; often a mere shrub, 5 to 7 feet high."—(*Engelm.* in Bot. Cal. ii. 99, *ined.*)

215.

*Quercus Douglasii*, Hook. & Arn.

MOUNTAIN WHITE OAK. BLUE OAK.

California, "in dry foothills of the Coast Ranges, from Monte Diablo and Mount Oso to Sacramento Valley.

"It resembles a middle-sized White Oak of the Eastern States in its size, pale, scaly bark, and quality of its timber. The largest tree seen by *Professor Brewer* has a circumference of 7 feet."—(*Engelm.* in Bot. Cal. ii. 95, *ined.*)

216.

*Quercus dumosa*, Nutt.*Q. berberidifolia*, Liebm.*Q. acutidens*, Torr.

California, "common in the cañons and on the arid slopes of the Coast Ranges from San Diego to San Francisco Bay; the variety (var. *bullata*, *Engelm.*) in the Santa Lucia Mountains (*Brewer*) and northward to Lake County (*Dr. Torrey*)."—(*Engelmann* in Bot. Cal. ii. 96, *ined.*)

217.

*Quercus Emoryi*, Torr.*Q. hastata*, Liebm.

Comal County, Texas, through Southern New Mexico to Rocky Cañon, Arizona (*Rothrock*).

A small tree, or often a shrub.

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**218. Quercus falcata, Michx.**

- Q. elongata*, Willd.  
*Q. discolor*, var. *foliata*, Spach.  
*Q. triloba*, Michx.  
*Q. falcata*, var. *triloba*, DC.

## SPANISH OAK.

New Jersey to Missouri, and south to Florida and Eastern Texas; most common in the Southern Atlantic States, where in the middle district it is the most prevalent forest tree.

Wood reddish, coarse-grained, not durable, of little value; somewhat employed in cooperage.

A large tree, often 80 feet in height, with a trunk 4 to 5 feet in diameter; its bark rich in tannin.

**219. Quercus Garryana, Dougl.**

*Q. Newi*, Liebm.

Vancouver Island and British Columbia, south to San Francisco Bay, near the coast.

Wood hard, brittle, probably of little value.

A large tree, 70 to 100 feet in height; extending farther north than any oak of the Pacific forest.

**220. Quercus heterophylla, Michx.**

- Q. aquatica*, var. *heterophylla*, DC.  
*Q. Phellos* × *coccinea*, Engelm. Trans. St. Louis Acad. iii. 385, 391, 541.

New Jersey, near Camden, Haddonfield, Mount Holly, and in Cape May County; Delaware, near Townsend Station and Wilmington; North Carolina (*M. A. Curtis* in Herb. Canby.); Eastern Texas (*E. Hall*).

A small tree, of uncertain origin.

**221. Quercus hypoleuca, Engelm.**

*Q. confertifolia*, Torr. Bot. Mex. Bound. 207 [not HBK].

"Sanoita Valley, Southern Arizona, at 7,000 feet altitude (*Rothrock*, 1874); also found in the San Francisco Mountains.

"A very conspicuous and as yet little known species, which Dr. Rothrock found 30 feet in height and 1 foot in diameter."—(*Engelm.* in Wheeler Rep. vi. 251.)

**222. Quercus imbricaria, Michx.**

## SHINGLE OAK. LAUREL OAK.

New Jersey, south along the Alleghany Mountains, and in the upper districts to Georgia; west to Wisconsin and the Indian Territory.

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Wood hard and heavy, but probably of little value except as fuel.  
A small tree, sometimes 50 feet in height. Most common west of the Alleghany Mountains.

223. **Quercus Kelloggii**, Newberry, Pacif. R. Rep. vi. 286, 6.

*Q. rubra*, Benth. Pl. Hartw. 337.

*Q. tinctoria*, var. *Californica*, Torr.

*Q. Sonomensis*, Benth.; DC. Prodr. xvi<sup>3</sup>. 62.

California, in the Coast Ranges, and along the western slopes of the Sierra Nevada, reaching a higher elevation than any other of the California oaks.

A large tree, or often at high elevations reduced to a small shrub.

224. **Quercus laurifolia**, Michx.

*Q. aquatica*, var. *laurifolia*, DC.

*Q. Phellos*, var. *laurifolia*, Chap.

LAUREL OAK.

North Carolina, in the middle and lower districts, south to Florida.

A large tree.

225. **Quercus lobata**, Née.

*Q. Hindii*, Benth. Bot. Sulph. 55.

*Q. Ransoni*, Kellogg, Proc. Calif. Acad. i. 25?

California, "common throughout the State, in the plains or in the foothills; or in the southern part of the State somewhat higher in the mountains.

"A majestic tree, sometimes 15 to 20 feet in girth, 100 feet high, and with a wider spread of branches" (*Brewer*), which often hang down to the ground.

"The wood is said to be brittle." (*Engelm. Bot. Cal. ii. 95, ined.*)

226. **Quercus lyrata**, Walt.

OVER-CUP OAK. SWAMP POST OAK. WATER WHITE OAK.

North Carolina and the valley of the lower Ohio; south to Florida, Arkansas (rare), and Eastern Texas.

Wood moderately compact and resembling, though inferior to, that of *Q. alba*.

A large tree; in deep and often submerged swamps. Not common.

227. **Quercus macrocarpa**, Michx.

*Q. oliviformis*, Michx.

*Q. macrocarpa*, var. *oliviformis*, Gray.

BURE OAK. MOSSY-CUP WHITE OAK. OVER-CUP OAK.

Canada and Northern Vermont, south to Lancaster County, Pennsylvania; west to Wisconsin, Eastern Nebraska, and Kansas.

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Wood probably of little value, except as fuel.

A large tree, 60 to 80 feet in height, with a trunk 4 to over 8 feet in diameter. Not common east of the Alleghany Mountains.

228. *Quercus Muhlenbergii*, Engelm. Trans. St. Louis Acad. iii. 391.

*Q. castanea*, Muhl. ap. Willd.

*Q. Prinus*, var. *acuminata*, Michx.

Perrysburg, Vermont, near Newburg, New York, on the Conestoga River, Lancaster County, Pennsylvania, and west to Eastern Nebraska, Arkansas, and the Indian Territory. Very common west of the Alleghany Mountains, and extending south to Western Florida and Mississippi.

Wood compact, strong, very durable; largely used for railway ties, posts, &c.

A small or medium-sized tree.

229. *Quercus nigra*, L.

*Q. ferruginea*, Michx.f.

*Q. quinqueloba*, Engelm.

*Q. nigra*, var. *quinqueloba*, A.DC.

BLACK JACK OAK. BARREN OAK.

Long Island, New York, south to Florida, and west to Eastern Nebraska, the Indian Territory, and Eastern Texas.

A small tree, rarely exceeding 25 feet in height; in gravelly, barren soil.

230. *Quercus oblongifolia*, Torr.

EVERGREEN WHITE OAK. LIVE OAK.

Mountains of Southwestern California, from San Diego to Los Angeles; and in Chihuahua.

"The wood is said to be hard, but brittle. A beautiful tree, 2 to 2½ feet in diameter (*Brewer*), with the aspect of the eastern Live Oak." (*Engelm.*, Bot. Cal. ii. 97, *ined.*)

231. *Quercus palustris*, DuRoi.

PIN OAK. SWAMP SPANISH OAK.

Western Massachusetts? (*Emerson*), New Haven, Connecticut, Long Island, and south to the District of Columbia; west and southwest to Wisconsin, Eastern Nebraska, Kansas, and Eastern Texas.

Wood coarse-grained, moderately strong, not durable.

A medium-sized tree; in low ground.

232. *Quercus Phellos*, L.

WILLOW OAK.

Long Island, New York, south to Florida, generally near the coast; and from Kentucky to Alabama, Arkansas, and Eastern Texas.

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Wood reddish, coarse-grained, not durable; sometimes used for the felloes of wheels, but of little value.

A medium-sized tree; generally along the borders of swamps, in low, cool situations.

**233. Quercus Prinus, L.**

*Q. Prinus*, var. *monticola*, Michx.

*Q. montana*, Willd.

**CHESTNUT OAK. ROCK CHESTNUT OAK.**

Vermont, shores of Lake Champlain, to the valley of the Genesee River, Livingston County, New York; south through the whole length of the Alleghany Mountains, and rarely eastward to the coast; in the mountains of Kentucky and Tennessee.

Wood reddish, porous, strong, somewhat employed in construction, cooperage, &c., although inferior to white oak.

A large or medium-sized tree.

**234. Quercus rubra, L.**

**RED OAK.**

Northern Nova Scotia, New Brunswick, valley of the Saint Lawrence, northern shore of Lake Huron, western shore of Lake Superior, south to Florida, and Eastern Texas; the most widely distributed of the North American oaks, extending farther north than any species of the Atlantic forests.

Wood varying remarkably in different localities; at the east reddish, porous, light, not durable, principally employed in cooperage; in Northern Wisconsin and Minnesota heavier, durable, compact, and quite generally used in construction.

A large tree. Very common in all rich woodlands.

**235. Quercus stellata, Wang.**

*Q. obtusiloba*, Michx.

*Q. Durandii*?, Buckley.

**POST OAK.**

Martha's Vineyard, Massachusetts, south to Florida; west to Missouri, Nebraska, Kansas, and Eastern Texas.

Wood resembling and probably equaling that of *Q. alba*.

A small or medium-sized tree, rarely exceeding 50 feet in height.

**236. Quercus tinctoria, Bartram.**

*Q. nigra*, Marsh. [not L.]

*Q. velutina*, Lam.

*Q. coccinea*, var. *tinctoria*, Gray.

**BLACK OAK. YELLOW-BARKED OAK.**

Canada and Northern New England, south to Tallapoosa County, Alabama, and west to Wisconsin, Eastern Nebraska, and Eastern Kansas (rare).

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Wood close-grained, strong, durable, and probably superior to that of the other North American Black Oaks; employed in the manufacture of carriages, cooperage, construction, &c.

A large tree, 80 to 100 feet in height, with a trunk often 4 to 5 feet in diameter; the bark rich in tannin; the intensely bitter inner bark yields a valuable yellow dye. Very common in all the Atlantic forests.

237.

*Quercus undulata*, Torr.

## ROCKY MOUNTAIN SCRUB OAK.

Eastern slope of the Rocky Mountains of Colorado from Denver southward, through New Mexico into Western Texas; west through Utah and Arizona into Southern California.

A small tree, or often a shrub running into innumerable forms, of which the best marked are:

var. *Gambelii*, Engelm. (*Q. Gambelii*, Nutt., and *Q. Drummondii*, Liebm.).

var. *Jamesii*, Engelm.

var. *Wrightii*, Engelm.

var. *breviloba*, Engelm. (*Q. obtusiloba*, var. *breviloba*, Torr.; *Q. Sabana*, Buckley?).

var. *oblongata*, Engelm. (*Q. oblongifolia*, Torr. in Bot. Mex. Bound. 206 [not Bot. Stgr.])

var. *grisea*, Engelm. (*Q. grisea*, Liebm.).

var. *pungens*, Engelm. (*Q. pungens*, Liebm.).

See Engelmann in Trans. St. Louis Acad. iii. 372, 382, 392, and Bot. Cal. ii. 98, *ined*

238.

*Quercus virens*, Ait.

*Q. sempervirens*, Ait.

*Q. oleoides*, Cham. & Schl.

*Q. retusa*, Liebm.

## LIVE OAK.

Mob Jack Bay, Virginia, south to Florida, near the coast; west along the Gulf coast to Mexico; in Texas penetrating to the high plateau north of San Antonio (*Engelmann* in Pl. Lindh. ii. 237), where it might without fruit be easily confounded with *Q. Emoryi*.

Wood yellowish, very heavy, compact, fine-grained, strong, and durable; largely employed in ship-building, for which purpose it is preferred to all other North American woods.

A tree, 50 to 60 feet in height, with a trunk 4 to 7 feet in diameter; of the first economic value; or reduced to a shrub (var. *maritima* and *dentata*, Clapman; *Q. maritima*, Willd.); the bark rich in tannin.

239.

*Quercus Wislizeni*, A. DC.

*Q. Morehus*, Kellogg.

California, "common in the valleys and in the lower mountains throughout the State, and ascending into the Sierra Nevada." The

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variety (var. *frutescens*, Engelm.) is the "Desert Oak" of the southeastern desert region, ranging northward to Mount Shasta.

"A magnificent tree, with very dense dark-green and shining foliage; sometimes 10 to 12 and even 18 feet in circumference (Shasta, *Brewer*), and 50 to 60 feet high." (*Engelm.* in Bot. Cal. ii. 98, *ined.*)

The following North American shrubby species do not properly find a place in this catalogue:

*Q. Breweri*, Engelm. in Bot. Cal. ii. 96, *ined.* (*Q. lobata*, var. *fruticosa*, Engelm.) Western slopes of high Sierra Nevada, California.

*Q. Georgiana*, M. A. Curtis. Stone Mountain, Georgia.

*Q. myrtifolia*, Willd. (*Q. Phellos*, var. *arenaria*, Chapman).

*Q. aquatica*, var. *myrtifolia*, A.DC. Sea coast, South Carolina to Florida.

*Q. ilicifolia*, Wang. (*Q. Banisteri*, Michx.). New England to Ohio and southward.

*Q. prinoides*, Willd. (*Q. Prinus pumila*, Michx.; *Q. Prinus Chinquapin*, Michx. f., A.DC.; *Q. Chinquapin*, Pursh.). New England to Arkansas.

*Q. pumila*, Nutt. (*Q. Phellos*, var. *pumila*, Michx.; *Q. cinerea*, var. *pumila*, Chap.), and var. *sericea*, Engelm (*Q. sericea*, Willd.; *P. Phellos*, var. *sericea*, Ait.). Pine barrens of South Carolina.

*Q. reticulata*, HBK. Southern Arizona and Mexico.

240. *Castanopsis chrysophylla*, A.DC.

*Castanea chrysophylla*, Hook.

*C. sempervirens*, Kellogg.

CHINQUAPIN.

Western Oregon and California, along the western flank of the Sierra Nevada, and in the Coast Ranges south to Santa Cruz.

A tree, 30 to 50 feet in height, in the Cascade Mountains, or in California often a low shrub.

241. *Castanea pumila*, Mill.

*Fagus pumila*, L.

CHINQUAPIN.

Lancaster County, Pennsylvania; Marietta, Ohio; south and southwest to Florida, Arkansas, the Indian Territory, and Eastern Texas.

Wood strong, compact, even-grained, very durable.

A shrub, or in the southern Alleghany Mountains, Florida, and Arkansas a tree, 30 to 50 feet in height, with a trunk often 18 inches in diameter; the sweet fruit smaller than that of the next species.

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**242. *Castanea vulgaris*, Lam., var. *Americana*, A. DC. Prodr. xvi<sup>2</sup>. 114.***Fagus Castanea*, L.*C. vesca*, Gertn., var. *Americana*, Michx.*C. Americana*, Raf.

Northern shores of Lakes Erie and Ontario, Southern Maine, New Hampshire, and Vermont; south to Western Florida, and west and southwest to Michigan and Arkansas; reaching its greatest development in Tennessee, along the western slopes of the Alleghany Mountains.

Wood light-colored, coarse-grained, moderately strong, very durable, but difficult to season and liable to warp; largely employed in cabinet-making, and for railway ties, posts, fencing, &c.

A large tree; of the first economic value; the fruit, although smaller, superior in sweetness and flavor to that of the European chestnut.

**243. *Fagus ferruginea*, Ait.***Fagus sylvestris*, Michx.

## AMERICAN BEECH.

Nova Scotia and New Brunswick, through the valley of the Saint Lawrence and Ottawa Rivers, and the northern shores of Lakes Huron and Michigan to Missouri and Minnesota; south to Florida and Arkansas.

Wood light-colored or reddish, varying greatly with soil and location, close-grained, compact, heavy, and susceptible of a beautiful polish; employed in the manufacture of shoe-lasts, handles of tools and in turnery; used largely as fuel.

A large tree. Very common in all northern forests east of the Mississippi River, and in those of the southern Alleghany Mountains.

**244. *Ostrya Virginica*, Willd.***Carpinus Ostrya*, L.*Carpinus Virginiana*, Lam.*O. Americana*, Michx.*O. vulgaris*, Watson.*Carpinus triflora*, Mœnch.

Nova Scotia, New Brunswick, through the valleys of the Saint Lawrence and the lower Ottawa Rivers, along the northern shores of Lake Huron, to Northern Wisconsin; south to Florida, and west to Fremont County, Iowa, Missouri, and Arkansas.

Wood white, compact, fine-grained, very heavy, durable.

A small tree, rarely exceeding 40 feet in height, or with a trunk more than 12 to 15 inches in diameter.

**245. *Carpinus Caroliniana*, Walt.***C. Americana*, Michx.

## AMERICAN HORNBEAM. BLUE BEECH. WATER BEECH. IRON WOOD.

Northern Nova Scotia and New Brunswick, through the valley of the Saint Lawrence and lower Ottawa Rivers, along the northern shores of

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Lake Huron to Northern Wisconsin and Minnesota; south to Florida and Eastern Texas.

Wood resembling that of *Ostrya*.

At the North generally a shrub or small tree, but becoming, in the southern Alleghany Mountains, a tree sometimes 50 feet in height, with a trunk 2 to 3 feet in diameter.

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## BETULACEÆ.

### 246. *Betula alba*, L., var. *populifolia*, Spach.

*B. populifolia*, Willd.

*B. acuminata*, Ehrh.

*B. cuspidata*, Schrad.

WHITE BIRCH. OLD FIELD BIRCH. GRAY BIRCH.

New Brunswick, and from the valley of the lower Saint Lawrence River south to Delaware, near the coast.

Wood white, moderately hard, close-grained, susceptible of a good polish; extensively manufactured into spools, shoe-pegs, &c., and recently largely exported.

A small tree, rarely exceeding 20 to 30 feet in height; in dry and gravelly soil, or on the borders of swamps; springing up everywhere on abandoned land in New England.

### 247. *Betula lenta*, L.

*B. carpinifolia*, Ehrh.

*B. lenta*, Regel in DC. Prodr. xvi<sup>2</sup>. 179, in part.

CHERRY BIRCH. BLACK BIRCH. SWEET BIRCH. MAHOGANY BIRCH.

Nova Scotia, Canada, and through the Northern States; west to Illinois, and south along the Alleghany Mountains to Georgia.

Wood reddish, close-grained, compact, moderately hard, susceptible of a brilliant polish; furnishing a valuable material for cabinet-making, and excellent fuel.

A medium-sized tree. Common at the North in rich woodlands.

