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THE NATIVE TREES OF FLORIDA

University of Florida Agricultural Extension Service

INTERIOR OF A BALD-CYPRESS SWAMP

THE NATIVE TREES OF FLORIDA

By

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and

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To the Nature Lovers of Florida

FOREWORD

FLORIDA is rich in its tree flora—a flora not surpassed by that of any other area in the continental United States. In any list of the state's natural resources, trees would rank with the most important. Two trees in particular have had much to do with the development of the state: the pine, a native tree; and the orange, an exotic one. Both have attracted people to the state, both have been and still are sources of great wealth. In primeval days forests covered much of the state and they still do, though their nature has changed. For the most part virgin stands of pine have gone but younger generations of trees have replaced them. Lumbering operations too have changed, as have the uses to which forest products are put. There is also renewed interest in growing trees, for it is realized that in a large way the welfare of Florida is interwoven with them. Reforestation, both natural and by the hand of man, and the protection of forests are receiving a much larger share of attention. Understanding and appreciation of the value of trees and their place in the economic life of the state have increased greatly.

In Florida it is difficult to separate financial and aesthetic values because the two in many ways are interlocked. Much of the peculiar charm of Florida's landscapes is due to trees whose beauty cannot be valued in dollars and cents. They give height to the hills; they fill in the hollows; they clothe the level stretches. For many parts of the state the best shade trees are natives; and the beauty of many streets and the comfort of many homes are enhanced by their presence. Into gardens have gone many such natives as silver bell, dogwood, redbud, holly, and plum. Here and there the State Road Department has developed park-like strips along Florida highways by widening the right-of-way and taking advantage of native trees already in place. This treatment has added greatly to the beauty of the highways.

In the state's tree flora there are four main elements: a northern one represented by sweet gum, red maple, and tulip tree; a widely distributed southern one represented by longleaf pine, magnolia, and cypress; a Caribbean one of which royal palm, mahogany, and gumbo-limbo are a part; and an endemic one of which Florida yew, dune holly, and Florida hickory are examples. The total number of species (kinds) is approximately 314 (the exact number depending on the classification followed), and this total comprises nearly half of all the trees in continental North America north of Mexico.

This book by two members of the staff of the University of Florida Agricultural Experiment Station, Mr. Erdman West, Botanist, and Miss Lillian E. Arnold, Assistant Botanist, is limited in its scope to native trees. Into it has gone a great deal of field work, years of collecting, and much study. Their work with Florida trees antedates the actual preparation of the manuscript which was begun in 1935. It has been written in the hope that by increasing knowledge of our trees it will further increase public interest in Florida's peculiar and unrivalled tree life. The fine drawings from which the illustrations have been made were prepared, under the supervision of the authors, by Robert K. Turner, a student in the School of Architecture of the University of Florida.

Florida without her native trees would be poor indeed.

H. HAROLD HUME

Provost for Agriculture,
University of Florida
February, 1946

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INTRODUCTION

Definition of a Tree

In defining the term "tree," it is necessary to draw a distinction between trees and shrubs, which is often a difficult task. Many plants attain tree stature only in rare instances, but these occurrences entitle them to be placed in the "tree" category. The most satisfactory definition, and the one most frequently followed, is that of G. B. Sudworth (1927):

> Difference of opinion regarding this mooted question has, as the case may be, increased or decreased the number of recorded arborescent species and varieties. Judgment as to when a plant is to be called a tree and when a shrub appears to be based chiefly on the size, height and diameter attained . . . . The general rule applied by the author in defining a tree includes woody plants having one well-defined stem and a more or less definitely formed crown, and attaining a height of at least eight feet and a diameter of not less than two inches. Most truly arborescent plants produce a single erect or ascending trunk. Some species of trees, however, have the habit of producing several trunks from the same root. Examples of this type of growth are to be found among the willows, some of which, on account of their size, obviously are properly classed as trees.

More technically, woody plants may be said to differ from herbaceous plants in being perennial and in possessing vascular or specialized conducting tissue, a trunk, lignification, and secondary thickening. These characteristics must be considered as a whole, as no one condition holds true singly of a tree. All of the plants treated as trees herein fulfill the above requirements at some place within their Florida range, although some usually occur as shrubs.

The Names of Trees

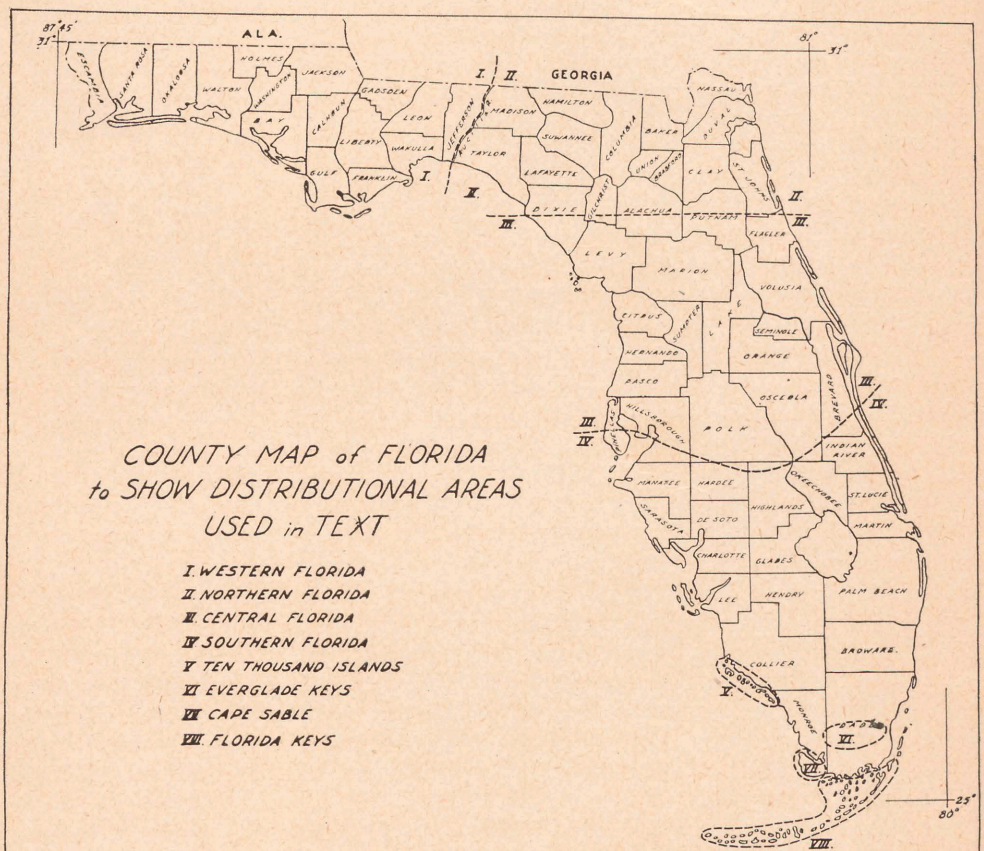
Every known kind of tree has a technical (or scientific, or botanical) name, and many trees have one or more common names as well. The technical name, which in this book occupies the top line of each description, was established under fixed rules designed to make one name refer universally to one particular kind of tree. This technical name is in Latin or Latinized terms and consists of two words: the first a capitalized noun which gives the name of the genus (group) to which the tree belongs; the second an adjective or adjective-like noun that designates the particular kind of tree within the genus. The initials, name, or names that follow the technical name are those of the person or persons who established the name for this particular kind of tree. The names used are those adopted under the rules of the International Code of Nomenclature.*

The common name of a tree is often unreliable because the same name may be applied to several other plants, or the same plant may have several other

*The technical names adopted by Small (1933) in his *Manual of the Flora of the Southeastern States* were in the past those fixed by the American Code of Nomenclature. When his names differ from those of the International Code, they are usually cited in italics in the Index, and as footnotes to the descriptions of species to which they apply.

common names, even within the limits of a single state. Trees having a wide distribution are often unfortunate in this respect. Recently the United States Forest Service has attempted to standardize the common names of all North American trees so that, except for strictly technical purposes, they may supplant the unfamiliar botanical names without loss of accuracy. These standardized common names are coming into considerable usage, particularly in the numerous government publications.

In this book the common name or names of each tree are given in the second line of its description. The first is the preferred name, and since it is intended to distinguish this particular tree from all others in the United States, there is frequent use of the words *Florida, Southern, Atlantic,* etc., to distinguish these names from those of similar trees that occur in other regions. A hyphen included in the name indicates that the noun of the common name (cedar, cypress, etc.) does not correspond to the equivalent technical genus name. The other common names that may follow the preferred common name are in considerable use in various regions of Florida.



Factors Affecting Distribution

The flora of Florida is one of the richest in species to be found in any state in the Union, and in the number of its native trees, over 300, the state

ranks very high. Distribution of the various species is an interesting study, but until all counties have been carefully explored botanically, our knowledge of the exact range of many species will remain incomplete. Distribution indicated for each species is based upon actual specimens as far as possible, supplemented by all available reports which seem reliable. Future studies will undoubtedly bring to light many necessary changes in these records. Additional data for any of these species will be welcomed by the authors.

The trees of Florida may be roughly divided into three groups according to geographical origin. One of these groups, found in northern and western Florida, includes species widespread in the more northern sections of the United States. At the southern end of the peninsula there are many trees of tropical origin which are related to the great West Indian flora. The intermediate region is largely populated with Coastal Plain species which gradually merge with the species in the neighboring regions.

Climate also is an important factor. Although Florida has a latitudinal extension of over six degrees with corresponding temperature ranges, the climate of the peninsula is modified by the proximity of the Gulf Stream and the Gulf of Mexico. As a result, rainfall is abundant. Data collected over thirty-five years show an average annual rainfall of 52.29 inches for the state, over half of which falls in the daytime in the four warmest months.

The character of a local flora is greatly influenced by slight changes in topography and variations in soil types. Notwithstanding the fact that Florida lies entirely in the Coastal Plain, and that the topography is flat, the soils, although derived from similar and local parent materials, are varied and intermingled. Therefore, soils have such a direct bearing upon the vegetation that the tree flora is often an excellent indicator of soil type.

The interplay of all these factors—origin, climate, and soil—shows a profound effect upon vegetation. Innumerable combinations or variations offer as many possibilities for types of vegetation, but certain combinations occur often enough or over sufficiently large areas to be readily recognized. The degree to which a species is sensitive to these variations of one or more factors determines whether its distribution is limited to a few special areas or covers a wide territory.

Areas of Distribution

The map on the opposite page indicates the limits of the more extensive areas of distribution, referred to in this publication as follows: western Florida—the area west of the Aucilla River; northern Florida—the area east of the Aucilla River and north of a line drawn through Cross City, Gainesville, and Palatka; central Florida—the area south of the above-mentioned line and north of a line drawn through Tampa, Avon Park, and Melbourne; southern Florida—the area south of the last-mentioned line, excluding the Florida Keys, Cape Sable, the Ten Thousand Islands, and the Everglade Keys, a curved series of limestone islands which extends about fifty miles from the Miami River southwest into the Everglades.

Certain smaller and more uniform areas of distribution are termed habitats. As some of these are important in relation to tree distribution, they are defined hereafter. HIGH PINELAND is self-descriptive of land bearing longleaf pines and its associates or successors—turkey and bluejack oaks. Water never stands on this type of habitat. FLATWOODS are pinelands which have such

poor drainage that water stands on them during the summer months, and which bear a characteristic flora composed of slash pine, saw-palmetto and certain sedges, grasses and herbaceous plants. At other times they are extremely dry. PRAIRIES, which occur mostly in the peninsula, are flat, more or less extensive, and damp to inundated treeless areas. MARSHES are wet prairies and support no trees. SWAMPS are areas covered with trees, such as tupelo and bald-cypress, which are inundated during long periods of the year by floods and summer rains, and which are usually associated with streams or lakes. SAND-DUNES comprise large areas occurring as actively shifting heaps of sand along the coast and as stationary hills in the interior. The latter areas are usually referred to as SCRUB. HAMMOCKS are areas of broad-leaved evergreen trees, such as magnolias, bays, and live oaks. They are usually surrounded by flatwoods, high pinelands, or prairies, and exhibit varying degrees of moisture. The term itself is probably of Indian origin.

ACKNOWLEDGMENTS

The authors gratefully acknowledge their indebtedness to the many sources of information drawn upon in the preparation of this publication. A list of the more important articles and books consulted is given in the List of References (see pages 203-204). We are especially indebted to three of our colleagues at the University of Florida: Dean H. Harold Hume, Provost for Agriculture, for his interest in and encouragement of the project; Director Harold Mowry, of the Agricultural Experiment Station, for constructive criticism of the manuscript; and Professor W. B. Tisdale, Head of the Department of Botany and Plant Pathology, for his continued support. Mr. Robert K. Turner made all of the line drawings with the exception of about a dozen. We are grateful to the Agricultural Experiment Station for providing funds for the preparation and printing of the illustrations. Photographic plates of the palms are reproduced through the courtesy of Director Harold Mowry from *Native and Exotic Palms of Florida,* Bulletin 84, Florida Agricultural Extension Service, June, 1936. To the many individuals who have assisted us by answering apparently casual questions, we are likewise grateful.

ERDMAN WEST
LILLIAN E. ARNOLD

Gainesville, Florida
February 1, 1946

HOW TO USE THE KEY

WARNING: The trees illustrated on pages 110, 112, and 114 are poisonous, and severe irritations of the skin may follow contact with them. Look at the drawings and descriptions to make sure you are not dealing with one of these plants before proceeding further.

SPECIMENS: Before beginning to use the Key, be sure that you have as many characters of the tree in question as it is possible to obtain. Leaves on twigs, flowers, and fruits should all be obtained if possible. Fresh leaves and twigs are necessary to determine whether the sap is milky or watery and whether the foliage is aromatic when crushed.

THE KEY: At the beginning there are three choices. If the leaves of your specimen are needle-, scale- or awl-shaped, turn to number 1 on the left hand margin; if the leaves are large, fan- or feather-shaped, turn directly to Palmae; if the leaves are otherwise, then turn as directed by the Key to number 2 on the left-hand margin. At each number you will find two choices, each followed by a name or another number. By following the choice that best fits your specimen, you should eventually arrive at the name of a tree or family of trees. If the picture or description does not fit your specimen, go back and begin over, because you have probably taken the wrong choice at some number. Unfamiliar terms will be found defined in the Glossary. The pages on which trees or families are pictured and described are listed after their names in the Key or may be found by referring to the Index.

KEY TO THE NATIVE TREES OF FLORIDA

Leaves needle-shaped, scale-shaped, or awl-shaped 1
Leaves large, fan-shaped, or feather-shaped ..... **Palmae**, pp. 15-19
Leaves not as above 2

1 Fruit a small berry less than ¼ inch long, or a cone ..... **Pinaceae**, pp. 1-12
1′ Fruit a berry ½ inch or more long ..... **Taxus**, p. 13, **Torreya** p. 14

2 Leaves compound 3
2′ Leaves simple 26

3 Leaves opposite 4
3′ Leaves alternate 8

4 Leaves palmately divided ..... **Aesculus**, p. 129
4′ Leaves pinnately divided 5

5 Leaves less than 6 inches long ..... **Guaiacum**, p. 94
5′ Leaves over 6 inches long 6

6 Leaflets deeply toothed ..... **Acer negundo**, p. 131
6′ Leaflets not deeply toothed 7

7 Fruit a berry ..... **Sambucus**, p. 200
7′ Fruit not a berry ..... **Fraxinus**, pp. 184-186

8 (3′) Leaves 2 feet or more long, with many leaflets ..... **Aralia**, p. 165
8′ Leaves smaller 9

9 Leaves 2-pinnate ..... **Leguminosae**, pp. 86-93
9′ Leaves pinnate 10

10 Number of leaflets even (2,4,6, etc.) 11
10′ Number of leaflets odd (3,5,7, etc.) 12

11 Leafstalk red ..... **Simarouba**, p. 102
11′ Leafstalk green ..... **Sapindaceae**, pp. 133-135

12 (10′) Leaflets 3 13
12′ Leaflets 5 or more 16

13 Twigs thorny ..... **Erythrina**, p. 92
13′ Twigs not thorny 14

14 Leaves aromatic when crushed ..... **Rutaceae**, pp. 96-100
14′ Leaves not aromatic 15

15 Leaflets thick, leathery ..... **Metopium**, p. 112
15′ Leaflets thin, flexible ..... **Sapindaceae**, pp. 133-135

16 (12′) Leaflets with toothed margins 17
16′ Leaflets with entire margins 21

17 Leaflets blunt 18
17′ Leaflets pointed 19

18 Leaves aromatic when crushed ..... **Rutaceae**, pp. 96-100
18′ Leaves not aromatic ..... **Piscidia**, p. 93

19 (17′) Fruit a nut ..... **Carya**, pp. 20-23, **Juglans**, p. 24
19′ Fruit not a nut 20

20 Leaves aromatic when crushed ..... **Rutaceae**, pp. 96-100
20′ Leaves not aromatic ..... **Rhus**, p. 113

21 (16′) Leaflets pointed 22
21′ Leaflets blunt 23

22 Leafstalk red ..... **Toxicodendron**, p. 114
22′ Leafstalk green ..... **Sapindus**, p. 135

23 (21′) Leaflets 7 to 9 ..... **Piscidia**, p. 93
23′ Leaflets 3 to 7 24

24 Leaflets usually 5 (sometimes 3 or 7) 25
24′ Leaflets usually 3 (sometimes 5) ..... **Rutaceae**, pp. 96-100

25 Fruit in clusters 1 to 3 inches long including stalk ..... **Bursera**, p. 105
25′ Fruit in clusters 4 to 8 inches long including stalk ..... **Metopium**, p. 112

26 (2′) Leaves opposite 27
26′ Leaves alternate 47

27 Leaves lobed ..... **Acer**, pp. 130-132
27′ Leaves not lobed 28

28 Leaves fleshy, leathery, blunt ..... **Clusia**, p. 143
28′ Leaves not fleshy 29

29 Leaves aromatic when crushed
Eugenia, pp. 154-157, **Calyptranthes**, p. 158
29′ Leaves not aromatic 30

30 Leaves with 3 prominent sunken veins ..... **Tetrazygia**, p. 150
30′ Leaves otherwise 31

31 Twigs spiny ..... **Duranta**, p. 192
31′ Twigs not spiny 32

32 Leaves with toothed margins 33
32′ Leaves with entire margins 35

33 Young leaves rusty-downy ..... **Viburnum**, p. 201
33′ Young leaves not rusty-downy 34

34 Fruit red or black with 1 to 5 seeds ..... **Celastraceae**, pp. 126-128
34′ Fruit greenish, always 1 seed ..... **Forestiera**, pp. 183-184

35 (33′) Leaves thick, brittle, less than 2 inches long ..... **Jaquinia**, p. 169
35′ Leaves not as above 36

36 Growing in salty soil 37
36′ Not growing in salty soil 39

37 Branches bearing aerial roots ..... **Rhizophora**, p. 159
37′ Branches without aerial roots 38

38 Leaves paler beneath ..... **Avicennia**, p. 190
38′ Leaves equally green on both sides ..... **Laguncularia**, p. 153

39 (36′) Leaf bases joined by stipular lines ..... **Rubiaceae**, pp. 194-199
39′ Leaf bases not as above 40

40 Leaves deciduous 41
40′ Leaves evergreen 43

41 Leaves 4 inches or more long ..... **Chionanthus**, p. 181
41′ Leaves usually less than 4 inches long 42

42 Flowers and fruits terminal ..... **Cornus**, pp. 160-161
42′ Flowers and fruits axillary ..... **Forestiera**, pp. 183-184

43 (40′) Leaves twice as long as wide 44
43′ Leaves less than twice as long as wide 45

44 Leaves less than 1½ inches long ..... **Byrsonima**, p. 95
44′ Leaves over 2 inches long ..... **Osmanthus**, p. 182

45 (43′) Fruit juicy, black 46
45′ Fruit juicy and red, or dry and brown ..... **Torrubia**, pp. 63-64, **Pisonia**, p. 63

46 Fruit with 2 seeds ..... **Verbenaceae**, pp. 190-192
46′ Fruit with one seed ..... **Rhamnaceae**, pp. 136-139

47 (26′) Sap milky 48
47′ Sap watery 49

48 Flower spike 2 to 3½ inches long ..... **Hippomane**, p. 110
48′ Flower spike much shorter ..... **Ficus**, p. 54

49 (47′) Fruit an acorn ..... **Quercus**, pp. 35-53
49′ Fruit not an acorn 50

50 Leaves lobed 51
50′ Leaves not lobed 56

51 Lobes blunt or rounded 52
51′ Lobes pointed 54

52	Leaves square at end	**Liriodendron**, p. 68
52′	Leaves blunt or rounded at end	53
53	Branches spiny	**Crataegus**, pp. 77-80
53′	Branches not spiny	**Sassafras**, p. 148
54	(51′) Leaves with 3 lobes	**Gossypium**, p. 141
54′	Leaves with 5 lobes	55
55	Leaves aromatic when crushed	**Liquidambar**. p. 74
55′	Leaves not aromatic when crushed	**Platanus**, p. 75
56	(50′) Leaves aromatic when crushed	57
56′	Leaves not aromatic when crushed	61
57	Leaves with toothed margins	**Myrica**, pp. 25-26
57′	Leaves with entire margins	58
58	Fruit large, fleshy, many-seeded	**Annona**, p. 65, **Asimina**, p. 66
58′	Fruit small or cone-like	59
59	Fruit cone-like or star-shaped	**Magnoliaceae**, pp. 67-71
59′	Fruit otherwise	60
60	Leaves pellucid-punctate	**Canella**, p. 142
60′	Leaves not pellucid-punctate	**Lauraceae**, pp. 145-149
61	(56′) Leaves narrow and fleshy	**Suriana**, p. 103
61′	Leaves not narrow and fleshy	62
62	Twigs sheathed at base of leaf-stalk	**Coccolobis**, pp. 61-62
62′	Twigs not so ornamented	63
63	Leaves heart-shaped	64
63′	Leaves not heart-shaped	69
64	Leaves downy	65
64′	Leaves not downy	67
65	Fruit a many-seeded pod	**Hibiscus**, p. 141
65′	Fruit 1-seeded	66
66	Leafstalk one inch or more long	**Tilia**, p. 140
66′	Leafstalk ½ inch or less long	**Trema**, pp. 57-58
67	(64′) Leaves toothed	**Populus**, p. 27
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68	Leaves with long stalks	**Cercis**, p. 90
68′	Leaves with short stalks	**Coccolobis**, pp. 61-62
69	(63′) Branches with thorns or spine-like twigs	70
69′	Branches not as above	73
70	Fruit several-seeded	**Malus**, p. 81, **Crataegus**, pp. 77-80
70′	Fruit 1-seeded	71
71	Young leaves rusty-downy	**Bumelia**, pp. 173-174
71′	Young leaves not as above	72
72	Leaves toothed	**Prunus**, pp. 83-85
72′	Leaves entire	**Ximenia**, p. 193

73 (69′) Seeds bearing a tuft of hairs 74
73′ Seeds without tuft of hairs 75

74 Leaves long with small teeth ..... **Salix**, p. 28
74′ Leaves short with coarse teeth ..... **Baccharis**, p. 202

75 (73′) Fruit a long, slim pod ..... **Capparis**, p. 72
75′ Fruit otherwise 76

76 Leaves bearing minute golden dots or glands 77
76′ Leaves not as above 78

77 Fruit papery ..... **Dodonaea**, p. 134
77′ Fruit berry-like ..... **Myrica**, pp. 25-26

78 (76′) Twigs brown-downy 79
78′ Twigs not brown-downy 80

79 Leaves entire ..... **Sapotaceae**, pp. 173-177
79′ Leaves toothed ..... **Colubrina**, pp. 136-137

80 (78′) Fruit spiny 81
80′ Fruit not spiny 82

81 Spines sharp ..... **Castanea**, p. 33, **Fagus**, p. 34
81′ Spines soft and blunt ..... **Planera**, p. 56

82 (80′) Flowers in catkins prior to leaves ..... **Betulaceae**, pp. 29-32
82′ Flowers not in catkins or in catkins with leaves 83

83 Fruit 3-lobed or 3-winged 84
83′ Fruit not 3-parted 85

84 Fruit fleshy or woody ..... **Euphorbiaceae**, pp. 107-111
84′ Fruit papery ..... **Cliftonia**, p. 115

85 (83′) Large veins spreading from midribs 86
85′ Large veins spreading from base of leaf ..... **Celtis**, p. 55

86 Leaves large, rough on both sides 87
86′ Leaves not as above 89

87 Leaves toothed ..... **Hamamelis**, p. 73
87′ Leaves entire 88

88 Flowers orange, fruits white ..... **Cordia**, p. 188
88′ Flowers white, fruits yellow ..... **Solanum**, p. 187

89 (86′) Fruit fleshy—a berry or drupe 90
89′ Fruit dry or woody 107

90 Fruit 1 seeded 91
90′ Fruit with 2 or more seeds 99

91 Twigs with white bark ..... **Shoepfia**, p. 193
91′ Twigs with dark bark 92

92 Fruit yellow 93
92′ Fruit some other color 94

93 Fruit small (1/8 inch or less), in long spikes ..... **Cyrilla**, pp. 116-117
93′ Fruit larger (1/2 inch or more), in clusters ..... **Sideroxylon**, p. 177

94 (92′) Fruit white with pink cheek ..... **Chrysobalanus**, p. 82
94′ Fruit some other color 95

95 Fruit oval or cylindrical 96
95′ Fruit globose 97

96 Fruit black or red ..... **Nyssa**, pp. 162-164
96′ Fruit brown ..... **Symplocos**, p. 178

97 (95′) Leaves toothed ..... **Prunus serotina**, p. 85
97′ Leaves entire 98

98 Flowers white with purple spots ..... **Ardisia**, p. 170, **Rapanea**, p. 171
98′ Flowers white without spots ..... **Dipholis**, p. 175

99 (90′) Fruit 1 inch or more thick 100
99′ Fruit less than 1 inch thick 101

100 Fruit yellow or orange ..... **Diospyros**, p. 172
100′ Fruit brown ..... **Mimusops**, p. 175

101 (99′) Fruit in terminal clusters 102
101′ Fruit lateral, along stem 103

102 Fruit purple to black ..... **Amelanchier**, p. 76
102′ Fruit orange to brown ..... **Bourreria**, p. 189

103 (101′) Fruit white ..... **Drypetes**, pp. 107-108
103′ Fruit not white 104

104 Fruit red 105
104′ Fruit black 106

105 Fruit downy or pubescent ..... **Drypetes**, pp. 107-108
105′ Fruit not downy or pubescent ..... **Ilex**, pp. 118-125

106 (104′) Leaves deciduous, thin, with prominent lateral veins ..... **Rhamus**, p. 139
106′ Leaves evergreen, leathery, without prominent lateral veins ..... **Ilex krugiana**, p. 122

107 (89′) Flowers greenish, in late winter prior to leaves ..... **Ulmus**, pp. 58-60
107′ Flowers with the leaves 108

108 Leaves (at least some of them) with teeth 109
108′ Leaves entire on edges 111

109 Leaves evergreen ..... **Gordonia**, p. 144
109′ Leaves deciduous 110

110 Flowers and fruits in large, terminal clusters ..... **Oxydendron**, p. 166
110′ Flowers and fruits in small, lateral clusters **Styrax**, p. 180, **Halesia**, pp. 179-180

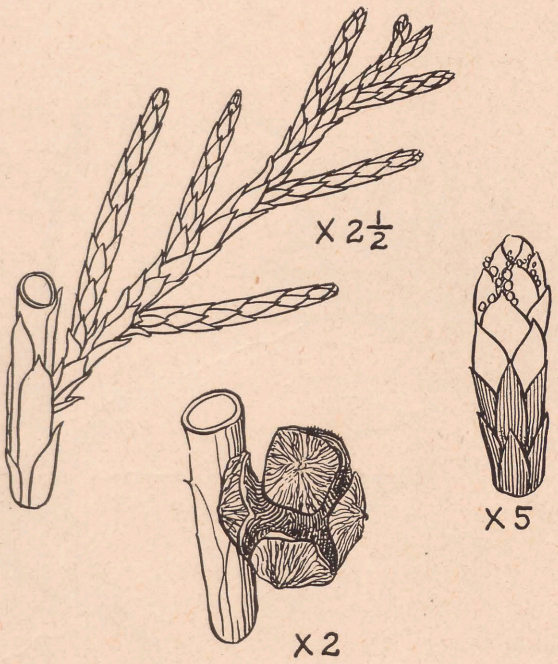
111 (108′) Leaves rusty-scaly or over 2 inches long ..... **Ericaceae**, pp. 166-168
111′ Leaves not rusty-scaly, less than 2 inches long **Combretaceae**, pp. 151-153

CHAMAECYPARIS THYOIDES (L.) B. S. P.

Atlantic White-cedar, White Cedar

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—80 feet, trunks 2 feet in diameter. **Crowns**—narrowly conical, on irregular, mostly horizontal branches. **Bark**—ashy gray to light reddish brown, thin, smooth, peeling off in long fibrous strips. **Twigs**—slender, bluish green, often arranged in fan-like clusters. **Leaves**—evergreen, small, ovate, sharp-pointed, bluish green, closely overlapping, scale-like, 4 ranked, less than 1/8 inch long. **Cones**—in spring, small, inconspicuous,



staminate and ovulate on the same tree. **Fruits**—ripening in fall, inconspicuous, dry, globose, about 1/4 inch in diameter. **Seeds**—small, brown, winged.

DISTINGUISHING CHARACTERS: Small, round cones having scales attached at the center.

GENERAL COMMENT: The Atlantic white-cedar occurs in brown-water swamps from Liberty County westward with an isolated colony in Putnam County. Young trees frequently grow in dense stands with the trunks so close together that it is difficult to pass between them. Young isolated trees are symmetrical, but with maturity the lower branches are lost, leaving the crown high in the air. The commercial value of the tall, straight trunks has induced lumbermen to cut them so extensively that full-grown perfect trees are now rare.