### 248. *Betula lutea*, Michx.f.

*B. excelsa*, Pursh [not Ait.]

*B. lenta*, Regel in DC. Prodr. xvi<sup>2</sup>. 179, in part.

YELLOW BIRCH. GRAY BIRCH.

Newfoundland to the western shore of Lake Superior, through the New England and Northwestern States, and south along the Alleghany Mountains to the high peaks of North Carolina.

Wood resembling, and perhaps surpassing, that of the last species

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The largest deciduous tree of the forests of Canada and Northern New England, not rarely 80 feet in height, with a trunk 3 to 4 feet in diameter.

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*Betula nigra*, L.

RED BIRCH. RIVER BIRCH.

Banks of the Merrimac and Spicket Rivers, in Middlesex and Essex Counties, Massachusetts, and from New Jersey south to Florida and Tallapoosa County, Alabama; west to Missouri, Arkansas, and Eastern Texas.

A medium-sized tree; along the borders of streams and ponds.

250.

*Betula occidentalis*, Hook.

California, "in the eastern cañons of the Sierra Nevada, above Owen's Valley, at an altitude of from 4,500 to 10,000 feet, where it is reported as abundant and often the main reliance of the settlers for timber for fencing and other purposes; Surprise Valley, Modoc County (*Lemmon*), and common along streams in Siskiyou County, where it is known as 'Black Birch.' It is frequent from Washington Territory to the Saskatchewan and in the Rocky Mountains to New Mexico." (*Watson*, Bot. Cal. ii. 79, *ined.*)

251.

*Betula papyracea*, Ait.

CANOE BIRCH. WHITE BIRCH. PAPER BIRCH.

Latitude 65° N. (*Richardson*), south through British America and the Northern States to the mountains of Pennsylvania; west to Minnesota, Eastern Nebraska, and Dakota?; most common at the North.

Wood white, compact, moderately hard, furnishing an excellent fuel; extensively employed in the manufacture of spools, shoe-lasts, pegs, &c., and now largely exported.

A large tree, as far north as Hudson's Bay, and extending to a higher latitude than any deciduous tree of the Atlantic forests; the very tough, durable bark, is easily separated into thin layers impervious to water, and is largely used in the construction of canoes, tents, &c.

252.

*Alnus incana*, Willd.

SPECKLED ALDER. HOARY ALDER. BLACK ALDER.

Newfoundland to the Saskatchewan, and south to northern New England, Wisconsin, Minnesota, and Nebraska; and in Europe.

Wood hard and heavy; furnishing fuel preferred and largely employed in Northern New England for the final baking of bricks.

A shrub, or sometimes a small tree; along streams and in swampy ground.

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**var. virescens**, Watson (Bot. Cal. ii. 81, *ined.*) extends from Oregon east to the Rocky Mountains, and south to the southern Sierra Nevada and New Mexico.

253. ***Alnus maritima***, Muhl.  
SEA-SIDE ALDER.

Delaware and Eastern Maryland; and in Japan?  
A small tree, sometimes 20 feet in height; along streams.

254. ***Alnus oblongifolia***, Torr.

Banks of the Mimbres River, and near Santa Barbara, New Mexico; Arizona; in the Cayumaca Mountains, San Diego County, and in the San Bernardino Mountains, California; also in Northern Mexico.

A tree, sometimes 80 feet in height with a trunk 2 or 3 feet in diameter.

255. ***Alnus rhombifolia***, Nutt.

From Oregon to Southern California; at San Felipe, California (*Palmer*), known as White Alder. "The common California Alder, 20 to 30 feet in height, and 2 to 3 in diameter, according to *Bolander*; 30 to 50 feet in height (*Peckham*); bark light ash gray."—(*Watson*, Bot. Cal. ii. 80, *ined.*)

256. ***Alnus rubra***, Bongard.

Sitka, south to Santa Barbara, California; common in the neighborhood of San Francisco.

A tree, 30 to 40 feet in height.

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## SALICACEÆ.

257. ***Salix cordata***, Muhl.

Great Slave Lake, Saskatchewan, and Lake Winipeg; south through the New England States to the District of Columbia.

A small tree, rarely 20 feet in height; along streams and in wet ground; running into many forms of which the best marked are:—

**var. rigida**, Gray (*S. rigida*, Muhl. *S. Torreyana*, Barratt).

**var. angustata**, Anders. (*S. angustata*, Pursh).

258. ***Salix lævigata***, Bebb.

California, Sierra County, and from the valley of the Sacramento River to San Diego.

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"An erect pyramidal tree, 15 to 50 feet high, growing in bottom lands near streams; trunk straight, a foot or two in diameter, with fissured dark brown bark."—(*C. L. Anderson*, in *Bot. Cal.* ii. 84, *ined.*)

259. **Salix lasiandra**, Benth.

*S. Hoffmanniana*, Hook. & Arn.

*S. speciosa*, Nutt.

*S. arguta*, var. *lasiandra*, Anders.

British Columbia, and south to the valley of the Sacramento River, California.

"A tree, 20 to 60 feet high, growing along streams."—(*Bebb*, in *Bot. Cal.* ii. 84, *ined.*)

var. *lancifolia*, *Bebb.* (*S. lancifolia*, Anders. *S. lucida*, var. *macrophylla*, Anders.). With the species.

var. *Fendleriana*, *Bebb.* (*S. pentandra*, var. *caudata*, Nutt. *S. Fendleriana*, Anders. *S. arguta*, Anders.). Colorado, New Mexico, and in the Sierra Nevada of Central California.

260. **Salix lucida**, Muhl.

SHINING WILLOW.

Mackenzie River, in latitude 65° north, through British America and the New England States, south to Chester County, Pennsylvania.

A shrub or small tree, rarely exceeding 20 to 25 feet in height; along streams.

261. **Salix nigra**, Marsh.

*S. ambigua*, Pursh.

*S. Houstoniana*, Pursh.

*S. Caroliniana*, Michx.

*S. falcata*, Pursh. (*S. Purshiana*, Spr. *S. nigra*, var. *falcata*, Gray.)

Canada (rare) and Northern Vermont; south to Florida, and west to the valley of the Sacramento River, Clear Lake, and Fort Mohave, California; most common between the Alleghany and Rocky Mountains.

A small tree, 20 to 40 feet in height, with a trunk sometimes 10 to 18 inches in diameter.

262. **Populus angustifolia**, James.

*P. Canadensis*, var. *angustifolia*, *Wesmael* in *DC. Prodr.*, xvi. 329.

*P. balsamifera*, var. *angustifolia*, *Watson*, *Bot. King Rep.* v. 327.

In the Rocky Mountains of Colorado and New Mexico; Central Arizona; in the Shoshone Mountains, Central Nevada, and northwestward to the valley of the Columbia River.

Wood considered of little value.

A medium-sized tree.

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*Populus balsamifera*, L.

BALSAM POPLAR. TACAMAHAC. BALM OF GILEAD.

Mackenzie River and the Great Slave Lake; south through British America to Northern New England and Wisconsin.

A large tree. Common in Arctic America, and furnishing, according to *Dr. Richardson*, the greater part of the drift timber on the shores of the Arctic Sea.

var. *candicans*, Gray (*P. candicans*, Alt. *P. nigra*, Catesb. *P. macrophylla*, Lindl. *P. Ontariensis*, Desf.).

Arctic America to Northern New England, Wisconsin, and Kentucky; west to Colorado and Idaho.

A large tree. Rare in a wild state, although very common in cultivation.

264.

*Populus Fremontii*, Watson, Proc. Amer. Acad. x. 350.

*P. monilifera*, Newberry, Pacific R. Rep. vi. 89; Watson, Bot. King Rep. vi. 327.

Valley of the upper Sacramento River, California; eastward in Nevada and Southern Utah.

A large tree.

var. *Wializeni*, Watson, in Am. Jour. Sci. (3 ser.), xv. 137. (*P. monilifera*, Torr. Bot. Mex. Bound. 204.)

"The prevalent Cottonwood in the more southern districts, ranging, from San Diego County, California (Jamul Valley, *Palmer*), and the Colorado Valley (Fort Yuma, *Schott*), to Southern Utah and the Rio Grande."—(*Watson*, Bot. Cal. ii. 92, *ined.*)

265.

*Populus grandidentata*, Michx.

Nova Scotia, New Brunswick, Canada, and through the Northern States; along the Alleghany Mountains to North Carolina, and west to Wisconsin and Iowa. Rare at the South; common at the North.

Wood white, soft, very light; large quantities of the wood of this species have of late years been ground into pulp in Northern New England and Michigan, and used as a substitute for rags in the manufacture of paper.

A medium-sized tree, sometimes 70 to 80 feet in height, with a trunk 20 to 30 inches in diameter.

266.

*Populus heterophylla*, L.

*P. argentea*, Michx.f.

*P. heterophylla*, var. *argentea*, Wesmael in DC. Prodr. xvi<sup>2</sup>. 326.

DOWNY POPLAR. COTTON TREE.

Western Massachusetts;? Northport, Long Island; to the valley of the lower Ohio River; south to the Cape Fear River, North Carolina, and Southern Arkansas.

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Wood white, soft, probably of little value.

A large tree, often 70 to 80 feet in height, with a trunk 3 to 4 feet in diameter; in swamps and along river bottoms. Rare.

267. *Populus monilifera*, Ait.

- P. angulata*, Ait.  
*P. angulosa*, Michx.  
*P. Canadensis*, Desf.  
*P. Marylandica*, Bosc.  
*P. laevigata*, Willd.  
*P. glandulosa*, Mench.

COTTONWOOD. NECKLACE POPLAR. CAROLINA POPLAR.

Western New England, west to the Rocky Mountains of Colorado and Idaho?; south to Florida and Louisiana.

Wood white, soft, of little value.

A large tree, 80 to 100 feet in height, and with a trunk 4 to 8 feet in diameter; the common Cottonwood of the western plains, bordering all streams flowing east from the Rocky Mountains.

268. *Populus tremuloides*, Michx.

AMERICAN ASPEN. QUAKING ASP.

Arctic America, south to the mountains of Pennsylvania, New Mexico, and the valley of the Sacramento River, California. Very common on all the mountain ranges from the Rocky Mountains, west and north, at 6,000 to 10,000 feet elevation, in moist slopes and bottoms. Not yet seen on the high peaks of the southern Alleghany Mountains, to which it might naturally extend.

Wood white, soft, easily worked; esteemed and somewhat used in Utah for flooring and in turnery, and in Northern New England with that of *P. grandidentata* in the manufacture of paper.

A small tree, sometimes 50 feet in height, with a trunk rarely exceeding 18 inches in diameter. The most widely distributed of North American trees.

269. *Populus trichocarpa*, Torr. & Gray.

- P. balsamifera*, var.  $\gamma$  Hook. Flor. Bor. Am. ii. 154.  
*P. balsamifera*, var. (?) *Californica*, Watson, Am. Jour. Sci. (3 ser.) xv. 136.

"San Diego, California, northward to British Columbia, and extending into Western Nevada. According to Douglas it attains in Washington Territory a height of 60 to 100 feet, with a diameter of 2 to 6 feet. It is generally found scattered, or in open spaces along stream banks and in river bottoms at an altitude not exceeding 6,000 feet."—*Watson*, Bot. Cal. ii. 91, *ined.*)

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## TAXACEÆ.

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**Torreya Californica**, Torr.*T. Myristica*, Muir, Edinb. New Phil. Journal, x. 7, t. 3; Bot. Mag. t. 4780.

## CALIFORNIA NUTMEG.

California, from Mendocino County to Yuba and Mariposa Counties.

Wood light-colored, close-grained, compact, heavy, odoriferous, probably valuable.

A tree, 50 to 75 feet in height, with a trunk 1 to 3 feet in diameter; when cut throwing up suckers very freely from the stump.

271.

**Torreya taxifolia**, Arn.

## STINKING CEDAR.

Along the eastern bank of the Apalachicola River, Middle Florida.

Wood exceedingly durable, odoriferous, especially when burned.

A small or medium-sized tree, 20 to 40 feet in height, with a trunk 1 to 3 feet in diameter; like the last throwing up suckers when cut from the stump; an exceedingly local species.  
extermination.

272.

**Taxus brevifolia**, Nutt.*T. baccata*, Hook. Fl. Bor. Am. ii. 167, in part.*T. Bourstieri*, Carriere. Rev. Hort. 1854, 228.*T. Lindleyana*, Muir, Edinb. New Phil. Journal, i. 294.

British Columbia, and south to the Sierra Nevada of Central California.

Wood reddish, hard, tough, elastic, very heavy, durable, susceptible of a brilliant polish.

In Oregon a tree, 40 to 60 feet in height, with a trunk sometimes 3 feet in diameter, in California rarely exceeding 20 to 30 feet in height.

273.

**Taxus Floridana**, Nutt.

Banks of the Apalachicola River, Middle Florida.

A small tree, 10 to 20 feet in height; very local, and still imperfectly known.

**Taxus baccata**, L., var. **Canadensis**, Gray. (*T. Canadensis*, Willd.)

A shrubby species; common in Canada and the Northeastern States, south to the mountains of Virginia.

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## CONIFERÆ.

274. *Juniperus Californica*, Carrière.*J. Andina*, Nutt. ?*J. tetragona*, var. *osteosperma*, Torr.*J. Cerrosianus*, Kellogg.*J. occidentalis*, Purl. in DC. Prodr. xvi<sup>2</sup>. 489, in part.

California, in the Coast Ranges, from the valley of the Sacramento River, south to San Diego.

Wood light-colored, slightly aromatic, close-grained, moderately heavy. A shrub or small tree, sometimes 20 to 30 feet in height.

var. *Utahensis*, Engelm. Trans. Acad. St. Louis, iii. 588; (*J. occidentalis*, Watson, Bot. King Rep. v. 336, in part.)

On all the ranges of Central Nevada, south to Arizona and Southern Utah; very common at 5,000 to 8,000 feet elevation.

Wood resembling that of the species, and in Central Nevada furnishing the common and cheapest fuel.

A shrub or low bushy tree, 10 to 20 feet in height, with a trunk rarely exceeding 2 feet in diameter.

275. *Juniperus occidentalis*, Hook.*J. excelsa*, Pursh.

Oregon and Idaho, south to California, on the high Sierra Nevada.

In Oregon, a large tree; smaller in California, or often reduced to a shrub.

var. *monosperma*, Engelm. Trans. St. Louis Acad. iii. 590.

Pike's Peak, Colorado, through Western Texas and New Mexico to Arizona and Southern California.

A shrub or small tree.

var. ? *conjungens*, Engelm., l. c.

"Western Texas, where it forms forests and is an important timber tree, although not as large nor as easily worked and useful as the Red Cedar of the plains of Eastern Texas."—(*Lindheimer*.)

276. *Juniperus pachyphloea*, Torr.*J. plochyderma*, Torr. in Sitgr. Rep. t. 16.

New Mexico and Arizona.

"A middle-sized tree, with a spreading, rounded top, thick and much cracked bark, and pale, reddish wood."—(*Engelm.*, Trans. St. Louis Acad. iii. 589.)

277. *Juniperus Virginiana*, L.

RED CEDAR. SAVIN.

New Brunswick and Canada up to latitude 45° north; south to Florida, and west to British Columbia, Washington Territory, and Eastern

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Texas; not in Western Texas, California, or probably Oregon; rare in Utah, Arizona, and Central Nevada.

Heart-wood red, aromatic, close-grained, compact, very durable; largely employed in cabinet-making, for fence posts, railway ties, pencils, &c.

A tree, sometimes 60 to 80 feet in height, or, near its northern limit, reduced to a low shrub or small tree.

The most widely-distributed and one of the most valuable of North American *Conifera*.

**278. Cupressus Goveniana, Gordon.**

"A shrub or small bushy tree, 6 to 10 feet high or more.

"California, in the Coast Ranges from about Monterey to Sonoma County.

"In Marin County it is said to sometimes attain a height of 40 to 80 feet. A doubtful form is reported from Cedar Mountain, Alameda County (*Dr. Kellogg*), described as a handsome tree, 30 to 40 feet high, of dense symmetrical growth."—(*Watson*, Bot. Cal. ii. 114, *ined.*)

**279. Cupressus Macnabiana, Muir.**

California, "about Clear Lake (*Torrey, Bolander*); originally reported by Jeffrey from Mount Shasta, at 5,000 feet altitude.

"A shrub or small tree, 6 to 10 feet high or more."—(*Watson*, Bot. Cal. ii. 114, *ined.*)

**280. Cupressus macrocarpa, Hartw.**

*C. Lambertiana*, Gord.

*C. Hartwegii*, Currière.

MONTEREY CYPRESS.

California, "on granite rocks near the sea; from Point Pinos, near Monterey, southward 4 or 5 miles to Pescadero Ranch. The largest measurement recorded (*Brewer*) is a circumference of trunk 18 $\frac{3}{4}$  feet at a height of 5 or 6 feet from the ground."—(*Watson*, Bot. Cal. ii. 113, *ined.*)

A tree, 40 to 70 feet in height.

These species are still very imperfectly known, and the attention of California botanists is called to the importance of studying, *in the field*, the various species of *Cupressus* native of their State.

**281. Chamæcyparis Lawsoniana, Parl. in DC. Prodr. xvi<sup>2</sup>. 464.**

*Cupressus Lawsoniana*, Murr.

*Cupressus Nutkaensis*, Torr. Bot. Wilkes, t. 16.

*Cupressus fragrans*, Kellogg.

*Cupressus attenuata*, Gordon.

OREGON CEDAR. WHITE CEDAR.

Oregon and southward along the Coast Ranges to the Mount Shasta region, Northern California.

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Wood white, fragrant, close-grained, compact, elastic, free of knots, easily worked, very durable.

A large tree, 100 to 150 feet in height, with a trunk 2 to 6 feet in diameter.

282. *mæcyparis Nutkaensis*, Spach.

*Thuya excelsa*, Bong.  
*Cupressus Nutkaensis*, Lamb.  
*Cupressus Americana*, Trautv.  
*C. excelsa*, Fisch.  
*Thuyopsis borealis*, Hort.  
*Thuyopsis Tchugutskoy*, Hort.

Sitka; southward to the Cascade Mountains.

Wood white, soft, clear, easily worked; susceptible of a beautiful polish; probably very valuable.

A tree, sometimes 100 feet in height.

283. *Chamæcyparis sphæroidea*, Spach.

*Cupressus Thyoides*, L.  
*Thuya sphaeroidalis*, Rich.

WHITE CEDAR.

Essex County, Massachusetts; south to Florida, near the coast; and in Wisconsin.

Wood reddish, light, soft, fine-grained, easily split and worked, very durable; employed for shingles, in boat-building, cooperage, and largely for railway ties, posts, fencing, &c.

A tree, 40 to 80 feet in height, with a trunk often 2 to 3 feet in diameter; always in deep, cold swamps.

284. *Thuya gigantea*, Nutt.

*T. plicata*, Donn.  
*T. Menziesii*, Dougl.

WESTERN ARBOR VITÆ.

Sitka, and southward through the Coast Ranges and the Cascade Mountains to Northern California.

Wood light-colored, soft, easily worked, moderately durable; used for shingles, and often sawed into boards, although liable to split and warp when exposed to the sun.

A large tree, 100 to 150 feet in height, with a trunk 3 to 12 feet in diameter.

285. *Thuya occidentalis*, L.

ARBOR VITÆ. WHITE CEDAR.

James' Bay and the Saskatchewan, south through British America, except Newfoundland and Nova Scotia; common in the Northeastern

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States to Pennsylvania, and occasionally along the Alleghany Mountains to North Carolina; west to Northern Michigan and Wisconsin.

Wood light-colored, compact, light, very durable; largely employed for posts, railway ties, fencing, &c.

A small tree, 20 to 50 feet in height, with a trunk 1 to 3 feet in diameter; in swamps and along the rocky banks of streams.

**286. Libocedrus decurrens, Torr.**

*Thuja Cruligiana*, Balfour.

*Thuja gigantea*, Carrière.

*Hedyleria decurrens*, Koch.

WHITE CEDAR.

Oregon, to San Diego, California; in the Coast Ranges and in the Sierra Nevada, up to 8,500 feet elevation.

Wood light-colored, soft, and said to be durable.

A large tree, 100 to 150 feet in height, with a trunk 4 to 7 feet in diameter.

**287. Taxodium distichum, Richard.**

*Cupressus disticha*, L.

BALD CYPRESS. BLACK CYPRESS. WHITE CYPRESS. DECIDUOUS CYPRESS.

Southern Delaware to Southern Florida, near the coast; and from Carroll County, Indiana, Southern Illinois and Missouri, south to Alabama, Louisiana, and Eastern Texas.

Wood reddish, strong, light, compact, easily split and worked, very durable. Largely used in construction in the form of boards and square timber, for shingles, posts, railway ties, fencing, &c.

A large tree, sometimes reaching under favorable circumstances in the Southern States, a height of 150 feet, with a diameter of trunk of 10 to 12 feet or more; in swamps, or the inundated borders of streams; one of the most valuable trees of the North American forests.

**288. Sequoia gigantea, DeCaisne.**

*Wellingtonia gigantea*, Lindl.

*Washingtonia Californica* (*Taxodium Washingtonianum*), Winslow.

*S. Wellingtoniana*, Seem.

*Taxodium giganteum*, Kell. & Behr.

BIG TREE.

California, along the western slopes of the Sierra Nevada at about 4,000 feet elevation from Placer County to Deer Creek, on the southern borders of Tulare County; in small or isolated groves, except toward its southern limit where it forms an extensive forest, some 40 miles in length by 6 to 8 miles in width. Wood dull red, very light, and

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remarkably durable. (See Muir in Proc. Amer. Assoc. xxv. 242.) The largest tree of the American forests.

"It has an average height of 275 feet, with a trunk 20 feet in diameter; the largest measurement being 306 feet in height, and a diameter of 35 feet 8 inches within the bark, at four feet above the ground."—(Watson in Bot. Cal. ii. 117, *ined.*)

**289. Sequoia sempervirens, Endl.**

*Taxodium sempervirens*, Lamb.  
*Schubertii sempervirens*, Spach.

RED WOOD.

California, from the northern portion of the State, south only in the Coast Ranges to San Luis Obispo.

Wood red, light, close-grained, compact, easily split and worked, susceptible of a fine polish, and very durable; largely sawn into boards and shingles; and furnishing the common and cheapest lumber, railway ties, posts, and fencing, of the Pacific coast.

The forests of this species are economically the most valuable of California; but owing to their accessibility to tide-water, are in great danger of speedy extermination.

"In size the red wood usually averages 8 to 12 feet in diameter, and from 200 to 300 in height, with a straight cylindrical barrel, naked to the height of 70 to 100 feet or more." (Watson in Bot. Cal. ii. 117, *ined.*)

This species is remarkable for its tenacity of life, the stumps and roots throwing up for a long time great-numbers of vigorous suckers.

**290. Abies balsamea, Marshall.**

*Pinus balsamea*, L.  
*A. balsamifera*, Michx.  
*Picea balsamea*, Lamb.

BALSAM FIR. BALM OF GILEAD FIR.

Canada, Nova Scotia, and the Northeastern States, south along the Alleghany Mountains to Virginia; west along the great lakes to Wisconsin and Minnesota.

Wood white and soft; occasionally made into shingles, but of little value.

A tree, sometimes 70 feet in height, with a trunk rarely exceeding 18 inches in diameter; in cold, damp woods and mountain swamps; or at high elevations reduced to a prostrate shrub (*A. Hudsoniana*, Hort.).

**291. Abies bracteata, Nutt.**

*Pinus venusta*, Dougl.  
*Pinus bracteata*, Don.  
*Picea bracteata*, Lindl.

Southern California, only in the Santa Lucia Mountains, at an elevation of 3,000 to 6,000 feet.

A little known tree, 100 to 150 feet in height.

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**Abies concolor**, Lindl.

- Picea concolor*, Gordon.  
*Pinus concolor*, Engelm.  
*A. Lowiana*, Murr.  
*A. grandis*, of the California botanists.  
*A. amabilis*, (?) Watson, King. Rep. v. 333.  
*A. lasiocarpa*, Hort. [not Hook.]  
*A. Parsoniana*, Hort.  
*A. amabilis*, Hort.

## WHITE FIR.

From Southern Oregon through the Sierra Nevada, at 3,000 to 8,000 feet elevation, and through the mountains of Oregon to Utah and Southern Colorado.

Wood probably of little value.

A large tree, 80 to 150 feet in height, with a trunk 2 to 4 in diameter

233.

**Abies Fraseri**, Lindl.

*Pinus Fraseri*, Pursh.

Only on the summits of the peaks of North Carolina and Tennessee, ? which exceed 6,000 feet in height.

Wood white, soft, of little value.

A small tree, 20 to 40 feet in height, with a trunk not exceeding 18 inches in diameter.

294.

**Abies grandis**, Lindl.

- Pinus grandis*, Dougl.  
*Pinus amabilis*, Dougl. † [not of later authors].  
*Picea grandis*, Lond.  
*A. Gordoulana*, Carrière.

British Columbia, south to Mendocino County, California, near the coast.

Wood considered valuable.

The largest species of the genus, reaching 200 to 300 feet in height with a trunk 3 to 4 feet in diameter.

**var. densiflora**, Engelm., Trans. St. Louis Acad. iii. 594. Base of Mount Hood to British Columbia.

295.

**Abies magnifica**, Murr.

*A. amabilis*, of the California botanists.

## RED FIR.

"The Red Fir of the higher Sierras is not rare at an altitude of 7,000 to 10,000 feet, but forms no forests by itself. Easily distinguished from the next species by the inclosed bracts. Forms, however, are said to occur (Mount Silliman, *Brewer*), with exserted bracts, and it remains to be

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seen whether the slight differences in the leaves, scales, and seeds will suffice to keep the species separate." (*Engelm.*, in Bot. Cal. ii. 119, *ined.*)

A large tree, 200 feet or more in height, with a trunk 8 to 10 feet in diameter.

236.

***Abies nobilis*, Lindl.***Pinus nobilis*, Dougl.*Picea nobilis*, Lond.

Base of Mount Shasta, California, where it forms extensive forests at an elevation of 6,000 to 8,000 feet, and north through the Cascade Mountains to the Columbia River.

Wood said to be more valuable than that of the other species of the genus.

A large tree, 200 feet in height.

237.

***Abies subalpina*, Engelm.***A. lasiocarpa*, Hook. Fl. Bor. Am. ii. 163? [not Hort.].*A. bifolia*, Murr.*A. amabilis*, Parl. in DC. Prodr. xvi<sup>2</sup>. 426, in part.*A. grandis*, of the Colorado botanists.

"It extends from the higher mountains of Colorado and the adjoining parts of Utah, northward to Wyoming and Montana, where it is the only species, and westward to the mountains of Oregon, and into British Columbia (Fraser River), and southward probably to Mount Shasta; always scattered in the subalpine forests, and, at least in Colorado, coming up almost to the timber limit; but never alone constituting forests." (*Engelm.*, Trans. St. Louis Acad. iii. 597.)

Wood light-colored, soft, almost worthless.

A tree, 60 to 100 feet in height, with a trunk often more than 2 feet in diameter.

**var. fallax**, Engelm. l. c. (*A. amabilis*, Newberry, Pac. R. Rep. vi. 51.)

High summits of the Cascade Mountains, south of the Columbia River, and in the Wasatch Mountains, Utah.

238.

***Pseudotsuga Douglasii*, Carrière.***P. Douglasii*, Sabine.*Abies Douglasii*, Dougl.*Tsuga Douglasii*, Carrière.

## DOUGLAS SPRUCE.

Oregon and California, in the Coast Ranges, and along the west flank of the Cascade and Sierra Nevada Ranges up to 6,000 to 8,000 feet elevation, extending south into Mexico, and east through Arizona and New Mexico to the Rocky Mountains of Colorado.

Wood yellow or reddish, coarse-grained, heavy, strong; largely sawn into boards and square timber; used for masts, spars, &c.

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A tree, 200 to 300 feet in height, with a trunk 8 to 15 feet in diameter; the most valuable timber tree of Oregon, reaching there its greatest development, and forming probably the heaviest forest growth known.

**var. macrocarpa**, Engelm., Bot. Cal. ii. 120, *ined.* (*Abies macrocarpa*, Vasey in Gard. Monthly, June, 1876.)

Southern California, in the cañons of the foothills of the San Bernardino Mountains and in the San Felipe Cañon.

A small and little known tree, 40 to 50 or rarely 80 feet in height, with a trunk 2 to 3 feet in diameter; cones much larger than in the species.

**299. Tsuga Canadensis**, Carrière.

*Pinus Canadensis*, L.

*Abies Canadensis*, Michx.

*Picea Canadensis*, Link.

HEMLOCK.

Northern New Brunswick, through the valleys of the Saint Lawrence and upper Ottawa Rivers to the western shore of Lake Superior; south through the Northern States and along the Alleghany Mountains south to Habershaw County, Georgia.

Wood light-colored, coarse and crooked-grained, light, very liable to splinter; largely sawn into boards of an inferior quality.

A tree, 70 to 80 feet in height, with a trunk 2 to 3 feet in diameter; in rather dry, rocky situations, generally on the north side of hills; of great economic value on account of its bark, which is richer in tannin than that of any common tree of the Northeastern States.

**300. Tsuga Mertensiana**, Carrière.

*Pinus Mertensiana*, Bong.

*Abies Mertensiana*, Lindl.

*Abies Albertiana*, Murr.

*Abies Bridgesii*, Kellogg.

In the coast regions, from Alaska south to Mendocino and Marin Counties, California.

Wood less coarse and straighter-grained than in the last species.

A tree, 100 to 200 feet in height.

**301. Tsuga Pattoniana**, Engelm.

*Abies Pattonii*, or *Pattoniana*, Jeffrey.

*Abies Hookeriana*, Murr.

*Abies Williamsonii*, Newberry.

*Pinus Pattoniana*, Parl.

California and Oregon, "in the highest timber regions of the Sierra Nevada, at 8,000 to 10,000 feet altitude; from the head of the San Joaquin River, northward and through the Cascade Mountains, near Crescent City descending to near the coast. (*Brewer.*)" (*Engelm.*, Bot. Cal. ii. 121, *ined.*)

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A large tree, 100 to 150 feet in height, with a trunk 2 to 4 feet in diameter, or at high elevations reduced to a low shrub.

**302. *Picea alba*, Link.**

*Pinus alba*, Ait.  
*Abies alba*, Michx.

WHITE SPRUCE. SINGLE SPRUCE.

From about latitude 67½° north, south through British America to Northern Maine, the southern shores of Lake Superior, Northern Minnesota, and Dakota?

Wood light-colored, lighter than that of the Black Spruce; preferred for the masts of boats, small spars, &c., but probably little used within the limits of the United States.

A small tree, sometimes 50 feet in height, with a trunk rarely, if ever, exceeding 18 to 24 inches in diameter.

**303. *Picea Engelmanni*, Engelm.**

*Abies nigra*, Engelm. [not. Poir.]  
*Abies Engelmanni*, Purry.  
*Pinus commutata*, Parl.

British Columbia, and Oregon, south through the Rocky Mountains to Arizona (San Francisco Mountains, Sierra Blanca, Mount Graham), and east to the Black Hills of Dakota.

Wood resembling that of the eastern Black Spruce.

A large tree, with a trunk sometimes 2 to 3 feet in diameter, or above the timber line reduced to a prostrate shrub; in Colorado forming extensive forests at 8,500 to 11,500 feet elevation, and furnishing the most valuable timber of the central Rocky Mountain region.

**304. *Picea nigra*, Link.**

*Pinus nigra*, Ait.  
*Abies nigra*, Michx.  
*Pinus rubra*, Lamb.  
*Abies rubra*, Poir.  
*Abies nigra*, var. *rubra*, Michx.f.  
*P. rubra*, Link.

Newfoundland, Nova Scotia, and Canada; through the Northern States, from Maine to Wisconsin, and south along the Alleghany Mountains to the high peaks of North Carolina.

Wood light-colored or reddish, light, elastic, strong; largely sawn into boards and square timber; formerly somewhat used in ship-building, for spars, &c.; also now largely employed in the manufacture of paper. The Spruce lumber of the eastern markets is derived from this species.

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A small or medium-sized tree, 50 to 70 feet in height, with a trunk 2 to 3 feet in diameter; in high mountain woods; sometimes in cold, deep swamps, when it is small, stunted, and of little value.

**305. *Picea pungens*, Engelm.**

*Abies Menziesii* of Colorado botanists.

Rocky Mountains of Colorado, extending into Wyoming and perhaps Idaho.

A large tree, 100 to 150 feet in height, with a trunk 2 to 3 feet in diameter; at 6,000 to 8,500 feet elevation; never forming forests but scattered along streams, in damp, moist soil.

**306. *Picea Sitchensis*, Carrière.**

*Pinus Sitchensis*, Bong.

*Pinus Menziesii*, Dougl.

*Abies Menziesii*, Lindl.

Alaska, south to Mendocino County, California, near the coast, and east to ?

Wood light-colored, straight-grained, valuable; resembling and probably surpassing that of the eastern Black Spruce.

A tree, 150 to 200 feet in height, with a trunk 6 to 9 feet in diameter; in wet, sandy soil, generally near the mouths of streams. Rare. Its range to the east still uncertain.

A peculiar Spruce should be looked for in Strawberry Valley and other valleys and slopes about Mount Shasta, California, at 3,500 to 4,000 feet elevation; about which nothing is known but "that its lower branches are very long, slender, and handsome, and its leaves much narrower than those of *P. Sitchensis*; 7 to 9 lines long, and two-thirds of a line wide, quite obtuse, strongly keeled, and stomatose on the upper side and without stomata beneath." (*Engelm., Bot. Cal. ii. 123, ined.*)

**307. *Larix Americana*, Michx.**

*Pinus pendula*, Ait.

*L. pendula*, Salisb.

*L. macrocarpa*, Forbes.

*L. intermedia*, Loibl.

*Pinus macrocarpa*, Lamb.

AMERICAN LARCH. BLACK LARCH. TAMARACK. HACKMATAC.

Latitude 65° north, south through British America; in the Northern States from Maine to Wisconsin, and south to the mountains of Pennsylvania.

Wood light-colored, strong, very durable; extensively used and preferred for the upper knees of ships, and for posts, railway ties, &c.

In Labrador and Newfoundland, a tree 80 to 100 feet in height, with

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a trunk sometimes 2 to 3 feet in diameter; on moist uplands or interval lands; within the limits of the United States, smaller, less valuable, and always in cold, damp swamps.

**308. Larix Lyallii, Parl.**

*Pinus Lyallii, Parl.*

Oregon, in the Cascade and Galton Ranges, at 6,000 to 7,000 feet elevation.

A small and little known tree.

**309. Larix occidentalis, Nutt.**

*L. Americana, var. brevifolia, Carrière.*

*Pinus Nuttallii, Parl.*

Oregon and Washington Territory, in the Cascade Mountains up to 5,000 feet elevation, and eastward to the western slopes of the Rocky Mountains.

A little known tree, said to attain a height of 150 feet, with a trunk 2 to 3 feet in diameter.

**310. Pinus Arizona, Engelm.**

Wheeler's Rep. vi. 260.

On the Santa Rita Mountain, Southern Arizona. "The best lumber of that region; there called Yellow Pine."—(*Rothrock.*)

A little known tree, 40 feet in height, with a trunk 2 to 3 feet in diameter; only collected by *Dr. Rothrock* in 1874.

**311. Pinus australis, Michx.**

*P. palustris, Mill.*

LONG-LEAVED PINE. SOUTHERN PINE. GEORGIA PINE. BROWN PINE. YELLOW PINE. HARD PINE.

Southern Virginia to Florida and Mississippi, Louisiana, in the Valley of the Red River, and probably in Eastern Texas; not extending more than 100 miles from the coast.

Wood superior to that of any other North American Pine; strong, compact, straight-grained, remarkably free from sap-wood, very durable; largely employed in construction of all sorts, ship-building, and for fencing, railway ties, &c. From this species nearly all the turpentine, tar, pitch, and rosin produced in the United States is derived.

A tree of the first economic value, 60 to 80 feet in height, with a trunk 2 to 4 feet in diameter; in dry, sandy soil, or more rarely in low swamps.

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312.

**Pinus Balfouriana**, Jeffrey.

FOX-TAIL PINE. HICKORY PINE.

California, in the Mount Shasta region, on the flanks of Scott Mountain, at 5,000 to 8,000 feet elevation, forming an extensive forest (*Lemon*); on Mount Whitney and on the headwaters of King and Kerr Rivers.

A medium-sized tree, rarely exceeding 50 feet in height, with a trunk sometimes 5 feet in diameter.

**var. aristata**, Engelm., Bot. Cal. ii. 125, *ined.* (*Pinus aristata*, Engelm. Am. Journ. Sci. (2 ser.) xxxiv. 332, and Trans. Acad. St. Louis, ii. 205, t. 5, 6.)