JUNIPERUS SILICICOLA (Small) Bailey*

Southern Red-cedar, Red Cedar

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—25 feet, trunks 2 feet in diameter. **Crowns**—broad, flat-topped, composed of spreading branches ascending at ends, the spread often equalling the height. **Bark**—reddish brown, very thin, peeling into long, stringy shreds. **Twigs**—slender, green, very flexible. **Leaves**—evergreen, aromatic; juvenile form on young trees and shoots narrow, sharp-pointed, spreading, not overlapping, opposite or in whorls of 3; adult form scale-like, ovate, not sharp-pointed, closely appressed, usually overlapping, 4-ranked, less than 1/8 inch long. **Strobili**—in early spring, staminate and ovulate on different trees, very small; staminate conspicuous due to great abundance, yellow-

ish. **Fruits**—maturing in late fall, persistent, dark blue with bloom, smooth, resinous, globose, less than 1/4 inch long. **Seeds**—small, smooth, ovate, about 1/8 inch long, embedded in resinous pulp.

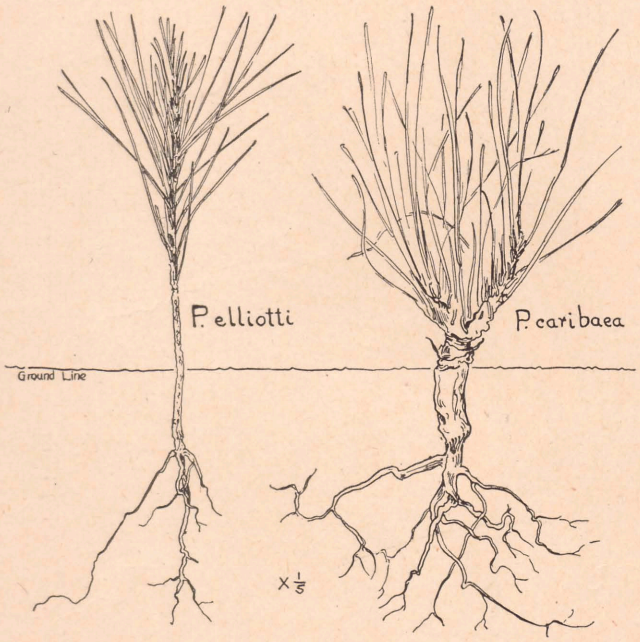
DISTINGUISHING CHARACTERS: Two leaf forms; aromatic foliage; small, blue fruits.

GENERAL COMMENT: The southern red-cedar, common in areas underlain by limestone, is widely distributed as far south as Sarasota County. Before being heavily lumbered, dense stands occurred at Cedar Key and other points. The present trends in reforestation may replace these stands. Horticulturally, this naturally symmetrical evergreen has long been popular.

*Sabina silicicola Small.

PINUS CARIBAEA Morelet
Caribbean Pine, Slash Pine, Cuban Pine
(Pinaceae: Pine Family)

DESCRIPTION: **Height**—90 feet, trunks 2 feet in diameter. **Crowns**—small, irregular, open, broadly conical. **Bark**—dark gray, deeply furrowed, soon broken into irregular, rectangular plates about twice as long as wide, flaking to expose reddish-brown inner bark. **Twigs**—stout, reddish brown, ¼ inch in diameter. **Shoots**—when young, covered with orange-brown scales bearing brownish fringes. **Needles**—persistent, in 2's and 3's, 7 to 12 inches long. **Sheaths**—⅝ inch long. **Strobili**—in winter; staminate purplish, 1 to 1½ inches long, less than ⅜ inch thick, in dense clusters at base of season's growth; ovulate rose-purple, narrowly ovate, ⅝ inch long, ⅜ inch thick on



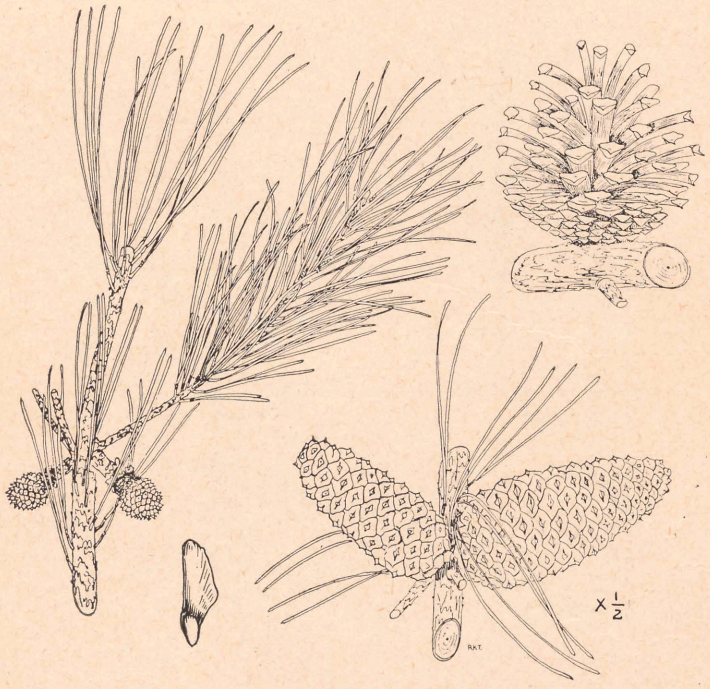
stalks ½ inch or more long. **Fruits**—falling at end of second year, stalked cones, 3 to 6 inches long, narrowly conical when closed, cylindrical or ovate-cylindrical when open, with a small, recurved spine on each reddish-brown scale-face. **Seeds**—pitted, almost black, ¼ inch long or more; wings glossy, dark brown, 1 inch or less in length.

DISTINGUISHING CHARACTERS: Long needles in 2's and 3's; ovoid cones; dry habitat; southern range; dwarf, thick-stemmed seedlings.

GENERAL COMMENT: The Caribbean pine, the only pine on Big Pine Key, occurs along the coasts as far north as Daytona Beach and Tampa and inland as far north as Okeechobee County. There is little to distinguish mature trees of Caribbean pine *(P. caribaea* Morelet) from slash pine *(P. elliotti* Engelm.) in general appearance. Seedlings of the former resemble longleaf pine in forming a large taproot and a top that does not elongate for 3 to 6 years. The resin ducts in the needles are more abundant (5 to 10) than in the slash pine (3 to 4) in cross sections of needles from 2-needle fascicles.

PINUS CLAUSA (Engelm.) Vasey
Sand Pine, Scrub Pine
(Pinaceae: Pine Family)

DESCRIPTION: **Height**—70 feet, trunks 1 foot or more in diameter. **Crowns**—cylindrical to conical, composed of numerous branches, from crooked trunks. **Bark**—gray, comparatively smooth. **Twigs**—reddish to ashy gray, stiff, smooth. **Needles**—slender, flexible, persistent, in 2's, about 3 inches long. **Sheaths**—about ¼ inch long. **Strobili**—in spring; staminate yellowish, 1 inch long, at the base of new growth; ovulate green, ovate, about ½ inch long.



Fruits—shedding seed after fall of second year, or remaining closed 2 to 4 years longer, stalkless cones, leaving a few basal scales attached to twig when shed, 2 to 3 inches long, conical when closed, ovate when open, with a short, stout spine on each scale-face. **Seeds**—black, less than ¼ inch long; wings glossy, dark brown, ½ inch long.

DISTINGUISHING CHARACTERS: Needles in 2's, about 3 inches long; cones very persistent, often opening tardily; arid habitat.

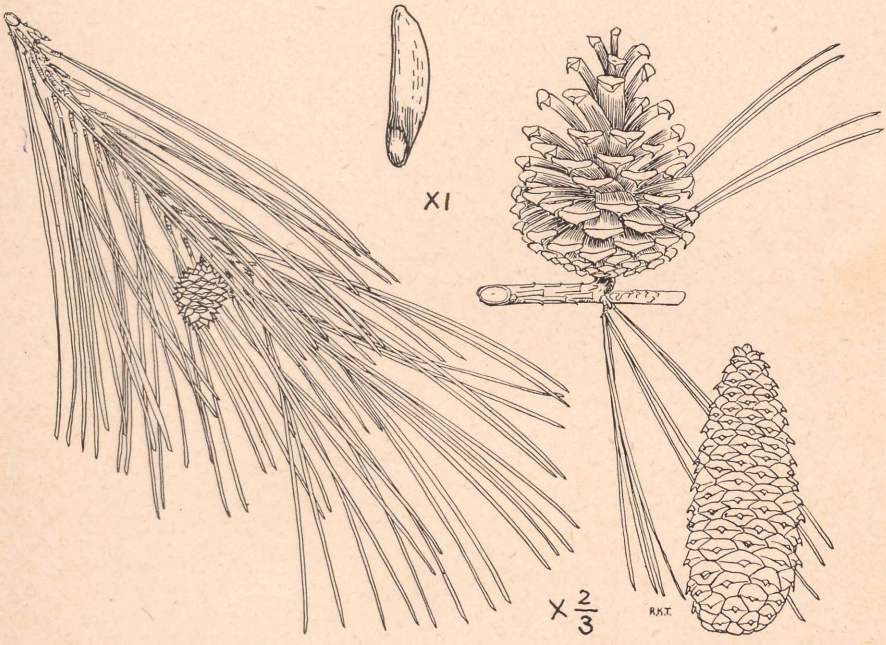
GENERAL COMMENT: The sand pine occurs on the coastal sand dunes as far south as Dade and Manatee counties, as well as in the scrubs of the interior where it attains its largest size and greatest abundance. Its most remarkable characteristic is its ability to reseed burned-over areas by the opening of hitherto closed cones on the fire-killed trees. Little use has been found for the coarse-grained wood.

PINUS ECHINATA Mill.

Shortleaf Pine, Shortleaved Yellow Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—100 feet or more, trunks 2 to 3 feet in diameter. **Crowns**—small, pyramidal, composed of slender, spreading branches, from long, straight trunks. **Bark**—reddish brown, broken by distinct furrows into rectangular plates scaly on the surface. **Twigs**—reddish brown, rough, stiff. **Shoots**—when young, covered with grayish scales. **Needles**—slender, flexible, persistent, in 2's, sometimes in 3's, 3 to 5 inches long. **Sheaths**—5/8 inch long.



Strobili—in early spring; staminate pale purple, stalkless, 3/4 inch long, less than 1/8 inch thick; ovulate, rose-pink, short-stalked, about 1/4 inch long. **Fruits**—maturing during fall of second year, stalkless cones, conical when closed, ovate when open, 1½ to 2½ inches long, with a sharp, weak, sometimes deciduous, rounded, reddish spine on each scale-face. **Seeds**—brown, with black markings, less than 1/4 inch long; wings ½ inch long, broadest near the middle.

DISTINGUISHING CHARACTERS: Needles usually in 2's; very small cones; reddish-brown bark broken into large rectangular plates; geographical distribution.

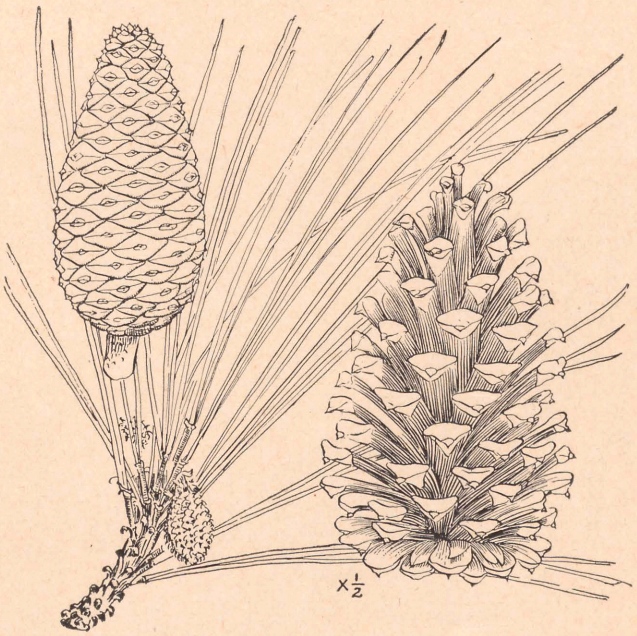
GENERAL COMMENT: The shortleaf pine is confined in its distribution to well-drained soils and red clay hills of western Florida as far east as the Aucilla River region of Jefferson County. It is made into a superior grade of lumber and therefore it is recommended for use in reforestation.

PINUS ELLIOTTI Engelm.*

Slash Pine, Swamp Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—90 feet, trunks 2 feet in diameter. **Crowns**—irregular, very broadly conical, composed of short, stout branches. **Seedlings**—slim, pencil-like. **Bark**—dark gray, deeply furrowed, breaking into irregular, rectangular plates, twice as long as wide, exposing reddish-brown inner bark. **Twigs**—stout, brown, less than 1/4 inch in diameter. **Shoots**—when young, covered with narrow, golden-brown scales bearing nearly pure white fringes. **Needles**—persistent in 2's and 3's, 7 to 12 inches long. **Sheaths**—less than 1/2



inch long. **Strobili**—in spring; staminate 1 1/2 to 2 inches long, 1/4 inch thick, rose-purple, in dense clusters at base of season's growth; ovulate rose-purple, ovate, about 1/2 inch long, 1/4 inch wide, stalked. **Fruits**—falling during autumn of second year, stalked cones, 3 to 4 1/2 inches long, narrowly ovate when closed, broadly ovate when open, with small, straight or recurved spines on each persistently reddish-brown scale-face. **Seeds**—smooth, slate-gray, 1/4 inch long or more; wings glossy, brown, purple-veined, 1 inch or more long, oblique at the end; broadest above the middle.

DISTINGUISHING CHARACTERS: Long needles in 2's and 3's; ovoid cones; wet habitat; slim seedlings. (See *Pinus caribaea* Morelet.)

GENERAL COMMENT: The slash pine occupies vast areas of inland flatwoods as far south as Highlands County. It is absent along the southern coast of the peninsula. Because it propagates readily from seed, grows rapidly on many soil types, and produces naval stores and pulpwood at an early age, it is the most important pine in reforestation development. Lumber manufactured from well-grown trees is of the highest grade.

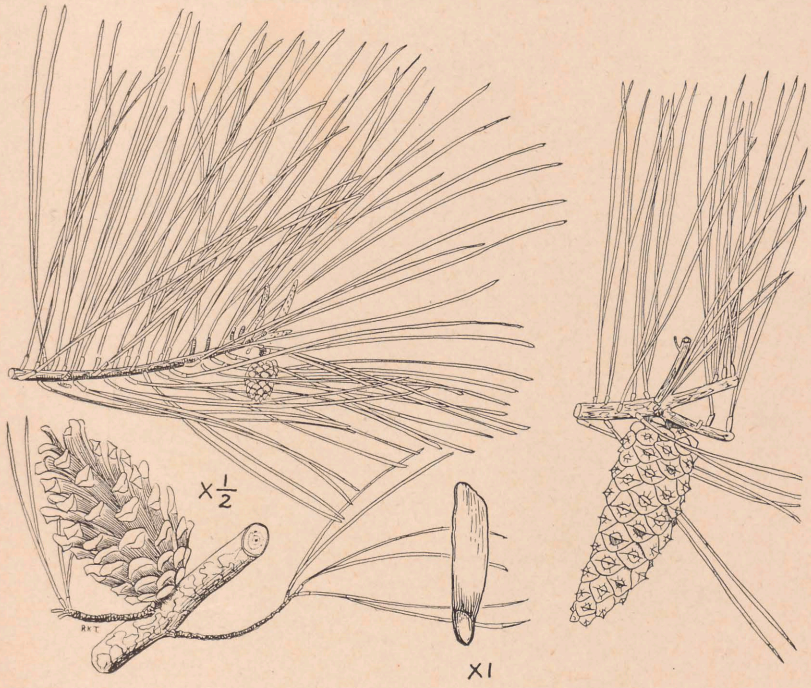
*P. palustris Mill. (P. caribaea Auth. in part.)

PINUS GLABRA Walt.

Spruce Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—100 feet or more, trunks 2 to 3 feet in diameter. **Crowns**—open, narrow, cylindrical, composed of a few short, slender branches, from straight trunks. **Bark**—dark gray, relatively smooth, closely furrowed without plates. **Twigs**—light gray, slender, flexible, smooth. **Shoots**—when young, covered with very narrow, brown scales bearing brownish fringes. **Needles**—slender, flexible, persistent, in 2's, about 3 inches long. **Sheaths**—



¼ inch long. **Strobili**—in early spring; staminate ¾ inch long, about ¼ inch thick, yellow with rosy tints, in clusters at base of season's growth; ovulate ¼ inch long, excluding stalks. **Fruits**—shedding seeds during the fall of the second year, persistent several years, short, stout-stalked cones, 1¼ to 2 inches long, conical when closed, ovate to globose when open, with a small, weak spine or none on each scale-face. **Seeds**—black, with brown specks, less than ¼ inch long; wings brown, purple-veined, ⅝ inch long.

DISTINGUISHING CHARACTERS: Smooth bark; very slender leaves in 2's; small, nearly unarmed cones.

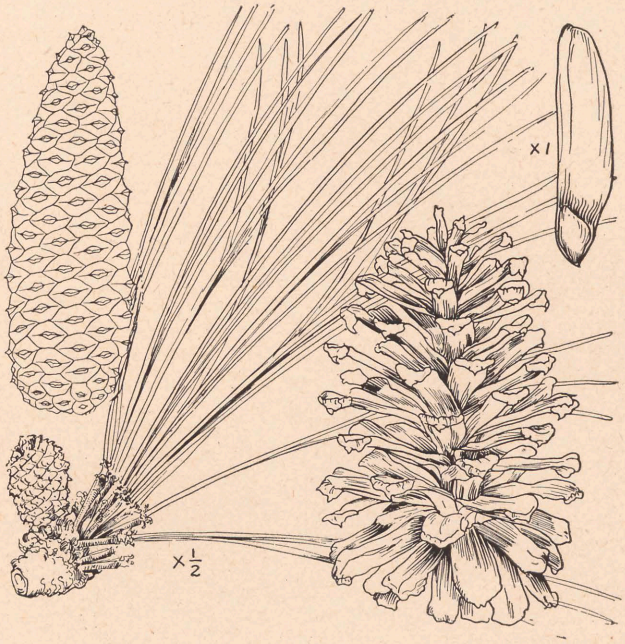
GENERAL COMMENT: The spruce pine is confined to rich, moist hammocks and stream banks from Alachua County northward. In contrast to other Florida pines, its relatively smooth bark resembles that of southern red oak. Pure stands are rare, and large individuals usually occur as isolated specimens.

PINUS PALUSTRIS Mill.*

Longleaf Pine, Yellow Pine, Southern Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—120 feet, trunks 2 to 2½ feet in diameter. **Crowns**—small, open, irregular, broadly conical, composed of a few short, stout branches, from long, straight, shaft-like trunks. **Seedlings**—dwarf, thick-stemmed, root carrot-like. **Bark**—dark gray, furrowed, soon breaking into large, irregular plates, exposing reddish-brown inner bark. **Twigs**—reddish brown, very stout, ⅜ inch in diameter. **Shoots**—when young, covered with silvery-white, fringed scales. **Needles**—pendent, persistent, in 3's, 8 to 10 inches long. **Sheaths**—1 inch or more long. **Strobili**—in spring; staminate purplish, 2 to 3 inches long, ⅜ inch or more thick, in dense clusters at base



of season's growth; ovulate cylindrical, about ½ inch long, ¼ inch thick, purplish. **Fruits**—falling in autumn of second year, leaving a few basal scales attached, stalkless cones, 6 to 10 inches long, narrowly conical, slightly curved when closed, broadly conical when open, with a recurved spine on each wrinkled, reddish-brown to ashy-gray scale-face. **Seeds**—ridged, pale, mottled, ½ inch long; wings glossy, brown, 1½ to 2 inches long, oblique at ends.

DISTINGUISHING CHARACTERS: Long needles in 3's; stout twigs; immense cones; silvery-white new shoots; short-stemmed seedings.

GENERAL COMMENT: The longleaf pine, the most widely distributed pine, ranges from Lake Okeechobee northward and across western Florida. It was the original source of naval stores, while the timber makes very fine lumber for construction. The destruction of former virgin stands by lumbering and of numerous seedlings by indiscriminate woods-burning is being offset by the present trends towards conservation and reforestation.

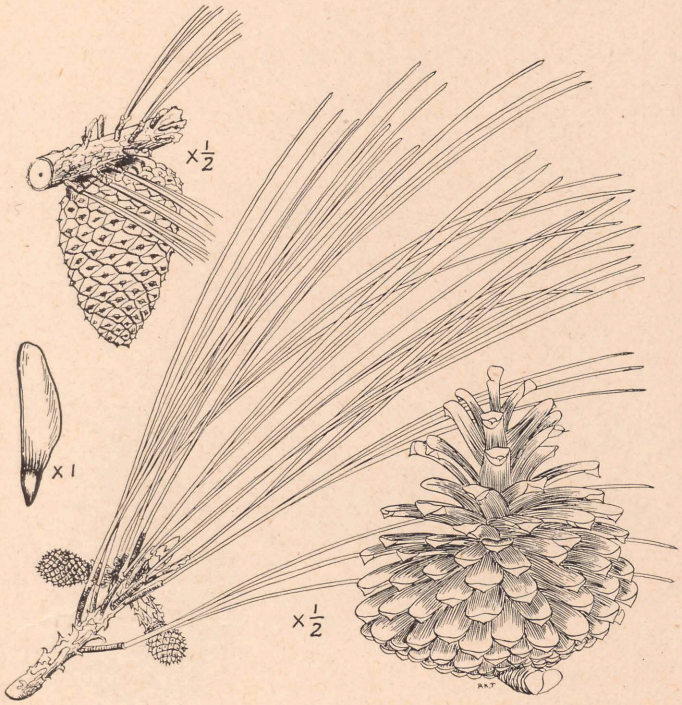
*P. australis Michx. f.

PINUS RIGIDA SEROTINA (Michx.) Loud.*

Pond Pine, Black Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—75 feet, trunks 2 feet in diameter. **Crowns**—cylindrical with broadly conical tops, composed of numerous short branches, from straight, slender trunks clothed with short, tufted twigs. **Bark**—coarse, furrowed, flaking into narrow, vertical plates exposing dark-brown inner bark. **Twigs**—stout, smooth, dull brown. **Needles**—persistent, in 3's, rarely in 4's, 6 to 11 inches long. **Sheaths**—½ inch long. **Strobili**—in spring. **Fruits**—



shedding seeds during fall of second year, persisting for several years longer, stalkless cones, 2 to 2½ inches long, ovate to globular-ovate when closed, very broad when opened, with a minute spine on each scale-face. **Seeds**—black, ¼ inch long; wings clear, pale brown, ¾ inch long.

DISTINGUISHING CHARACTERS: Persistent, unstalked, nearly globular cones; numerous lateral branches far down the trunk; ability to sprout from stumps.

GENERAL COMMENT: The pond pine occurs in low flatwoods and around flatwoods ponds as far south as Osceola County. Although this common tree is rather sporadically distributed, nearly pure stands often cover considerable areas. Tufts of twigs and foliage growing on the main trunks are outstanding characters among Florida pines.

*P. serotina Michx.

PINUS TAEDA L.

Loblolly Pine, Oldfield Pine

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—100 feet or more, trunks 2½ feet in diameter. **Crowns**—narrowly to broadly conical, composed of short, rigid branches ascending slightly at tips. **Bark**—gray, deeply furrowed, flaking into coarse, narrow plates exposing reddish-brown inner bark. **Twigs**—reddish brown, coarse, scaly. **Shoots**—when young, covered with very narrow, golden-brown scales bearing brown to gray-brown fringes. **Needles**—persistent, in 3's, 6 to 9 inches long. **Sheaths**—½ inch or more long. **Strobili**—in early spring; staminate 1¾ inches long, less than ¼ inch thick, yellowish green, sometimes

tinged with violet, in dense clusters at base of season's growth; ovulate broadly ovate, ½ inch long including stalks, less than ¼ inch thick, pale green, rose-purple at tips. **Fruits**—in the fall of second year, persistent, stalkless cones, 3 to 4 inches long, narrowly to broadly conical when closed, ovate to conic-cylindrical when open, with a small, sharp spine on each scale-face. **Seeds**—dark brown, nearly ¼ inch long, roughened, with black markings; wings ¾ inch long, broadest above center.

DISTINGUISHING CHARACTERS: Persistent, unstalked, cylindrical cones; long needles always in clusters of 3.

GENERAL COMMENT: The loblolly pine is a common tree from Orange County northward, except on wet ground or in the scrub. Dense stands of this species often appear in old fields, but solitary or scattered specimens are just as frequent. Although not of the highest grade, the timber is generally marketed as yellow pine.

TAXODIUM ASCENDENS Brongn.

Pond-cypress, Cypress

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—75 feet. **Crowns**—irregular, composed of numerous spreading branches, from straight trunks often with swollen bases. **"Knees"**—few. **Bark**—gray to cinnamon-brown, somewhat thin, relatively smooth, showing shallow, longitudinal furrows, rougher with age. **Twigs**—green, slender, smooth, upcurved, deciduous. **Leaves**—deciduous, alternate, evenly spaced on twigs, simple, appressed, smooth, thin, flat, light green, up

to 3/8 inch long, awl-shaped, tips pointed, incurved, margins even, entire. **Strobili**—in early spring on twigs of previous year, staminate and ovulate on the same tree; staminate in catkins often branched and 2 to 4 inches long; ovulate solitary. **Cones**—maturing in late summer, globose, green, about 1 inch in diameter, composed of angular scales attached by their centers. **Seeds**—several, irregular, angular, brown, about ½ inch long.

DISTINGUISHING CHARACTERS: Minute, scaly foliage on upcurved twigs; bulbous bases of the trunks; few "knees"; pond habitat.

GENERAL COMMENT: The pond-cypress occurs in flatwoods ponds from Palm Beach County northward. While it never attains the great size of bald-cypress, the wood is equally valuable and is not differentiated by lumbermen.

TAXODIUM DISTICHUM (L.) L. C. Rich.

Bald-cypress, Swamp Cypress, River Cypress

(Pinaceae: Pine Family)

DESCRIPTION: **Height**—125 feet, trunks 6 feet or more in diameter. **Crowns**—evenly pyramidal when young, later irregularly rounded, composed of a few large, spreading branches, from straight, buttressed trunks often swollen at base. **"Knees"**—frequent, especially in wet soil, 3 feet or more high, narrowly conical, covered with thin bark. **Bark**—gray to cinnamon-brown, thin, relatively smooth, somewhat shaggy with age. **Twigs**—green, straight, flexible, smooth, deciduous. **Leaves**—deciduous, alternate, in one plane, simple, smooth, thin, shining, flat, light green, about ½ inch long, narrowly lanceolate,

tips pointed, margins even, entire, midribs prominent. **Strobili**—in early spring, on twigs of previous year, staminate and ovulate on the same tree; staminate in catkins often branched and 2 to 4 inches long; ovulate solitary. **Cones**—maturing in late summer, globose, green, about 1 inch in diameter, composed of angular scales attached by their centers. **Seeds**—several, irregular, angular, brown, about ½ inch long.

DISTINGUISHING CHARACTERS: Fern-like, deciduous foliage; bulbous bases of the trunks; numerous "knees"; wet habitat.

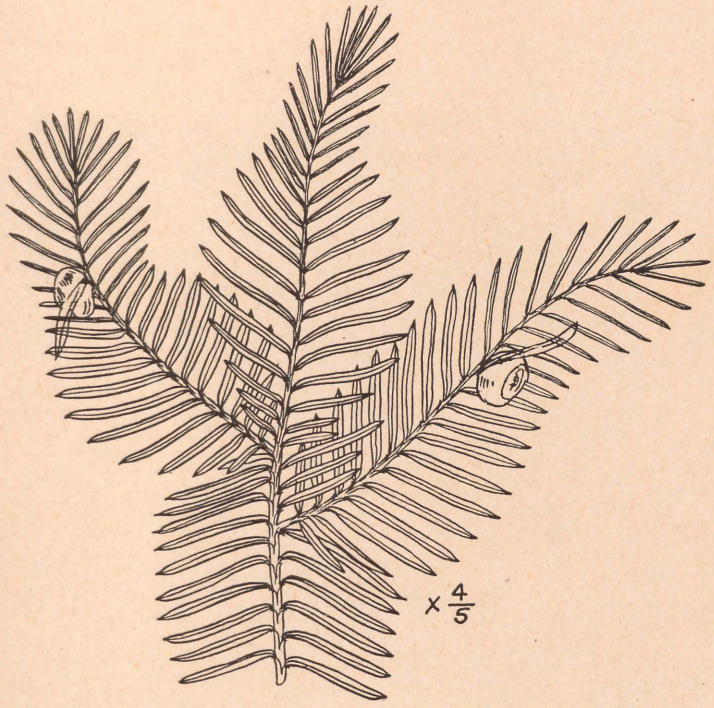
GENERAL COMMENT: The bald-cypress, occurring around lakes and along slow-moving streams, is widely distributed from the Everglade Keys northward. Although numerous in the past, virgin stands are now rare and difficult of access owing to excessive lumbering of the commercially valuable timber. In longevity, it surpasses all other Florida trees.

TAXUS FLORIDANA Nutt.

Florida Yew, Savin

(Taxaceae: Yew Family)

DESCRIPTION: **Height**—20 feet, trunks 10 to 12 inches in diameter. **Crowns**—rounded, composed of many stout, spreading branches, from short trunks. **Bark**—purplish brown, sometimes separating into large, thin, irregular plates. **Twigs**—green, slender, flexible, smooth. **Leaves**—evergreen, simple, thick, flat, leathery, dark green above, paler beneath, in one plane,



aromatic when crushed, nearly 1 inch long, linear, with pointed tips, margins slightly thickened and revolute. **Strobili**—in March, staminate and ovulate on separate trees; staminate in small, round, yellowish catkins, early deciduous; ovulate very small, solitary. **Fruits**—maturing in fall, light red, pulpy, globose, about ½ inch in diameter. **Seeds**—solitary, bony, about ¼ inch long, not completely enclosed by flesh, about ⅓ protruding.

DISTINGUISHING CHARACTERS: Red fruits with half-covered seeds; flexible foliage.

GENERAL COMMENT: The distribution of Florida yew, a very rare species, is limited to ravines in a small area of the Apalachicola River Valley. In addition to the beauty of its combination of dark-green foliage and small, scarlet fruits, its rarity recommends it for conservation.