Mountains of Southeastern California; on the high mountains through Nevada, Northern Arizona, and Southern Utah to Colorado, above 7,500 feet, and in Colorado reaching 12,000 feet elevation.

Wood reddish, close-grained, tough, very strong; in Central Nevada preferred for the timbering of mines.

A tree, 50 to 100 feet in height.

313.

**Pinus Banksiana**, Lamb.

*P. Hudsonica*, Poir.

*P. rupestris*, Michx. f.

SCRUB PINE. GRAY PINE.

From latitude 65° north, south through British America to the northern borders of Maine, Michigan, Wisconsin; and in Minnesota and Dakota?

Wood hard, very resinous, of little value; in New Brunswick somewhat used for railway ties.

A low shrub or tree, rarely exceeding 20 feet in height.

314.

**Pinus Chihuahuana**, Engelm.

Sanoita Valley, Southern Arizona, at 6,500 feet elevation, and common in Western Chihuahua.

A tree, 30 to 50 feet in height.

315.

**Pinus contorta**, Dougl.

*P. inops*, Bong. Veg. Sitch. 45.

*P. Bolanderi*, Parl. in DC. Prodr. xvi. 379.

Alaska, south to Mendocino County, California, near the coast.

A small tree, 5 to 25 feet in height, with a trunk rarely exceeding 6 inches in diameter; in wet, sandy soil.

**var. Murrayana**, Engelm. Bot. Cal. ii. 126, *ined.* (*P. contorta*, Newberry, Pacif. R. Rep. iv. 34, t. 5, and of the Californian botanists. *P. inops*, Benth. Pl. Hartw. *P. Murrayana*, Murr. *P. contorta*, var. *latifolia*, Engelm. in Bot. King Rep. vi. 331, &c.)

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Oregon, in the Cascade Mountains; common in the high Sierras of California, where, at an elevation of 8,000 to 9,000 feet, it forms extensive forests; in the Rocky Mountains of Colorado and Southern Utah.

Wood white, very light, straight-grained, valuable.

A tree, 60 to 80 feet in height, with a trunk 2 to 4 feet in diameter.

**316. Pinus Coulteri, Don.**

*P. macrocarpa*, Lindl.

California, in the Coast Ranges, from Monte Diablo south to the southern border of the State.

Wood said to be brittle.

A tree, 50 to 70 feet in height, with a trunk 1 to 2 feet in diameter.

**317. Pinus edulis, Engelm.**

PIÑON. NUT PINE.

Cañon City, Colorado, south through New Mexico and Arizona.

Wood supplying a valuable fuel.

A small tree, rarely reaching 30 feet in height, with a trunk 8 to 12 inches in diameter; the large edible seeds furnishing to the Indians a valuable article of food.

**318. Pinus Elliottii, Engelm. *ined.***

South Carolina, to Florida and Southern Alabama, near the coast.

A large tree, probably often confounded with *P. Taeda*.

**319. Pinus flexilis, James.**

WHITE PINE.

In the Rocky Mountains, from Montana to New Mexico; on the high mountain ranges of Nevada (above 8,000 feet elevation), Arizona, and on the Inyo Mountains and Mount Silliman, California.

Wood white, soft, and, although not free from knots, of fair quality; intermediate between eastern white pine and sugar pine.

A tree, 50 to 60 feet in height, with a trunk 2 to 4 feet in diameter; the most valuable timber tree of Central Nevada, where it is sawn into boards.

*var. albicaulis*, Engelm. Bot. Cal. ii. 124, *ined.* (*P. albicaulis*, Engelm. *P. cembroides*, Newberry. *P. Shasta*, Carrière.)

Montana, British Columbia, and on the alpine peaks of the Sierra Nevada, from Mount Shasta to Mono Pass, and in the Scott Mountains, California.

A tree, 40 to 50 feet in height, or at the highest elevations reduced to a low shrub.

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**Pinus glabra**, Walt.

SPRUCE PINE.

South Carolina, to Florida and Mississippi, near the coast.

Wood soft and white.

A tree, 40 to 60 feet in height, with a trunk 12 to 18 inches in diameter; in swampy soil. Rare.

321.

**Pinus inops**, Ait.

JERSEY PINE. SCRUB PINE.

Middle Island, Long Island, Tottenville and Clifton, Staten Island, New York, south to Cedar Keys, Florida, and from Kentucky to Arkansas (*Nuttall*).

Wood probably of little value, except as inferior fuel.

A small tree, 10 to 40 feet in height, with a trunk rarely 2 feet in diameter; in sterile, sandy soil; springing up everywhere on the abandoned tobacco-lands of Virginia and North Carolina.

A variety with serotinous cones (*P. clausa* and *P. inops*, var. *clausa*, Chap.) has been detected in Florida by *Dr. Chapman*.

322.

**Pinus insignis**, Dougl.

*P. Californica*, Lois. ?

*P. adunca*, Bosc.

*P. radiata*, Don.

*P. tuberculata*, Don [not Gordon].

MONTEREY PINE.

Seacoast of California, from Pescadero south to Monterey and San Simeon Bay.

A tree, 80 to 100 feet in height, with a trunk 2 to 3 feet in diameter.

323.

**Pinus Lambertiana**, Dougl.

SUGAR PINE.

California, on the Coast Ranges, from the Santa Lucia Mountains north to Humboldt County, along the Sierra Nevada throughout the length of the State, especially on the western flank, at 4,000 to 8,000 feet elevation; and in the Cascade Mountains of Oregon north to the Columbia River.

Wood resembling that of the eastern white pine, but heavier, stronger, coarser-grained, and probably less easily worked.

A tree, 150 to 300 feet in height, with a trunk 10 to 20 feet in diameter.

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*Pinus mitis*, Michx.*P. variabilis*, Pursh.

YELLOW PINE. SHORT-LEAVED PINE. SPRUCE PINE.

Gifford's, Staten Island (a single specimen), south to Florida and Tallapoosa County, Alabama; on the Ozark Mountains of Missouri, where it is the only Pine, and south into Arkansas; doubtless in many intermediate stations.

Wood yellow, hard, compact, durable; inferior to, although employed for the same purpose as that of *P. australis*.

A tree, 40 to 70 feet in height, with a trunk rarely 2 feet in diameter.

325.

*Pinus monophylla*, Torr. & Freni.*P. Fremontiana*, Endl.

NUT PINE.

Through Central Nevada, Southern Utah, and Arizona; along the eastern slope of Sierra Nevada; and in the Californian Coast Ranges about Fort Tejon.

Wood white, soft, very resinous, furnishing valuable fuel; and in Central Nevada, where it will soon be exterminated, largely made into charcoal.

A small bushy tree, 10 to 20 feet in height, with a trunk sometimes 2 feet in diameter; the large edible seeds invaluable to the Indians of the "Great Basin," and their principal article of food.

326.

*Pinus monticola*, Dougl.

Washington Territory and Oregon in the Cascade Mountains, and south along the Sierra Nevada to Calaveras County, California, at 7,000 to 10,000 feet elevation.

Wood said to resemble that of the eastern white pine.

A tree, 60 to 80 feet in height, with a trunk 2 to 3 feet in diameter.

327.

*Pinus muricata*, Don.*P. Edgariana*, Hartw.

California, "only near the coast, where it is exposed to the sea winds and fogs, to an altitude of 2,000 feet from Mendocino, where it grows tallest (in peat bogs) to Tomalis Point (in the most sterile soil), Monterey and San Luis Obispo." (*Engelm.*, Bot. Cal. ii. 128, *ined.*)

A slender tree, 25 to 50, or rarely 80 to 120 feet in height, with a trunk 1 to 3 feet in diameter.

328.

*Pinus Parryana*, Engelm.*P. Llaveana*, Torr.

Only collected by Dr. C. C. Parry, 40 miles southeast of San Diego,

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California, and beyond the limits of the United States, to which, however, it may yet perhaps be found to extend.

A small tree, 20 to 30 feet in height, with a trunk 10 to 18 inches in diameter.

**329. Pinus ponderosa, Dougl.**

*P. Benthamiana*, Hartw.

*P. Beardsleyi*, Murr.

*P. Craigana*, Murr.

YELLOW PINE.

Throughout Oregon and California, especially along the western slopes of the Sierra Nevada.

Wood yellow, hard, heavy, strong, durable, very valuable.

A large tree, 200 to 300 feet in height, with a trunk 12 to 15 feet in diameter; with its varieties the most widely distributed (not yet seen on any of the mountain ranges of Nevada), and the most valuable of the western Pines.

**var. Jeffreyi**, Engelm. Bot. Cal. ii. 120, *ined.* (*P. Jeffreyi*, Murr. *P. deflexa*, Torr., in part.)

Oregon and California, principally along the eastern slopes of the Sierra Nevada, above 5,000 feet elevation.

A tree, 100 to 200 feet in height, with a trunk 10 to 15 feet in diameter; often in the most arid situations.

**var. scopulorum**, Engelm. l. c. (*P. ponderosa* of the Colorado botanists.)

Throughout the Rocky Mountains from British Columbia to New Mexico and Arizona.

A tree, 80 to 100 feet in height.

**330. Pinus pungens, Michx.**

TABLE MOUNTAIN PINE.

In the Alleghany Mountains, from Pennsylvania (Port Clinton, Harrisburg, &c.,) to North Carolina.

A small tree, 30 to 50 feet in height, with a trunk 18 to 20 inches in diameter. Rare.

**331. Pinus resinosa, Ait.**

*P. rubra*, Michx.f.

RED PINE. NORWAY PINE.

From about latitude 50° north, south through the extreme Northern and New England States to the mountains of Pennsylvania, and west to Minnesota.

Wood light-colored, resinous, hard, heavy, durable; employed in construction, ship-building, &c.

A tree, 60 to 80 feet in height, or in Michigan 100 to 150 feet in

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height (*Bessey*), with a trunk 2 to 3 feet in diameter; in light sandy soil. Nowhere very common; forming scattered groves, rarely exceeding a few hundred acres in extent.

**332.** *Pinus rigida*, Mill.

PITCH PINE.

Mount Desert, Maine, and Northern Vermont to the upper districts of Georgia, not extending west of the Alleghany Mountain region.

Wood heavy, resinous, or when grown in low ground soft and largely composed of sap wood; little used except as fuel, although sometimes sawed into cheap boards.

A tree, 40 to 80 feet in height, with a trunk sometimes 30 inches in diameter; in the dryest and most barren, sandy soil, or in deep swamps.

**333.** *Pinus Sabiana*, Dougl.

California, throughout the Coast Ranges; on the foothills of the Sierra Nevada, up to 4,000 feet elevation, and in the valley of the Sacramento River; east of the Sierras only seen in Owen's Valley.

A small tree, 40 to 50 feet in height, with a trunk rarely exceeding 2 feet in diameter; the edible seeds supplying the Indians with a valuable article of food.

**334.** *Pinus serotina*, Michx.

*P. Tada*, var. *alopeuroidea*, Ait. Hort. Kew.

POND PINE.

North Carolina, to middle Florida, near the coast.

A tree, 40 to 80 feet in height, with a trunk rarely exceeding 20 inches in diameter; in low, swampy, peaty soil.

**335.** *Pinus Strobus*, L.

WHITE PINE. WEYMOUTH PINE.

Newfoundland, the northern shores of Lake Nipigon and the Saskatchewan; south through the New England and Northern States, and along the Alleghany Mountains to Georgia.

Wood white, soft, clear, free of knots; easily worked, and susceptible of a beautiful polish; durable when not placed in contact with the soil, although lacking in strength; immense quantities of boards annually sawed from this species are used for the outside covering of buildings, packing cases, cabinet work, and many domestic purposes.

A tree, 80 to 150 feet in height, with a trunk sometimes, though rarely, exceeding 4 feet in diameter.

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*Pinus Teda*, L.

LOBLOLLY PINE. OLD FIELD PINE.

Southern Delaware and Fredericksburg, Virginia, to Florida, Alabama, Eastern Texas, and in Arkansas.

Wood "sappy, coarse-grained, liable to warp and shrink, and soon decays on exposure."

A tree, 50 to 70 feet in height, with a trunk 2 to 3 feet in diameter; in low, moist situations where it reaches its greatest development, or in dry, sandy soil; everywhere springing up in abandoned lands near the coast in the Southern Atlantic and Gulf States. Turpentine of inferior quality is produced from this species.

In the vicinity of Albemarle Sound, in low, swampy districts, the Loblolly Pine is said to occasionally attain a height of 150 to 170 feet, and to produce timber of great value, and is there locally known as "Swamp Pine," "Slash Pine," "Rosemary Pine."

337.

*Pinus tuberculata*, Gordon.*P. Californica*, Hartw.

California, from the Shasta Region through the Coast Ranges to San Bernardino and the Santa Lucia Mountains, and on the foot-hills of the Sierra Nevada at 2,500 feet elevation, near Forest Hills, Placer County (*Bolander*).

A small tree or bush, 3 to 20 or rarely 40 feet in height.

## PALMACEÆ.

338.

*Sabal Palmetto*, R. S.*Chamærops Palmetto*, Michx.

CABBAGE TREE. CABBAGE PALMETTO.

North Carolina (rare), and south to Florida, near the coast.

Wood porous, resisting the attacks of the Tereido, and almost imperishable under water; highly valued for piles, wharfs, &c.

A tree, 20 to 40 feet in height.

339.

*Washingtonia filifera*, Wendl. Bot. Zeit. xxxvii. 68.*Brahea dulcis* (?), Cooper, Smith. Rep. 1860, 442.*Brahea filamentosa*, Hort.*Pritchardia filamentosa*, Wendl.

San Bernardino County, California, to Western Arizona.

A tree, 20 to 40 feet in height, with a trunk sometimes 2 to 3 feet in diameter; "in rocky localities, in dry sheltered cañons, solitary, or few in a group." (*Watson*, in Bot. Cal. ii. 211, *ined.*) Some other species, as yet very imperfectly known, possibly occur in Southern California.

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340. *Thrinax parviflora*, Sw.

"Keys along the Florida reefs, extending up the west coast as far as Cape Rowano."—(*Chapman*, in *Concl. Bot. Gaz.* iii. 12.)

A small tree, 10 to 30 feet in height.

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LILIACEÆ.

341. *Yucca brevifolia*, Engelm.

*Y. Draconis* L, var. *arborescens*, Torr.

Southwestern Utah, Northwestern Arizona to Southern Nevada, and Southeastern California; forming near the Mohave River, on the desert plateau, at 2,000 to 4,000 feet elevation, straggling forests.

Wood, as in the whole genus, brittle and fibrous.

A small tree, 15 to 30 feet in height, with a trunk often 2 feet in diameter.

342. *Yucca Treculiana*, Carrière.

Southern Texas, Matagorda Bay, and from the Brazos and Guadalupe Rivers south into Mexico.

A small tree, 15 to 25 feet in height, with a trunk 1 to 2 feet in diameter; the bitter-sweetish fruit cooked and eaten by the Indians.

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ADDENDUM.

Under *Acer saccharinum*, No. 52, insert :

var. *nigrum*, Torr. & Gray (*A. nigrum*, Michx. f.). Black Sugar Maple.

Western Vermont to Missouri, and south to ?

A large tree; along streams in lower situations than the species, from which it is perhaps specifically distinct.

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# INDEX.

Name.	No.	Page.	Name.	No.	Page.
A.			<i>Achras salicifolia</i> .....	137	30
<i>Abies alba</i> .....	302	70	<i>Aceras Zapotilla</i> , var. <i>parriflora</i> .....	142	31
<i>Abies Albertiana</i> .....	300	69	<i>Esculus arguta</i> .....	39	11
<i>Abies amabilis</i> ? (Abies concolor) .....	292	67	<i>Esculus Californica</i> .....	38	11
<i>Abies amabilis</i> (Abies concolor) .....	292	67	<i>Esculus flava</i> .....	39	11
<i>Abies amabilis</i> (Abies magnifica) .....	295	67	<i>Esculus glabra</i> .....	40	11
<i>Abies amabilis</i> (Abies subalpina) .....	297	68	<i>Esculus Ohioensis</i> .....	40	11
<i>Abies amabilis</i> (Abies subalpina), var.			Alder, Black .....	252	56
<i>fullax</i> .....	297	68	Alder, Hoary .....	252	56
<i>Abies balsamea</i> .....	290	66	Alder, Seaside .....	253	57
<i>Abies balsamifera</i> .....	290	66	Alder, Speckled .....	252	56
<i>Abies bifolia</i> .....	297	68	Algaroba .....	72	18
<i>Abies bracteata</i> .....	291	66	<i>Algarobia glandulosa</i> .....	72	18
<i>Abies Bridgerii</i> .....	300	69	Alnus incana .....	252	56
<i>Abies Canadensis</i> .....	299	69	Alnus incana, var. <i>virusecens</i> .....	252	57
Abies concolor .....	292	67	Alnus maritima .....	253	57
<i>Abies Douglasii</i> .....	298	68	Alnus oblongifolia .....	254	57
<i>Abies Engelmanni</i> .....	303	70	Alnus rhombifolia .....	255	57
<i>Abies Fraseri</i> .....	293	67	Alnus rubra .....	256	57
<i>Abies Gordoniana</i> .....	294	67	Amelanchier Canadensis .....	105	24
Abies grandis .....	294	67	Amelanchier Canadensis, var. <i>Botry-</i>		
Abies grandis, var. <i>densiflora</i> .....	294	67	<i>apinum</i> .....	105	24
<i>Abies grandis</i> (Abies concolor) .....	292	67	Amelanchier Canadensis, var. <i>oblon-</i>		
<i>Abies grandis</i> (Abies subalpina) .....	297	68	<i>gifolia</i> .....	105	24
<i>Abies Hookeriana</i> .....	301	69	American Aspen .....	268	60
<i>Abies lasiocarpa</i> (Abies concolor) .....	292	67	American Beech .....	243	54
<i>Abies lasiocarpa</i> (Abies subalpina) .....	297	68	American Cork Elm .....	180	39
<i>Abies Lowiana</i> .....	292	67	American Crab Apple .....	87	21
Abies magnifica .....	295	67	American Elm .....	177	39
<i>Abies macrocarpa</i> .....	298	69	American Holly .....	28	9
<i>Abies Menziesii</i> (Picea pungens) .....	305	71	American Hornbeam .....	245	54
<i>Abies Menziesii</i> (Picea Sitichensis) .....	306	71	American Larch .....	307	71
<i>Abies Mertensiana</i> .....	300	69	American Mountain Ash .....	85	21
<i>Abies nigra</i> (Picea Engelmanni) .....	303	70	American Plane Tree .....	191	41
<i>Abies nigra</i> (Picea nigra) .....	304	70	<i>Amyris Florida</i> .....	23	8
<i>Abies nigra</i> , var. <i>rubra</i> .....	304	70	<i>Amyris sylvatica</i> .....	23	8
Abies nobilis .....	296	68	ANACARDIACEÆ .....	14	
<i>Abies Parsoniana</i> .....	292	67	<i>Andromeda arborea</i> .....	129	29
<i>Abies Pattonii</i> or <i>Pattoniana</i> .....	301	69	Angelica Tree .....	114	26
<i>Abies rubra</i> .....	304	70	Anona glabra .....	9	5
Abies subalpina .....	297	68	<i>Anona triloba</i> .....	10	5
Abies subalpina, var. <i>fullax</i> .....	297	68	ANONACEÆ .....	5	
<i>Abies Williamsouii</i> .....	301	69	<i>Anonymos aquaticus</i> .....	181	40
Acacia, Green-bark .....	69	17	Apple, American Crab .....	87	21
Acacia Greggii .....	74	18	Apple Haw .....	90	22
Acacia, Three-thorned .....	67	17	Apple, Narrow-leaved Crab .....	86	21
<i>Acer circinatum</i> .....	46	12	Apple, Oregon Crab .....	88	21
<i>Acer dasycarpum</i> .....	47	12	Aralia spinosa .....	114	26
<i>Acer Drummondii</i> .....	51	13	ARALIACEÆ .....	26	
<i>Acer eriocarpum</i> .....	47	12	Arbol de Hierro .....	60	15
<i>Acer grandidentatum</i> .....	48	13	Arbor Vitæ .....	285	64
<i>Acer macrophyllum</i> .....	49	13	Arbor Vitæ, Western .....	284	64
<i>Acer Negundo</i> .....	53	14	<i>Arbutus laurifolia</i> .....	126	28
<i>Acer nigrum</i> .....	52	13	<i>Arbutus Menziesii</i> .....	126	28
<i>Acer Pennsylvanicum</i> .....	50	13	<i>Arbutus procera</i> .....	126	28
<i>Acer rubrum</i> .....	51	13	<i>Arbutus Texana</i> .....	126	28
<i>Acer saccharinum</i> .....	52	13	Arctostaphylos glauca .....	128	29
<i>Acer saccharinum</i> , var. <i>nigrum</i> .....	52	13	<i>Arctostaphylos glauca</i> (Arctostaphylos		
<i>Acer striatum</i> .....	50	13	<i>pungens</i> , var. <i>platyphylla</i> ) .....	127	28
			Arctostaphylos pungens .....	127	28



Name.	No.	Page.	Name.	No.	Page.
Arctostaphylos pungens, var. platyphylla	127	28	Birch, Red	249	56
Ardisia Pickeringia	133	30	Birch, River	249	56
Aronica arbutifolia	104	24	Birch, Sweet	247	55
Ash, American Mountain	85	21	Birch, West Indian	22	8
Ash, Black	155	34	Birch, White (Betula alba, var. populifolia)	246	55
Ash, Blue	156	34	Birch, White (Betula papyracea)	251	56
Ash, Oregon	151	33	Birch, Yellow	248	55
Ash, Prickly	19	7	Bitter Nut	199	43
Ash, Water	153	33	Bitter Wood	21	8
Ash, White	148	32	Black Alder	252	56
Ash-leaved Maple	53	14	Black Ash	155	34
Asimina triloba	10	5	Black Birch	247	55
Asp, Quaking	268	60	Black Button Wood	109	25
Aspen, American	268	60	Black Cypress	287	65
Avicennia nitida	167	36	Black Gum	120	27
Avicennia oblongifolia	167	36	Black Haw	124	28
Avicennia tomentosa	167	36	Black Jack, Forked-leaf	210	46
B.			Black Jack Oak	229	50
Bald Cypress	287	65	Black Larch	307	71
Balm of Gilead	263	59	Black Oak	236	51
Balm of Gilead Fir	290	66	Black Sugar Maple	52	80
Balsam Fir	290	66	Black Thorn	102	23
Balsam Poplar	263	59	Black Walnut	196	43
Barren Oak	229	50	Blue Ash	156	34
Bass Wood	14	6	Blue Beech	245	54
Bass Wood, White	15	7	Blue Jack	211	46
Bay, Loblolly	12	6	Blue Oak	215	47
Bay, Red	170	37	Blue Wood	33	10
Bay, Rose	131	29	Brahea dulcis	339	79
Bay, Sweet	4	4	Brahea filamentosa	339	79
Bay, White	4	4	Brown Hickory	202	44
Bear Berry	35	11	Brown Pine	311	72
Beech, American	243	54	Bois d'Arc	190	41
Beech, Blue	245	54	BORRAGINACEÆ	35	
Beech, Water	245	54	Bourreria Havanaensis	162	35
Betula acuminata	248	55	Bourreria Havanaensis, var. radula	162	35
Betula alba, var. populifolia	246	55	Bourreria radula	162	35
Betula carpinifolia	247	55	Bourreria succulenta	162	35
Betula cuspidata	246	55	Borveria tomentosa, var. Havanaensis	162	35
Betula excelsa	248	55	Bourreria virgata	162	35
Betula lenta	247	55	Box Elder (Negundo aceroides)	53	14
Betula lenta (Betula lutea)	248	55	Box Elder (Negundo Californicum)	54	14
Betula lutea	247	55	Box, False	31	10
Betula nigra	249	56	Buckeye, Fetid	40	11
Betula occidentalis	250	56	Buckeye, Ohio	40	11
Betula papyracea	251	56	Buckeye, Sweet	39	11
Betula populifolia	246	55	Buckthorn, Southern	140	31
BETULACEÆ	55		Buckwheat Tree	30	10
Big Laurel	5	4	Bumelia angustifolia	138	30
Big Tree	288	65	Bumelia cuneata	138	30
Bignonia Catalpa	164	35	Bumelia ferruginea	139	31
Bignonia linearis	166	36	Bumelia fastidissima	136	30
BIGNONIACEÆ	35		Bumelia lanuginosa	139	31
Bilsted	106	24	Bumelia lycioides	140	31
Birch, Black	247	55	Bumelia myrsinifolia	138	30
Birch, Canoe	251	56	Bumelia oblongifolia	139	31
Birch, Cherry	247	55	Bumelia pallida	136	30
Birch, Gray (Betula alba, var. populifolia)	246	55	Bumelia parvifolia	138	30
Birch, Gray (Betula lutea)	248	55	Bumelia reclinata	138	30
Birch, Mahogany	247	55	Bumelia salicifolia	137	30
Birch, Old Field	246	55	Bumelia tenax	141	31
Birch, Paper	251	56	Bumelia tomentosa	139	31
			Bumwood	55	14
			Burr Oak	227	49
			Bursern gummiifera	22	8

Bruse  
Button  
Button  
Button  
Buttern

Cabbag  
Cabbag  
CACTAC  
Cajepu  
Calico  
Califor  
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Ceanoth  
Ceanoth  
Cedar, C  
Cedar, F  
Cedar, S  
Cedar, V  
sonian  
Cedar, V  
roiden  
Cedar, W  
Cedar, W  
CELAST  
Celtis br  
Celtis cro  
Celtis int  
Celtis lex  
Celtis lon  
Celtis M

Name.	No.	Page.	Name.	No.	Page.
BURSERACEÆ.....	8		<i>Celtis occidentalis</i> .....	184	40
Button Tree.....	108	25	<i>Celtis occidentalis</i> , var. <i>crassifolia</i> .....	184	40
Buttonwood.....	191	41	<i>Celtis occidentalis</i> , var. <i>integrifolia</i> .....	183	40
Buttonwood, Black.....	109	25	<i>Celtis occidentalis</i> , var. <i>tennifolia</i> .....	183	40
Butternut.....	195	42	<i>Celtis (Momisia) pallida</i> .....	185	40
			<i>Celtis</i> Tala, var. <i>pallida</i> .....	185	40
C.			<i>Cerasus borealis</i> .....	80	19
			<i>Cerasus Caroliniana</i> .....	77	19
Cabbage Palmetto.....	338	79	<i>Cerasus Chicosa</i> .....	78	19
Cabbage Tree.....	338	79	<i>Cerasus mollis</i> .....	79	19
CACTACEÆ.....	25		<i>Cerasus Pennsylvanica</i> .....	80	19
Cajeput.....	172	37	<i>Cerasus serotina</i> .....	81	20
Calico Bush.....	130	29	<i>Cerasus Virginiana</i> .....	81	20
California Laurel.....	172	37	<i>Cercidium floridum</i> (Parkinsonia florid- da).....	68	17
California Lilac.....	37	11	<i>Cercidium floridum</i> (Parkinsonia Tor- reyana).....	69	17
California Live Oak.....	212	46	<i>Cercis Californicum</i> .....	71	17
California Nutmeg.....	270	61	<i>Cercis Canadensis</i> .....	70	17
California Olive.....	172	37	<i>Cercis occidentalis</i> .....	71	17
Canada Plum.....	76	19	<i>Cercis reniformis</i> .....	71	18
Canoe Birch.....	251	56	<i>Cercocarpus ledifolius</i> .....	84	20
CAPRIFOLIACEÆ.....	27		<i>Cereus giganteus</i> .....	113	25
Carolina Poplar.....	267	60	<i>Chamaecyparis attenuata</i> .....	281	63
<i>Carpinus Americana</i> .....	245	54	<i>Chamaecyparis excelsa</i> .....	282	64
<i>Carpinus Caroliniana</i> .....	245	54	<i>Chamaecyparis fragrans</i> .....	281	63
<i>Carpinus Ostrya</i> .....	244	54	<i>Chamaecyparis Lawsoniana</i> .....	281	63
<i>Carpinus triflora</i> .....	244	54	<i>Chamaecyparis Nutkaensis</i> .....	282	64
<i>Carpinus Virginiana</i> .....	244	54	<i>Chamaecyparis Nutkaensis</i> (Chamaecy- paris Lawsoniana).....	281	63
<i>Carya alba</i> .....	198	43	<i>Chamaecyparis sphaeroides</i> .....	283	64
<i>Carya amara</i> .....	199	43	<i>Chamaerops Palmetto</i> .....	338	79
<i>Carya aquatica</i> .....	200	44	Cherry Birch.....	247	55
<i>Carya glabra</i> .....	202	44	Cherry, Wild Black.....	81	20
<i>Carya myristicifera</i> .....	201	44	Cherry, Wild Red.....	80	19
<i>Carya porcina</i> .....	202	44	Chestnut Oak.....	233	51
<i>Carya sulcata</i> .....	203	44	Chestnut Oak, Rock.....	233	51
<i>Carya tomentosa</i> .....	204	44	Chickasaw Plum.....	78	19
<i>Castanea Americana</i> .....	242	54	<i>Chilopsis glutinosa</i> .....	166	36
<i>Castanea chrysophylla</i> .....	240	53	<i>Chilopsis linearis</i> .....	166	36
<i>Castanea pumila</i> .....	241	53	<i>Chilopsis saligna</i> .....	166	36
<i>Castanea vesca</i> , var. <i>Americana</i> .....	242	54	Chinquapin ( <i>Castanea pumila</i> ).....	241	53
<i>Castanea vulgaris</i> , var. <i>Americana</i> .....	242	54	Chinquapin ( <i>Castanopsis chryso-</i> <i>phylla</i> ).....	240	53
<i>Castanopsis chrysophylla</i> .....	240	53	<i>Chionanthus Virginica</i> .....	158	34
<i>Castanopsis sempervirens</i> .....	240	53	<i>Chrysophyllum microphyllum</i> .....	134	30
Catalpa biguonioides.....	164	35	<i>Chrysophyllum monopyrenum</i> .....	135	30
<i>Catalpa cordifolia</i> .....	164	35	<i>Chrysophyllum oliviforme</i> .....	135	30
<i>Catalpa speciosa</i> .....	165	36	Cladrastis tinctoria.....	62	16
<i>Catalpa springifolia</i> .....	164	35	Clammy Locust.....	59	15
Catalpa, Western.....	165	36	Cliftonia ligustrina.....	30	10
Cat's-claw.....	75	18	<i>Clusia flava</i> .....	11	6
Ceanothus spinosus.....	36	11	<i>Coccoloba Florida</i> .....	168	36
Ceanothus thyrsiflorus.....	37	11	<i>Coccoloba parifolia</i> .....	168	36
Cedar, Oregon.....	281	63	<i>Coccoloba unifera</i> .....	169	37
Cedar, Red.....	277	62	Cockspur Thorn.....	96	22
Cedar, Stinking.....	271	61	Coffee Tree, Kentucky.....	65	16
Cedar, White ( <i>Chamaecyparis Law-</i> <i>soniana</i> ).....	281	63	Condalia obovata.....	33	10
Cedar, White ( <i>Chamaecyparis sphae-</i> <i>roides</i> ).....	283	64	CONFERRÆ.....	62	
Cedar, White ( <i>Libocedrus decurrens</i> ).....	286	65	<i>Conocarpus erecta</i> .....	108	25
Cedar, White ( <i>Thuja occidentalis</i> ).....	285	64	Coral Sumach.....	55	14
CELASTRACEÆ.....	10		<i>Cordia Boissieri</i> .....	160	35
<i>Celtis brevipes</i> .....	182	40	<i>Cordia floridana</i> .....	162	35
<i>Celtis crassifolia</i> .....	184	40	<i>Cordia Sebestena</i> .....	161	35
<i>Celtis integrifolia</i> .....	183	40	<i>Cordia speciosa</i> .....	161	35
<i>Celtis levigata</i> .....	183	40	Cork Elm, American.....	180	39
<i>Celtis longifolia</i> .....	183	40			
<i>Celtis Mississippensis</i> .....	183	40			



Name.	No.	Page.	Name.	No.	Page.
CORNACEÆ	26		Desert Willow	166	36
Cornus Florida	115	26	Devil Wood	159	34
Cornus Nuttallii	116	26	Diospyros Texana	144	32
Cotton Gum	121	27	Diospyros Virginiana	143	31
Cotton Tree	266	59	Dipholis salicifolia	137	30
Cottonwood	267	60	Dogwood, Flowering	115	26
Crab Apple, American	87	21	Dogwood, Jamaica	61	15
Crab Apple, Narrow-leaved	86	21	Dogwood, Striped	50	13
Crab Apple, Oregon	88	21	Douglas Spruce	298	68
Crab Wood	31	10	Downy Poplar	266	59
Crataegusestivalis	90	22	<i>Drimyphyllum pauciflorum</i>	172	37
Crataegus apiifolia	91	22	Drypetes crocea	173	38
Crataegus arborescens	92	22			
Crataegus arbutifolia	104	24	E.		
Crataegus berberifolia	93	22	EUPHORBACEÆ	31	
Crataegus coccinea	94	22	<i>Ehretia Beauveria</i>	162	35
Crataegus coccinea, var. populifolia	94	22	<i>Ehretia elliptica</i>	163	35
Crataegus coccinea, var. viridis	94	22	<i>Ehretia Havanaensis</i>	162	35
Crataegus coccinea, var. mollis	101	23	<i>Ehretia radula</i>	162	35
Crataegus cordata	95	22	<i>Ehretia tomentosa</i>	162	35
Crataegus Crus-galli	96	22	Elder	122	27
Crataegus Crus-galli, var. linearis	96	22	Elm, American	177	39
Crataegus Crus-galli, var. ovalifolia	96	22	Elm, American Cork	180	39
Crataegus Crus-galli, var. prunifolia	96	22	Elm, False	184	40
Crataegus Crus-galli, var. pyreanthifolia	96	22	Elm, Moose	179	39
Crataegus Douglasii	97	23	Elm, Rock	180	39
Crataegus flava	98	23	Elm, Slippery	179	39
<i>Crataegus microcarpa</i>	100	23	Elm, Small-leaved	176	38
<i>Crataegus mollis</i>	101	23	Elm, Red	179	39
Crataegus punctata	102	23	Elm, White	177	39
Crataegus rivularis	99	23	Elm, Winged	176	38
<i>Crataegus sanguinea, var. Douglasii</i>	97	23	Euceno	206	45
Crataegus spathulata	100	23	EUPHORBACEÆ	28	
Crataegus species	103	24	<i>Eugenia buxifolia</i>	110	25
Crataegus subvillosa	101	23	<i>Eugenia dichotoma</i>	111	25
Crataegus tomentosa	102	23	<i>Eugenia procera</i>	112	25
Crataegus tomentosa, var. punctata	102	23	EUPHORBACEÆ	38	
Crataegus tomentosa, var. mollis	101	23	Evergreen White Oak	230	50
Cucumber Tree	1	4	<i>Erycaria lucida</i>	174	38
Cucumber Tree, Long-leaved	3	4			
Cupressus Americana	282	64	F.		
Cupressus disticha	287	65	<i>Fagus Castanea</i>	242	54
Cupressus Goveniana	278	63	<i>Fagus ferruginea</i>	243	54
Cupressus Hartwegii	280	63	<i>Fagus pumila</i>	241	53
Cupressus Lambertiana	280	63	<i>Fagus sylvestris</i>	243	54
Cupressus Lawsoniana	281	63	False Box	31	10
Cupressus Macnabiana	279	63	False Elm	184	40
Cupressus macrocarpa	280	63	Fetid Buckeye	40	11
Cupressus Nutkaensis	282	64	Ficus aurea	186	41
Cupressus Thyoides	283	64	Ficus brevifolia	187	41
CUPULIFERÆ	45		Ficus pedunculata	188	41
Cypress, Bald	287	65	Fir, Balm of Gilead	290	66
Cypress, Black	287	65	Fir, Balsam	290	66
Cypress, Deciduous	287	65	Fir, Red	295	67
Cypress, Monterey	280	63	Fir, White	292	67
Cypress, White	287	65	Flowering Dogwood	115	26
<i>Cyrilla Caroliniana</i>	29	9	Forked-leaf Black Jack	210	46
<i>Cyrilla paniculata</i>	133	30	Fox-tail Pine	312	73
<i>Cyrilla racemiflora</i>	29	9	<i>Frangula Caroliniana</i>	34	10
CYRILLACEÆ	9		<i>Frangula Parshiana</i>	35	11
			<i>Fraxinus acuminata</i>	148	32
			<i>Fraxinus alba</i>	148	32
			<i>Fraxinus Americana</i>	148	32
			<i>Fraxinus Americana</i> ( <i>Fraxinus platycarpa</i> )	153	33
Dahoon Holly	27	9			
Deciduous Cypress	287	65			