TORREYA TAXIFOLIA Arn.*

Florida Torreya, Stinking Cedar, Savin

(Taxaceae: Yew Family)

DESCRIPTION: **Height**—50 feet, trunks 1 foot or more in diameter. **Crowns**—conical, open, composed of numerous short, slender, drooping branches. **Bark**—almost black, slightly roughened. **Twigs**—green, straight, slender, flexible. **Leaves**—evergreen, simple, thick, flat, rigid, shining, dark green above, paler and banded beneath, in one plane, aromatic when crushed, up to 1¼ inches long, linear, tips sharp, rigid. **Strobili**—in March, staminate and ovulate on different trees; staminate small, ovate, yellowish, early deciduous;

ovulate solitary. **Fruits**—maturing in summer, green with a bloom, globose to obovate, about 1½ inches long. **Seeds**—solitary, large, ovate, pale brown, bearing two indentations opposite each other near the base, covered with thin, resinous flesh.

DISTINGUISHING CHARACTERS: Small, nutmeg-like fruits; aromatic, rigid foliage.

GENERAL COMMENT: The range of the Florida torreya is very limited, including only a small area on the banks of the Apalachicola River. Young trees are attractive ornamentals and the durable wood has many uses. As one of the rarest native trees, the Florida torreya deserves to be protected.

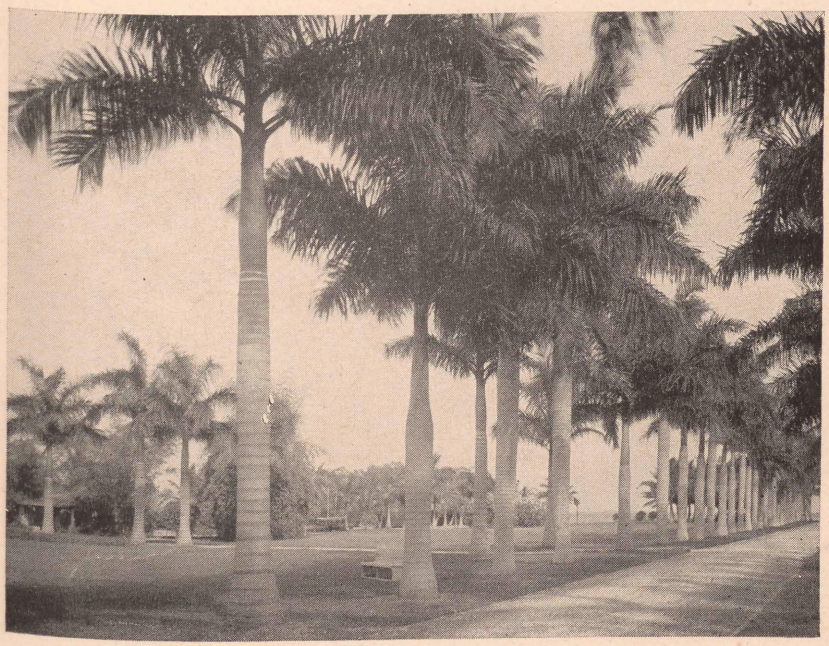
*Tumion taxifolia (Arn.) Greene

ROYSTONEA REGIA (H.B.K.) O. F. Cook

Cuban Royal-palm

(Palmae: Palm Family)

DESCRIPTION: **Height**—80 to 100 feet, trunks often 2 feet in diameter. **Trunks**—gray, concrete-like, straight, smooth, often conspicuously enlarged at base, upper 8 to 10 feet enclosed in green, sheath-like leaf bases. **Leaves**—persistent, alternate, pinnate, firm, dark green, 10 to 12 feet long. **Leaflets**—very numerous, 2½ to 3 feet long, gradually decreasing in size toward end of leaf, strap-shaped, gradually narrowed, tips pointed, margins entire. **Leafstalks**—stiff, 10 to 12 feet long, nearly round, gradually flattened toward long, green, sheathing bases. **Flowers**—in spring, fragrant, white, about ¼ inch in diameter, in dense, branched, drooping clusters about 2 feet long. **Fruits**—maturing in summer, violet-blue, smooth, ovate, about ½ inch long. **Seeds**—solitary, light brown, thin, embedded in brown, fibrous flesh.



DISTINGUISHING CHARACTERS: Bulging base on trunk; pinnate leaves; long, smooth, green boot, composed of sheathing leaf bases.

GENERAL COMMENT: The natural range of Cuban royal-palm is limited to rich, moist hammocks in Dade and Monroe counties. In its native habitat, the tall, massive trunks bear robust crowns of immense, dark-green leaves far above neighboring vegetation. Establishment of the Everglades National Park should save this palm from extermination as a native tree.

SABAL PALMETTO (Walt.) Lodd.
Cabbage Palmetto, Swamp Cabbage
(Palmae: Palm Family)

DESCRIPTION: **Height**—80 feet, trunks often 18 inches in diameter. **Trunks**—brown to gray, nearly straight, covered with the remains of leaf bases, becoming bare, shallowly ringed with leaf scars, eventually nearly smooth with a few vertical fibers. **Leaves**—persistent, alternate, fan-shaped, firm, 5 to 6 feet long, dark green, shining, margins deeply divided into numerous drooping segments often longer than undivided portions of leaves, bearing numerous thread-like fibers. **Midribs**—prominent, extending into bases of

segments. **Leafstalks**—stiff, 6 to 7 feet long, flat above, rounded below, smooth, unarmed, green. **Flowers**—in spring, fragrant, white, about ¼ inch in diameter, in broad, drooping clusters 5 to 6 feet long. **Fruits**—maturing in fall, nearly black, smooth, nearly globose, about ⅓ inch in diameter. **Seeds**—solitary, brown, shining, shaped like a shoe button, covered with thin, dry flesh.

DISTINGUISHING CHARACTERS: Tall, nearly straight trunks; fan-shaped leaves with a prominent midrib and long, marginal divisions; unarmed leafstalk.

GENERAL COMMENT: The cabbage palmetto, the most common arborescent palm, occurs in rich, moist, inland hammocks as far north as Alachua County and much farther north in the coastal hammocks. Mile after mile of Florida landscape is characterized by this native palm.

The paurotis, *Paurotis wrighti* (Griseb. & Wendl.) Britton, is confined to low ground in the extreme southern portion of the state. Slender, upright trunks grow in clumps and the long stalks of the fan-shaped leaves are armed their full length with heavy, upcurved spines.

RELATED SPECIES: The saw-palmetto, *Serenoa repens* (Bartr.) Small, common as a dry-land shrub, occasionally assumes tree characters with leaning trunks, which are covered with old leaf bases. The fan-shaped leaves are borne on slender stalks armed with numerous small, sharp teeth.

THRINAX PARVIFLORA Sw.

Jamaica Thatch-palm

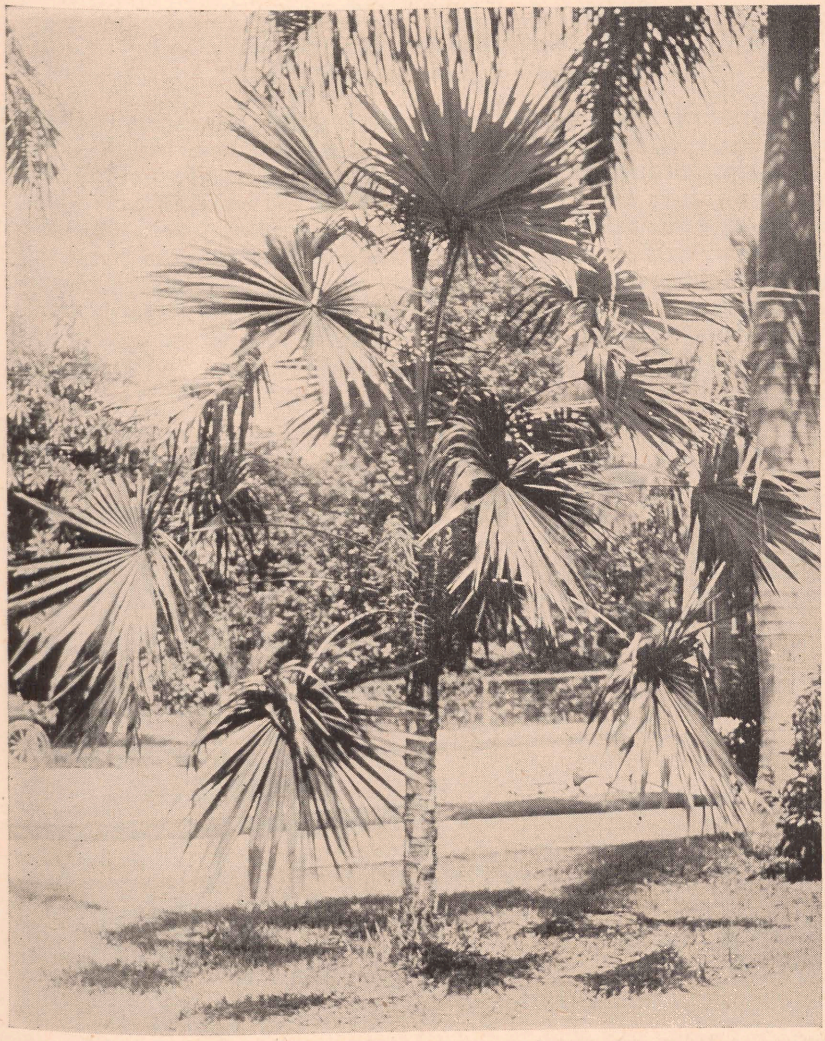
(Palmae: Palm Family)

DESCRIPTION: **Height**—30 feet, trunks 4 to 6 inches in diameter, gray, sometimes covered for half the length with dead leaf bases, eventually becoming smooth and bare. **Leaves**—persistent, alternate, fan-shaped, firm, yellowish

green, shining above, silvery gray beneath, about 3 feet long, margins deeply divided into numerous stiff segments. **Midribs**—lacking. **Leafstalks**—green, stiff, flat, smooth, unarmed, about 4 feet long. **Flowers**—in spring, very fragrant, white on slender stalks about $\frac{1}{8}$ inch long, in narrow clusters 3 feet or more long. **Fruits**—maturing in fall, nearly white, smooth, nearly globose, about $\frac{1}{2}$ inch in diameter. **Seeds**—solitary, in dry, thick flesh.

DISTINGUISHING CHARACTERS: Slender trunks; fan-shaped leaves without midribs, silvery beneath; unarmed leafstalks; long flower clusters.

GENERAL COMMENT: In common with other thatch-palms, the natural range of this species includes only a very limited, subtropical area. While it is suitable for ornamental plantings, its growing conditions are so critical that its general use should be avoided. Because of its rarity and past abuse, it merits conservation.



The Florida silver-palm, *Coccothrinax argentata* (Jacq.) Bailey,* has flexible leaf segments and dense flower clusters 2 feet or less in length.

RELATED SPECIES: The brittle thatch-palm, *Thrinax microcarpa* Sarg., has pale-green leaves and small fruits about 1/8 inch in diameter on stout stalks.

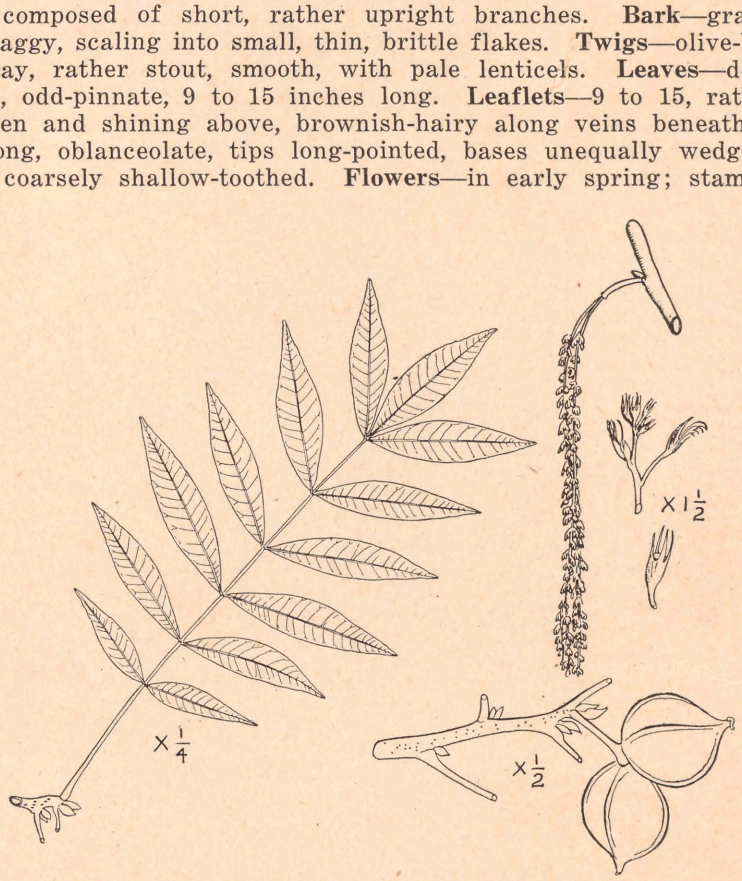
*C. argentea (Lodd.) Sarg.

CARYA AQUATICA (Michx. f.) Nutt.*

Water Hickory, Wild Pecan

(Juglandaceae: Walnut Family)

DESCRIPTION: **Height**—90 feet, trunks 2 feet in diameter. **Crowns**—high, narrow, composed of short, rather upright branches. **Bark**—gray-brown, finely shaggy, scaling into small, thin, brittle flakes. **Twigs**—olive-brown to brown-gray, rather stout, smooth, with pale lenticels. **Leaves**—deciduous, alternate, odd-pinnate, 9 to 15 inches long. **Leaflets**—9 to 15, rather thin, dark green and shining above, brownish-hairy along veins beneath, 3 to 5 inches long, oblanceolate, tips long-pointed, bases unequally wedge-shaped, margins coarsely shallow-toothed. **Flowers**—in early spring; staminate on



3-branched catkins on present or previous year's wood; pistillate in 2- to 10-flowered spikes on ends of twigs. **Fruits**—ripening in fall, in clusters, flattened, globose to obovate, 1 to 1¼ inches long, 1 inch or more wide, narrowly winged to the base. **Husks**—very thin, sometimes splitting only to the middle. **Nuts**—pale brown, flattened, 4-angled and thin-shelled. **Kernels**—dark reddish brown, very bitter.

DISTINGUISHING CHARACTERS: Scythe-shaped leaflets; flaky bark; flattened nuts; wet habitat.

GENERAL COMMENT: The occurrence of water hickory is confined to low, wet ground, river banks, swamps, and margins of lakes from Lee County northward. Its dark-green crowns are in striking contrast to the pale-green foliage of bald-cypress, which it often accompanies. Along the lower reaches of the Aucilla and Suwannee rivers, where it is quite prevalent, it is sometimes called wild pecan because of its resemblance to that species.

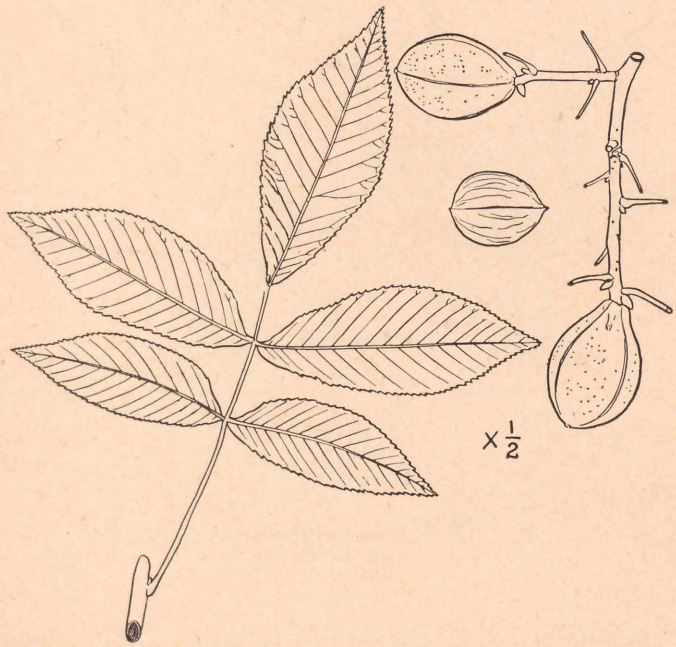
*Hicoria aquatica (Michx. f.) Britt.

CARYA FLORIDANA Sarg.*

Scrub Hickory, Florida Hickory

(Juglandaceae: Walnut Family)

DESCRIPTION: **Height**—60 feet, trunks 1 foot or more in diameter. **Crowns**—usually rounded, from a few, large, irregular branches. **Bark**—olive-gray to pale gray, relatively smooth, but roughened by numerous flat-topped, interlacing ridges. **Twigs**—dark reddish brown, slender, rigid, crooked, smooth except for a sparse covering of raised, elongated lenticels. **Leaves**—deciduous, alternate, odd-pinnate. **Leaflets**—3 to 5, rarely 7, yellowish green, rusty-hairy when young, becoming smooth, lanceolate to elliptic, with remotely toothed margins. **Flowers**—appearing in spring with leaves, both sexes on the same tree; staminate in 3-branched catkins on present or previous year's wood; pistillate in 2- to 10-flowered terminal spikes. **Fruits**—maturing in



fall, varying greatly in shape but uniform on individual trees, narrowly pear-shaped to nearly globose, often with a stalk-like base, about 1 inch long, smooth or slightly ridged. **Husks**—thin, separating tardily and irregularly. **Nuts**—thick-shelled, ovate to rounded, somewhat flattened with small, blunt, irregular ridges. **Kernels**—sweet.

DISTINGUISHING CHARACTERS: Leaflets 3 to 5, smooth, rusty-hairy when young; xerophytic habitat.

GENERAL COMMENT: The scrub hickory is a small tree characteristic of the coastal dunes from Brevard County southward and of the scrubs in the interior of the peninsula as far north as Marion County. It bears abundant crops of small, sweet nuts, often fruiting when 6 feet or less in height. In common with silkbay, tough bumelia, and other plants typical of scrubs, this hickory has a dense crown of yellowish-green foliage.

*Hicoria floridana (Sarg.) Small

CARYA GLABRA MEGACARPA Sarg.*

Coast Pignut Hickory

(Juglandaceae: Walnut Family)

DESCRIPTION: **Height**—100 feet, trunks 2 feet or more in diameter. **Crowns**—very irregular, with long, large upper branches and short, smaller lower branches. **Bark**—dark gray, irregularly furrowed, with numerous roughened, flat-topped, interlacing ridges. **Twigs**—dark brown, rather stout, rigid, smooth, with scattered lenticels. **Leaves**—deciduous, alternate, odd-pinnate, 7 to 12 inches long. **Leaflets**—5 to 7, rather thin, smooth, dark green above, paler beneath, elliptic, tips pointed, bases unequally wedge-shaped, margins toothed. **Flowers**—in spring; staminate on 3-branched catkins on present or previous

year's wood; pistillate in 2- to 10-flowered spikes on ends of twigs. **Fruits**—maturing in fall, in clusters, smooth or slightly 4-ridged, obovate or pear-shaped, often with a stalked base, 1¼ inches long or more. **Husks**—thin, tardily dehiscent, splitting only part way to the base. **Nuts**—brown, smooth, or slightly angled, obovate to subglobose, thick-shelled. **Kernels**—sweet.

DISTINGUISHING CHARACTERS: Relatively smooth bark; leaflets 5 to 7; smooth, pear-shaped fruits with thin husks splitting only to the middle; globose, thick-shelled nuts.

GENERAL COMMENT: The coast pignut hickory, prevalent in hammocks from Manatee County northward, becomes a very tall tree, although it has a crown that is less dense than mockernut. Autumnal colors are rare in Florida, but in this case the leaves of the whole crown turn a bright yellow. The fruits exhibit many variations in shape, although they are usually uniform on individual trees.

*Hicoria glabra (Mill.) Britt.

CARYA TOMENTOSA (Lam.) Nutt.*

Mockernut Hickory, White Hickory

(Juglandaceae: Walnut Family)

DESCRIPTION: **Height**—70 feet, trunks 2 feet in diameter. **Crowns**—narrow, cylindrical to broad and round-topped, composed of short-limbed branches. **Bark**—dark to light gray, close, neither shaggy nor smooth, roughened by irregular, interlacing furrows, which separate broad, flat, close, more or less scaly and rounded ridges. **Twigs**—gray-brown, stout, with numerous pale, vertically elongated lenticels. **Leaves**—deciduous, alternate, odd-pinnate. **Leaflets**—7 to 9, dark yellow-green and shining above, permanently fine-hairy beneath, broadly lanceolate to oblanceolate, aromatic, margins finely to coarsely toothed. **Flowers**—in spring, both sexes on the same tree; staminate

arranged in 3-branched catkins on present or previous year's wood; pistillate in 2- to 10-flowered terminal spikes. **Fruits**—maturing in fall, nearly globose but 4- to 5-channeled, 1½ to 2½ inches long, solitary or paired. **Husks**—thick, woody, separating readily. **Nuts**—brown, nearly globose, 4-ribbed, shell very thick. Kernels—sweet.

DISTINGUISHING CHARACTERS: Broad, downy leaflets; rough, non-flaking bark; husk of fruit splitting freely.

GENERAL COMMENT: One of the most widely distributed Florida hickories is the mockernut hickory, common from Lake County northward. The common name probably refers to the very thick shells that protect the sweet kernels so well that it is doubtful whether even the squirrels find them worth eating. It is primarily known for its wood, which is hard, strong, and tough, and thus admirably suited for tool handles and agricultural implements.

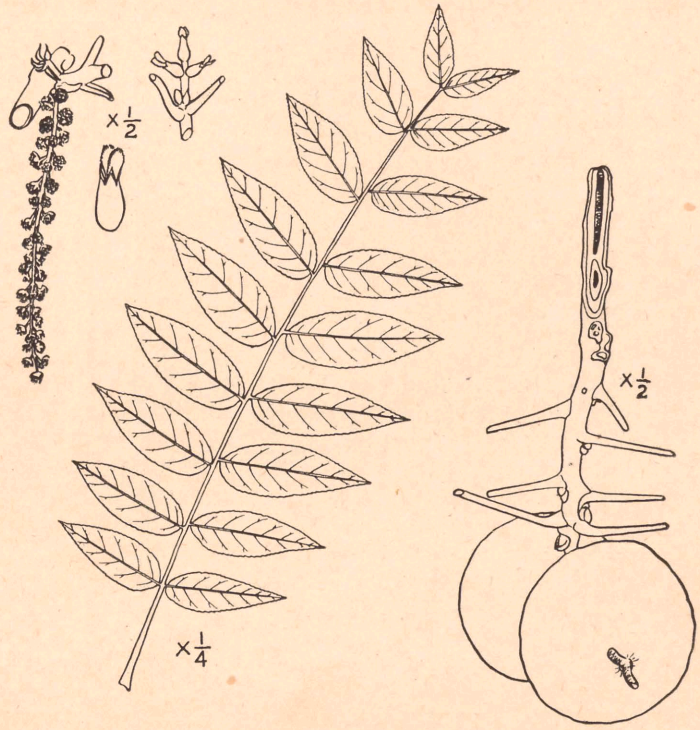
*Hicoria alba (L.) Britt.

JUGLANS NIGRA L.*

Black Walnut

(Juglandaceae: Walnut Family)

DESCRIPTION: **Height**—70 feet, trunks 2 to 3 feet in diameter. **Crowns**—broad, deep, round-topped, rather open, composed of heavy branches, from short trunks. **Bark**—dark brown to black, divided by deep, narrow furrows into thin ridges, forming roughly diamond-shaped patterns. **Twigs**—orange-brown to dark brown, stout, hairy, becoming smooth, with inconspicuous lenticels. **Pith**—chambered, buff-colored. **Leaves**—deciduous, aromatic, alternate, pinnate. **Leaflets**—15 to 23, thin, bright yellow-green, shining and smooth above, downy below, 3 to 4 inches long, ovate-lanceolate, tips sharp,



margins toothed, stalkless. **Leaf rachis**—stout, hairy. **Flowers**—in March; staminate in catkins 2 to 4 inches long, clustered on wood of previous season; pistillate catkins few-flowered at ends of new growth. **Fruits**—ripening in fall, green, becoming black, globose, 2 to 3 inches in diameter. **Seeds**—solitary, globose, thick-walled, deeply corrugated, black, 1 to 2 inches in diameter, embedded in a juicy, fibrous husk. **Kernels**—sweet, highly flavored, oily, edible.

DISTINGUISHING CHARACTERS: Aromatic oil glands in leaflets; black, globose, corrugated nuts; chambered pith.

GENERAL COMMENT: The black walnut is distributed sporadically on rich, well-drained soil from Jackson County westward. Its wood is valuable for furniture and gun-stocks, while the nuts are gathered for the highly flavored kernels. Brown dye obtainable from the sap is no longer used.

*Wallia nigra (L.) Alef.

MYRICA CERIFERA L.*

Southern Waxmyrtle, Bayberry, Myrtle

(Myricaceae: Waxmyrtle Family)

DESCRIPTION: **Height**—40 feet, trunks 1 foot or more in diameter, crooked or leaning. **Crowns**—rather narrow, rounded, supported on upright or spreading, slender branches. **Bark**—silvery gray, smooth, with scattered, horizontally elongated lenticels, commonly mottled with lichens. **Twigs**—reddish brown to gray, slender, smooth except for scattered glands. **Leaves**—evergreen, simple, alternate, thin-leathery, smooth, flat, shining above, with many small, orange dots beneath, aromatic when crushed, 2 to 4 inches long, noticeably shorter at ends of twigs, oblanceolate with tips sharp and margins coarsely toothed toward the tip or sometimes entire. **Flowers**—in spring in the axils of previous year's leaves, staminate and pistillate flowers always on

different trees; staminate catkins greenish yellow, 1 inch or less in length; pistillate pale green, ½ inch or less. **Fruits**—ripening in winter, in dense clusters along the twigs, often in great abundance, persistent berries, ⅛ inch in diameter, green under a thick coating of wax producing a bluish color. **Seeds**—small, globose.

DISTINGUISHING CHARACTERS: Aromatic, evergreen leaves; wax-covered berries; pale bark.

GENERAL COMMENT: The southern waxmyrtle is common in some form over most of the southeastern states but reaches its largest size in Florida, where it occurs in every county. As a shrub it is common in fields and woods but in low hammocks, especially along lake shores, it frequently becomes a medium-sized tree. The pale trunks compete with the tupelos, red maples, and dahoons, often leaning out over the water to obtain a share of the light. The abundant wax on the berries has long been used for making fragrant green candles, but with the use of cheaper substitutes, few bayberry candles are now seen.

*Cerothamnus ceriferus (L.) Small

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MYRICA INODORA Bartram*
Odorless Waxmyrtle
(Myricaceae: Waxmyrtle Family)

DESCRIPTION: **Height**—20 feet, but usually a shrub. **Crowns**—narrow, rounded, composed of short, irregular branches, from slender, crooked trunks. **Bark**—thin, smooth, and nearly white. **Twigs**—reddish brown, stout, smooth or downy, with a few scattered lenticels. **Leaves**—evergreen, alternate, simple, thin-leathery, smooth, flat and not aromatic, 2 to 3½ inches long, elliptic with pointed tips and entire margins. **Flowers**—in spring in the axils of previous year's leaves, staminate and pistillate always on different trees; stami-

nate catkins greenish yellow, 1 inch or less in length; pistillate pale green, ½ inch or less. **Fruits**—ripening in winter, persistent berries, ¼ inch or less in diameter, green under a thick coating of wax producing a bluish color. **Seeds**—small, globose.

DISTINGUISHING CHARACTERS: Non-aromatic, evergreen leaves; rough wax-covered berries.

GENERAL COMMENT: The odorless waxmyrtle, one of the rarer plants of Florida, is occasionally found as a tree in the valley of the Apalachicola River and the western counties. It is almost without exception crowded in with other trees and shrubs, so that the top has no characteristic form. The dull-green, unnotched leaves and rough, waxy fruits are botanical characters first observed and described by John Bartram on one of his trips through Florida. It is an anomalous member of its group, being the only non-aromatic species in it.

*Cerothamnus inodorus (Bartr.) Small

POPULUS DELTOIDES Bartr.*

Eastern Cottonwood, Poplar

(Salicaceae: Willow Family)

DESCRIPTION: **Height**—80 to 100 feet, trunks 3 to 4 feet in diameter. **Crowns**—broadly rounded, composed of large, spreading branches, from short trunks. **Bark**—gray-brown, roughened by flat-topped, slightly interlacing ridges that flake eventually; inner bark sometimes interlaced oppositely to the outer. **Twigs**—olive-green to gray, smooth, with scattered lenticels. **Leaves**—deciduous, alternate, simple, smooth, green and shining above, paler beneath, 5 to 7 inches long, 4 to 5 inches wide, ovate, longer than broad, tips abruptly long-pointed, bases squared, margins toothed, stalks flattened sidewise. **Flowers**—in spring with leaves, staminate and pistillate catkins on different trees; staminate catkins 1½ inches long; pistillate catkins slender, few-flowered, 3 to 3½ inches long; both growing from buds in axils of leaves of the previous year. **Fruits**—maturing in early summer, greenish, pointed, elliptical, ⅓ inch long, on spikes 8 to 12 inches long. **Seeds**—small, light brown, bearing tufts of long, white, silky, deciduous hairs.

DISTINGUISHING CHARACTERS: Bark with interlacing ridges; shape of leaves; long catkins of fruit containing silky hairs.

GENERAL COMMENT: The natural distribution of the eastern cottonwood is limited to moist soil along streams in the Apalachicola River Valley, although it has been used horticulturally as far south as Cocoa and Dade City. Its large leaves, attached by flattened leaf-stalks, are conspicuously in constant movement. It is neither common nor important as a timber tree.

RELATED SPECIES: *P. heterophylla* L., swamp cottonwood, has the same range as the eastern cottonwood, but differs from it in having round stalks and leaves rounded at the base and tip.