Name.	No.	Page.	Name.	No.	Page.
<i>Fraxinus anomala</i> .....	149	33	<i>Halesia diptera</i> .....	146	32
<i>Fraxinus Berlandierana</i> .....	157	34	<i>Halesia tetraptera</i> .....	147	32
<i>Fraxinus Caroliniana</i> ( <i>Fraxinus platycarpa</i> ) .....	153	33	HAMAMELACEÆ .....	24	
<i>Fraxinus Caroliniana</i> ( <i>Fraxinus viridis</i> ) .....	157	34	Hard Pine .....	311	72
<i>Fraxinus concolor</i> .....	157	34	Haw, Apple .....	90	22
<i>Fraxinus cuneata</i> .....	152	33	Haw, Black .....	124	28
<i>Fraxinus Curtissii</i> .....	148	32	Haw, May .....	90	22
<i>Fraxinus dipetala</i> .....	150	33	Haw, Summer .....	98	23
<i>Fraxinus epiptera</i> .....	148	32	Hemlock .....	299	69
<i>Fraxinus expanna</i> .....	157	34	Herules' Club .....	114	26
<i>Fraxinus grandifolia</i> .....	151	33	<i>Heteromeles arbutifolia</i> .....	104	24
<i>Fraxinus juglandifolia</i> ( <i>Fraxinus Americana</i> ) .....	148	32	<i>Heteromeles Fremontiana</i> .....	104	24
<i>Fraxinus juglandifolia</i> ( <i>Fraxinus viridis</i> ) .....	157	34	<i>Heyderia decurrens</i> .....	286	65
<i>Fraxinus nigra</i> .....	154	34	Hickory, Brown .....	202	44
<i>Fraxinus Oregona</i> .....	151	33	Hickory, Nutmeg .....	201	44
<i>Fraxinus pallida</i> .....	153	33	Hickory Pine .....	312	73
<i>Fraxinus paniciflora</i> .....	153	33	Hickory, Shag-bark .....	198	43
<i>Fraxinus Pennsylvanica</i> .....	154	34	Hickory, Shell-bark .....	198	43
<i>Fraxinus platycarpa</i> .....	152	33	Hickory, Swamp .....	199	43
<i>Fraxinus plicata</i> .....	153	33	Hickory, Thick Shell-bark .....	203	44
<i>Fraxinus pubescens</i> .....	154	34	Hickory, Water .....	200	44
<i>Fraxinus pubescens</i> , var. .....	151	33	Hickory, Western Shell-bark .....	203	44
<i>Fraxinus quadrangulata</i> .....	156	34	Hickory, White .....	199	43
<i>Fraxinus sambucifolia</i> .....	155	34	Hickory, White-heart .....	204	44
<i>Fraxinus tomentosa</i> .....	154	34	Hippomane Manceinella .....	175	38
<i>Fraxinus triptera</i> .....	153	33	Horny Alder .....	252	56
<i>Fraxinus velutina</i> .....	152	33	Hog Plum .....	25	9
<i>Fraxinus viridis</i> .....	157	34	Holly, American .....	28	9
<i>Fraxinus viridis</i> , var. <i>Berlandierana</i> .....	157	34	Holly, Dahoan .....	27	9
Fringe Tree .....	158	34	Honey Berry .....	44	12
G.			Honey Locust ( <i>Gleditsia trinanthos</i> ) .....	67	17
Gulp Tree .....	44	12	Honey Locust ( <i>Prosopis juliflora</i> ) .....	72	18
Georgia Bark .....	125	28	<i>Hopea tinctoria</i> .....	145	32
Georgia Pine .....	311	72	Hornbeam, American .....	245	54
<i>Gleditschia monosperma</i> .....	66	17	Horse Sugar .....	145	32
<i>Gleditschia triacanthos</i> .....	67	17	Hypelate paniculata .....	44	12
<i>Gordonia lasianthus</i> .....	12	6	Hypelate trifoliata .....	45	12
<i>Gordonia pubescens</i> .....	13	6	I.		
Grape, Sea .....	169	37	Hex Dahoan .....	27	9
Gray Birch ( <i>Betula alba</i> , var. <i>populifolia</i> ) .....	246	55	Hex opaca .....	28	9
Gray Birch ( <i>Betula lutea</i> ) .....	246	55	IRACINEÆ .....	9	
Gray Pine .....	313	73	<i>Inga unguis-cati</i> .....	75	18
Great Laurel .....	131	29	Iron Wood ( <i>Bumelia lycioides</i> ) .....	140	31
Green-bark Aesculus .....	69	17	Iron Wood ( <i>Carpinus Caroliniana</i> ) .....	245	54
<i>Guaicum angustifolium</i> .....	17	7	Ivy .....	130	29
<i>Guaicum sanctum</i> .....	16	7	J.		
<i>Guaicum</i> .....	17	7	Jack, Blue .....	211	46
Gum, Black .....	120	27	Jack, Forked-leaf Black .....	210	46
Gum, Cotton .....	121	27	Jamaica Dogwood .....	61	15
Gum, Sour .....	119	27	Jersey Pine .....	321	75
Gum, Sweet .....	106	24	Judas Tree ( <i>Cercis canadensis</i> ) .....	70	17
Gum Tree .....	118	26	Judas Tree ( <i>Cercis occidentalis</i> ) .....	71	17
GUTTIFERÆ .....	6		JUGLANDACEÆ .....	42	
<i>Gymnanthes lucida</i> .....	174	38	<i>Juglans amara</i> .....	199	43
<i>Gymnocladus Canadensis</i> .....	65	16	<i>Juglans angustifolia</i> .....	199	43
H.			<i>Juglans aquatica</i> .....	200	44
Hackberry .....	184	40	<i>Juglans Californica</i> .....	194	42
Hacknut .....	307	71	<i>Juglans cathartica</i> .....	195	42
			<i>Juglans cinerea</i> .....	195	42
			<i>Juglans glabra</i> .....	202	44
			<i>Juglans myristiciformis</i> .....	201	41
			<i>Juglans nigra</i> .....	196	43
			<i>Juglans obcordata</i> .....	202	44

**Juglans**  
**Juglans**  
**Juglans**  
**Juglans**  
 June B  
**Juniperu**  
**Juniperu**  
**Juniperu**  
**Juniperu**  
**Juniperu**  
**Juniperu**  
**Juniperu**  
 Iforni  
**Juniperu**  
 (genus)  
**Juniperu**  
 spermi  
**Juniperu**  
**Juniperu**  
**Juniperu**

**Kalmia**  
**Kentuck**

**Lagnum**  
**Larch, A**  
**Larch, B**  
**Large Tu**  
**Large-lea**  
**Larix An**  
**Larix An**  
**Larix inte**  
**Larix Ly**  
**Larix ma**  
**Larix oce**  
**Larix pen**  
**LAURACE**  
**Laurel, B**  
**Laurel, C**  
**Laurel, C**  
**Laurel, M**  
**Laurel O**  
**Laurel O**  
**Laurus B**  
**Laurus C**  
**Laurus S**  
**LEGUMIN**  
**Libocedr**  
**Lignum**  
**Lilac, Ca**  
**LILIACE**  
**Lime, Op**  
**Lime Tre**  
**Liquidam**  
**Liquidam**  
**Liriodend**  
**Live Oak**  
**Live Oak**  
**Live Oak**  
**Loblolly**

Name.	No.	Page.	Name.	No.	Page.
<i>Juglans oblonga</i> .....	195	42	Loblolly Pine .....	336	79
<i>Juglans portina</i> .....	202	44	Loenst .....	58	15
<i>Juglans rupestris</i> .....	197	43	Loenst, Climmy .....	59	15
<i>Juglans rupestris</i> , var. <i>major</i> .....	194	42	Loenst, Honey (Gleditschia triacanthos) .....	67	17
June Berry .....	105	24	Loenst, Honey (Prosopis juliflora) .....	72	18
<i>Juniperus Andina</i> .....	274	62	Loenst, Water .....	66	17
<i>Juniperus Californica</i> .....	274	62	Log Wood .....	33	10
<i>Juniperus Californica</i> , var. <i>Utahensis</i> .....	274	62	Long-leaved Cucumber Tree .....	3	4
<i>Juniperus Cerrostylans</i> .....	274	62	Long-leaved Pine .....	311	72
<i>Juniperus excelsa</i> .....	275	62			
<i>Juniperus occidentalis</i> .....	275	62			
<i>Juniperus occidentalis</i> ( <i>Juniperus Californica</i> ) .....	274	62			
<i>Juniperus occidentalis</i> , var. <i>? conjungens</i> .....	275	62	M.		
<i>Juniperus occidentalis</i> , var. <i>monosperma</i> .....	275	62	<i>Maclura aurantiaca</i> .....	190	41
<i>Juniperus pachyphloea</i> .....	276	62	Madeira Wood .....	41	12
<i>Juniperus plichyderma</i> .....	276	62	Madrona .....	126	28
<i>Juniperus tetragona</i> , var. <i>osteosperma</i> .....	274	62	<i>Magnolia acuminata</i> .....	1	4
<i>Juniperus Virginiana</i> .....	277	62	<i>Magnolia auriculata</i> .....	3	4
			<i>Magnolia cordata</i> .....	2	4
K.			<i>Magnolia Fraseri</i> .....	3	4
<i>Kalmia latifolia</i> .....	130	29	<i>Magnolia glauca</i> .....	3	4
Kentucky Coffee Tree .....	65	16	<i>Magnolia grandiflora</i> .....	5	4
			<i>Magnolia macrophylla</i> .....	6	5
			<i>Magnolia Tree</i> , Large-leaved .....	6	5
			<i>Magnolia tripetala</i> .....	7	5
L.			Magnolin Umbrella .....	7	5
<i>Laguncularia racemosa</i> .....	109	25	MAGNOLIACEE .....		
Larch, American .....	307	71	Mahogany .....	24	8
Larch, Black .....	307	71	Mahogany Birch .....	247	55
Large Tupelo .....	121	27	Mahogany, Mountain .....	84	20
Large-leaved Magnolia Tree .....	6	5	<i>Malus angustifolia</i> .....	86	21
Larix Americana .....	307	71	<i>Malus coronaria</i> .....	87	21
<i>Larix Americana</i> , var. <i>brevifolia</i> .....	309	72	<i>Malus virularis</i> .....	88	21
<i>Larix intermedia</i> .....	307	71	Manchineel .....	175	38
Larix Lyallii .....	308	72	Manchineel, Mountain .....	55	14
<i>Larix macrorarpa</i> .....	308	71	Mangrove .....	107	25
Larix occidentalis .....	309	72	Mangrove, White ( <i>Avicennia nitida</i> ) .....	167	36
<i>Larix pendula</i> .....	307	71	Mangrove, White ( <i>Laguncularia racemosa</i> ) .....	109	25
LAURACEE .....		37	Manzanita ( <i>Arctostaphylos glauca</i> ) .....	123	29
Laurel .....	130	29	Manzanita ( <i>Arctostaphylos pungens</i> ) .....	127	28
Laurel, Big .....	5	4	Maple, Ash-leaved .....	53	14
Laurel, California .....	172	37	Maple, Black Sugar .....	52	80
Laurel, Great .....	131	29	Maple, Red .....	51	13
Laurel, Mountain .....	172	37	Maple, Rock .....	52	13
Laurel Oak ( <i>Quercus imbricaria</i> ) .....	222	48	Maple, Silver .....	47	12
Laurel Oak ( <i>Quercus laurifolia</i> ) .....	224	49	Maple, Striped .....	50	13
<i>Laurus Borbonica</i> .....	170	37	Maple, Sugar .....	52	13
<i>Laurus Carolinensis</i> .....	170	37	Maple, Swamp .....	51	13
<i>Laurus Sassafras</i> .....	171	37	Maple, Vine .....	46	12
LEGUMINOSAE .....		15	Maple, White .....	47	12
<i>Libocedrus decurrens</i> .....	286	65	May Haw .....	90	22
Lignum Vite .....	16	7	MELIACEE .....		8
Lilac, California .....	37	11	<i>Melicocca paniculata</i> .....	44	12
LILIACEE .....		80	Mesquit .....	72	18
Lime, Ogechee .....	117	26	<i>Mespilus arborea</i> .....	105	24
Lime Tree .....	14	6	<i>Mespilus arbutifolia</i> .....	104	24
Liquidambar <i>Styraciflua</i> .....	106	24	Mesquit, Screw-pod .....	73	18
Liquidambar .....	106	24	Mexican Persimmon .....	144	32
Liriodendron <i>Tulipifera</i> .....	8	5	<i>Mimusops dissecta</i> .....	142	31
Live Oak ( <i>Quercus oblongifolia</i> ) .....	230	50	<i>Mimusops Sieberi</i> .....	142	31
Live Oak ( <i>Quercus virens</i> ) .....	238	52	Mock Orange .....	77	19
Live Oak, California .....	212	46	Mocker Nut .....	204	44
Loblolly Bay .....	12	6	<i>Momiola (Cellis) pallida</i> .....	185	40
			Monterey Cypress .....	280	63
			Monterey Pine .....	322	75

Moose B  
Moose W  
*Myrsine C*  
Morus r  
Mossy-c  
Mountai  
Mountai  
Mountai  
Mountai  
Mountai  
Mountai  
Mulberry  
*Mylocaria*  
Myrica C  
Myrica A  
MYRSINE  
*Myrsine p*  
*Myrsine l*  
Myrsine  
MYRTAC

Narrow-l  
Nase Ber  
Negundo  
Negundo  
Necklace  
Norway I  
Nut, Bitt  
Nut, Moc  
Nut Pine  
Nut Pine  
Nut, Pig  
Nutmeg,  
Nutmeg F  
Nuttallia  
*Nyssa aqu*  
*Nyssa aqu*  
*Nyssa bifl*  
*Nyssa can*  
Nyssa enj  
Nyssa Can  
*Nyssa gra*  
Nyssa mu  
*Nyssa mul*  
Nyssa syl  
*Nyssa tom*  
Nyssa uni  
*Nyssa villo*

Oak, Bur  
Oak, Blac  
Oak, Blac  
Oak, Blue  
Oak, Bur  
Oak, Culi  
Oak, Ches  
Oak, Even  
Oak, Lam  
Oak, Lam  
Oak, Live  
Oak, Live

Name.	No.	Page.	Name.	No.	Page.
Moose Elm	170	39	Oak, Mossy-cup White	227	49
Moose Wood	50	13	Oak, Mountain White	215	47
<i>Morus Canadensis</i>	189	41	Oak, Over-cup ( <i>Quercus lyrata</i> )	226	49
<i>Morus rubra</i>	189	41	Oak, Over-cup ( <i>Quercus macrocarpa</i> )	227	49
Mossy-cup White Oak	227	49	Oak, Pin	231	50
Mountain Ash, American	85	21	Oak, Post	235	51
Mountain Laurel	172	37	Oak, Red	234	51
Mountain Mahogany	84	20	Oak, Rock Chestnut	233	51
Mountain Manchineel	55	14	Oak, Rocky Mountain Scrub	237	52
Mountain Plum	25	9	Oak, Scarlet	213	47
Mountain White Oak	215	47	Oak, Scrub	210	46
Mulberry, Red	189	41	Oak, Shingle	222	48
<i>Mylocarium lignastrum</i>	30	10	Oak, Spanish	218	48
Myrica Californica	205	45	Oak, Swamp Post	226	49
MYRICACEÆ	45		Oak, Swamp Spanish	231	50
MYRSINACEÆ	29		Oak, Swamp White	209	46
<i>Myrsine floribunda</i>	132	29	Oak, Turkey	210	46
<i>Myrsine Florida</i>	132	29	Oak, Upland Willow	211	46
Myrsine Rapauna	132	29	Oak, Water	208	45
MYRTACEÆ	25		Oak, Water White	226	49
			Oak, White	207	45
N.			Oak, Willow	232	50
Narrow-leaved Crab Apple	86	21	Oak, Yellow-barked	226	51
Nase Berry	142	31	Ogeechee Lime	117	26
Negundo aceroides	53	14	Ohio Buckeye	40	11
Negundo Californicum	54	14	OLACINEÆ	9	
Necklace Poplar	267	60	OLEACEÆ	32	
Norway Pine	331	77	Old Field Birch	246	55
Nut, Bitter	199	43	Old Field Pine	336	79
Nut, Mocker	204	44	<i>Olea Americana</i>	159	34
Nut Pine ( <i>Pinus edulis</i> )	317	74	Olive, California	172	37
Nut Pine ( <i>Pinus monophylla</i> )	325	76	Olive, Tesota	60	15
Nut, Plg	202	44	Oregon Ash	151	33
Nutmeg, California	270	61	Oregon Cedar	281	63
Nutmeg Hickory	201	44	Oregon Crab Apple	88	21
Nuttallia cernuiformis	83	20	<i>Oreodaphne Californica</i>	172	37
<i>Nyssa aquatica</i> ( <i>Nyssa Caroliniana</i> )	118	26	<i>Ornus dipetala</i>	150	33
<i>Nyssa aquatica</i> ( <i>Nyssa multiflora</i> )	119	27	Osage Orange	190	41
<i>Nyssa aquatica</i> ( <i>Nyssa uniflora</i> )	121	27	Osmanthus Americanus	159	34
<i>Nyssa biflora</i>	119	27	Oso Berry	83	20
<i>Nyssa candicans</i>	117	26	<i>Ostrya Americana</i>	244	54
<i>Nyssa capitata</i>	117	26	<i>Ostrya Virginica</i>	244	54
<i>Nyssa Caroliniana</i>	118	26	<i>Ostrya vulgaris</i>	244	54
<i>Nyssa grandidentata</i>	121	27	Over-cup Oak ( <i>Quercus lyrata</i> )	226	49
<i>Nyssa multiflora</i>	119	27	Over-cup Oak ( <i>Quercus macrocarpa</i> )	227	49
<i>Nyssa multiflora</i> , var. <i>sylvatica</i>	120	27	Oxydendrum arboreum	129	29
<i>Nyssa sylvatica</i>	120	27			
<i>Nyssa tomentosa</i>	121	27	P.		
<i>Nyssa uniflora</i>	121	27	<i>Palinurus Texensis</i>	32	10
<i>Nyssa villosa</i>	120	27	PALMACEÆ	79	
O.			Palmetto, Cabbage	338	79
Oak, Barren	229	50	Palo Verde	69	17
Oak, Black	236	51	Papaw	10	5
Oak, Black Jack	229	50	Paper Birch	251	56
Oak, Blue	215	47	Parkinsonia florida	68	17
Oak, Burr	227	49	Parkinsonia Torreyana	69	17
Oak, California Live	212	46	<i>Paria flava</i>	39	11
Oak, Chestnut	233	51	Pear Thorn	102	23
Oak, Evergreen White	230	50	Pepperidge	119	27
Oak, Laurel ( <i>Quercus imbricaria</i> )	222	48	<i>Persea Borbonica</i>	170	37
Oak, Laurel ( <i>Quercus laurifolia</i> )	224	49	<i>Persea Carolinensis</i>	170	37
Oak, Live ( <i>Quercus oblongifolia</i> )	230	50	<i>Persea Sassafras</i>	171	37
Oak, Live ( <i>Quercus virens</i> )	238	52	Persimmon	143	31
			Persimmon, Mexican	144	32