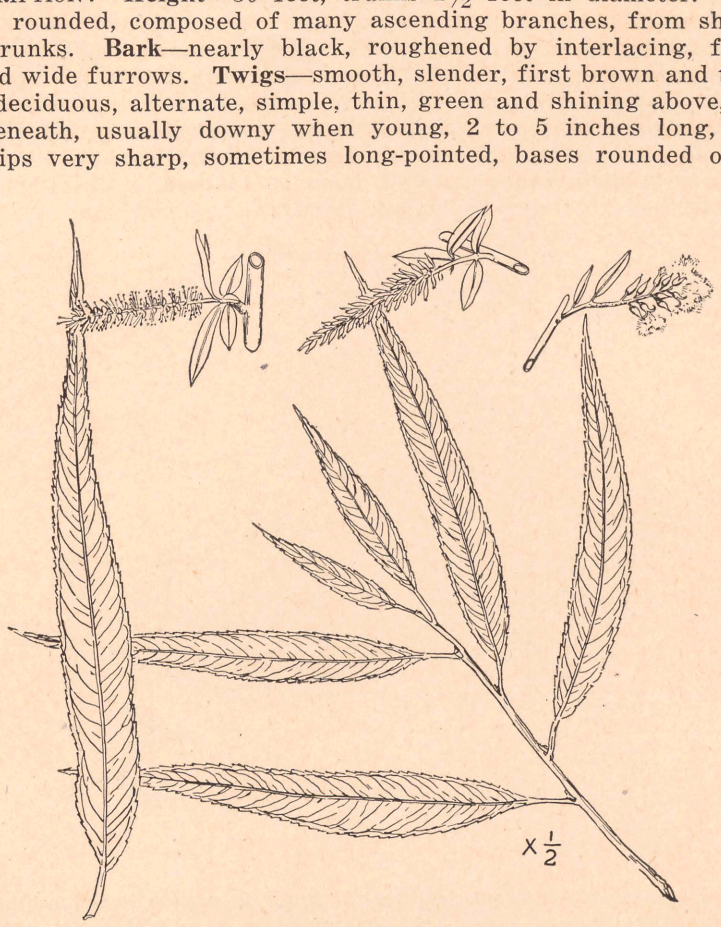
*P. balsamifera L.

SALIX LONGIPES Shuttl.

Coastal-Plain Willow

(Salicaceae: Willow Family)

DESCRIPTION: **Height**—30 feet, trunks 1½ feet in diameter. **Crowns**—irregular, rounded, composed of many ascending branches, from short, often leaning trunks. **Bark**—nearly black, roughened by interlacing, flat-topped ridges and wide furrows. **Twigs**—smooth, slender, first brown and then gray. **Leaves**—deciduous, alternate, simple, thin, green and shining above, pale and silvery beneath, usually downy when young, 2 to 5 inches long, narrowly elliptic, tips very sharp, sometimes long-pointed, bases rounded or broadly



wedge-shaped, margins very finely toothed. **Flowers**—in spring, sexes on different trees; staminate on catkins, greenish with prominent yellow stamens; pistillate pale green, on catkins 2 inches or more long, on the ends of present year's branches. **Fruits**—maturing in late spring, long-stalked, green, ovate, about ¼ inch long, swollen at base, splitting at maturity. **Seeds**—minute, bearing long silk.

DISTINGUISHING CHARACTERS: Leaves silvery beneath; brown twigs turning gray.

GENERAL COMMENT: The Coastal-Plain willow occurs along streams and around lakes and savannahs in every county. Its trunks are seldom straight enough for lumbering, but it is efficient for erosion control along streams.

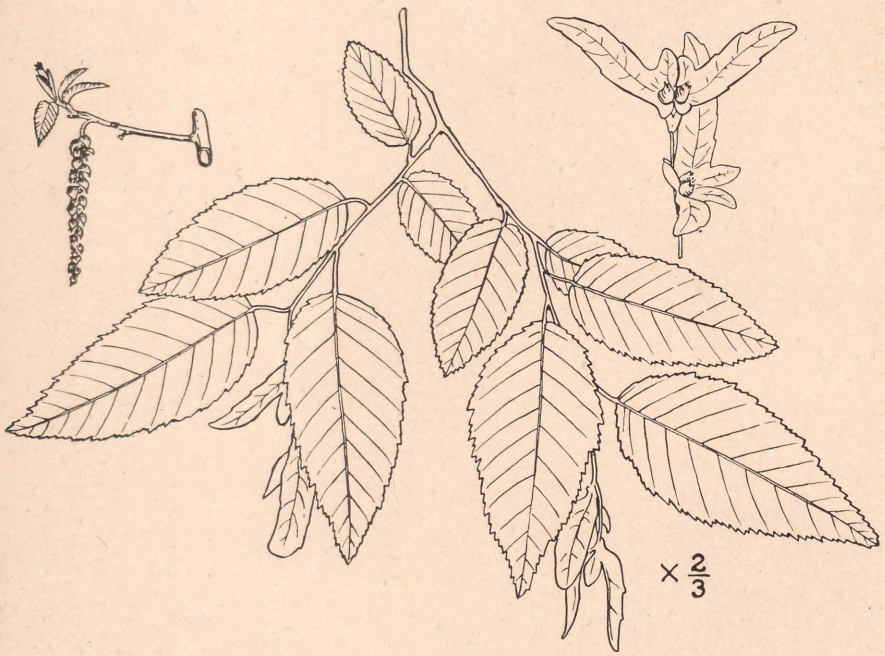
RELATED SPECIES: The black willow, *S. nigra* Marsh., reported in Florida, has leaves green on both sides.

CARPINUS CAROLINIANA Walt.

American Hornbeam, Blue Beech

(Betulaceae: Birch Family)

DESCRIPTION: **Height**—10 to 30 feet, trunks 8 to 12 inches in diameter. **Crowns**—rounded, usually irregular from crowding, composed of slender, crooked branches often drooping at the ends, from slender, straight-fluted trunks. **Bark**—smooth, thin, close-fitting, bluish gray tinged with brown and usually covered with lichens. **Twigs**—red-brown or olive-brown, slender, smooth, shining, with scattered pale lenticels. **Leaves**—deciduous, alternate, simple, dark green and smooth above, paler below, 2 to 4 inches long, ovate, sharp-pointed, with rounded or wedge-shaped bases and double-toothed



margins. **Flowers**—in the spring, unfurling with the first leaves; staminate catkins 1½ inches long, pendent and greenish; pistillate catkins ⅔ inch long, erect, green, scarlet-tipped, growing on the ends of new shoots on the same tree. **Fruits**—ripening in summer, small corrugated nuts, ⅓ inch long, enclosed in leaf-like, 3-lobed bracts that are usually toothed only on 1 margin of the middle lobe.

DISTINGUISHING CHARACTERS: Vertical, fluted, bluish-gray, smooth bark; leaf-like, 3-lobed bract with its corrugated nut.

GENERAL COMMENT: The American hornbeam, a very common member in the dense shade of low-lying woods, ranges as far south as Lake and Seminole counties. The smooth, bluish-gray bark and flutings of the trunk serve readily to distinguish it. The tough, hard wood was formerly used for mallets and wedges, but synthetic materials are largely replacing it.

OSTRYA VIRGINIANA (Mill.) K. Koch.

Eastern Hop-hornbeam

(Betulaceae: Birch Family)

DESCRIPTION: **Height**—20 to 30 feet, trunks about 12 inches in diameter. **Crowns**—rounded, irregular, composed of wide-spreading, drooping branches, from crooked trunks. **Bark**—gray-brown, shaggy, with numerous shallow, vertical furrows, peeling into long, narrow strips. **Twigs**—dark brown, slender, smooth, covered with small, scattered, gray lenticels. **Leaves**—deciduous, alternate, simple, 3 to 5 inches long, ovate, with sharp tips, rounded bases and double-toothed margins. **Flowers**—in spring with first leaves; staminate

catkins formed the previous season, reddish brown, about 2 inches long expanded, arranged in 3's at ends of twigs; pistillate catkins green, ¾ inch long, erect at ends of new growth on the same tree. **Fruits**—maturing in summer, small, nut-like, ¼ inch long, enclosed in inflated, bladder-like bracts. **Bracts**—covered at base with long, brittle hairs, in hop-like, pendent clusters 1½ inches long.

DISTINGUISHING CHARACTERS: Shaggy, gray bark; hop-like fruits.

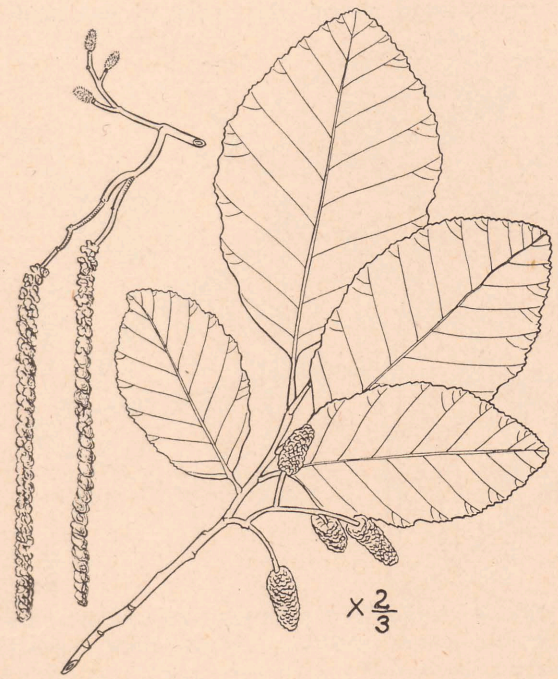
GENERAL COMMENT: The eastern hop-hornbeam is common in dry woods north of Marion County. Its foliage is so similar to that of American hornbeam that bark and fruit characters must be used to distinguish them. Commercially the wood is too tough and difficult to split to be valuable.

ALNUS RUGOSA (DuRoi) Spreng.

Hazel Alder, Black Alder

(Betulaceae: Birch Family)

DESCRIPTION: **Height**—20 feet, trunks 6 inches in diameter. **Crowns**—one-sided, umbrella-like on a few large branches, from slender, leaning trunks. **Bark**—gray, thin, smooth, slightly roughened at the base of old trunks. **Twigs**—slender, smooth, with scattered, roundish lenticels, orange- to red-brown in color. **Leaves**—deciduous, alternate, simple, smooth, thick, dark green above, 1 to 4 inches long, obovate, blunt-pointed or rounded at the tip, usually wedge-shaped at the base, margins finely and evenly toothed. **Flowers**—in the spring before the leaves unfold, but both sexes formed the previous fall; staminate



catkins 2 to 4 inches long, in clusters of 2 to 5 at the ends of twigs; pistillate catkins greenish to purplish, about 1/4 inch long, in clusters of 2 to 3. **Fruits**—in summer, cone-like, woody, persistent, ovate, about 3/4 inch long. **Seeds**—small, globose, flattened, nut-like, less than 1/8 inch long.

DISTINGUISHING CHARACTERS: Persistent, woody, cone-like fruits.

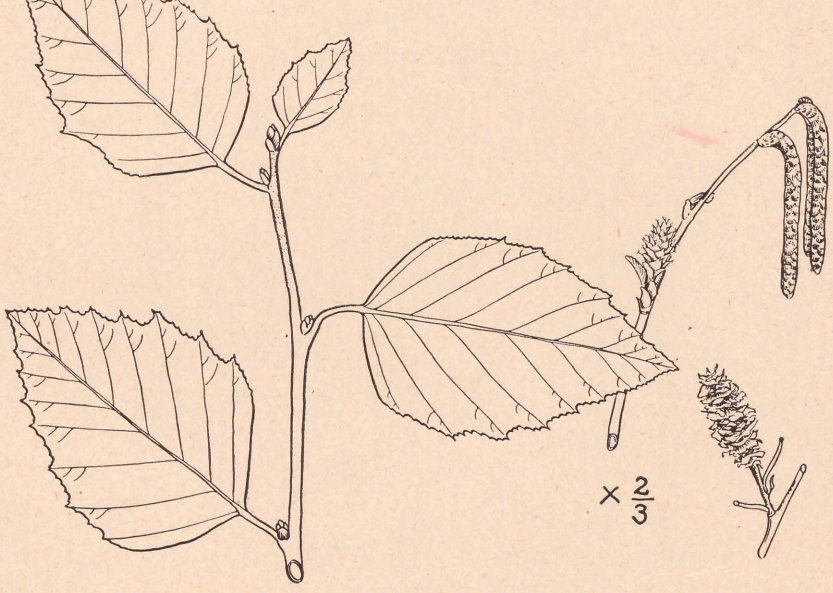
GENERAL COMMENT: Usually considered a shrub, this plant sometimes attains tree proportions in northern and north-central Florida as far south as Alachua and Putnam counties, where it may frequently be found along stream banks, in wet thickets, and in low woods. It makes a good soil binder by virtue of its large strong roots, which are very effective in preventing erosion of stream banks.

BETULA NIGRA L.

River Birch, Black Birch

(Betulaceae: Birch Family)

DESCRIPTION: **Height**—50 to 60 feet, trunks 2 feet in diameter. **Crowns**—narrow, oblong, irregular, from a short trunk that soon divides into several large branches. **Bark**—on young trunks peeling off in horizontal, thin, film-like, papery scales, reddish brown to silvery, persistent, exposing light-red, close bark beneath; on old trunks dark reddish-brown bark, roughened by fissures separating it into irregular scales. **Twigs**—slender, smooth, reddish brown, with pale, horizontally elongated lenticels. **Leaves**—deciduous, alternate, simple, smooth, 1½ to 2½ inches long, ovate, tip sharp-pointed, base wedge-shaped, margins double-toothed. **Flowers**—in the spring before the



leaves; staminate catkins drooping, usually in 3's, 2 to 3 inches long when expanded, formed the previous fall at the ends of new growth; pistillate erect, ⅓ inch long, below the staminate on the same twigs. **Fruits**—in late spring, erect, cylindrical, cone-like, downy, slender-stalked, 1½ inches long. **Seeds**—solitary, small, flat, nut-like, almost surrounded by a hairy wing.

DISTINGUISHING CHARACTERS: Reddish-to cinnamon-brown bark peeling off in film-like, papery curls or scales.

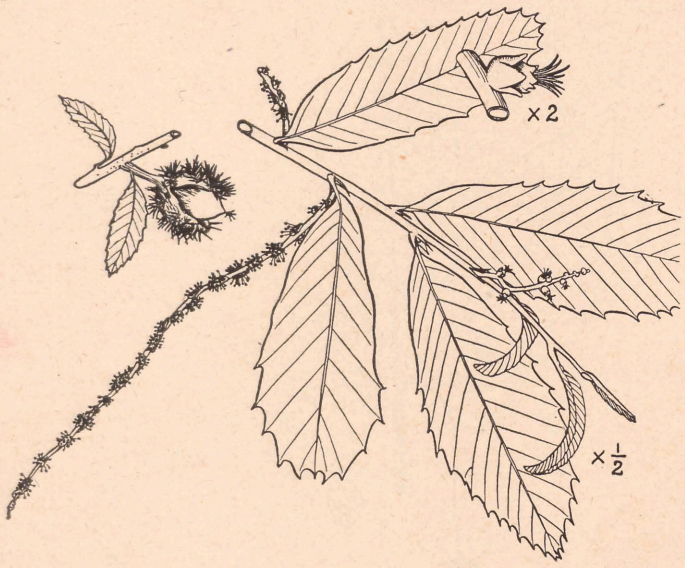
GENERAL COMMENT: The river birch, named for its habitat, is mostly limited to the water courses of western Florida, although it ranges as far east and south as the drainage basin of the Suwannee River. It is the only Florida representative of a group of trees widely known for their soft, peeling bark. The ultimate branchlets are so slender and flexible that they move readily in air currents and cause the shining foliage to glisten in the sunlight.

CASTANEA ASHEI Sudw.

Ashe Chinquapin

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—20 feet. **Crowns**—on trees grown in the open: broad, dense, round-topped, with short trunks and large branches; in the forest: small, irregular, narrow, on unbranched, slender trunks. **Bark**—smooth, somewhat interlaced, with shallow, vertical, brownish-gray furrows and very broad, flat-topped, pale-gray ridges. **Twigs**—slender, yellow-brown, gray-downy when young, and covered with scattered lenticels. **Leaves**—deciduous, alternate, simple, stiff, smooth and green above, gray-downy beneath, 2 to 5 inches long, narrowly elliptic to narrowly obovate, tips rounded or pointed, bases narrowly rounded and margins coarsely sharp-toothed. **Flowers**—in late spring near ends of twigs, slender catkins up to 5 inches long, all staminate except a very few at bases of catkins growing nearest ends of twigs. **Fruits**—maturing in early fall, brown burs about 1 inch long, 2- to



4-valved, very short stalked and covered with short, downy, branched spines arranged in clusters. **Nuts**—brown, solitary, ovate, shining except for dull scar on base and a downy point tipped with a star-shaped appendage. **Kernels**—sweet, edible.

DISTINGUISHING CHARACTERS: Burs with clustered, downy spines.

GENERAL COMMENT: The Ashe chinquapin is the southern relative of the fast-disappearing chestnut and, like it, bears spiny burs and sweet nuts relished by many animals and people. The tree, which is quite conspicuous and attractive in bloom, is often covered with drooping, white spikes of staminate flowers. In habit it is frequently bushy with several trunks springing from a common base, their tops uniting to form a symmetrical crown. It occurs along fence rows and margins of hammocks from Lake County northward, not very close to the coast.

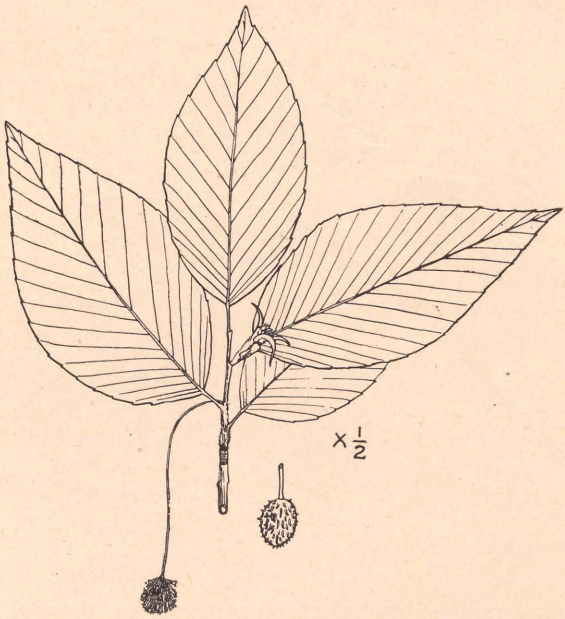
RELATED SPECIES: Two other Florida chinquapins are *C. pumila* (L.) Mill. and *C. alnifolia floridana* Sarg. The former differs from *C. ashei* in having long, slender spines on burs, whereas the latter has leaves that are smooth beneath.

FAGUS GRANDIFOLIA Ehrh.

American Beech

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—70 to 80 feet, trunks 2 feet in diameter. Open grown trees short-trunked, covered with many lateral branches, the lower often drooping, the higher growing erect, the whole forming a dense, deep, symmetrical crown; forest-grown trees with clear, straight trunks and rather compact, shallow crowns. **Bark**—smooth, thin, light blue-gray, often mottled, changing little with age. **Twigs**—slender, gray, smooth, sometimes zigzag, covered with yellowish lenticels. **Leaves**—deciduous, alternate, simple, stiff, papery, smooth and often persistent although brown and dry, 2½ to 5 inches long, elliptic to ovate, taper-pointed, with sharp-toothed margins. **Flowers**—in spring with expanding leaves, both kinds on the same tree; staminate in a



long-stalked, globose head about 1 inch in diameter; pistillate in 2-flowered clusters emerging from the axils of upper leaves. **Fruits**—ripening in late summer, long-stalked, prickly, 4-valved, ovate burs about ¾ inch long. **Seeds**—pale brown, 3-angled and shining, with edible kernels.

DISTINGUISHING CHARACTERS: Close, smooth, light-gray bark; simple, papery, often persistent leaves; prickly, stalked fruit with 3-cornered seeds.

GENERAL COMMENT: The American beech has long been one of the outstanding forest trees in the north temperate zone. Its sturdy, white trunk, supporting a graceful crown of feathery branches, gives it a dignified appearance much appreciated by landscape architects. The smooth bark heals so readily that carved initials and other mutilations are preserved for permanent record. While the range of the beech includes Florida west of the Suwannee River, the southernmost extension is an isolated colony near Santa Fe in Alachua County.

QUERCUS ALBA L.

White Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—70 to 80 feet, trunks 3 feet in diameter. **Bark**—light ashy gray, broken into thin, flat, irregular plates loosely attached by one side, occasionally rough-ridged with scales. **Twigs**—stout, purplish gray to greenish red, with numerous minute lenticels. **Leaves**—deciduous, alternate, simple, green and smooth above, paler beneath, 5 to 9 inches long, 2 to 4 inches wide, generally obovate, tips blunt, bases wedge-shaped, margins with 7 to 9 blunt lobes, separated by deep, rounded sinuses. **Flowers**—in spring; staminate on catkins at base of new growth; pistillate stalked in axils

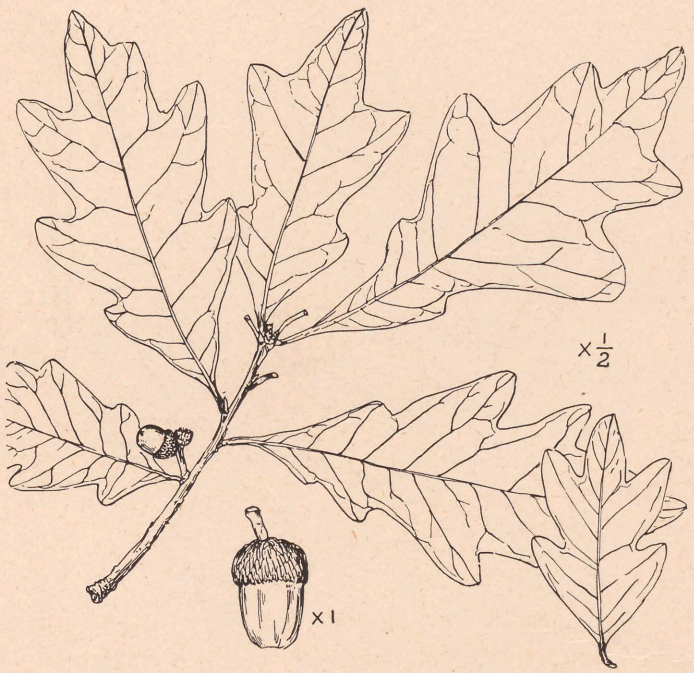
of leaves. **Fruits**—maturing first year, ovoid, ½ to ¾ inch long, enclosed ¼ of their length in bowl-like cups covered with thickened, warty scales, stalkless or short-stalked, solitary or paired. **Kernels**—sweet.

DISTINGUISHING CHARACTERS: Pale-gray, scaly bark; leaves smooth on both sides with 7 to 9 blunt lobes; acorn maturing first year, ¾ inch long, enclosed ¼ of its length in a bowl-like cup with rounded, warty scales.

GENERAL COMMENT: The white oak reaches the southern limit of its range on well-drained soil west of the Suwannee River, where it is locally common. Its hard, white wood has divers uses, but it is not sufficiently abundant to be commercially important. The white oak is one of the most massive of deciduous oaks.

QUERCUS AUSTRINA Small
Bluff Oak
(Fagaceae: Beech Family)

DESCRIPTION: **Height**—70 feet, trunks 2 to 3 feet in diameter. **Crowns**—open, cylindrical, composed of many horizontal, crooked branches with ascending ends, from straight trunks. **Bark**—pale gray, shaggy, flaking into long, narrow strips, exposing pale-brown inner bark. **Twigs**—brown to gray-brown, very stout, crooked. **Leaves**—deciduous, alternate, simple, green and shining above, paler beneath, 2 to 6 inches long, 1 to 2 inches wide, oblong-ovate, tips rounded or blunt, bases rounded or wedge-shaped, margins with 3 to 7, usually 5 lobes, upper lobes blunt, pointing forward and showing



narrow sinuses, or entire, wavy margins. **Flowers**—in spring; staminate on clustered catkins at base of new growth; pistillate short-stalked in axils of leaves. **Fruits**—maturing first season, downy at the tip, oval, ½ to ¾ inch long, enclosed for ⅓ to ½ of their length in thin, cup-shaped cups covered with blunt, downy scales, stalkless or short-stalked, solitary or paired.

DISTINGUISHING CHARACTERS: Pale-gray, shaggy bark; usually 5-lobed leaves; lobes shallow and blunt; hammock habitat.

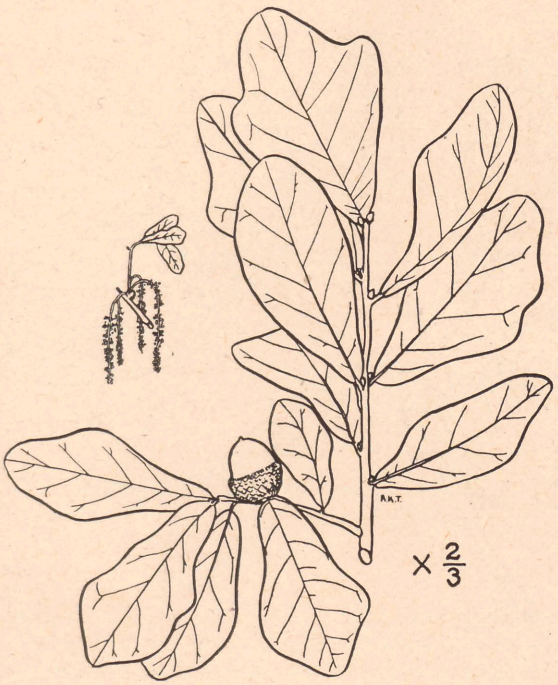
GENERAL COMMENT: Bluff oaks occur as scattered, solitary, rarely large individuals in rich, often calcareous hammocks as far south as Marion County. They are frequently confused with swamp chestnut oaks from the similarity of the bark, or mistaken for white oaks on leaf characters. Small quantities of timber are cut for the valuable wood.

QUERCUS CHAPMANI Sarg.

Chapman Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—25 feet, trunks 5 to 6 inches in diameter. **Crowns**—round-topped, broad, spreading, composed of few branches, from leaning trunks. **Bark**—broken into irregular plates. **Twigs**—olive-brown to brownish gray, stiff, smooth, with scattered, raised lenticels. **Leaves**—persisting until following spring, alternate, simple, green and shining above, yellowish and downy beneath, 2 to 3 inches long, 1 to 1½ inches wide, obovate to elliptic, often indistinctly 3-lobed, tips rounded, bases wedge-shaped, margins entire, wavy, revolute. **Flowers**—in spring; staminate on clustered catkins; pistillate



stalked. **Fruits**—maturing first season, ovoid, ½ to 1 inch long, less than twice as long as wide, enclosed for ⅓ of their length in hemispheric cups covered with prominent scales, stalkless, solitary or sometimes paired.

DISTINGUISHING CHARACTERS: Acorn cup hemispheric, about as deep as wide; nut ovoid, less than twice as long as thick; leaves indistinctly 3-lobed at tip.

GENERAL COMMENT: The Chapman oak, a native of the scrub and other porous soils of the interior, occurs widely as far south as the Everglades. Although large individuals are rare, it covers wide areas with shrubby growth. The yellowish cast to the green of the young growth distinguishes it from associated species.

QUERCUS CINEREA Michx.

Bluejack Oak, Upland Willow Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—15 to 30 feet, trunks 6 to 10 inches in diameter. **Crowns**—narrow, irregular, composed of short, stout, crooked, ascending branches on stout, straight or crooked trunks. **Bark**—dark gray to nearly black, broken into numerous small, narrow, vertical blocks. **Twigs**—dark brown to gray, smooth. **Leaves**—deciduous, alternate, simple, gray-green and smooth above, pale and downy beneath, 2 to 5 inches long, ½ to 1 inch wide, lanceolate, tips sharp or rounded, bases wedge-shaped, margins entire, slightly wavy; young leaves unfolding pink above, silvery white beneath, downy on

both sides. **Flowers**—in spring; staminate in clustered catkins at the base of new growth; pistillate on short, downy stalks. **Fruits**—maturing the second season, nearly globose, often striped and downy at the tip, about ½ inch long, in very shallow, saucer-shaped cups covered with thick, downy scales, stalkless or short-stalked, frequently numerous. **Kernels**—orange-yellow, bitter.

DISTINGUISHING CHARACTERS: Small size; downy foliage; very shallow acorn cups; dry habitat.

GENERAL COMMENT: The bluejack oak, which is common on dry, rolling, usually sandy soil from Lee County northward, is frequently associated with blackjack and turkey oaks. This small tree, attractively colored in spring, is valued chiefly for the excellent firewood it produces.

QUERCUS FALCATA Michx.*

Southern Red Oak, Spanish Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—70 to 80 feet, trunks 2 to 3 feet in diameter. **Crowns**—open, rounded, composed of large branches, from tall or short trunks. **Bark**—dark gray to nearly black, broken into many narrow, deep, vertical ridges. **Twigs**—dark reddish brown, stout, smooth. **Leaves**—deciduous, alternate, simple, stiff, shining above, yellowish to brownish hairy beneath, 5 to 9 inches long, 4 to 5 inches wide, variable, ovate, bases wedge-shaped or rounded, margins shallowly 3-lobed or deeply 5- to 7-lobed, lobes often sickle-shaped, sharp, bristle-tipped, terminal sometimes much longer than laterals, sinuses wide, rounded. **Flowers**—in late spring; staminate on clustered catkins at base of new growth; pistillate on downy stalks. **Fruits**—maturing

second season, striped, nearly globose, ½ inch long, covered with star-shaped hairs, enclosed ⅓ or less of their length in thin, shallow cups covered with thin scales, downy except on margins, stalkless or nearly so, solitary or paired.

DISTINGUISHING CHARACTERS: Leaves with 3 to 5 lobes, yellow- to rusty-hairy beneath; dry habitat.

GENERAL COMMENT: The range of southern red oak is limited to dry, open woods and slopes as far south as Marion County. Leaf variations among individual trees are usual for this species; some have 3 shallow lobes at the tip, whereas others are deeply cut with 5 or 7 lobes. Its timber is low in grade, most of the cut being sold for firewood.

RELATED SPECIES: Two Florida oaks resembling *Q. falcata* Michx. are *Q. velutina* Lam., black oak, and *Q. falcata pagodaefolia* Elliott, swamp red oak. The former differs from the southern red oak in having an acorn cup ¾ inch or more in diameter, whereas the latter has leaves with 5 to 13 lobes, whitish instead of yellowish beneath.

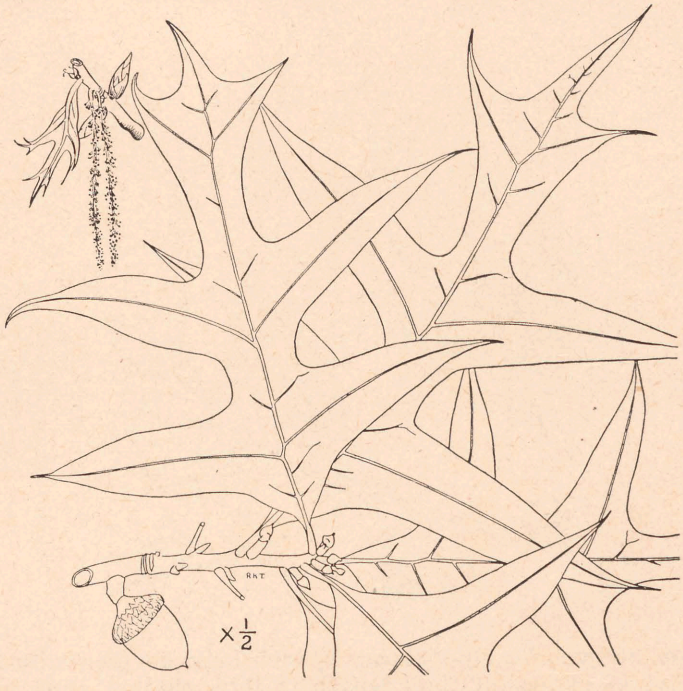
*Q. rubra L.

QUERCUS LAEVIS Walt.

Turkey Oak, Scrub Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—30 feet or more, trunks 1½ feet in diameter. **Crowns**—broad or narrow, open, irregular, usually round-topped, composed of stout, spreading, crooked branches. **Bark**—gray, broken into very coarse, very deep, sharp, vertical ridges by brown furrows. **Twigs**—gray-brown, stout, crooked, smooth. **Leaves**—persisting after death, deciduous, alternate, simple, stiff, green and shining above, brilliant red in fall, smooth with tufts of hairs in forks of veins beneath, 5 inches or more long, nearly as wide, variable, ovate to triangular, bases wedge-shaped, margins with 3 to 5, some-



times 7 lobes, lobes spreading, sickle-shaped, often again divided, tips bristle-like, sinuses wide, rounded. **Flowers**—in late spring; staminate on clustered catkins at base of new growth; pistillate on downy stalks in leaf axils. **Fruits**—maturing second season, striped, oval, rounded at both ends, ¾ to 1 inch long, enclosed for ⅓ of their length in thin, shallow, funnel-shaped cups covered with incurved, downy scales, usually solitary, short-stalked.

DISTINGUISHING CHARACTERS: Deeply cut leaves with spreading, sickle-shaped lobes, persistent although dead; short stature; habitat.

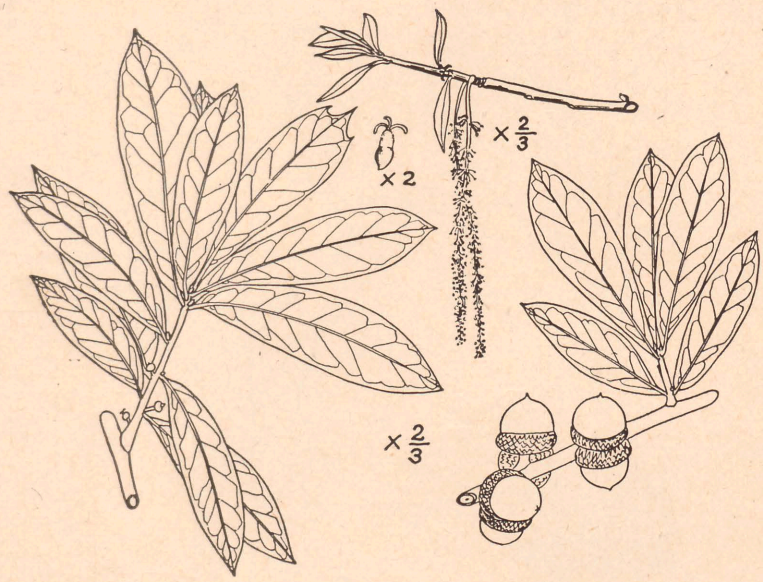
GENERAL COMMENT: The turkey oak, common on dry pinelands and sandy ridges as far south as De Soto County, pre-empts much of the dry, cutover, high pinelands, especially where fires have not been controlled. Its habit of retaining its leaves after they die is shared by only 2 or 3 other trees. This species is valued and cut consistently for firewood.

QUERCUS LAURIFOLIA Michx.

Laurel Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—75 feet, trunks 3 feet in diameter. **Crowns**—round-topped, symmetrical, composed of large, ascending branches, from prominent trunks. **Bark**—nearly smooth, dark gray; on trees over 18 inches in diameter, dark gray to black, roughened by numerous wide, flat-topped ridges or patches separated by nearly vertical furrows. **Twigs**—gray, slender, smooth. **Leaves**—tardily deciduous, alternate, simple, smooth, green and shining above, paler beneath, 2 to 4 inches long, ½ to 1 inch wide, flat, elliptical to oblong, tips sharp, bases narrowed, margins entire, wavy; on water sprouts, often sharply lobed. **Flowers**—in spring; staminate on clustered catkins at base of new growth; pistillate very short-stalked in



leaf axils. **Fruits**—maturing second season, nearly globose, ½ inch long and broad, enclosed for ¼ or less of their length in a thin, saucer-like cup, stalkless, solitary.

DISTINGUISHING CHARACTERS: Narrowly elliptical leaves tardily deciduous; short, round acorns.

GENERAL COMMENT: The laurel oak, widely distributed in moist soil north of the Everglades, often occurs naturally in dense, nearly pure stands. Its rapid growth and tolerance of transplanting have made it so popular for street planting that it outnumbers all other species combined for this purpose. In contrast to the live oak, which has acorns maturing in 1 year and leaves with rolled edges, the laurel oak has flat-edged leaves and requires 2 years to mature its acorns.

RELATED SPECIES: Two close relatives of *Q. laurifolia* are willow oak, *Q. phellos* L., and *Q. obtusa* (Willd.) Ashe. Both species are deciduous, but *Q. phellos* has very narrow leaves and *Q. obtusa* has obovate ones. They are rare trees in Jackson County and westward.

QUERCUS LYRATA Walt.

Overcup Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—75 feet, trunks 2 to 3 feet in diameter. **Crowns**—large, open, irregular, composed of crooked branches, from short, crooked or twisted trunks. **Bark**—brownish or reddish gray, rough, flaky, with large, irregular plates or ridges. **Twigs**—gray, few, slender. **Leaves**—deciduous, alternate, simple, shining above, smooth, sometimes whitish and downy beneath, 6 to 9 inches long, 1 to 4 inches wide, oblong, tips blunt or pointed, bases narrowly wedge-shaped, margins very variable, mostly with 5 to 9

lobes, sinuses broad, irregular. **Flowers**—in spring; staminate on clustered catkins at the base of new growth; pistillate stalked, in lower leaf axils. **Fruits**—maturing first season, ovoid to globose, ½ to 1 inch long, usually broader than long, nearly or wholly enclosed in a deep, unfringed cup, stalkless or stalked, solitary or paired.

DISTINGUISHING CHARACTERS: Acorns nearly enclosed in cup; irregularly lobed leaves; swampy habitat.

GENERAL COMMENT: The overcup oak, an uncommon species, is confined to wet river bottoms from the Suwannee River westward. The divided leaves, often with a narrow waist effect near the middle, and the acorns, nearly enclosed in their cups, are unmistakable characteristics by which this species is distinguished from other Florida species.

QUERCUS MARILANDICA Muenchh.

Blackjack Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—30 feet, trunks 1½ feet in diameter. **Crowns**—narrow, compact, often irregular, usually round-topped, composed of short, stout, crooked, spreading branches, from straight trunks. **Bark**—black, very rough and block-like. **Twigs**—brown to ashy gray, stout, crooked, nearly smooth. **Leaves**—deciduous, persisting after death, alternate, simple, stiff, green and shining above, rusty-hairy beneath, 6 to 7 inches long, nearly as wide, variable, obovate, bases broadly wedge-shaped or rounded, margins

shallowly 3-lobed at tips, wavy to nearly entire. **Flowers**—in late spring; staminate on clustered catkins at base of new growth; pistillate on short, downy stalks in lower leaf axils. **Fruits**—maturing second season, oblong, ¾ inch long, enclosed for ⅓ to ½ of their length in thick, bowl-shaped cups covered with loose reddish-brown scales, short-stalked, solitary or paired.

DISTINGUISHING CHARACTERS: Large, nearly entire, obovate leaves.

GENERAL COMMENT: The range of blackjack oak is limited to areas of poor, dry soil west of the Suwannee River. The large leaves, greater in area than those of any other Florida oak, are a sure guide to its identification. From the small, crooked trunks is secured an abundance of firewood.

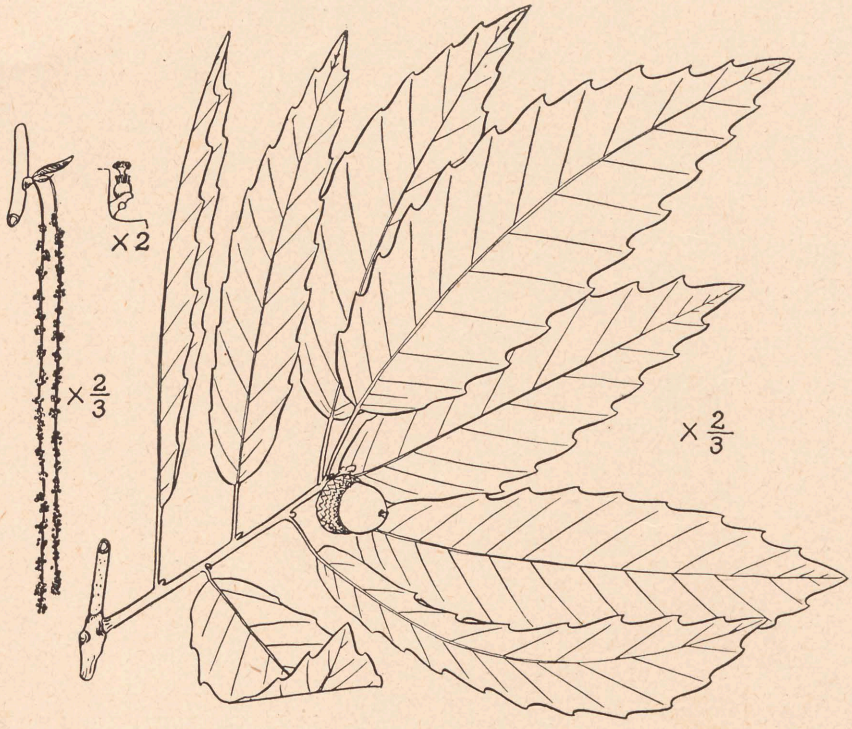
RELATED SPECIES: *Q. arkansana* Sarg. differs from the blackjack oak in having the cup fringeless, ½ inch or less in diameter, and leaves pale beneath.

QUERCUS MUEHLENBERGI Engelm.

Chinquapin Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—60 to 80 feet, trunks 2 to 3 feet in diameter. **Crowns**—small, round-topped, composed of small, lateral branches, from straight, well-developed trunks. **Bark**—ashy to brownish gray, rough, broken into short, narrow, loose scales. **Leaves**—deciduous, alternate, simple, smooth above, pale and finely downy beneath, 4 to 7 inches long, 1 to 4 inches wide, oblong-lanceolate, tips sharp, bases narrowed, margins coarsely sharp-



toothed. **Flowers**—in spring; staminate on clustered catkins at base of new growth; pistillate stalkless, in lower leaf axils. **Fruits**—maturing first season, ovoid, ½ to ¾ inch long, enclosed for ½ of their length in thin, bowl-shaped cups covered with small, indistinct scales, stalkless or short-stalked, solitary or paired. **Kernels**—sweet when roasted.

DISTINGUISHING CHARACTERS: Large, sharp-toothed leaves.

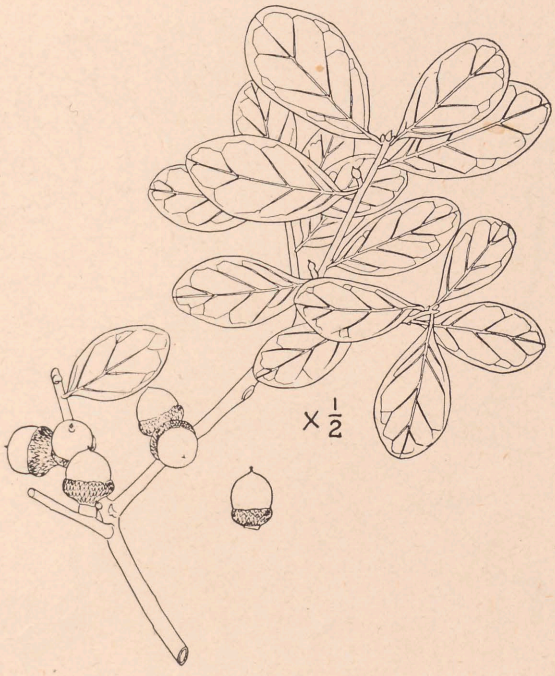
GENERAL COMMENT: The chinquapin oak, an uncommon species, occurs in hammocks, especially along streams in limestone regions west of the Apalachicola River. From the tall, straight trunks is manufactured a high grade of lumber, not distinguished commercially from white oak.

QUERCUS MYRTIFOLIA Willd.

Myrtle Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—20 to 40 feet, trunks 6 to 8 inches in diameter. **Crowns**—round-topped, broad, spreading, composed of crooked, usually short branches, from twisted trunks. **Bark**—dark gray-brown, thin, smooth, slightly furrowed near base of trunks. **Twigs**—dark red-brown to gray-brown, slender, rigid, intricately branched, smooth. **Leaves**—falling gradually during second year, alternate, simple, thick, shining, prominently veined, dark green above, paler with tufts of hairs in forks of veins beneath, ¾ to 2 inches long, ½ to 1 inch wide, oval to oblong-ovate, tips sharp to rounded, bases wedge-shaped



to rounded, margins very thick, revolute, sometimes wavy, entire. **Flowers**—in spring; staminate on clustered catkins; pistillate stalkless. **Fruits**—maturing second year, oval to nearly globose, ¼ to ½ inch long, enclosed for ¼ to ⅓ of their length in bowl-shaped cups covered with blunt, downy scales, stalkless or nearly so, solitary or paired. **Kernels**—bitter.

DISTINGUISHING CHARACTERS: Obovate, evergreen leaves, with strongly recurved margins; small size; dry habitat.

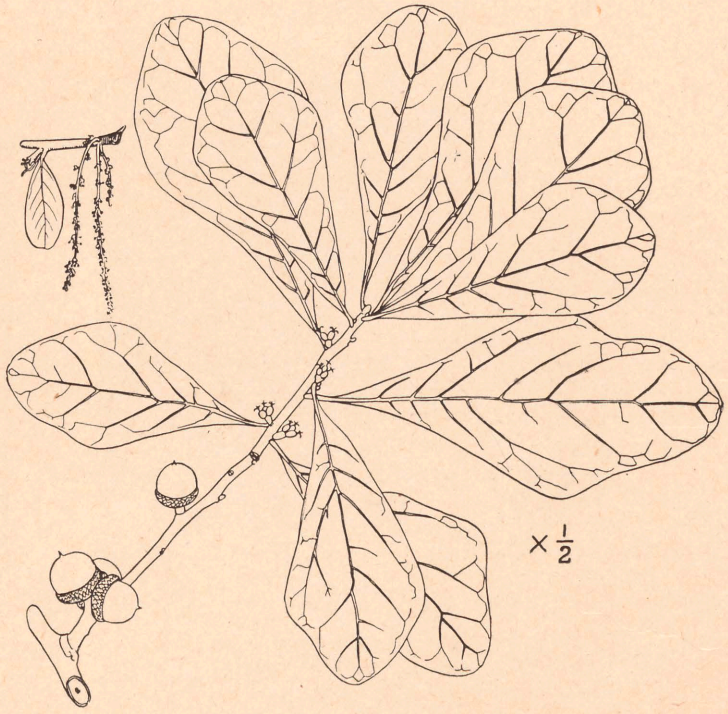
GENERAL COMMENT: The myrtle oak is found in its natural habitat on excessively drained soil, such as coastal sand dunes and scrubs from Dade County northward. As a shrub, it covers large areas with almost impenetrable thickets, especially near the seacoast, but arborescent individuals are not uncommon in the interior. The evergreen leaves are variable in size and form.

QUERCUS NIGRA L.

Water Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—75 feet, trunks 3 feet in diameter. **Crowns**—round-topped, symmetrical, composed of large, ascending branches, from prominent trunks. **Bark**—smooth, dark gray, becoming dark brownish gray, roughened by numerous wide, flat-topped ridges or patches separated by nearly vertical furrows. **Twigs**—dull red to gray, slender, smooth. Leaves—tardily deciduous, smooth, green on both sides, 2 to 4 inches long, 1 to 2 inches wide, variable, generally wedge-shaped with entire margins, tips indistinctly 3-lobed (leaves on water-sprouts often irregularly lobed). **Flowers**—in spring;



staminate on clustered catkins at base of new growth; pistillate short-stalked. **Fruits**—maturing second season, often striped, smooth or slightly downy, ½ inch long and broad, enclosed at base in thin, shallow, saucer-like cups, very short-stalked, solitary or paired.

DISTINGUISHING CHARACTERS: Wedge-shaped leaves; short, nearly globose acorns.

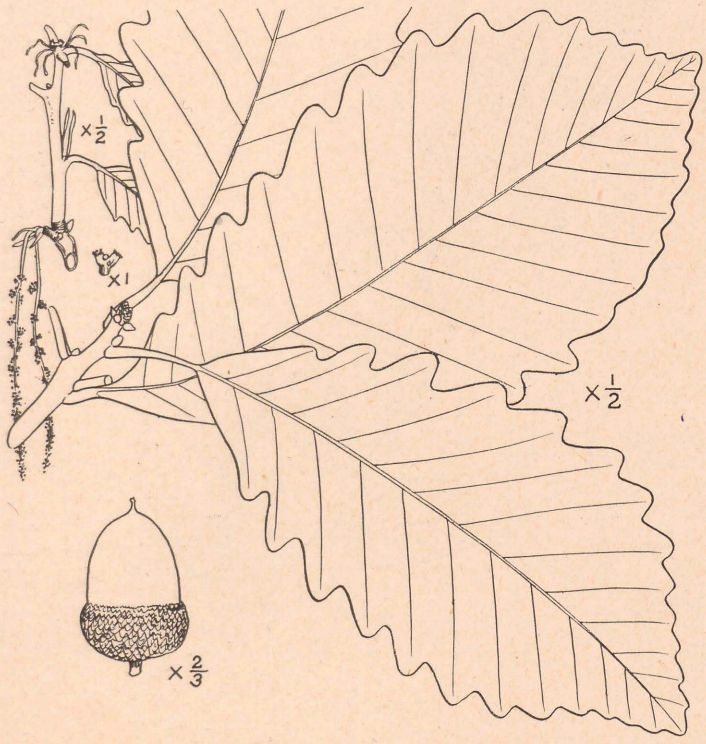
GENERAL COMMENT: The water oak is widely distributed naturally in swamps and moist hammocks as far south as Orange County. As a street tree, it has been widely planted from Orlando northward. Although of rapid growth and attractive color in early spring, it is too short-lived to be recommended for permanent plantings.

QUERCUS PRINUS L.

Swamp Chestnut Oak, Basket Oak, Cow Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—60 to 80 feet, trunks 3 to 4 feet in diameter. **Crowns**—narrow, pyramidal, composed of numerous horizontal branches, from straight, massive, well-developed trunks. **Bark**—pale gray, shaggy, broken by small furrows into long, narrow plates, flaking to expose pale, brownish-gray inner bark. **Twigs**—olive- to gray-brown, smooth. **Leaves**—deciduous, alternate, simple, thick, stiff, smooth and shining above, pale to whitish and downy beneath, 4 to 8 inches long, 2 to 4½ inches wide, obovate to elliptical, tips pointed, bases narrowed, margins with coarse, blunt teeth.



Flowers—in spring; staminate on clustered catkins at base of new growth; pistillate stalkless. **Fruits**—maturing first season, shining brown, ovoid to oblong, 1 to 1½ inches long, enclosed for nearly ⅓ of their length in thick, bowl-shaped cups with distinct, somewhat wedge-shaped scales, stalkless or nearly so, paired or solitary. **Kernels**—sweet, edible.

DISTINGUISHING CHARACTERS: Large, blunt-toothed leaves; enormous acorns.

GENERAL COMMENT: The swamp chestnut oak, a common large tree, occurs in hammocks, low woods, and ravines as far south as Citrus County. Because the tough, heavy wood is valuable for implement handles and splint baskets, the timber is in steady demand. The large leaves and big acorns are outstanding among Florida oaks.

QUERCUS ROLFSI Small
Rolfs Oak
(Fagaceae: Beech Family)

DESCRIPTION: **Height**—20 feet, trunks 4 to 6 inches in diameter. **Crowns**—open, irregular, composed of hard, rigid branches. **Bark**—coppery gray, broken into shallow, irregular, vertical furrows forming small, irregular, scaly plates. **Twigs**—brownish gray, stiff, smooth, with scattered, raised lenticels. **Leaves**—persistent until following spring, alternate, simple, dark green, shining and finely veined above, paler and finely downy beneath, 1 to 2½ inches long, ¾ to 1¼ inches wide, tips blunt to rounded, bases rounded,

margins wavy to shallow-toothed, or shallow-lobed, somewhat revolute. **Flowers**—in spring; staminate on numerous long catkins; pistillate short-stalked. **Fruits**—maturing first season, elliptical, ¾ to 1 inch long, half as wide, enclosed for ½ of their length in funnel-form cups covered with prominent scales, short-stalked, usually paired.

DISTINGUISHING CHARACTERS: Acorn cup funnel-shaped; nut usually twice as long as wide, elliptical; leaves indistinctly lobed.

GENERAL COMMENT: The Rolfs oak has been reported from hammocks and scrubs of the lower east coast, notably Brevard and Broward counties, but its range is imperfectly known. These small trees are characterized by the extreme rigidity of their upright branches, twigs, and leaves. By some authorities, this species is considered to be a form of sand live oak.

QUERCUS SHUMARDI Buckl.

Shumard Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—100 feet or more, trunks 4 to 5 feet in diameter. **Crowns**—open, wide-spreading, composed of stout branches, from long, straight, clear trunks. **Bark**—gray-brown, roughened by somewhat interlacing, dark furrows and lighter, flat-topped ridges. **Twigs**—gray to grayish brown, slender to moderately stout, smooth. **Leaves**—deciduous, alternate, simple, green and shining above, paler with tufts of hair in forks of veins

beneath, 6 to 8 inches long, 4 to 5 inches wide, obovate to oval, bases broad, rounded, margins with 7 to 9 lobes, often again divided, with many bristle-tips, sinuses rounded, deep. **Flowers**—in late spring; staminate in clusters; pistillate on downy stalks. **Fruits**—maturing second season, oblong-ovoid, striped by streaks of down, ¾ to 1 inch long, seated in thick, shallow, saucer-shaped cups covered with pale, downy or nearly smooth scales, nearly stalkless, solitary or paired.

DISTINGUISHING CHARACTERS: Deeply cut leaves; shallow acorn cups.

GENERAL COMMENT: The Shumard oak, found naturally on rich, well-drained soil underlain by limestone from Marion County northward, is sporadic in its distribution. Although the tall, straight trunks yield lumber of high grade, the supply is too limited to be important commercially.

QUERCUS STELLATA Wangenh.

Post Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—70 feet, trunks 1 to 2 feet in diameter. **Crowns**—round-topped or irregular, composed of short, stout, spreading branches. **Bark**—grayish brown to reddish brown, broken by deep fissures into flat, irregular, loose scales. **Twigs**—dark brown, stout, covered with rusty hairs, becoming smooth. **Leaves**—deciduous, alternate, simple, shining above, paler and rusty-hairy beneath, 4 to 7 inches long, 3 to 4 inches wide, broadly obovate,

blunt at tips, wedge-shaped at bases, margins deeply 5-lobed, the two middle lobes almost square and nearly opposite, blunt, separated by deep, rounded sinuses. **Flowers**—in spring; staminate on clustered catkins at base of new growth; pistillate stalkless in leaf axils. **Fruits**—maturing first season, sometimes striped, smooth or downy at tips, oval, ½ to ¾ inch long, enclosed for ⅓ of their length in bowl-shaped cups covered with thin scales, stalkless or short-stalked, solitary, paired or clustered.

DISTINGUISHING CHARACTERS: Broad leaves with squarish middle lobes.

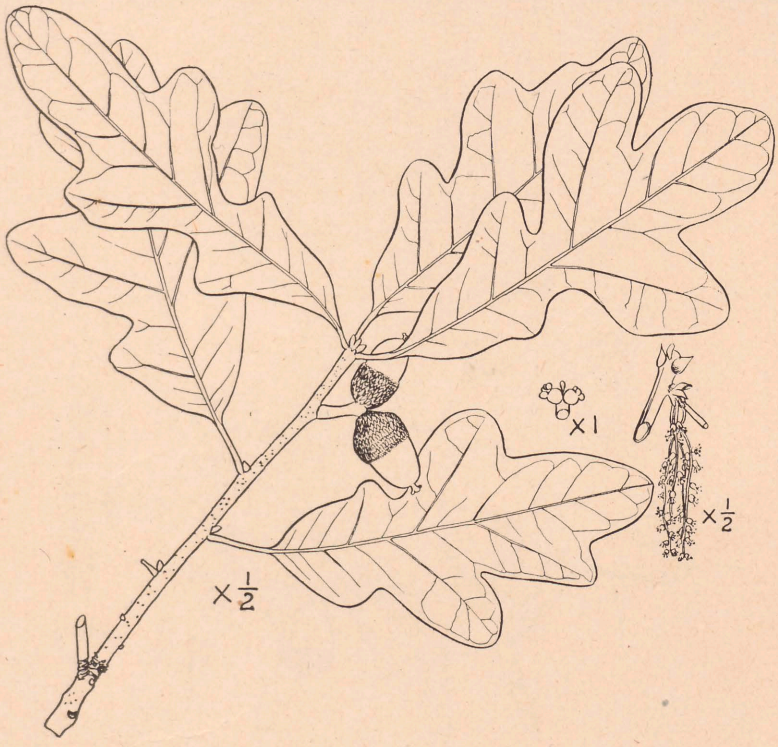
GENERAL COMMENT: The post oak, usually a small tree, occurs in dry, hilly country in northwestern Florida with the southern extension of its range near the Sante Fe River. A small proportion of the trees of this species is cut and sold for firewood.

QUERCUS STELLATA MARGARETTA (Ashe) Sarg.*

Dwarf Post Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 8 to 12 inches in diameter. **Crowns**—broadly conical to round-topped, irregular, composed of relatively large, twisted branches on crooked trunks. **Bark**—light gray, shaggy, flaking into small, thick, rectangular plates. **Twigs**—smooth, yellowish brown soon turning gray. **Leaves**—deciduous, alternate, simple, sometimes hairy in the forks of veins beneath, 2 to 5 inches long, 1½ to 3 inches wide, obovate,



tips blunt, bases wedge-shaped, margins with 3 to 5 rounded lobes, sinuses shallow. **Flowers**—in spring; staminate on clustered catkins at base of new growth; pistillate short-stalked in leaf axils. **Fruits**—maturing first season, elliptical to oval, ½ inch long, enclosed for ⅓ to ½ of their length in a cup-shaped cup, stalkless or short-stalked, solitary or paired.

DISTINGUISHING CHARACTERS: Small tree; leaves with 3 to 5 shallow lobes; dry habitat.

GENERAL COMMENT: The dwarf post oak is found in dry woods of the interior as far south as Orange County. It often covers large areas on sandy hills of the north-central peninsula, where the trees are frequently accompanied by a dwarf form covering patches 10 feet or more in diameter with a dense stand of upright stems less than 2 feet high.

*Q. margaretta Ashe

QUERCUS VIRGINIANA Mill.

Live Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—40 to 50 feet, trunks 3 to 4 feet in diameter. **Crowns**—close, round-topped, broad, sometimes 100 feet or more in diameter, composed of large, wide-spreading, horizontal branches, from short, enlarged, buttressed trunks. **Bark**—dark gray to brownish gray, broken into uniform, narrow, flat-topped ridges by numerous interlacing, vertical furrows. **Twigs**—slender, brown to ashy gray. **Leaves**—persistent until following spring, alternate, simple, dark green and shining above, paler and often downy beneath, 2 to 5 inches long, ½ to 1½ inches wide, ovate to oblong, tips blunt, bases

narrowed, margins entire, revolute (leaves on water sprouts often irregularly lobed). **Flowers**—in spring; staminate on drooping, clustered catkins 2 to 3 inches long; pistillate few, on long stalks in axils of new leaves. **Fruits**—maturing first season, nearly black, elliptical, ¾ to 1 inch long, enclosed for ⅓ of their length in top-shaped cups, solitary or clustered on stalks of varying lengths. **Kernels**—sweet, edible.

DISTINGUISHING CHARACTERS: Broad, spreading crown; evenly corrugated bark; revolute leaves; nearly black acorns in top-shaped cups.

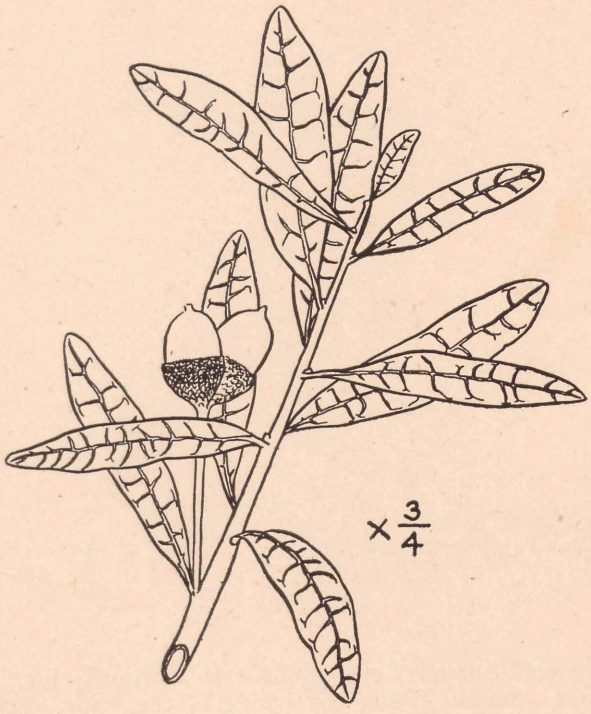
GENERAL COMMENT: The range of live oak includes the hammocks and lake margins of every county in Florida. As a street tree, it has the desirable characteristics of longevity and evergreen foliage, combined with ease of transplanting. Its timber was formerly of considerable economic importance in the construction of sailing vessels.