*Photinia*  
*Photinia*  
*Picea abies*  
*Picea balsamifera*  
*Picea canadensis*  
*Picea contorta*  
*Picea excelsa*  
*Picea graeca*  
*Picea mariana*  
*Picea nobilis*  
*Picea parviflora*  
*Picea rubra*  
*Picea sibirica*  
*Pickerings*  
 Pig Nut  
 Pigeon  
 Pin Oak  
 Pinekne  
 Piñon  
 Pine, B  
 Pine, F  
 Pine, G  
 Pine, G  
 Pine, H  
 Pine, H  
 Pine, J  
 Pine, L  
 Pine, L  
 Pine, M  
 Pine, N  
 Pine, N  
 Pine, O  
 Pine, P  
 Pine, P  
 Pine, R  
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*Pinus adpressa*  
*Pinus albifolia*  
*Pinus alba*  
*Pinus amabilis*  
*Pinus arvensis*  
*Pinus attenuata*  
*Pinus australis*  
*Pinus balfora*  
*Pinus banksiana*  
*Pinus borealis*

Name.	No.	Page.	Name.	No.	Page.
<i>Photinia arbutifolia</i> .....	104	24	<i>Pinus Benthiana</i> .....	329	77
<i>Photinia salicifolia</i> .....	104	24	<i>Pinus Bolanderi</i> .....	315	73
<i>Picea alba</i> .....	302	70	<i>Pinus bracteata</i> .....	291	66
<i>Picea balsamea</i> .....	290	66	<i>Pinus Californica</i> ( <i>Pinus insignis</i> ) .....	322	75
<i>Picea bracteata</i> .....	291	66	<i>Pinus Californica</i> ( <i>Pinus tuberculata</i> ) .....	337	79
<i>Picea Canadensis</i> .....	290	69	<i>Pinus Canadensis</i> .....	299	69
<i>Picea concolor</i> .....	292	67	<i>Pinus cembroides</i> .....	319	74
<i>Picea Engelmanni</i> .....	303	70	<i>Pinus Chihuahuana</i> .....	314	73
<i>Picea grandis</i> .....	294	67	<i>Pinus clausa</i> .....	321	75
<i>Picea nigra</i> .....	304	70	<i>Pinus commutata</i> .....	303	70
<i>Picea nobilis</i> .....	296	68	<i>Pinus concolor</i> .....	292	67
<i>Picea pungens</i> .....	305	71	<i>Pinus contorta</i> .....	315	73
<i>Picea rubra</i> .....	304	70	<i>Pinus contorta</i> , var. <i>Murrayana</i> .....	315	73
<i>Picea Sitchensis</i> .....	306	71	<i>Pinus contorta</i> , var. <i>latifolia</i> .....	315	73
<i>Pickerlingia paniculata</i> .....	133	30	<i>Pinus contorta</i> ( <i>Pinus contorta</i> , var. <i>Murrayana</i> ) .....	315	73
Pig Nut .....	202	44	<i>Pinus Coulteri</i> .....	316	74
Pigeon Plum .....	168	36	<i>Pinus Craigiana</i> .....	329	77
Pin Oak .....	231	50	<i>Pinus deflexa</i> .....	329	77
Pinekneya pubens .....	125	28	<i>Pinus Edgariana</i> .....	327	76
Piñon .....	317	74	<i>Pinus edulis</i> .....	317	74
Pine, Brown .....	312	73	<i>Pinus Elliottii</i> .....	318	74
Pine, Fox-tail .....	312	73	<i>Pinus flexilis</i> .....	319	74
Pine, Georgia .....	311	72	<i>Pinus flexilis</i> , var. <i>albicaulis</i> .....	319	74
Pine, Gray .....	313	73	<i>Pinus Fraseri</i> .....	293	67
Pine, Hard .....	311	72	<i>Pinus Fremontiana</i> .....	325	76
Pine, Hickory .....	312	73	<i>Pinus glabra</i> .....	320	75
Pine, Jersey .....	321	75	<i>Pinus grandis</i> .....	294	67
Pine, Loblolly .....	336	79	<i>Pinus Hudsonica</i> .....	313	73
Pine, Long-leaved .....	311	72	<i>Pinus inops</i> .....	321	75
Pine, Monterey .....	322	75	<i>Pinus inops</i> , var. <i>clausa</i> .....	321	75
Pine, Norway .....	331	77	<i>Pinus inops</i> ( <i>Pinus contorta</i> ) .....	315	73
Pine, Nut ( <i>Pinus edulis</i> ) .....	317	74	<i>Pinus inops</i> ( <i>Pinus contorta</i> , var. <i>Murrayana</i> ) .....	315	73
Pine, Nut ( <i>Pinus monophylla</i> ) .....	325	76	<i>Pinus insignis</i> .....	322	75
Pine, Old Field .....	336	79	<i>Pinus Jeffreyi</i> .....	329	77
Pine, Pitch .....	332	78	<i>Pinus Lambertiana</i> .....	323	75
Pine, Pond .....	334	78	<i>Pinus Llacuna</i> .....	328	76
Pine, Red .....	331	77	<i>Pinus Lyallii</i> .....	308	72
Pine, Rosemary .....	336	79	<i>Pinus macrocarpa</i> ( <i>Larix Americana</i> ) .....	307	71
Pine, Scrub ( <i>Pinus Banksiana</i> ) .....	313	73	<i>Pinus macrocarpa</i> ( <i>Pinus Coulteri</i> ) .....	316	74
Pine, Scrub ( <i>Pinus inops</i> ) .....	321	75	<i>Pinus Menziesii</i> .....	306	71
Pine, Short-leaved .....	324	76	<i>Pinus Mertensiana</i> .....	300	69
Pine, Slash .....	336	79	<i>Pinus mitis</i> .....	324	76
Pine, Southern .....	311	72	<i>Pinus monophylla</i> .....	325	76
Pine, Spruce ( <i>Pinus glabra</i> ) .....	320	75	<i>Pinus monticola</i> .....	326	76
Pine, Spruce ( <i>Pinus mitis</i> ) .....	324	76	<i>Pinus muricata</i> .....	327	76
Pine, Sugar .....	323	75	<i>Pinus Murrayana</i> .....	315	73
Pine, Swamp .....	336	79	<i>Pinus nigra</i> .....	304	70
Pine, Table Mountain .....	330	77	<i>Pinus nobilis</i> .....	296	68
Pine, Weymouth .....	335	78	<i>Pinus Nuttallii</i> .....	309	72
Pine, White ( <i>Pinus flexilis</i> ) .....	319	74	<i>Pinus palustris</i> .....	311	72
Pine, White ( <i>Pinus Strobus</i> ) .....	335	78	<i>Pinus Parryana</i> .....	328	76
Pine, Yellow ( <i>Pinus australis</i> ) .....	311	72	<i>Pinus Pattoniana</i> .....	301	69
Pine, Yellow ( <i>Pinus mitis</i> ) .....	324	76	<i>Pinus pendula</i> .....	307	71
Pine, Yellow ( <i>Pinus ponderosa</i> ) .....	329	77	<i>Pinus ponderosa</i> .....	329	77
<i>Pinus adanca</i> .....	322	75	<i>Pinus ponderosa</i> , var. <i>Jeffreyi</i> .....	329	77
<i>Pinus alba</i> .....	302	70	<i>Pinus ponderosa</i> , var. <i>scopulorum</i> .....	329	77
<i>Pinus albicaulis</i> .....	319	74	<i>Pinus pungens</i> .....	330	77
<i>Pinus amabilis</i> .....	294	67	<i>Pinus radiata</i> .....	322	75
<i>Pinus aristata</i> .....	312	73	<i>Pinus resinosa</i> .....	331	77
<i>Pinus Arizonica</i> .....	310	72	<i>Pinus rigida</i> .....	332	78
<i>Pinus australis</i> .....	311	72	<i>Pinus rubra</i> ( <i>Picea nigra</i> ) .....	304	70
<i>Pinus Balfouriana</i> .....	312	73	<i>Pinus rubra</i> ( <i>Pinus resinosa</i> ) .....	331	77
<i>Pinus Balfouriana</i> , var. <i>aristata</i> .....	312	73	<i>Pinus rupestris</i> .....	313	73
<i>Pinus balsamea</i> .....	290	66			
<i>Pinus Banksiana</i> .....	313	73			
<i>Pinus Beardleyi</i> .....	329	77			

Pinus Sab  
Pinus sero  
Pinus Sha  
Pinus Sitch  
Pinus Stro  
Pinus Tiet  
Pinus Tod  
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Pitch Pine  
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Plum, Can  
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Plum, Pig  
Plum, Wil  
Poison W  
POLYGONA  
Pond Pine  
Poplar, Ba  
Poplar, Ca  
Poplar, D  
Poplar, Ne  
Poplar, Ye  
Populus ar  
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Populus la  
Populus m



Name.	No.	Page.	Name.	No.	Page.
<i>Pinus Sabiana</i> .....	333	78	<i>Populus Marylandica</i> .....	267	60
<i>Pinus serotina</i> .....	334	78	<i>Populus monilifera</i> .....	267	60
<i>Pinus Shasta</i> .....	319	74	<i>Populus monilifera</i> ( <i>Populus Fremontii</i> ) .....	264	59
<i>Pinus Sitchensis</i> .....	303	71	<i>Populus monilifera</i> ( <i>Populus Fremontii</i> , var. <i>Wislizeni</i> ) .....	264	59
<i>Pinus Strobus</i> .....	335	78	<i>Populus nigra</i> .....	263	59
<i>Pinus Teda</i> .....	336	79	<i>Populus Ontarioensis</i> .....	263	59
<i>Pinus Teda</i> , var. <i>alopeuroidea</i> .....	334	78	<i>Populus tremuloides</i> .....	263	60
<i>Pinus tuberculata</i> .....	337	79	<i>Populus trichocarpa</i> .....	269	60
<i>Pinus tuberculata</i> ( <i>Pinus insignis</i> ) .....	322	75	<i>Porlieria angustifolia</i> .....	17	7
<i>Pinus variabilis</i> .....	324	76	<i>Post Oak</i> .....	235	51
<i>Pinus venusta</i> .....	291	66	<i>Post Oak, Swamp</i> .....	226	49
<i>Pirus Americana</i> .....	85	21	<i>Prickly Ash</i> .....	19	7
<i>Pirus angustifolia</i> .....	83	21	<i>Pritchardia filamentosa</i> .....	339	79
<i>Pirus coronaria</i> .....	87	21	<i>Prosopis juliflora</i> .....	72	18
<i>Pirus rivularis</i> .....	88	21	<i>Prosopis pubescens</i> .....	73	18
<i>Pirus sambucifolia</i> .....	89	21	<i>Prunus Americana</i> .....	76	19
<i>Piscidia Erythrina</i> .....	61	15	<i>Prunus Capotini</i> .....	81	20
<i>Pistacia Mexicana</i> .....	57	15	<i>Prunus Caroliniana</i> .....	77	19
<i>Pitch Pine</i> .....	332	78	<i>Prunus Chicasa</i> .....	78	19
<i>Pithecolobium Guadalupense</i> .....	75	18	<i>Prunus emarginata</i> .....	79	19
<i>Pithecolobium Unguis-Cati</i> .....	75	18	<i>Prunus emarginata</i> , var. <i>mollis</i> .....	79	19
<i>Pittonia similis</i> .....	162	35	<i>Prunus mollis</i> .....	79	19
<i>Plane Tree, American</i> .....	191	41	<i>Prunus Pennsylvanica</i> .....	80	19
<i>Planer Tree</i> .....	181	40	<i>Prunus serotina</i> .....	81	20
<i>Planera aquatica</i> .....	181	40	<i>Prunus umbellata</i> .....	82	20
<i>Planera Gmelini</i> .....	181	40	<i>Pseudotsuga Douglasii</i> .....	298	68
<i>Planera ulmifolia</i> .....	181	40	<i>Pseudotsuga Douglasii</i> .....	298	68
PLATANACEÆ .....	41		<i>Pseudotsuga Douglasii</i> , var. <i>macrocarpa</i> .....	298	69
<i>Platanus occidentalis</i> .....	191	41			
<i>Platanus racemosa</i> .....	192	42	Q.		
<i>Platanus Wrightii</i> .....	193	42	<i>Quaking Asp</i> .....	268	60
<i>Plum, Canada</i> .....	76	19	<i>Quercus acutidens</i> .....	216	47
<i>Plum, Chickasaw</i> .....	78	19	<i>Quercus agrifolia</i> .....	206	45
<i>Plum, Hog</i> .....	25	9	<i>Quercus alba</i> .....	207	45
<i>Plum, Mountain</i> .....	25	9	<i>Quercus aquatica</i> .....	208	45
<i>Plum, Pigeon</i> .....	168	36	<i>Quercus aquatica</i> , var. <i>myrtifolia</i> .....	239	53
<i>Plum, Wild</i> .....	76	19	<i>Quercus aquatica</i> , var. <i>heterophylla</i> .....	220	48
<i>Poison Wood</i> .....	174	38	<i>Quercus aquatica</i> , var. <i>laurifolia</i> .....	224	49
POLYGONACEÆ .....	36		<i>Quercus Banisteri</i> .....	239	53
<i>Pond Pine</i> .....	334	78	<i>Quercus berberidifolia</i> .....	216	47
<i>Poplar, Balsam</i> .....	263	59	<i>Quercus bicolor</i> .....	209	46
<i>Poplar, Carolina</i> .....	257	50	<i>Quercus bicolor</i> , var. <i>Michauxii</i> .....	209	46
<i>Poplar, Downy</i> .....	266	59	<i>Quercus Breweri</i> .....	239	53
<i>Poplar, Necklace</i> .....	267	60	<i>Quercus castanea</i> .....	228	50
<i>Poplar, Yellow</i> .....	8	5	<i>Quercus Catesbaei</i> .....	210	46
<i>Populus angulata</i> .....	267	60	<i>Quercus Chinquapin</i> .....	239	53
<i>Populus angulosa</i> .....	267	60	<i>Quercus chrysolepis</i> .....	212	46
<i>Populus angustifolia</i> .....	262	58	<i>Quercus chrysolepis</i> , var. <i>vacciniifolia</i> .....	212	46
<i>Populus argentea</i> .....	266	59	<i>Quercus cinerea</i> .....	211	46
<i>Populus balsamifera</i> .....	263	59	<i>Quercus cinerea</i> , var. <i>pumila</i> .....	239	53
<i>Populus balsamifera</i> , var. <i>caudicans</i> .....	263	59	<i>Quercus coccinea</i> .....	213	47
<i>Populus balsamifera</i> , var. <i>γ</i> .....	269	60	<i>Quercus coccinea</i> , var. <i>tinctoria</i> .....	236	51
<i>Populus balsamifera</i> , var. <i>angustifolia</i> .....	262	58	<i>Quercus confertifolia</i> .....	221	48
<i>Populus balsamifera</i> , var. <i>Californiaca</i> .....	269	60	<i>Quercus crassipocula</i> .....	212	46
<i>Populus Canadensis</i> .....	267	60	<i>Quercus densiflora</i> .....	214	47
<i>Populus Canadensis</i> , var. <i>angustifolia</i> .....	262	58	<i>Quercus discolor</i> , var. <i>foliata</i> .....	218	48
<i>Populus candicans</i> .....	263	59	<i>Quercus Douglasii</i> .....	215	47
<i>Populus Fremontii</i> .....	264	59	<i>Quercus Drummondii</i> .....	237	52
<i>Populus Fremontii</i> , var. <i>Wislizeni</i> .....	264	59	<i>Quercus dumosa</i> .....	216	47
<i>Populus glandulosa</i> .....	267	60	<i>Quercus Durandii</i> .....	235	51
<i>Populus grandidentata</i> .....	265	59	<i>Quercus echinacea</i> .....	214	47
<i>Populus heterophylla</i> .....	266	59	<i>Quercus elongata</i> .....	218	48
<i>Populus heterophylla</i> , var. <i>argentea</i> .....	266	59			
<i>Populus lavigata</i> .....	267	60			
<i>Populus macrophylla</i> .....	263	59			