QUERCUS VIRGINIANA GEMINATA (Small) Sarg.*

Sand Live Oak

(Fagaceae: Beech Family)

DESCRIPTION: **Height**—20 to 30 feet, trunks 8 to 12 inches in diameter. **Crowns**—rounded, often irregular, composed of a few spreading branches on slender, often leaning trunks. **Bark**—pale gray, broken into uniform, narrow, flat-topped ridges by numerous interlacing, vertical furrows. **Twigs**—pale gray, slender. **Leaves**—persistent until spring, alternate, simple, stiff, green and shining above, coarsely veined and downy beneath, 1 to 2½ inches long, broadly lanceolate to elliptic-lanceolate, tips blunt, bases narrowed, margins entire, strongly revolute. **Flowers**—in spring; staminate on clustered catkins at base of new shoots; pistillate on long stalks in leaf axils. **Fruits**—maturing first season, narrowly oval, ⅔ inch long, enclosed ⅓ of their length in narrow, top-shaped cups, paired on long stalks.



DISTINGUISHING CHARACTERS: Small, strongly veined and strongly revolute leaves; paired acorns; dry habitat.

GENERAL COMMENT: The sand live oak is found commonly on sand ridges, coastal sand dunes, scrubs, and other excessively drained soils as far south as the Everglades. Although it usually occurs as a dense, stiff-branched shrub, it often forms small trees, especially on somewhat better soil. Paired acorns on long stalks and deeply cupped or strongly revolute leaves are the outstanding characters.

*Q. geminata Small

FICUS AUREA Nutt.

Florida Strangler Fig, Golden Fig

(Moraceae: Mulberry Family)

DESCRIPTION: **Height**—50 feet, trunks 3 feet in diameter. **Crowns**—broad, round-topped, from short trunks soon dividing into several large branches from which secondary roots often descend to the ground. **Bark**—ashy gray to nearly black, smooth, eventually breaking into small plates. **Twigs**—orange, smooth, with scattered lenticels, encircled by a very narrow ring at each leaf scar. **Leaves**—evergreen, alternate, simple, thick-leathery, dark green and shining above, paler beneath, 1 to 4 inches long, oblong, narrowed at both ends, sharp-pointed, bases wedge-shaped, margins entire. **Flowers**—continuous, produced on inside of small, globose, fleshy receptacles.

Fruits—ripening continuously, red, globose to ovate, ¾ inch long, stalkless, solitary or paired. **Seeds**—lining the inside of the fruit, very small, numerous, smooth, light brown.

DISTINGUISHING CHARACTERS: Oblong, evergreen leaves; red fruit without a stalk; peculiar strangling habit.

GENERAL COMMENT: The Florida strangler fig seedlings develop on the upper branches and trunks of other trees, notably cabbage palmetto. As the roots grow downward around the host trunk, a dense crown produced above shades out the host crown. By the time the fig roots are established in the earth, the host is nearly or quite dead and the fig is self-supporting. Aerial roots, produced later from lateral branches, form new trunks wherever they reach the ground. It occurs in hammocks from Martin and Manatee counties southward.

RELATED SPECIES: A rarer species, *F. brevifolia* Nutt., shortleaf fig, found in Dade and Monroe counties, can be distinguished by its stalked fruits and leaves with rounded bases.

CELTIS LAEVIGATA Willd.*

Sugarberry, Hackberry

(Ulmaceae: Elm Family)

DESCRIPTION: **Height**—60 to 80 feet, trunks 2 to 3 feet in diameter. **Crowns**—wide-spreading, round-topped, composed of large branches, from a well-developed trunk. **Bark**—thin, pale gray, smooth, but ornamented with few or many prominent warts. **Twigs**—reddish brown, slender, shining and zigzag. **Leaves**—deciduous, alternate, simple, thin, 2½ to 5 inches long, narrowly ovate with long, sharp tips, unequally rounded or wedge-shaped bases and margins entire or with a few teeth near the tip. **Flowers**—in late spring, inconspicuous, stalked, greenish, appearing in the lower axils of the new shoots. **Fruits**—ripening in late summer, orange-red to yellow, nearly globose,

smooth, stalked, ¼ inch in diameter and usually solitary. **Seeds**—solitary, pale brown, slightly rough, almost filling the dry fruits.

DISTINGUISHING CHARACTERS: Large size of old trees; warty, gray bark; smooth, nearly entire leaves.

GENERAL COMMENT: The sugarberry, an inhabitant of damp, rich woods, stream banks, and hammocks, is distributed over most of Florida, except the extreme southern part. It has tall, straight boles, very smooth bark bearing prominent warts, small, deciduous leaves, and small, orange-red berries which furnish food for birds. It is a most desirable specimen for the home grounds, provided its water requirement can be met.

RELATED SPECIES: *C. pumila georgiana* (Small) Sarg., Georgia hackberry, a small tree having small, dark-green leaves, rough on the upper surface, paler and slightly hairy on the lower surface, and short leafstalks, occurs as far south as Alachua County.

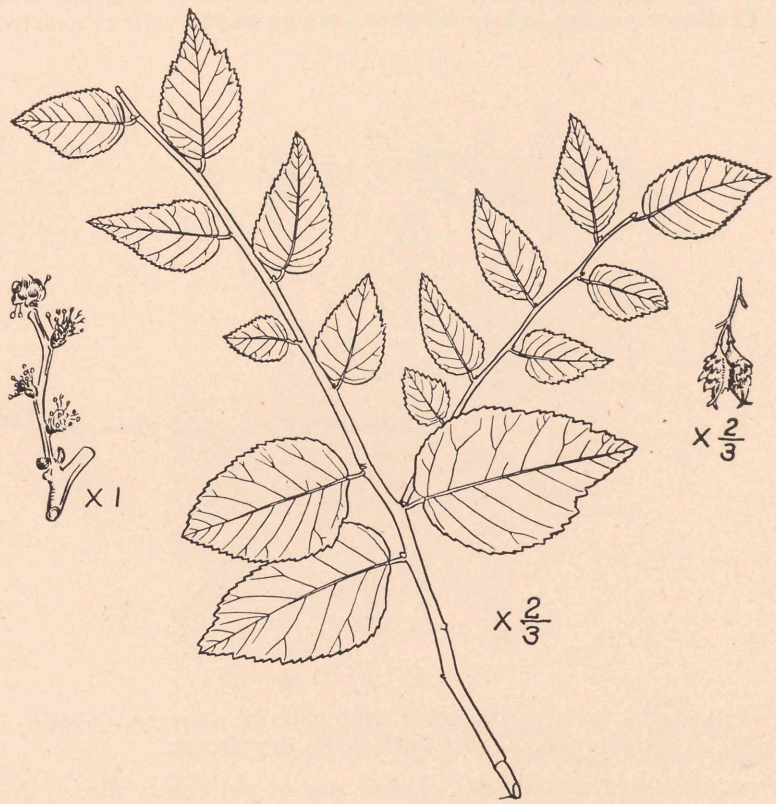
*C. mississippiensis Bosc.

PLANERA AQUATICA (Walt.) Gmel.

Planertree, Water Elm

(Ulmaceae: Elm Family)

DESCRIPTION: **Height**—20 to 30 feet, trunks 12 to 18 inches in diameter. **Crowns**—flat-topped, spreading, composed of numerous large, spreading branches, from short trunks. **Bark**—shaggy, flaking into large, loose, longitudinal, gray-brown plates exposing red-brown inner bark. **Twigs**—smooth, slender, red-brown becoming gray. **Leaves**—deciduous, alternate, simple, dull dark green above, paler beneath, 1 to 2½ inches long, ovate, with sharp



tips, unequally broad, wedge-shaped bases, margins doubly toothed. **Flowers**—in late winter with the first leaves, inconspicuous, perfect or the sexes in separate flowers on the same tree. **Fruits**—maturing in spring, green, later brown, ovate or oblong, about ⅓ inch long, covered with warts. **Seeds**—small, nearly black.

DISTINGUISHING CHARACTERS: Shaggy bark; warty fruits; wet habitat.

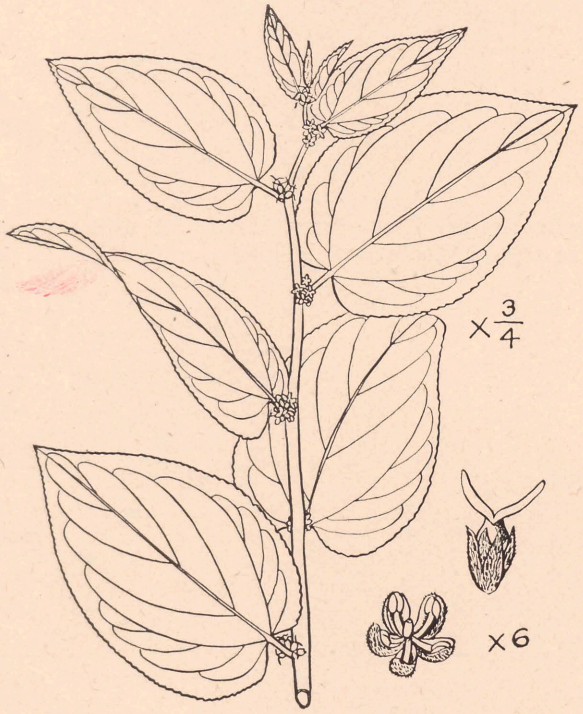
GENERAL COMMENT: The planertree is found in swamps and river floodplains as far south as Alachua County, where a pure stand several acres in extent has been observed. Its most outstanding characters are loose, gray bark, and clusters of slender, branched twigs on the trunks. The light wood is too weak and soft to be marketable.

TREMA MOLLIS (Humb. & Bonpl.) Blume*

Florida Trema

(Ulmaceae: Elm Family)

DESCRIPTION: **Height**—25 feet, trunks 1½ to 2½ inches in diameter. **Crowns**—narrowly umbrella-shaped, composed of numerous small, ascending branches, from slender trunks. **Bark**—chocolate-brown, thin, roughened by numerous small, wart-like excrescences separated into small, appressed, papery scales. **Twigs**—red-brown, 2-ranked, stout, gray-hairy. **Leaves**—persistent, alternate, simple, 2-ranked, dark green and rough above, pale and downy beneath, 3 to 4 inches long, ovate, tips abruptly pointed, bases rounded and often unequal, margins finely toothed, bearing sharp-pointed, incurved

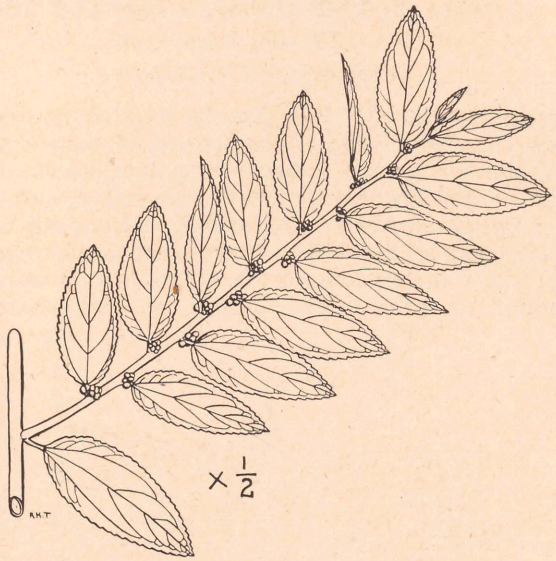


teeth. **Flowers**—in early spring, inconspicuous, in dense, hairy clusters. **Fruits**—maturing in summer, yellow to orange, globose, about ⅛ inch in diameter. **Seeds**—solitary.

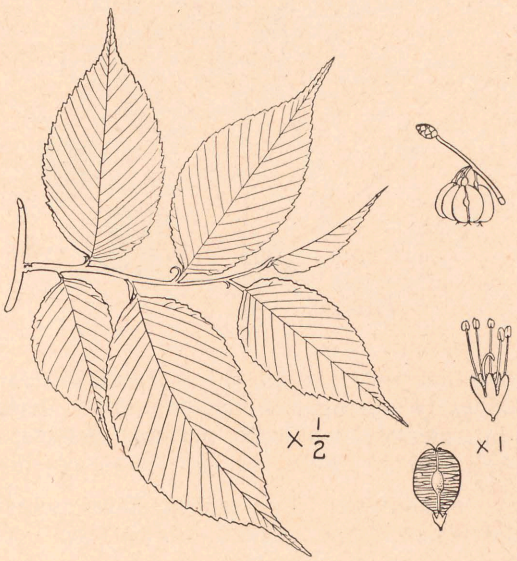
DISTINGUISHING CHARACTERS: Two-ranked, hairy twigs and leaves; small, yellow berries in clusters.

GENERAL COMMENT: The Florida trema occurs as far north as Pinellas County, often along fence rows and canal banks. Although this fast-growing tree produces only soft, weak wood, the numerous fruits furnish food for birds.

*T. floridana Britt.



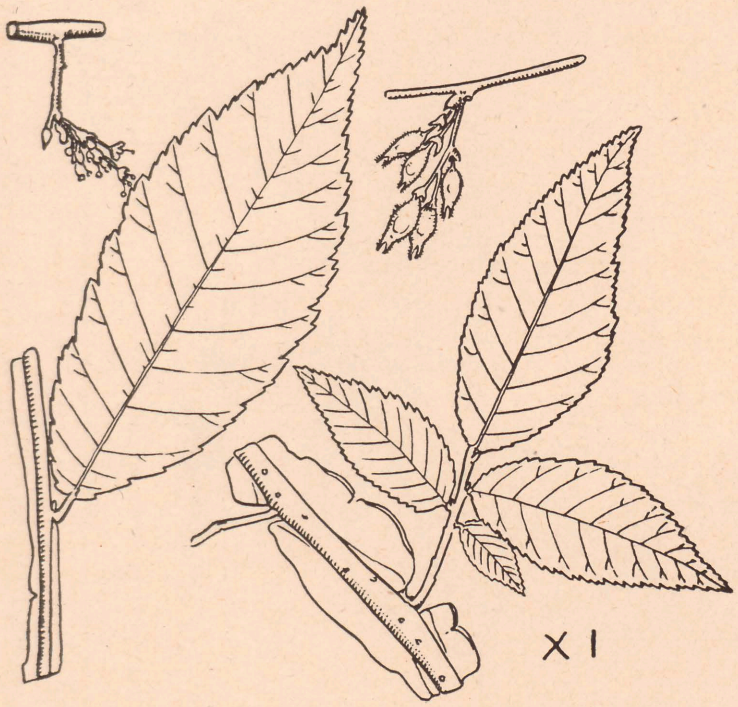
The West Indies trema, *Trema lamarckiana* (R. & S.) Blume, bearing pink fruits, is found in Collier, Dade, and Monroe counties.



The slippery elm, *Ulmus fulva* Michx., which has short-stalked flowers in dense clusters, mucilaginous inner bark, and fruit without pronged tips, is rare in northern Florida.

ULMUS ALATA Michx.
Winged Elm, Cork Elm
(Ulmaceae: Elm Family)

DESCRIPTION: **Height**—50 to 75 feet, trunks 2 feet in diameter. **Crowns**—open, round-topped, composed of short, stout, straight or erect branches, from straight trunks. **Bark**—grayish brown, divided by irregular, shallow fissures into interlacing, flat-topped ridges. **Twigs**—brown to reddish brown, very slender, smooth, with thin, corky lateral wings on one or both sides. **Leaves**—deciduous, alternate, simple, smooth above and pale, often downy



beneath, 2 to 4 inches long, elliptic, tips sharp, bases wedge-shaped or rounded, margins coarsely double-toothed. **Flowers**—in late winter before the leaves, small, inconspicuous, on slender, drooping stalks, in clusters. **Fruits**—in spring prior to or with the leaves, green, thin, flat, downy, 2-pronged at tip, ovate, 1/3 to 1/2 inch long.

DISTINGUISHING CHARACTERS: Winged twigs; elliptical leaves.

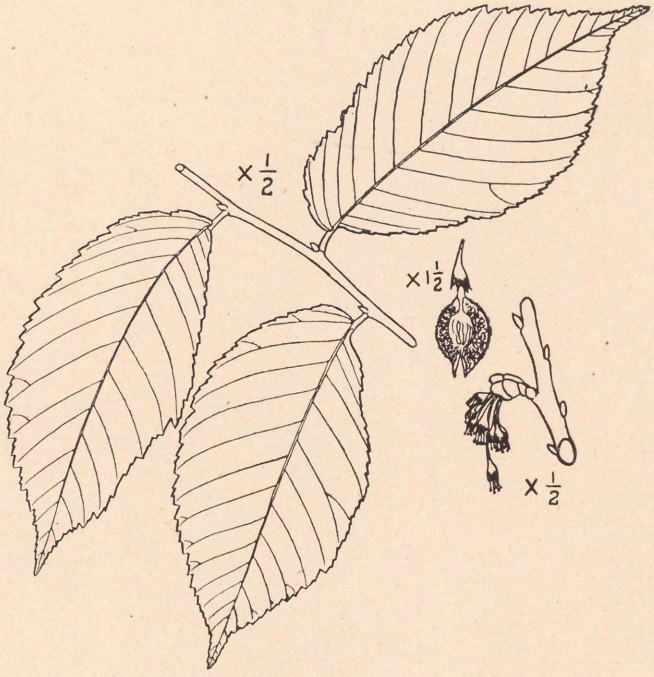
GENERAL COMMENT: The winged elm is found in dry woods or well-drained soil from Lake County northward. Its characteristic corky wings on the twigs vary greatly in size and number with individual trees. In spite of its desirable habit of growth and freedom from disease, it has been neglected in street plantings.

ULMUS FLORIDANA Chapm.

Florida Elm

(Ulmaceae: Elm Family)

DESCRIPTION: **Height**—40 to 50 feet, trunks 8 to 12 inches in diameter. **Crowns**—inverted conical, dense, composed of long, ascending to erect branches, from straight, slender trunks. **Bark**—pale brown, divided by irregular, shallow fissures into interlacing, flat-topped ridges. **Twigs**—gray to brown, smooth, slender, slightly zigzag, wingless. **Leaves**—deciduous, alternate, simple, smooth and shining above, paler and smooth beneath, 2 to 4½ inches long, elliptic, tips sharp, bases wedge-shaped or rounded, sometimes unequal, margins coarsely double-toothed. **Flowers**—in late winter before leaves expand, small, inconspicuous, on slender, drooping stalks in clusters.



Fruits—maturing in spring prior to or with unfolding leaves, green, thin, flat, smooth but hairy on margins, straight and 2-pronged at tip, ovate, about ⅓ to ½ inch long.

DISTINGUISHING CHARACTERS: Inverted conical crown; smooth, wingless twigs; flowers long-stalked; erect tips on the fruits; habitat.

GENERAL COMMENT: The Florida elm is confined to wet hammocks and stream margins from De Soto County northward. This small, inconspicuous tree is remarkable only for its reversed cone-shaped crown and large numbers of small flowers preceding the leaves.

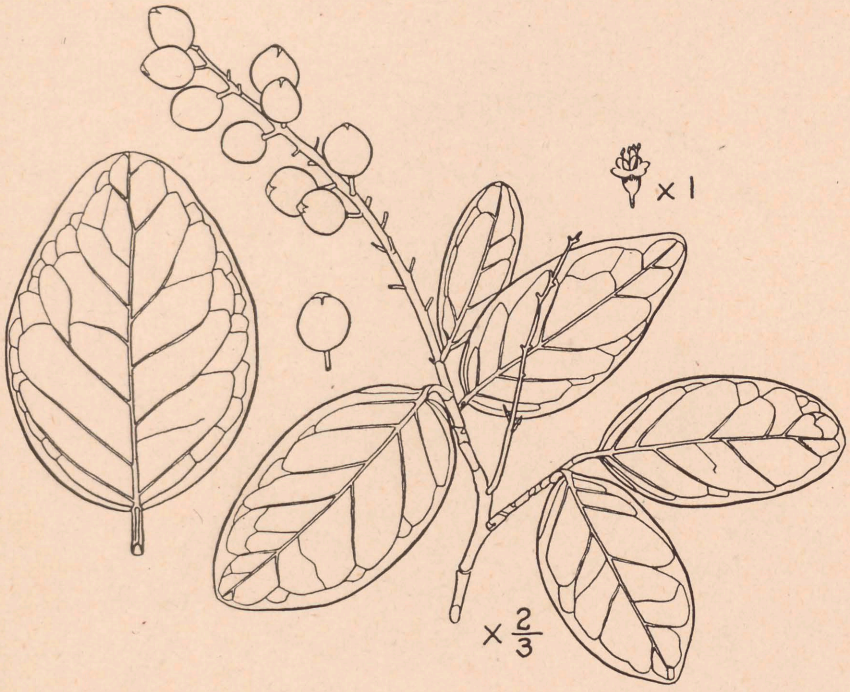
RELATED SPECIES: This tree may represent a geographical variety of the American elm, *U. americana* L., under which it is included by some authorities. The latter, which grows on drier ground, normally has downy twigs and converging tips on the fruits.

COCCOLOBIS LAURIFOLIA Jacq.

Dove-plum

(Polygonaceae: Knotweed Family)

DESCRIPTION: **Height**—60 to 70 feet, trunks 1 to 2 feet in diameter. **Crowns**—small, dense, round-topped, with spreading branches, from tall, straight trunks. **Bark**—gray tinged with brown, broken into large, smooth plates which in falling display the dark-purple inner bark. **Twigs**—reddish, slender, slightly zigzag and usually contorted. **Leaves**—evergreen, alternate, simple, leathery, bright green above and paler below, showing a conspicuously



pale midrib, 3 to 4 inches long, ovate to oblong, rounded or sharp at tips, wedge-shaped or rounded at base, margins entire, revolute, slightly wavy. **Flowers**—in spring, inconspicuous, arranged in spikes 2 to 3 inches long, growing from ends of twigs and axils of leaves. **Fruits**—ripening in winter and early spring, 1/3 inch long, narrowed at base and rounded at top. **Seeds**—solitary, hard, light brown, encased in thin flesh.

DISTINGUISHING CHARACTERS: Straight, upright trunks; oval to oblong leaves; dark-red fruits; papery collars around twigs above each joint.

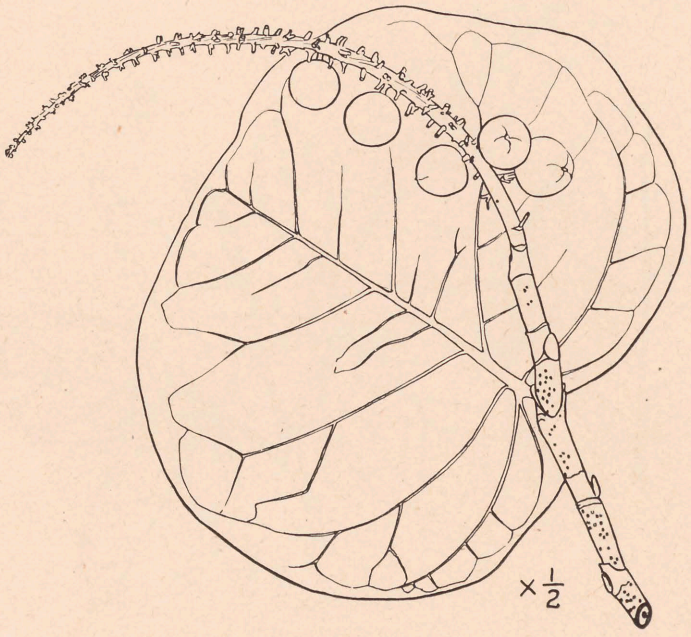
GENERAL COMMENT: The dove-plum is an important element of the natural vegetation on the Florida Keys, but extends northward into Brevard County. The rounded crowns are a dense mass of rather large, dark-green leaves that maintain their color throughout the year. Landscape gardeners have not taken full advantage of these desirable characters to use the tree as a horticultural subject.

COCCOLOBIS UVIFERA L.

Seagrape

(Polygonaceae: Knotweed Family)

DESCRIPTION: **Height**—15 feet, trunks 1½ feet in diameter. **Crowns**—compact, broad, round, composed of stout, spreading branches that sometimes droop on short, contorted trunks. **Bark**—thin, smooth, light brown, marked by large, irregular pale blotches. **Twigs**—dark orange, stout, smooth except for oblong, pale lenticels. **Leaves**—evergreen, alternate, simple, thick-leathery, dark green and shining above, with prominent red veins on both sides, 4 to 5 inches long and 5 to 6 inches wide, round, often broader than long, rounded at tip, heart-shaped at base, with entire and wavy margins. **Flowers**—summer



(or all year farther south), inconspicuous, arranged on thick-stemmed spikes 6 to 14 inches long at ends of twigs and axils of leaves. **Fruits**—ripening in late summer or all year, purple or greenish white, about ¾ inch long, ovate, gradually narrowed into stalk-like base. **Seeds**—solitary, hard, light red, surrounded by thin, watery flesh.

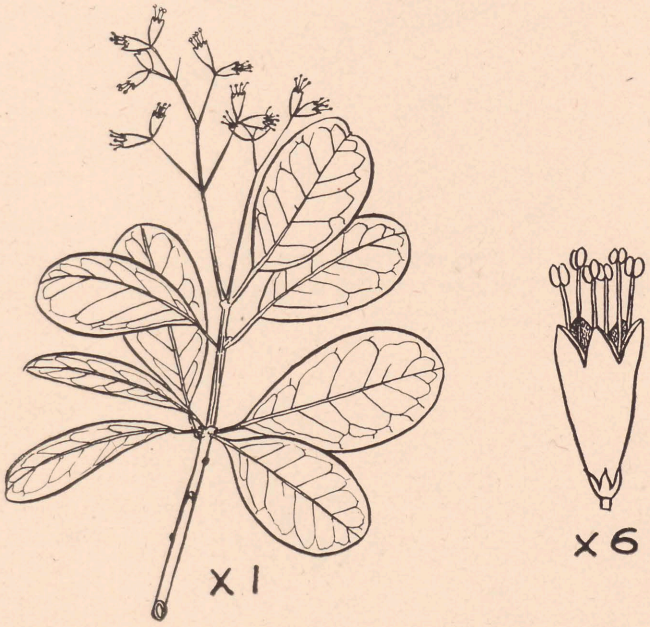
DISTINGUISHING CHARACTERS: Rounded crown; round leaves; grape-like fruits; coastal habitat.

GENERAL COMMENT: An odd tree of coastal hammocks, dunes, and beaches from Brevard and Manatee counties southward, the seagrape is a distinct asset to the home gardner in those regions where it is frequently a problem to find plants that are salt-tolerant. The round, leathery leaves are distinctive, and reputed to have been used to convey messages by the early Spaniards. In addition, a jelly can be prepared from the fruits. Birds feed freely on them also.

TORRUBIA LONGIFOLIA (Heimerl) Britton
Longleaf Blolly

(Nyctaginaceae: Four-o'clock Family)

DESCRIPTION: **Height**—30 to 50 feet, trunks 15 to 20 inches in diameter. **Crowns**—compact, round-topped, composed of stout, spreading branches, from erect or inclined trunks. **Bark**—light red-brown, thin, flaking into thin, irregular patches. **Twigs**—light reddish brown or ashy gray, slender, sometimes numerous and spur-like. **Leaves**—persistent, opposite or nearly so, simple, thin, firm, light green and smooth above, paler beneath, about 1½ inches long, oblong, tips blunt, bases wedge-shaped, margins slightly thickened, wavy. **Flowers**—in fall, inconspicuous, greenish yellow or purplish, in loose,



branched, long-stalked clusters. **Fruits**—maturing in winter or early spring, red, fleshy, smooth, ovate, about ¼ inch long. **Seeds**—solitary, hard, light brown.

DISTINGUISHING CHARACTERS: Smooth, light-colored bark; wedge-shaped leaves 1 inch or more long; fleshy, oval, red fruits.

GENERAL COMMENT: The longleaf blolly occurs only near the coast from Cape Canaveral southward. Because of its dense crown of light-green leaves and bright-red fruits, it merits wider use in ornamental plantings. The fruits are also attractive to birds.

RELATED SPECIES: *Pisonia rotundata* Griseb., differing from Torrubia chiefly in having dry, angular fruits, occurs on the Florida Keys.

Torrubia bracei Britton, occurring near the coast in southern Florida, is distinguished by leaves that are rounded at the base, and oval, fleshy, red fruits.

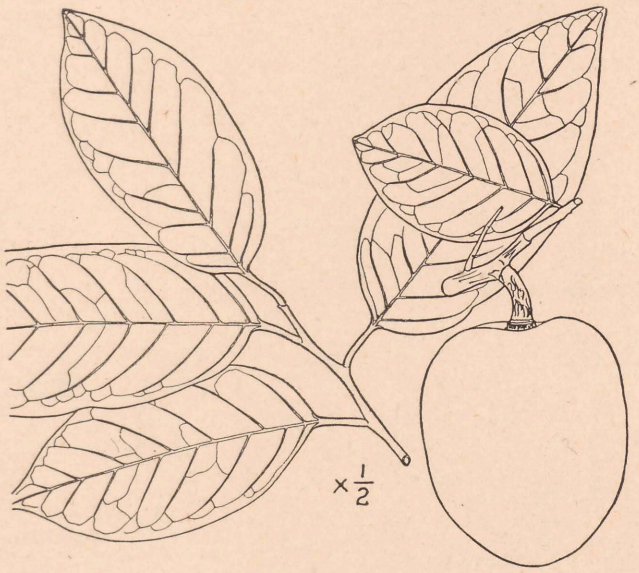
Torrubia globosa Small, occurring near the coast in southern Florida, has small leaves less than 1 inch long, and globose, red fruits.