Name.	No.	Page.	Name.	No.	Page.
<i>Quercus Emoryi</i> .....	217	47	<i>Quercus scarpervirens</i> .....	238	52
<i>Quercus falcata</i> .....	218	48	<i>Quercus sericea</i> .....	239	53
<i>Quercus falcata</i> , var. <i>triloba</i> .....	218	48	<i>Quercus Sonomensis</i> .....	233	49
<i>Quercus ferruginea</i> .....	229	50	<i>Quercus stellata</i> .....	235	51
<i>Quercus ferruscens</i> .....	212	46	<i>Quercus tinctoria</i> .....	236	51
<i>Quercus Gambellii</i> .....	237	52	<i>Quercus tinctoria</i> , var. <i>Californica</i> .....	223	49
<i>Quercus Garryana</i> .....	219	48	<i>Quercus triloba</i> .....	218	48
<i>Quercus Georgiana</i> .....	239	53	<i>Quercus undulata</i> .....	237	52
<i>Quercus grisea</i> .....	237	52	<i>Quercus undulata</i> , var. <i>breviloba</i> .....	237	52
<i>Quercus hastata</i> .....	217	47	<i>Quercus undulata</i> , var. <i>Gambellii</i> .....	237	52
<i>Quercus heterophylla</i> .....	220	48	<i>Quercus undulata</i> , var. <i>grisea</i> .....	237	52
<i>Quercus Hindii</i> .....	225	49	<i>Quercus undulata</i> , var. <i>Jamesii</i> .....	237	52
<i>Quercus hypoleuca</i> .....	221	48	<i>Quercus undulata</i> , var. <i>oblongata</i> .....	237	52
<i>Quercus ilicifolia</i> .....	239	53	<i>Quercus undulata</i> , var. <i>pungens</i> .....	237	52
<i>Quercus imbricaria</i> .....	222	48	<i>Quercus undulata</i> , var. <i>Wrightii</i> .....	237	52
<i>Quercus Kelloggii</i> .....	223	49	<i>Quercus raccinifolia</i> .....	212	46
<i>Quercus laurifolia</i> .....	224	49	<i>Quercus velutina</i> .....	236	51
<i>Quercus lobata</i> .....	225	49	<i>Quercus virens</i> .....	238	52
<i>Quercus lobata</i> , var. <i>fruticosa</i> .....	239	53	<i>Quercus virens</i> , var. <i>dentata</i> .....	238	52
<i>Quercus lyrata</i> .....	226	49	<i>Quercus virens</i> , var. <i>maritima</i> .....	238	52
<i>Quercus macrocarpa</i> .....	227	49	<i>Quercus Wislizeni</i> .....	239	52
<i>Quercus macrocarpa</i> , var. <i>olivaceiformis</i> .....	227	49	<i>Quercus Wislizeni</i> , var. <i>frutescens</i> .....	239	53
<i>Quercus maritima</i> .....	238	52			
<i>Quercus Michauxii</i> .....	209	46	R.		
<i>Quercus montana</i> .....	233	51	<i>Rapanea Guyanensis</i> .....	132	29
<i>Quercus Morehus</i> .....	239	52	Red Bay .....	170	37
<i>Quercus Muhlenbergii</i> .....	228	50	Red Birch .....	249	56
<i>Quercus myrtifolia</i> .....	229	53	Red Bud ( <i>Cercis Canadensis</i> ) .....	70	17
<i>Quercus Nevi</i> .....	219	48	Red Bud ( <i>Cercis occidentalis</i> ) .....	71	17
<i>Quercus nigra</i> .....	229	50	Red Cedar .....	277	62
<i>Quercus nigra</i> ( <i>Quercus tinctoria</i> ) .....	236	51	Red Elm .....	179	39
<i>Quercus nigra</i> , var. <i>quingueloba</i> .....	229	50	Red Fir .....	295	67
<i>Quercus oblongifolia</i> .....	230	50	Red Maple .....	51	13
<i>Quercus oblongifolia</i> ( <i>Quercus undulata</i> , var. <i>oblongata</i> ) .....	237	52	Red Mulberry .....	189	41
<i>Quercus obtusiloba</i> .....	235	51	Red Oak .....	234	51
<i>Quercus obtusiloba</i> , var. <i>breviloba</i> .....	237	52	Red Pine .....	331	77
<i>Quercus oleanoides</i> .....	238	52	Red Wood ( <i>Ceanothus spinosus</i> ) .....	36	11
<i>Quercus olivaceiformis</i> .....	227	49	Red Wood ( <i>Sequoia scarpervirens</i> ) .....	289	66
<i>Quercus palustris</i> .....	231	50	RHAMNACEÆ .....	10	
<i>Quercus Phellos</i> .....	232	50	<i>Rhamnus Caroliniana</i> .....	34	10
<i>Quercus Phellos</i> , var. <i>arenaria</i> .....	239	53	<i>Rhamnus obtusifolius</i> .....	32	10
<i>Quercus Phellos</i> , var. <i>eineca</i> .....	211	46	<i>Rhamnus Purshiana</i> .....	35	11
<i>Quercus Phellos</i> × <i>coccinea</i> .....	220	48	<i>Rhizophora Mangle</i> .....	107	25
<i>Quercus Phellos</i> , var. <i>laurifolia</i> .....	224	49	RHIZOPHORACEÆ .....	25	
<i>Quercus Phellos</i> , var. <i>pumila</i> .....	239	53	<i>Rhododendron maximum</i> .....	131	29
<i>Quercus Phellos</i> , var. <i>sericea</i> .....	239	53	<i>Rhus Metopium</i> .....	55	14
<i>Quercus prinoides</i> .....	239	53	<i>Rhus typhina</i> .....	56	14
<i>Quercus Prinus</i> .....	233	51	River Birch .....	249	56
<i>Quercus Prinus</i> , var. <i>acuminata</i> .....	228	50	<i>Robinia Pseudacacia</i> .....	58	15
<i>Quercus Prinus Chiquapin</i> .....	239	53	<i>Robinia viscosa</i> .....	59	15
<i>Quercus Prinus</i> , var. <i>discolor</i> .....	209	46	Rock Chestnut Oak .....	233	51
<i>Quercus Prinus</i> , var. <i>monticola</i> .....	233	51	Rock Elm .....	180	39
<i>Quercus Prinus pelustris</i> .....	209	46	Rock Maple .....	52	13
<i>Quercus Prinus pumila</i> .....	239	53	Rocky Mountain Scrub Oak .....	237	52
<i>Quercus Prinus</i> , var. <i>tomentosa</i> .....	209	46	ROSACEÆ .....	19	
<i>Quercus pumila</i> .....	239	53	Rose Bay .....	131	29
<i>Quercus pumila</i> , var. <i>sericea</i> .....	239	53	Rosemary Pine .....	336	79
<i>Quercus pungens</i> .....	237	52	RUBIACEÆ .....	28	
<i>Quercus quingueloba</i> .....	229	50	RUTACEÆ .....	7	
<i>Quercus Ransomi</i> .....	225	49			
<i>Quercus reticulata</i> .....	239	53	S.		
<i>Quercus retusa</i> .....	238	52	<i>Sabal Palmetto</i> .....	338	79
<i>Quercus rubra</i> .....	234	51	SALICACEÆ .....	57	
<i>Quercus rubra</i> ( <i>Quercus Kelloggii</i> ) .....	223	49	<i>Salix ambigua</i> .....	261	58
<i>Quercus San Sabana</i> .....	237	52			

Salix  
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Name.	No.	Page.	Name.	No.	Page.
<i>Salix angustata</i> .....	257	57	<i>Sideroxylon pallidum</i> .....	136	30
<i>Salix arguta</i> .....	259	58	Silver Maple .....	47	12
<i>Salix arguta</i> , var. <i>lasiandra</i> .....	259	58	Silver-bell Tree .....	147	32
<i>Salix Caroliniana</i> .....	261	58	SIMARUBEÆ .....	8	8
<i>Salix cordata</i> .....	257	57	Simarubra glauca .....	21	8
<i>Salix cordata</i> , var. <i>angustata</i> .....	257	57	Single Spruce .....	302	70
<i>Salix cordata</i> , var. <i>rigida</i> .....	257	57	Slash Pine .....	336	79
<i>Salix falcata</i> .....	261	58	Slippery Elm .....	179	39
<i>Salix Fendleriana</i> .....	259	58	Small-leaved Elm .....	176	38
<i>Salix Hoffmanniana</i> .....	259	58	Snow-drop Tree .....	147	32
<i>Salix Houstoniana</i> .....	261	58	Soap Berry ( <i>Sapindus marginatus</i> ) .....	42	12
<i>Salix levigata</i> .....	258	57	Soap Berry ( <i>Sapindus Saponaria</i> ) .....	43	12
<i>Salix lanceifolia</i> .....	259	58	<i>Sophora affinis</i> .....	63	16
<i>Salix lasiandra</i> .....	259	58	<i>Sophora secundiflora</i> .....	64	16
<i>Salix lasiandra</i> , var. <i>Fendleriana</i> .....	259	58	<i>Sophora speciosa</i> .....	64	16
<i>Salix lasiandra</i> , var. <i>lanceifolia</i> .....	259	58	<i>Sorbus Americana</i> .....	85	21
<i>Salix lucida</i> .....	260	58	<i>Sorbus sambucifolia</i> .....	89	21
<i>Salix lucida</i> , var. <i>macrophylla</i> .....	259	58	Sorrel Wood .....	129	29
<i>Salix nigra</i> .....	261	58	Sour Gum .....	119	27
<i>Salix nigra</i> , var. <i>falcata</i> .....	261	58	Sour Tupelo .....	117	26
<i>Salix pentandra</i> , var. <i>caudata</i> .....	259	58	Sour Wood .....	129	29
<i>Salix Purshiana</i> .....	261	58	Southern Buckthorn .....	140	31
<i>Salix rigida</i> .....	257	57	Southern Pine .....	311	72
<i>Salix speciosa</i> .....	259	58	Spanish Oak .....	218	48
<i>Salix Torreyana</i> .....	257	57	Spanish Oak, Swamp .....	231	50
<i>Samara floribunda</i> .....	132	29	Speckled Alder .....	252	56
<i>Sambucus glauca</i> .....	122	27	Spice Tree .....	172	37
SAPINDACEÆ .....	11		Spoon Wood .....	130	29
<i>Sapindus marginatus</i> .....	42	12	Spruce, Douglas .....	298	68
<i>Sapindus Saponaria</i> .....	43	12	Spruce Pine ( <i>Pinus glabra</i> ) .....	320	75
SAPOTACEÆ .....	30		Spruce Pine ( <i>Pinus mitis</i> ) .....	324	76
<i>Sassafras</i> .....	171	37	Spruce, Single .....	302	70
<i>Sassafras officinale</i> .....	171	37	Spruce, White .....	302	70
Satin Wood .....	18	7	Staghorn Sumach .....	56	14
Savin .....	277	62	Stinking Cedar .....	271	61
Scarlet Oak .....	213	47	Striped Dogwood .....	50	13
Scarlet-fruited Thorn .....	94	22	Striped Maple .....	50	13
<i>Schafferia bracteata</i> .....	31	10	<i>Strombocarpa pubescens</i> .....	73	18
<i>Schafferia completa</i> .....	31	10	<i>Styphnotobium affine</i> .....	63	16
<i>Schafferia frutescens</i> .....	31	10	STYRACACEÆ .....	32	
<i>Schafferia lateriflora</i> .....	173	38	Sugar Berry .....	184	40
<i>Schoepfia arborescens</i> .....	26	9	Sugar Maple .....	52	13
<i>Schubertia sempervirens</i> .....	289	66	Sugar Maple, Black .....	52	80
Screw Bean .....	73	18	Sugar Pine .....	323	75
Screw-pod Mesquit .....	73	18	Sumach, Coral .....	55	14
Scrub Oak .....	210	46	Sumach, Staghorn .....	56	14
Scrub Oak, Rocky Mountain .....	237	52	Summer Haw .....	98	23
Scrub Pine ( <i>Pinus Banksiana</i> ) .....	313	73	Swamp Hickory .....	199	43
Scrub Pine ( <i>Pinus inops</i> ) .....	321	75	Swamp Maple .....	51	13
Sea Grape .....	169	37	Swamp Pine .....	336	79
Sea-side Alder .....	253	57	Swamp Post Oak .....	226	49
Sebastiania lucida .....	174	38	Swamp Spanish Oak .....	231	50
Sequoia gigantea .....	288	65	Swamp White Oak .....	209	46
Sequoia sempervirens .....	289	66	Sweet Bay .....	4	4
<i>Sequoia Wellingtoniana</i> .....	288	65	Sweet Birch .....	247	55
Service Tree .....	105	24	Sweet Buckeye .....	39	11
Shad Bush .....	105	24	Sweet Gum .....	106	24
Shag-bark Hickory .....	198	43	Sweet Leaf .....	145	32
Sheep Berry .....	123	27	Swietenia Mahogany .....	24	8
Shell-bark Hickory .....	198	43	Sycamore .....	191	41
Shell-bark Hickory, Thick .....	203	44	Symplocos tinctoria .....	145	32
Shell-bark Hickory, Western .....	203	44			
Shingle Oak .....	222	48			
Shining Willow .....	260	58			
Short-leaved Pine .....	324	76			
<i>Sideroxylon mastichodendron</i> .....	136	30			

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Table Mountain Pine .....

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Name.	No.	Page.	Name.	No.	Page.
Tamarack ( <i>Larix Americana</i> ) .....	307	71	<i>Ulmus Florida</i> .....	177	39
Tamarack ( <i>Pinus contorta</i> , var. <i>Murrayana</i> ) .....	315	73	<i>Ulmus fulva</i> .....	179	39
TAXACEÆ .....	61		<i>Ulmus opaca</i> .....	178	39
<i>Taxodium distichum</i> .....	287	65	<i>Ulmus pumila</i> .....	176	39
<i>Taxodium giganteum</i> .....	288	65	<i>Ulmus racemosa</i> .....	180	39
<i>Taxodium sempervirens</i> .....	289	66	<i>Ulmus rubra</i> .....	179	39
<i>Taxodium Washingtonianum</i> .....	288	65	Umbellularia Californica .....	172	37
<i>Taxus baccata</i> .....	272	61	Umbrella Tree .....	7	5
<i>Taxus baccata</i> , var. <i>Canadensis</i> .....	273	61	Ungnadia speciosa .....	41	12
<i>Taxus Bourseri</i> .....	272	61	Upland Willow Oak .....	211	46
<i>Taxus brevifolia</i> .....	273	61	URTICACEÆ .....	38	
<i>Taxus Canadensis</i> .....	273	61	<i>Urtica triloba</i> .....	10	5
<i>Taxus Florida</i> .....	273	61	V. ....		
<i>Taxus Lindleyana</i> .....	272	61	VERBENACEÆ .....	36	
TERNSTREMIACEÆ .....	6		<i>Viburnum Lentago</i> .....	123	27
<i>Tetranthera Californica</i> .....	172	37	<i>Viburnum prunifolium</i> .....	124	28
Thick Shell-bark Hickory .....	203	44	Vine Maple .....	46	12
Thorn, Black .....	102	23	<i>Virgilia lutea</i> .....	62	16
Thorn, Cockspur .....	96	22	W. ....		
Thorn, Pear .....	102	23	Walnut, Black .....	196	43
Thorn, Scarlet-fruited .....	94	22	Walnut, White .....	195	42
Thorn, Washington .....	95	22	Washington Thorn .....	95	22
Three-thorned Acacia .....	67	17	<i>Washingtonia Californica</i> .....	288	65
<i>Thrinax parviflora</i> .....	340	80	<i>Washingtonia filifera</i> .....	339	79
<i>Thuja Craigiana</i> .....	286	65	Water Ash .....	153	33
<i>Thuja excelsa</i> .....	282	64	Water Beech .....	245	54
<i>Thuja gigantea</i> .....	284	64	Water Hickory .....	200	44
<i>Thuja gigantea</i> ( <i>Libocedrus decurrens</i> ) .....	286	65	Water Locust .....	63	17
<i>Thuja Menziesii</i> .....	284	64	Water Oak .....	208	45
<i>Thuja occidentalis</i> .....	285	64	Water White Oak .....	226	49
<i>Thuja plicata</i> .....	284	64	<i>Wellingtonia gigantea</i> .....	288	65
<i>Thuja spheroidalis</i> .....	283	64	West Indian Birch .....	22	8
<i>Thuyopsis borealis</i> .....	282	64	Western Arbor Vitæ .....	284	64
<i>Thuyopsis Tchugatskoy</i> .....	282	64	Western Catalpa .....	165	36
<i>Tilia alba</i> .....	15	7	Western Shell-bark Hickory .....	203	44
<i>Tilia Americana</i> .....	14	6	Weymouth Pine .....	335	72
<i>Tilia Americana</i> , var. <i>pubescens</i> .....	14	6	Whahoo .....	176	38
<i>Tilia heterophylla</i> .....	15	7	White Ash .....	148	32
<i>Tilia laxiflora</i> .....	15	7	White Bass Wood .....	15	7
<i>Tilia pubescens</i> .....	14	6	White Bay .....	4	4
TILIACEÆ .....	6		White Birch ( <i>Betula alba</i> , var. <i>populifolia</i> ) .....	246	55
Tollon .....	104	24	White Birch ( <i>Betula papyracea</i> ) .....	251	56
Toothache Tree .....	19	7	White Cedar ( <i>Chamaecyparis Lawsoniana</i> ) .....	281	63
Torch Wood .....	23	8	White Cedar ( <i>Chamaecyparis sphaeroides</i> ) .....	283	64
Tornilla .....	73	18	White Cedar ( <i>Libocedrus decurrens</i> ) .....	286	65
<i>Torreya Californica</i> .....	270	61	White Cedar ( <i>Thuja occidentalis</i> ) .....	285	64
<i>Torreya Myrsinica</i> .....	270	61	White Cypress .....	287	65
<i>Torreya taxifolia</i> .....	271	61	White Elm .....	177	39
Toyon .....	104	24	White Fir .....	292	67
<i>Tsuga Canadensis</i> .....	299	63	White Hickory .....	199	43
<i>Tsuga Douglasii</i> .....	298	63	White Mangrove ( <i>Avicennia nitida</i> ) .....	167	36
<i>Tsuga Mertensiana</i> .....	300	63	White Mangrove ( <i>Laguncularia racemosa</i> ) .....	109	25
<i>Tsuga Pattoniana</i> .....	301	63	White Maple .....	47	12
Tulip Tree .....	8	5	White Oak .....	207	45
Tupelo .....	119	27	White Oak, Evergreen .....	230	50
Tupelo, Large .....	121	27	White Oak, Mossy-cup .....	227	49
Tupelo, Sour .....	117	26	White Oak, Mountain .....	215	47
Turkey Oak .....	210	46	White Oak, Swamp .....	209	46
U. ....					
<i>Ulmus alata</i> .....	176	38			
<i>Ulmus Americana</i> .....	177	39			
<i>Ulmus crassifolia</i> .....	178	39			

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Name.	No.	Page.	Name.	No.	Page.
White Oak, Water.....	226	49	Xanthoxylum Clava-Herculis .....	19	7
White Pine (Pinus flexilis).....	319	74	Xanthoxylum Floridanum .....	18	7
White Pine (Pinus Strobus).....	335	78	Xanthoxylum Pterota.....	20	8
White Spruce .....	302	70	Ximenia Americana.....	25	9
White Walnut .....	195	42			
White Wood (Liriodendron Tulpi- fera).....	8	5	Y.		
White Wood (Tilia Americana).....	14	6	Yellow Birch .....	248	55
White-heart Hickory .....	204	44	Yellow Pine (Pinus australis) .....	311	72
Wild Black Cherry .....	81	20	Yellow Pine (Pinus mitis).....	324	76
Wild Plum .....	76	19	Yellow Pine (Pinus ponderosa).....	329	77
Wild Red Cherry .....	80	19	Yellow Poplar .....	8	5
Willow, Desert .....	166	36	Yellow Wood .....	62	16
Willow Oak .....	232	50	Yellow-barked Oak .....	236	51
Willow Oak, Upland.....	211	46	Yucca brevifolia .....	341	80
Willow, Shining.....	260	58	Yucca Draconis, var. arborescens.....	341	80
Winged Elm.....	176	38	Yucca Treculiana.....	342	80
X.			Z.		
Xanthoxylum Caribaeum .....	18	7	Zizyphus obtusifolius .....	32	10
Xanthoxylum Carolinianum.....	19	7	ZYGOPHYLLACEÆ.....	...	7