ANNONA GLABRA L.

Pond-apple, Custard-apple

(Annonaceae: Annona Family)

DESCRIPTION: **Height**—40 feet, trunks 12 to 18 inches in diameter. **Crowns**—round-topped, dense with contorted, stout and wide-spreading branches, from short trunks with heavy, swollen bases, sometimes buttressed. **Bark**—dark reddish brown, rather smooth, eventually marked by broad, shallow fissures. **Twigs**—slender, brown, decorated with small, scattered, wart-like bumps. **Leaves**—aromatic, persistent, alternate, simple, leathery, smooth on both sides, paler beneath, 3 to 5 inches long, ovate to oblong with sharp tips, bases rounded, margins entire, somewhat wavy. **Flowers**—appearing in spring, about 1 inch in diameter, solitary on drooping, short, stout stalks, composed



of 6 thick petals, the 3 outer ones enclosing 3 small inner ones, creamy white with a red blotch on inner side. **Fruits**—maturing in November, smooth with a coarse network of raised lines, heart-shaped, blunt at both ends, 3 to 5 inches long, yellow, blotched with brown. **Seeds**—numerous, somewhat flattened, narrowly winged, about ½ inch long, contained in aromatic, insipid, light-green, pulpy flesh.

DISTINGUISHING CHARACTERS: Creamy-white, leathery flowers; many-seeded, heart-shaped fruits.

GENERAL COMMENT: The pond-apple was formerly so abundant in areas of the Everglades adjacent to Lake Okeechobee that these spots were known as custard-apple land and, as that land was considered exceptionally valuable for agricultural purposes, these stands were soon cut down and destroyed. Small individuals occur over most of its old range, but the few remaining large trees are on the extreme southern part of the mainland. The large fruit is poor in quality, much inferior to its subtropical relatives—the sugar-apple and cherimoya.

ASIMINA TRILOBA (L.) Dunal
Pawpaw
(Annonaceae: Annona Family)

DESCRIPTION: **Height**—20 feet, trunks 6 to 8 inches in diameter. **Crowns**—broad, rounded, composed of straight, ascending branches. **Bark**—brown, thin, with pale blotches, divided by numerous shallow furrows. **Twigs**—slender, olive-brown, smooth except for scattered lenticels. **Leaves**—deciduous, alternate, simple, green above and paler beneath, 4 to 6 inches long, narrowly obovate, sharp-pointed at tip, and narrowly wedge-shaped at base, with entire margins. **Flowers**—in spring with the leaves but on the previous year's twigs, about 1½ inches in diameter, solitary on long, hairy stalks, composed of 6 petals, the outer three long and recurved and the inner 3 short

and erect, greenish to purplish in color. **Fruits**—ripening in early fall, clustered, smooth, ovate to cylindrical, blunt at both ends, sometimes curved, 3 to 5 inches long, greenish yellow becoming dark with age. **Seeds**—dark brown, numerous, shining, flattened, nearly 1 inch long, embedded in aromatic, edible, pulpy, yellow flesh.

DISTINGUISHING CHARACTERS: Large leaves; purplish flowers; banana-like fruits; seeds with ruminate endosperm.

GENERAL COMMENT: Of the several species of pawpaw that grow in Florida, only this one occasionally attains tree size. It appears sporadically in western Florida, where it grows in thickets often shaded by taller trees. The fruits are relished by some people, but the odor from injured bark or bruised leaves is decidedly unpleasant.

ILLICIUM FLORIDANUM Ellis

Florida Anisetree, Polecat-tree

(Magnoliaceae: Magnolia Family)

DESCRIPTION: **Height**—15 to 20 feet, trunks 2 to 3 inches in diameter. **Crowns**—small, open, round-topped, composed of short, slender branches, from tall, slender, crooked, and often leaning trunks. **Bark**—smooth, dark brown, with shallow furrows. **Twigs**—smooth, straight, ascending, green becoming brown. **Leaves**—evergreen, alternate, clustered at ends of twigs, simple, leathery, dark green above, paler beneath, aromatic, 2½ to 4 inches long, elliptic, with sharp tips, wedge-shaped bases, entire margins. **Flowers**—in

March, 1½ inches in diameter, with 20 to 30 dark-red, narrow, sharp-pointed petals, on long, recurved stalks near ends of branches. **Fruits**—maturing in summer, dry, star-shaped, each ray splitting on top. **Seeds**—solitary, pale brown, shining, ¼ inch long.

DISTINGUISHING CHARACTERS: Peculiar star-shaped flowers and fruits; strong odor of all parts when crushed.

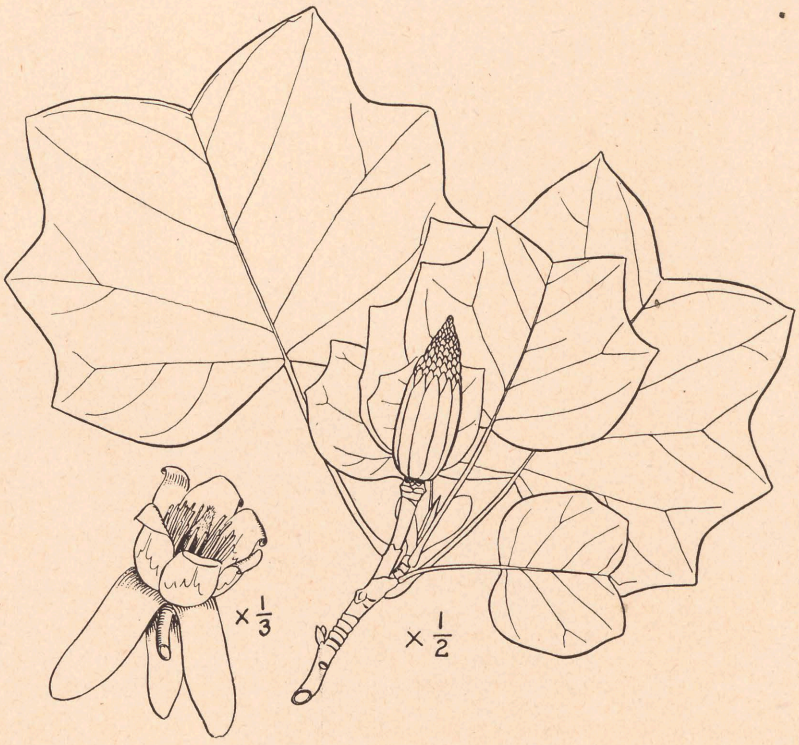
GENERAL COMMENT: The Florida anisetree is common and characteristic in the bayheads of western Florida, especially along the Apalachicola River. Just under the shallow crowns on the slender, crooked trunks are produced the reddish, star-shaped flowers. These are unique in form and diffuse a doubtfully pleasant odor.

LIRIODENDRON TULIPIFERA L.

Yellow-poplar, Tuliptree

(Magnoliaceae: Magnolia Family)

DESCRIPTION: **Height**—100 feet, trunks 3 to 4 feet in diameter. **Crowns**—conical when young, broader and spreading in age. **Branches**—short, small, from tall, straight trunks. **Bark**—ashy gray, smooth, later roughened by long, rough, interlacing, rounded furrows. **Twigs**—smooth, moderately stout, shining, brown to dark gray. **Leaves**—deciduous, alternate, simple, thin, bright green and shining above, paler beneath, 4 to 6 inches long and broad, more or less squarish, 4-lobed, tips square or nearly so, with square bases and entire margins on the lobes. **Flowers**—in early summer, 6-petalled, light



greenish yellow with deep-orange blotches in the center, narrowly cup-shaped, about 1½ to 3 inches wide, stalked, erect, solitary on the ends of leafy branches. **Fruits**—maturing in the fall, cone-like. **Seeds**—numerous, woody, boat-like, pale brown, winged.

DISTINGUISHING CHARACTERS: Squarish leaves; greenish, cup-shaped flowers; great stature; boat-shaped seeds.

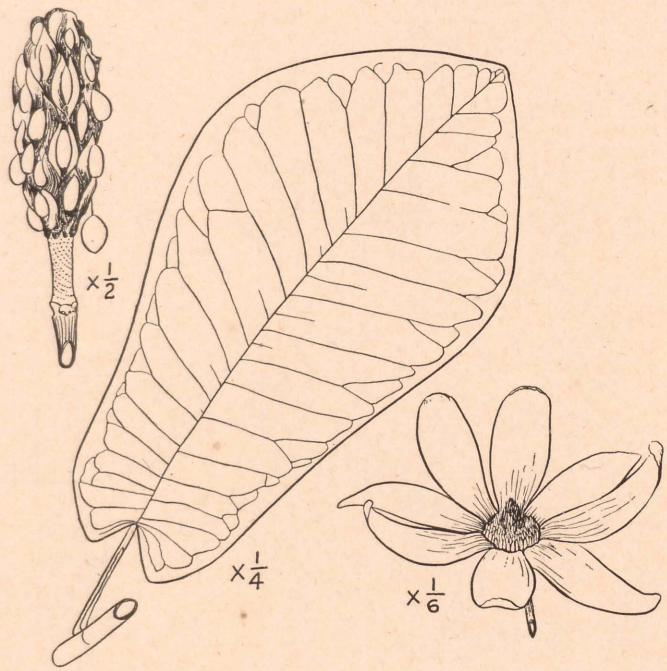
GENERAL COMMENT: The yellow-poplar is found growing sporadically along streams at many places in Florida, often miles apart. Contrary to normal expectation, large specimens are found near the southern extension of its range in Rock Springs Park, Orange County. Its yellowish, tulip-shaped flowers and yellowish-green foliage make it useful horticulturally.

MAGNOLIA ASHEI Weatherby

Ashe Magnolia

(Magnoliaceae: Magnolia Family)

DESCRIPTION: **Height**—15 feet, trunks 3 inches in diameter. **Crowns**—broadly conical, composed of numerous slender, ascending branches. **Bark**—grayish red-brown, smooth, slightly roughened with a few interlacing creases. **Twigs**—red-brown, smooth, slender. **Leaves**—deciduous, alternate, simple, thin, light green and shining above, very silvery beneath, 12 to 24 inches long, elliptic or oblong, largest above the middle with sharp or rounded tips, heart-shaped bases, entire, wavy margins. **Flowers**—in spring or early summer with the unfolding leaves, fragrant, 12 inches in diameter, 6-petalled,



creamy white, solitary, erect on the ends of branches. **Fruits**—maturing in summer, cylindrical, fleshy, cone-like, opening by several small slits. **Seeds**—oval, brown, flattened, covered with thin, aromatic, rose-colored skin, suspended on silken threads.

DISTINGUISHING CHARACTERS: Small stature; very large, silvery-backed leaves; very large flowers.

GENERAL COMMENT: The Ashe magnolia, a very rare tree, is distributed so locally in several counties in western Florida that it might be exterminated easily. In these open, wooded hillsides, the small trees, supporting very large flowers and dark-green leaves, silvery beneath, stand out conspicuously.

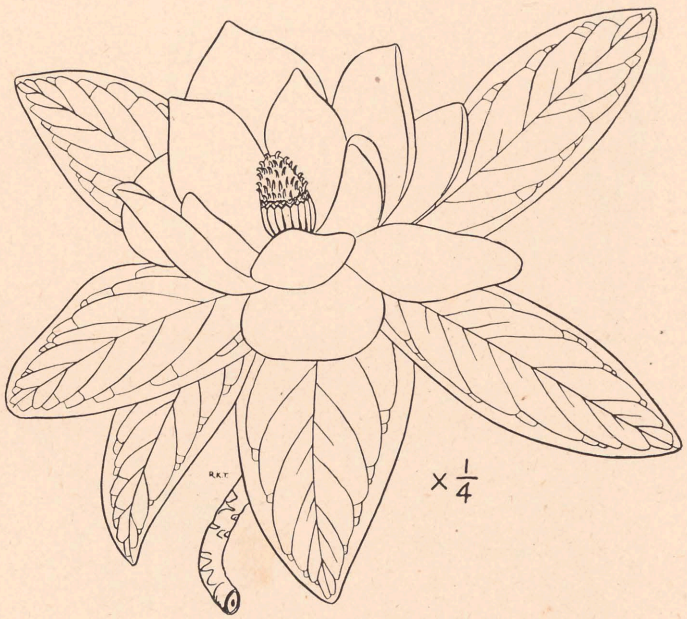
RELATED SPECIES: *M. macrophylla* Michx., bigleaf magnolia, in limited areas of western Florida, has large leaves and large flowers nearly 20 inches in diameter. Trunks attain diameters of 18 to 20 inches.

MAGNOLIA GRANDIFLORA L.

Southern Magnolia

(Magnoliaceae: Magnolia Family)

DESCRIPTION: **Height**—60 to 80 feet, trunks 2 to 3 feet in diameter. **Crowns**—conical, composed of small, spreading branches, from tall, straight trunks. **Bark**—pale gray to brown, rather smooth when young, broken into irregular, flat-topped plates or sometimes shallowly furrowed in age, often mottled gray by the presence of lichens. **Twigs**—green to dark olive-green, smooth. **Leaves**—evergreen, alternate, simple, leathery, bright green and shining above, smooth or densely coated with rusty hairs below, unpleasantly aromatic, 4 to 9 inches long, elliptic to oblong with sharp or blunt tips, wedge-



shaped bases, and entire, somewhat recurved margins. **Flowers**—in early summer, strongly fragrant, 6 to 8 inches in diameter, petals numerous, white becoming creamy with age, short-stalked, solitary, erect on ends of branches. **Fruits**—maturing in late fall, cone-like, opening by numerous small slits. **Seeds**—hard, kidney-shaped, brown, flattened, covered with a thin, aromatic, scarlet skin, suspended on silken threads.

DISTINGUISHING CHARACTERS: Smooth, towering, gray trunks; large, shining, evergreen leaves; large, fragrant flowers.

GENERAL COMMENT: The southern magnolia is widely distributed in hammocks from the Peace River in De Soto County northward. Its large, fragrant flowers and evergreen leaves corresponding in size have made it popular for generations. As an ornamental tree it ranks among the finest broad-leaved evergreens. Economically it is valued in the lumber trade for the manufacture of crates, baskets, and furniture.

MAGNOLIA VIRGINIANA AUSTRALIS Sarg.*

Southern Sweetbay

(Magnoliaceae: Magnolia Family)

DESCRIPTION: **Height**—75 feet, trunks 3 feet in diameter. **Crowns**—irregularly rounded, often small, composed of small, mostly erect but ultimately spreading branches, from tall, straight trunks. **Bark**—pale brown, smooth, broken into very small, rectangular blocks by shallow cracks, often mottled gray by the presence of many lichens. **Twigs**—green, white-downy, slender, later smooth, with a few pale lenticels. **Leaves**—evergreen, alternate, simple, thin-leathery, aromatic, green and shining above, smooth and silvery beneath, 4 to 6 inches long, oblong, narrowed at both ends, with entire, wavy margins. **Flowers**—in early summer and at irregular intervals, 2 to 3 inches in diameter,

9- to 12-petalled, white becoming creamy with age, very fragrant, nearly stalkless, solitary, erect on ends of branches. **Fruits**—maturing in fall, ovate, woody, cone-like, opening by several small slits. **Seeds**—hard, ovate, black, flattened, covered with thin, aromatic, scarlet skin, suspended by silken threads.

DISTINGUISHING CHARACTERS: Slender, smooth, gray trunks; evergreen leaves silvery beneath; very fragrant flowers.

GENERAL COMMENT: The southern sweetbay is distributed widely in bayheads, swamps, and along streams from Dade County northward. Pure stands occur only in deep swamps. Although the flowers are much smaller than those of southern magnolia, they are just as fragrant, and are often produced on young trees. The timber has little economic importance.

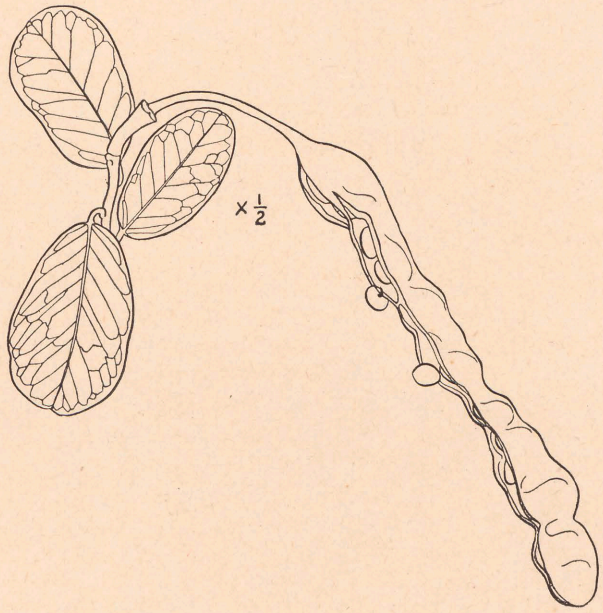
*M. virginiana L.

CAPPARIS CYNOPHALLOPHORA L.

Jamaica Caper

(Capparidaceae: Caper Family)

DESCRIPTION: **Height**—20 feet, trunks 6 inches in diameter. **Crowns**—slender, composed of short branches. **Bark**—dark red-brown, thin, slightly fissured and broken into small, irregular divisions. **Twigs**—slender, angular, smooth or slightly roughened, covered with very small, rusty scales. **Leaves**—persistent, alternate, simple, leathery, light yellow-green, smooth and shining above, covered with very small, rusty scales below, 2 to 3 inches long, narrowly oblong, tips rounded and notched, bases rounded, margins entire and slightly revolute. **Flowers**—white, becoming purplish, about 1¼ inches in diameter, 4-petalled, short-stalked, with numerous purple stamens about 1½ inches long forming a conspicuous tuft, grouped at ends of branches. **Fruits**—



maturing in summer, capsular, slender, cylindrical, long-stalked, 9 to 12 inches long, slightly swollen over individual seeds and covered with very small, rusty scales. **Seeds**—light brown, 1¼ inches long.

DISTINGUISHING CHARACTERS: Leaves scaly beneath; brush-like flowers; knotty fruits.

GENERAL COMMENT: The Jamaica caper, ranging from Cape Canaveral to Key West, occasionally attains tree size on some of the Florida Keys, but it is usually found as a clambering shrub in its limited range. As it grows entangled with eugenias and other bushy plants, the vegetative parts offer few diagnostic characters, unless the brown scales on the lower leaf surfaces catch the eye. The 4 whitish petals and the brush-like cluster of purple stamens remind one of a rose-apple flower, but the long, knotty pods resemble those of some of the legumes.

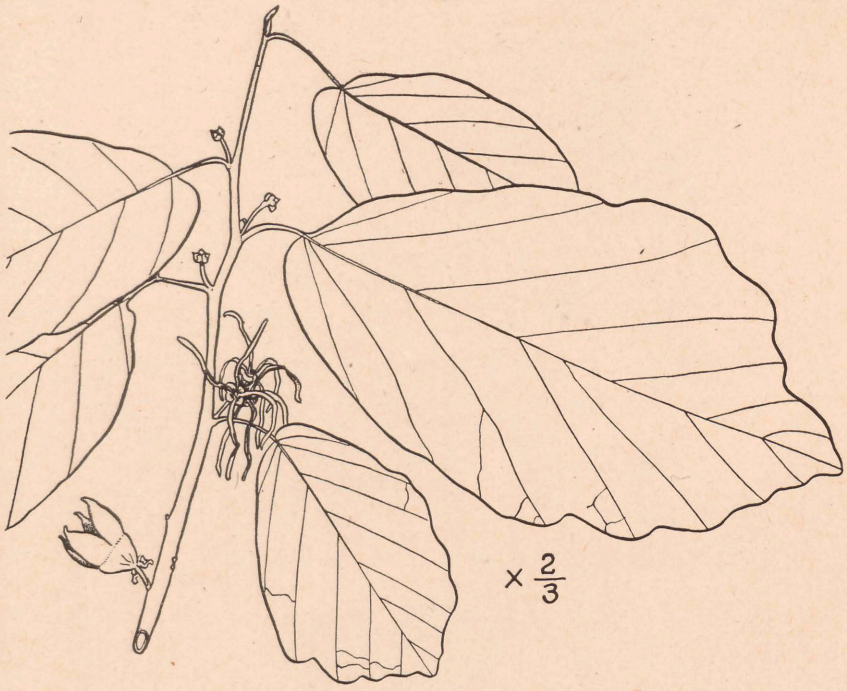
RELATED SPECIES: One other species, *C. flexuosa* L., limber caper, is found in the same region and differs from the foregoing mainly in that the twigs, leaves, and fruit lack the conspicuous rusty scales.

HAMAMELIS MACROPHYLLA Pursh

Southern Witch-hazel

(Hamamelidaceae: Witch-hazel Family)

DESCRIPTION: **Height**—30 feet, trunks 1 foot in diameter. **Crowns**—broad, open, composed of erect, spreading branches, from straight, slender trunks. **Bark**—gray-brown, smooth, with horizontal lenticels, in age showing a few small, vertical furrows. **Twigs**—brown, smooth or slightly downy, slender, slightly zigzag. **Leaves**—deciduous, alternate, simple, green above, paler beneath, roughened on both sides, 2 to 5 inches long, round to ovate with sharp or rounded tips, unequally rounded or wedge-shaped bases, margins



bluntly toothed, especially above the middle. **Flowers**—in winter, small, yellow, having 4 narrow, ribbon-like petals clustered at the ends of short stalks on twigs of the previous season's growth. **Fruits**—maturing in the fall, oval, woody pods that split from the 2-beaked tips to discharge the seeds forcibly. **Seeds**—narrowly ovate, smooth, shining, very hard, dark brown to nearly black.

DISTINGUISHING CHARACTERS: Ribbon-like petals; flowers appearing in winter.

GENERAL COMMENT: The southern witch-hazel is a common shrub that becomes a small tree in low, rich woodlands from Lake County northward. It is reputed to have been used medicinally by the Indians, and medications may still be obtained in which it is a major ingredient, although it has little economic importance today.

LIQUIDAMBAR STYRACIFLUA L.

Sweetgum, Red Gum

(Hamamelidaceae: Witch-hazel Family)

DESCRIPTION: **Height**—100 feet, trunks 4 feet in diameter. **Crowns**—conical when young, small and oblong in age. **Branches**—short, stout, from a tall, straight trunk. **Bark**—dark gray, roughened with many vertical, interlacing furrows deepening with age. **Ridges**—not flaking. **Twigs**—slender, smooth, sometimes bearing corky wings, olive-brown soon turning gray. **Leaves**—deciduous, alternate, simple, thin, green and shining on both sides, 3 to 6 inches broad, star-shaped, deeply 5- to 7-lobed, bases square or slightly notched, tips of lobes sharp and margins finely toothed. **Flowers**—in early

spring with the first leaves; staminate greenish yellow, in erect clusters of several rounded heads; pistillate pale green, in a single globose head on a long, drooping stalk below the staminate. **Fruits**—maturing in fall, globose, woody, cone-like with many slender projections, opening by small slits, pendent, persistent. **Seeds**—pale brown, oblong, winged, many abortive.

DISTINGUISHING CHARACTERS: Star-shaped leaves; pendent, spiny fruits.

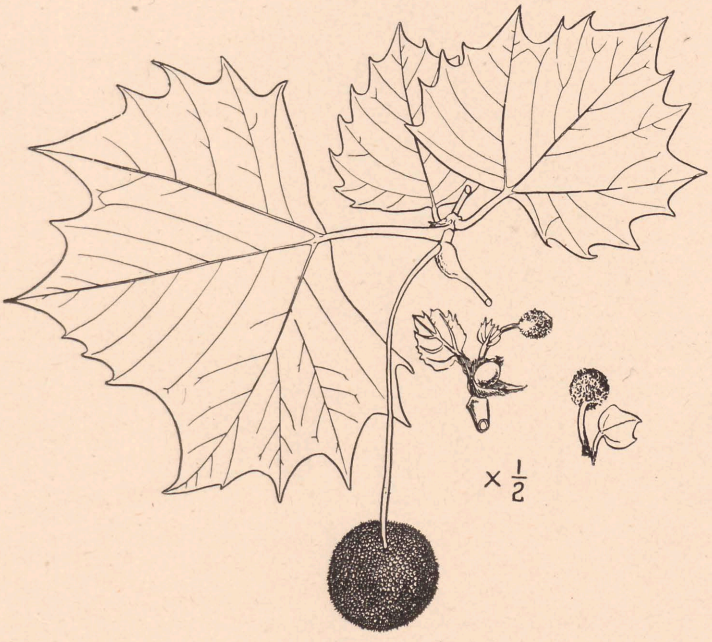
GENERAL COMMENT: The sweetgum is distributed generally as far south as Brevard and Manatee counties. It is one of the largest, most common, and most valuable hardwood timber trees in Florida, fine stands occurring in the flood-plain of the Apalachicola River. The great height and variable bark of mature trees make it difficult to distinguish, except at flowering and fruiting seasons. The autumnal coloring of sweetgum is unusually brilliant.

PLATANUS OCCIDENTALIS L.

American Sycamore, Buttonwood

(Platanaceae: Planetree Family)

DESCRIPTION: **Height**—100 feet, trunks 3 to 6 feet in diameter. **Crowns**—broadly conical to broad, open, irregular. **Trunks**—tall or short, branches massive, spreading. **Bark**—light gray to dark brown, smooth, breaking into small, thick, oblong scales, or flaking in large, irregular patches exposing yellow or greenish-white inner bark. **Twigs**—slender, zigzag, shining, light orange-brown to light gray. **Leaves**—deciduous, alternate, simple, thin, firm, smooth, bright green above, paler beneath, 4 to 6 inches broad, ovate, angular with 3 to 5 sharp-tipped lobes, square or slightly heart-shaped bases, and coarse-toothed margins. **Flowers**—in late spring with leaves, both sexes in



separate clusters on same shoots; staminate dark red, in globose heads on long, hairy stalks from axils of leaves; pistillate light green, in globose heads, from ends of twigs. **Fruits**—maturing in fall, pendent, persisting into winter, long-stalked, globose, about 1¼ inches in diameter. **Seeds**—numerous, narrow, pointed, surrounded at the base by a circle of upright, brown hairs.

DISTINGUISHING CHARACTERS: White, patchy bark; angular leaves; persistent fruits.

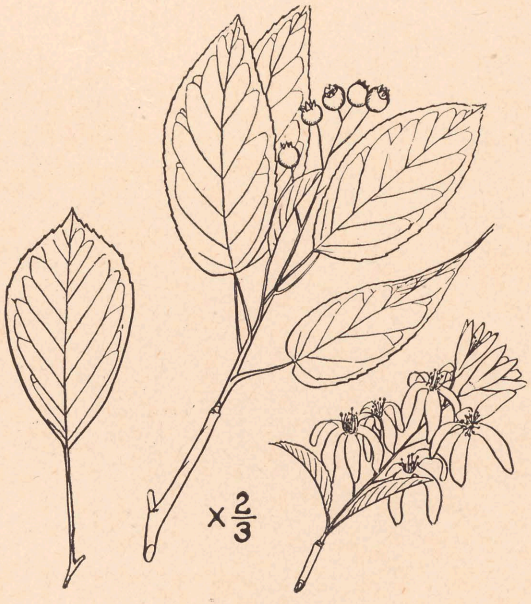
GENERAL COMMENT: The American sycamore is distributed naturally along streams from Gadsden County westward, but it has been planted over a much wider area. The white bark exposed by annual flaking is an outstanding mark of identification. Its tenacious, fibrous wood is so difficult to work that it has little commercial use.

AMELANCHIER ARBOREA (Michx.f.) Fern.*

Downy Serviceberry, Shad-berry

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—25 feet, trunks 4 to 5 inches in diameter. **Crowns**—narrow, rounded, composed of small, erect branches, from tall, slender trunks. **Bark**—ashy gray, thin, marked with shallow, vertical fissures, with somewhat roughened ridges. **Twigs**—slender, dark red-brown, smooth except for numerous lenticels. **Leaves**—deciduous, alternate, simple, downy when young but finally smooth, yellowish green above, slightly paler beneath, 2 to 4 inches long, bases rounded or slightly heart-shaped, margins finely sharp-toothed.



Flowers—in early spring prior to or with the unfolding leaves, fragrant, white, about 1 inch in diameter, stalked, in erect or drooping several-flowered clusters 3 to 7 inches long. **Fruits**—ripening in early summer, globose, about 1/3 inch in diameter, purple, covered with bloom. **Seeds**—several, small, embedded in rather dry, sweet, edible flesh.

DISTINGUISHING CHARACTERS: Large, white flowers; slightly heart-shaped leaves; purple fruits.

GENERAL COMMENT: The downy serviceberry occasionally occurs in woods, river banks, and swamps of western Florida, where it has been found blooming in March. Although straggling in growth habit, the large, fragrant, white flowers in rather drooping clusters appear so early in spring that the plant is valuable in the informal garden. The fruits are a source of food for birds.

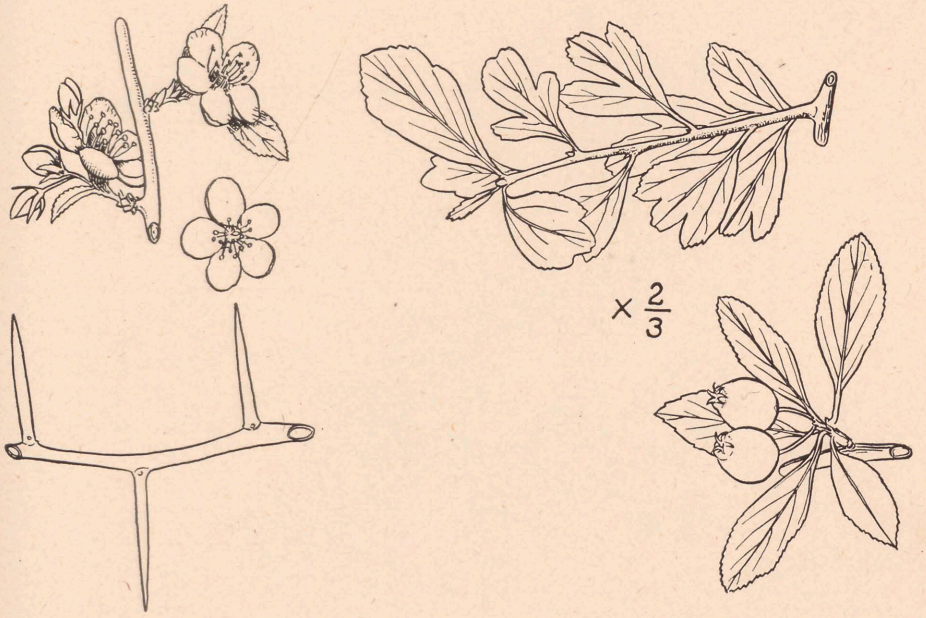
*A. canadensis (L.) Medic. (A. canadensis Auth.)

CRATAEGUS AESTIVALIS LUCULENTA Sarg.*

Shining Hawthorn

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—20 feet, trunks 8 inches in diameter. **Crowns**—rounded to cylindrical, composed of large, rigid, spreading branches on short trunks. **Bark**—gray, dividing into small, flat, thin plates, loose at the edges. **Twigs**—red-brown to gray, crooked, slender, bearing a few gray spines about 1¼ inches long. **Leaves**—deciduous, alternate, simple, thin, dark green and very glossy above, paler beneath, spatulate, ⅔ to 1½ inches long, tips round or slightly pointed, bases narrowly to broadly wedge-shaped, margins bluntly fine-toothed above the middle, sometimes with 3 to 5 deep lobes. **Flowers**—in spring after the leaves, white with pink stamens, ½ inch in diameter, in



1- to 5-flowered clusters on ends of twigs. **Fruits**—ripening in early summer, pale orange with reddish cheeks, globose, ¼ inch or more in diameter on smooth stalks ⅝ inch long. **Seeds**—3 to 5, rounded at both ends, ¼ inch long, embedded in juicy, palatable flesh.

DISTINGUISHING CHARACTERS: Habitat; very shining leaves; small flowers and fruits.

GENERAL COMMENT: The shining hawthorn occurs around shallow intermittent ponds from Alachua County northward. This species has apple-like characters that include bark on larger trunks, pink tint of petals, and shape and color of fruits. These fruits, like those of the May hawthorn, may be made into particularly fine-flavored jelly.

RELATED SPECIES: Another Florida hawthorn resembling the above is the May hawthorn, *C. aestivalis* (Walt.) Torr. and Gray, which has flowers more than ¾ inch in diameter and leaves somewhat red-downy beneath.

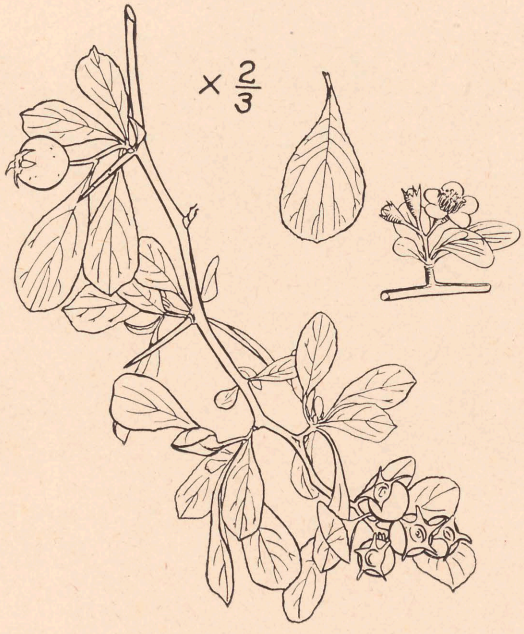
*C. luculenta Sarg.

CRATAEGUS FLORIDANA Sarg.

Jacksonville Hawthorn

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—15 feet, trunks 8 inches in diameter. **Crowns**—frregularly lobed, divisions rounded, branches rigid, stout, from short trunks. **Bark**—dark gray to nearly black, roughened by deep furrows forming numerous vertical, rectangular, flat-topped blocks. **Twigs**—red-brown, slender, smooth, zigzag, drooping, bearing few thorns. **Leaves**—early deciduous, alternate, simple, firm, smooth, dark green to yellow-green and shining above, paler beneath, 1 to 1½ inches long, obovate, tips broad with occasional small points, bases wedge-shaped, margins entire below the middle, sometimes with 3 lobes,



finely toothed with black-tipped teeth above the middle. **Flowers**—in March with the leaves, white, about ⅝ inch in diameter, usually solitary, sometimes several in a cluster, erect on ends of branches. **Fruits**—ripening in late summer, bright orange, obovate to globose, ¾ inch long, shining, covered with many pale dots. **Seeds**—4, pale brown, sharp at base and rounded at tips, slightly ridged on back, ⅓ inch long, enveloped in yellow, mealy, edible flesh.

DISTINGUISHING CHARACTERS: Dry habitat; weeping habit of growth; mealy-fleshed, orange fruits.

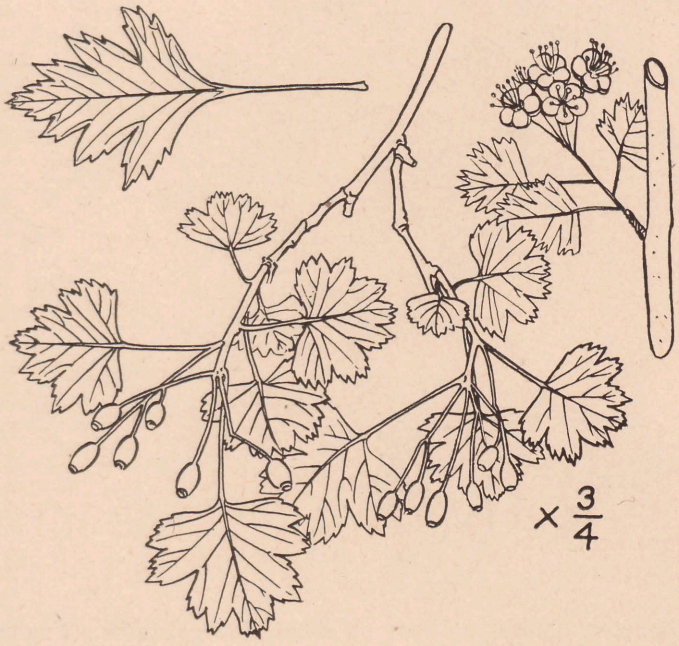
GENERAL COMMENT: The Jacksonville hawthorn, or a closely related species, grows on excessively drained ridges and in dry woods north and west from Marion County. Although it is deciduous, its weeping habit, exceptional among hawthorns, gives it ornamental value. It is useful in conservation, in that it provides food and cover for birds, and thrives in very dry soils.

CRATAEGUS MARSHALLI Eggleston

Parsley Hawthorn

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—18 feet, trunks 6 to 10 inches in diameter. **Crowns**—irregular, wide (or narrow from crowding), composed of slender, spreading, crooked branches, from slender, often crooked trunks. **Bark**—gray-brown, smooth, flaking in large, irregular, thin, flexible plates exposing cinnamon-brown inner bark. **Twigs**—light brown to ashy gray, slender, smooth, zigzag, bearing scattered, brown spines 1 inch or more in length. **Leaves**—deciduous, alternate, simple, green and shining above, paler beneath, downy when young, ⅔ to 1½ inches long, ovate to round, tips sharp, bases square or slightly



heart-shaped, margins with 5 to 7 lobes, each lobe finely sharp-toothed, sinuses narrow or broad, deep or shallow. **Flowers**—in the spring after the leaves, white with pink stamens, about ½ inch in diameter, on slender, hairy stalks, in dense clusters of 10 to 12 flowers. **Fruits**—maturing in late summer and persistent into winter, shining, scarlet, elliptic, about ⅓ inch long. **Seeds**—1 to 3, rounded at the ends, ⅓ inch long, surrounded by yellowish, edible flesh.

DISTINGUISHING CHARACTERS: Moist habitat; finely cut foliage; small, scarlet, persistent berries.

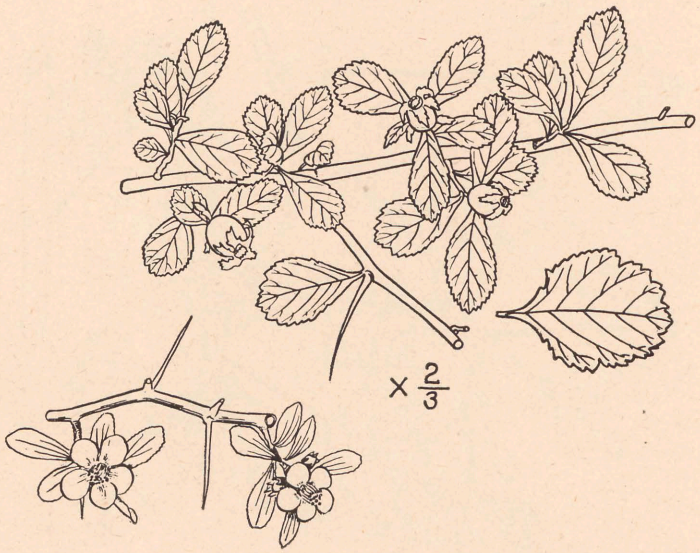
GENERAL COMMENT: The parsley hawthorn occurs naturally in low woods from Hillsborough County northward, but fine stands are found along the Santa Fe and Aucilla rivers. Although it is an attractive small tree with fine feathery foliage and brilliant red berries, its use as an ornamental is limited by its high moisture requirements.

CRATAEGUS UNIFLORA Muenchh.

One-flower Hawthorn

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—12 feet, trunks 6 inches in diameter. **Crowns**—dense, rounded, composed of stout, rigid, crooked, spreading branches, from short, stout trunks. **Bark**—gray-brown, smooth, broken into blocks near base of trunk. **Twigs**—pale gray-brown, slender, stiff, slightly zigzag, minutely scaly, with numerous spines 1 to 2 inches long. **Leaves**—deciduous, alternate, simple, firm, dark green, rough-netted, sometimes downy above, paler and downy beneath, ¾ to 1½ inches long, obovate, tips rounded or nearly so, bases wedge-shaped, margins often shallowly lobed, with coarse or fine teeth. **Flowers**—in spring with the leaves, white with pale-yellow stamens, about



⅝ inch in diameter, usually solitary on short, downy stalks. **Fruits**—maturing in late summer or fall, yellowish green, globose to pear-shaped, ¼ to ½ inch in diameter. **Seeds**—3 or 4, embedded in greenish, unpalatable flesh.

DISTINGUISHING CHARACTERS: Stiff, dense crown; rigid, very spiny twigs; dark-green, rough-netted leaves; solitary flowers.

GENERAL COMMENT: The one-flower hawthorn is found in dry open woods from Alachua County northward. Its slender but rigid twigs are furnished with numerous long, sharp thorns, so that the crowns are well-protected nesting sites for several species of birds. At Christmas time the leafless, thorny twigs are decorated with gumdrop candies to make "sugarplum" trees.

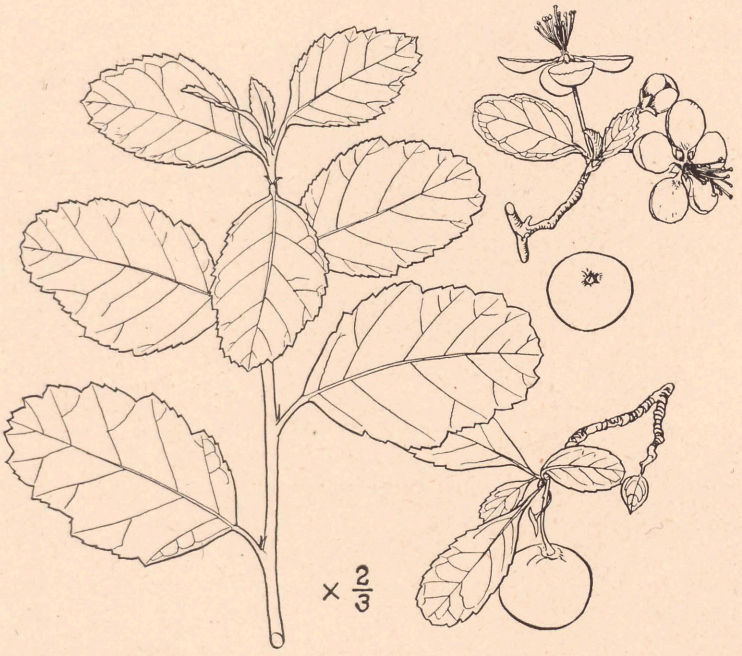
RELATED SPECIES: *C. viridis* L., green hawthorn, is the largest of the native species, sometimes attaining a height of 20 to 35 feet with a smooth trunk 18 to 20 inches in diameter. It occurs in western Florida along the Apalachicola River and tributaries of the Suwannee River, as far south as Alachua County. Occasional specimens of many other species of Crataegus attain tree stature under favorable conditions in various sections of the state.

MALUS ANGUSTIFOLIA (Ait.) Michx.

Southern Crab Apple

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—25 feet, trunks 8 to 10 inches in diameter. **Crowns**—broad, open, composed of large, rigid, spreading, sometimes drooping branches, from short trunks. **Bark**—dark red-brown, coarsely shaggy, divided by narrow, longitudinal furrows into irregular, persistent plates that reveal the bright red-brown inner bark at the loose edges. **Twigs**—smooth, slender, rigid, slightly zigzag, dark red when young, but turning red-brown overlaid with gray in age. **Leaves**—deciduous, alternate, simple, smooth, dull green above, light green beneath, 1 to 2 inches long, elliptic to oblong, tips rounded



or sharp, bases wedge-shaped, margins coarsely toothed. **Flowers**—in early March, strongly fragrant, about 1 inch in diameter, rose or white, 5-petalled, on smooth stalks in erect clusters on ends of branches. **Fruits**—maturing in summer, yellow-green, globose, about 1 inch in diameter.

DISTINGUISHING CHARACTERS: Habit of growth; longitudinal furrows on trunk with turned-up edges on plates; apple-like flowers and fruits.

GENERAL COMMENT: The southern crab apple is distributed along fence rows and in thickets over western Florida as far east as Taylor County. In spring it is covered with fragrant pink flowers, but the blooming period is frequently curtailed by tent caterpillars and a rust fungus. Its horticultural value is limited largely to its natural range.

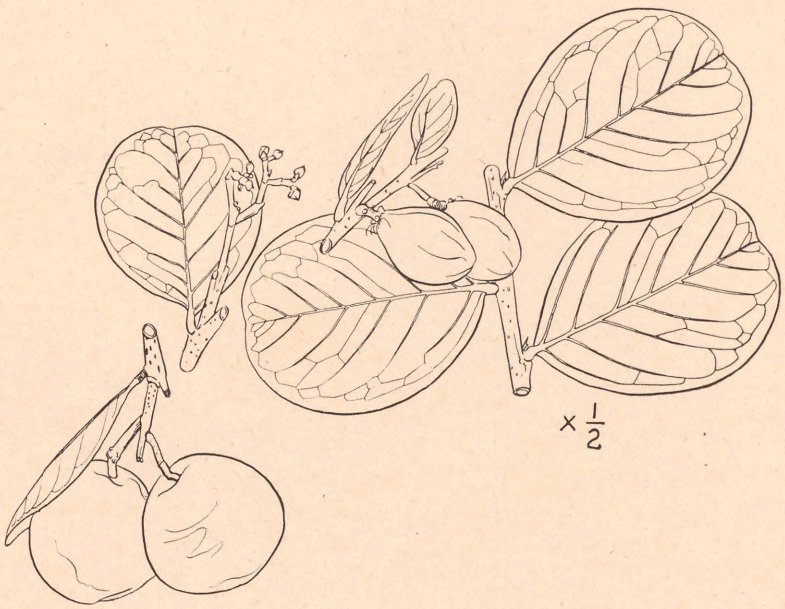
RELATED SPECIES: Another species, *M. bracteata* Rehder, differs from the southern crab apple only in having permanently downy leaves and occasional spines on the twigs.

CHRYSOBALANUS ICACO L.

Icaco Coco-plum

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—30 feet, trunks 1 foot in diameter. **Crowns**—dense, round, often broadly so, composed of erect branches, from trunks often leaning. **Bark**—dark red-brown, flaky, separating into long, thin, scales. **Twigs**—dark red-brown, slender, roughened by numerous lenticels. **Leaves**—evergreen, alternate, simple, leathery, smooth, dark green and shining above, paler beneath, 1 to 3½ inches long, broadly elliptic to nearly round, with rounded or slightly indented tips, wedge-shaped bases and entire margins. **Flowers**—during spring and summer, minute, white, on white, downy stalks, in small, flat-topped, axillary clusters. **Fruits**—maturing in summer and fall, whitish



to purple, nearly globose, 1½ to 1¾ inches in diameter. **Seeds**—solitary, obovate, about 1 inch long, with 5 or 6 blunt ridges from base to tip, surrounded by watery, aromatic, white flesh.

DISTINGUISHING CHARACTERS: Leathery, evergreen leaves; juicy, aromatic fruits; blunt-ridged seeds.

GENERAL COMMENT: The icaco coco-plum is generally distributed in southern coastal areas, but some of the finest specimens occur on spoil banks of canals. Stray individuals occur as far north as Brevard County. It has good possibilities as an ornamental plant and has been so used to some extent. The dark-green, glossy leaves are borne in great profusion, making the low, rounded crown very dense. Most naturally grown individuals are so symmetrical that they appear to have been trimmed.

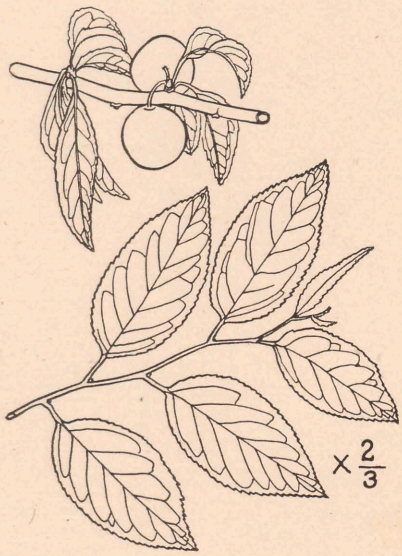
RELATED SPECIES: The smallfruit coco-plum, *C. icaco pellocarpus* (G.F.W. Mey.) DC., is a very similar tree, but has slightly smaller fruits that are always purple and a somewhat smaller seed with sharp ridges.

PRUNUS ANGUSTIFOLIA Marsh.

Chickasaw Plum

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—20 feet, trunks 8 inches in diameter. **Crowns**—rounded or flat-topped, irregular, composed of numerous slender, spreading branches, from short trunks. **Bark**—gray-black, smooth, with prominent, horizontal lenticels, becoming brown-gray with vertical, somewhat interlacing furrows. **Twigs**—slender, smooth, with horizontal, reddish-brown lenticels. **Leaves**—deciduous, alternate, simple, thin, bright green and shining above, paler below, 1 to 2 inches long, lanceolate to broadly lanceolate with sharp tips, broadly wedge-shaped bases, sharp-toothed margins. **Flowers**—in early spring prior to the leaves, white, about 1/3 inch in diameter, on smooth, slender stalks in clusters of 2 to 4, numerous. **Fruits**—maturing in late spring, red to yellow, shining, nearly globose, about 1/2 to 1 inch in diameter. **Seeds**—solitary, ovate to elliptic, slightly flattened, thick, rough-margined, about 1/2 inch long, embedded in juicy, acid, yellow flesh.



DISTINGUISHING CHARACTERS: Shining leaves; early-ripening fruit without a waxy coating.

GENERAL COMMENT: The Chickasaw plum is common in fence rows and edges of hammocks as far south as the central part of the peninsula. Its heavy crops of bright-colored fruit and its white flowers, which appear very early in spring, give it ornamental value.

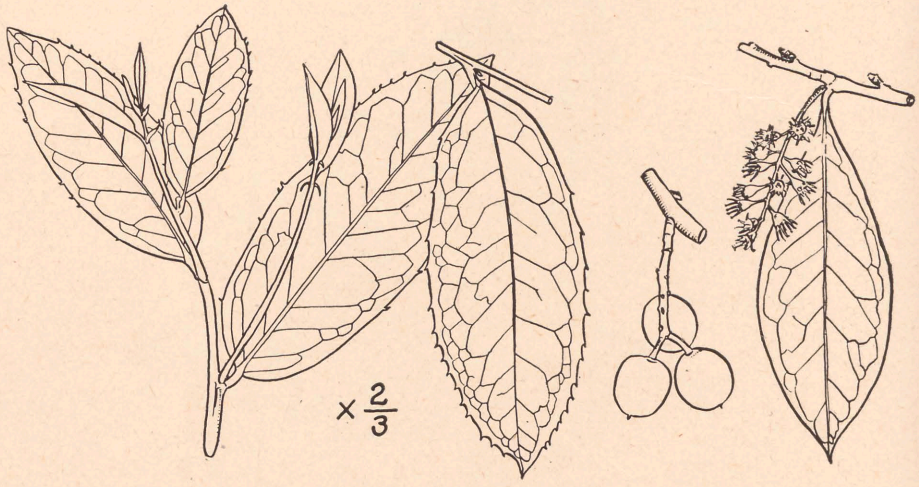
RELATED SPECIES: Of the other 2 species recorded for the state, the American plum, *P. americana* Marsh., differs from the above in having flowers nearly 1 inch in diameter, while the flatwoods plum, *P. umbellata* Elliott, has small flowers, and fruits that are usually purple.

PRUNUS CAROLINIANA (Mill.) Ait.*

Carolina Laurelcherry, Cherry Laurel

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—30 feet, trunks 12 inches in diameter. **Crowns**—cylindrical to broad and rounded, composed of small, spreading branches, from short, sometimes leaning trunks. **Bark**—gray, roughened by vertical furrows and horizontal cracks forming small, nearly square plates. **Twigs**—brown, slender, smooth. **Leaves**—evergreen, alternate, simple, firm, dark green and shining above, paler beneath, 2 to 4½ inches long, elliptic, with pointed tips, rounded bases, entire or remotely spiny-toothed margins. **Flowers**—in spring, white, on hairless spikes shorter than the leaves, growing from the axils of the previous year's leaves. **Fruits**—maturing in fall, persistent until blooming



time, black, smooth, short-pointed, oblong, ½ inch long. **Seeds**—solitary, ovate, hard, fragile, about ½ inch long, covered by very thin, gummy, greenish flesh.

DISTINGUISHING CHARACTERS: Shining, evergreen leaves; short spikes of inconspicuous white flowers; persistent fruits.

GENERAL COMMENT: The Carolina laurelcherry occurs in rich woods from Brevard County northward as a native plant. However, its native origin has been overshadowed by its wide use horticulturally, especially for hedges. Although the fruits furnish much food for birds, the wilted foliage is poisonous to livestock.

RELATED SPECIES: Another species native to hammocks of the Everglade Keys and the Florida Keys, *P. myrtifolia* (L.) Urban, can be distinguished from the above by the globose fruits and leaves with entire margins.

*Laurocerasus caroliniana (Mill.) Roem.

PRUNUS SEROTINA Ehrh.*

Black Cherry, Wild Cherry

(Rosaceae: Rose Family)

DESCRIPTION: **Height**—100 feet, trunks 4 to 5 feet in diameter. **Crowns**—cylindrical, open, of small, short, horizontal, scattered branches, from tall, straight trunks. **Bark**—gray-black, broken by many interlacing furrows into numerous small blocks scaling off on old trees exposing reddish-brown inner bark. **Twigs**—slender, smooth, whitish to gray-brown. **Leaves**—deciduous, alternate, simple, firm, dark green and shining above, paler beneath, 2 to 6 inches long, narrowly elliptic, with long pointed tips, rounded bases and fine-

toothed margins. **Flowers**—in spring with the leaves, small, white, in drooping, hairless spikes 4 to 6 inches long. **Fruits**—maturing in summer, smooth, nearly black, globose, 1/3 to 1/2 inch in diameter. **Seeds**—solitary, hard, globose, about 1/3 inch long, enveloped in juicy, edible, dark-purple flesh.

DISTINGUISHING CHARACTERS: Smooth flower spikes; fine-toothed, deciduous leaves; juicy fruit in long spikes.

GENERAL COMMENT: The black cherry occurs in hammocks and along fence rows as far south as Lake County. Small trees are common, furnishing food for many birds, but large specimens are so scarce that very little valuable timber is available. Its foliage, especially when wilted, is dangerously poisonous, even in small quantities, to cattle and other herbivorous animals.

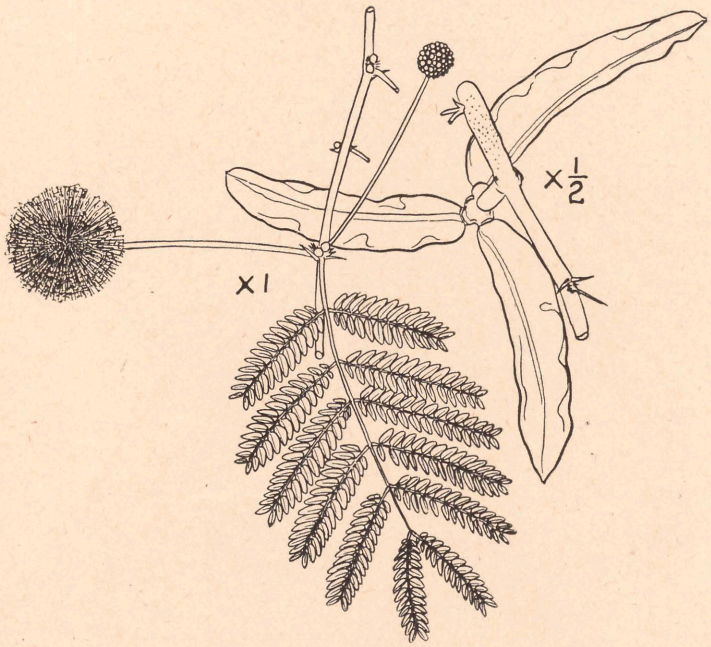
*Padus virginiana (L.) Mill.

ACACIA FARNESIANA (L.) Willd.*

Sweet Acacia, Opopanax

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—20 feet, trunks 12 inches in diameter. **Crowns**—wide, rounded, spreading, composed of numerous long, drooping branches, from straight trunks. **Bark**—reddish brown, shaggy, roughened by long, irregular, interlacing, shallow furrows into ridges that flake into thin strips. **Twigs**—slender, zigzag, smooth or downy. **Spines**—at bases of leaves, straight, smooth, rigid, up to 1½ inches long. **Leaves**—deciduous, persistent southward, alternate, 2-pinnate, thin, bright green, smooth. **Leaflets**—numerous, ⅛ to ¼ inch long, narrow, tips sharp, bases unequal, margins entire. **Flowers**—in spring,



summer, or all year southward, minute, in dense, globose, golden-yellow heads about ⅔ inch in diameter on stalks about 1 inch long, in clusters of 1 to 3 at bases of leaves. **Fruits**—persistent, ripening all year, dark reddish purple to brown, cylindrical pods, 2 to 3 inches long, sharp at both ends, 1 to several on long stalks. **Seeds**—several, thick, shining, ovate, about ¼ inch long, light brown marked with rings, embedded in pulpy flesh.

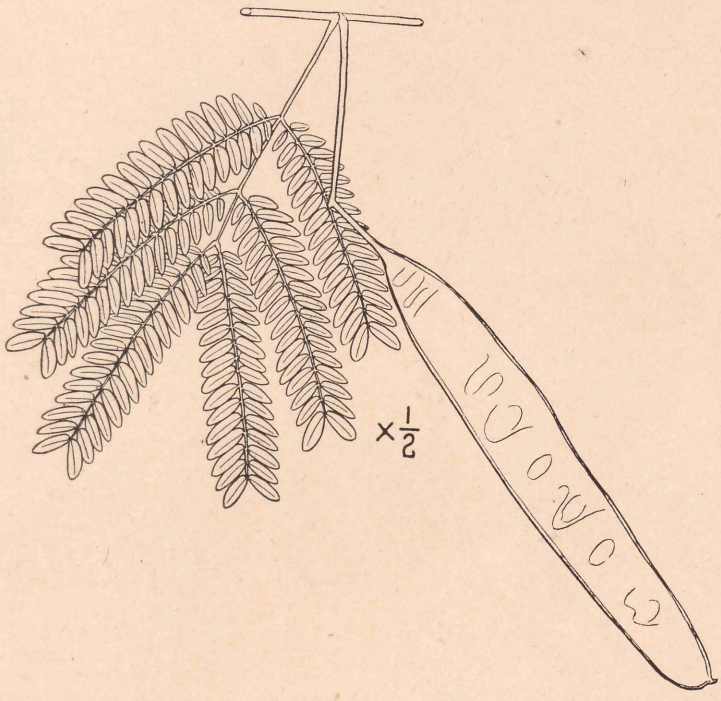
DISTINGUISHING CHARACTERS: Spiny twigs; flowers in golden-yellow heads; cylindrical pods filled with pulp.

GENERAL COMMENT: The sweet acacia, a small subtropical tree, occurs naturally on open, dry, sandy soil in Dade and Monroe counties. Although it tends to become a weed in its natural range, the dense crowns, feathery foliage, and numerous bright-yellow flower heads commend it for ornamental use.

*Vachellia farnesiana (L.) Wight. & Arn.

LEUCAENA GLAUCA (L.) Benth.
Leadtree
(Leguminosae: Pea Family)

DESCRIPTION: **Height**—30 feet, trunks 8 to 10 inches in diameter. **Crowns**—irregularly rounded, composed of numerous spreading branches, from short trunks. **Bark**—dull reddish brown, roughened by low, interlocking, flat-topped ridges. **Twigs**—brown, slender, zigzag, roughened by numerous lenticels. **Leaves**—evergreen, alternate, 2-pinnate. **Leaflets**—numerous, thin, smooth, green above, paler beneath, ¼ to ½ inch long, narrowly elliptic, with blunt



tips, unequal bases and entire margins. **Flowers**—continuous, minute, white or pinkish, in dense, globose heads about 1¼ inches in diameter, on stalks 1 to 2 inches long in clusters of 1 to 3 at the bases of the leaves. **Fruits**—continuous, smooth, flat, red-brown pods, 4 to 6 inches long, ¾ inch wide, with blunt tips, unequally wedge-shaped bases, on long stalks. **Seeds**—16 to 20, flattened, ovate, about ⅜ inch long, grayish black with pale markings.

DISTINGUISHING CHARACTERS: Bipinnate leaves; large flower heads; shape of seedpod.

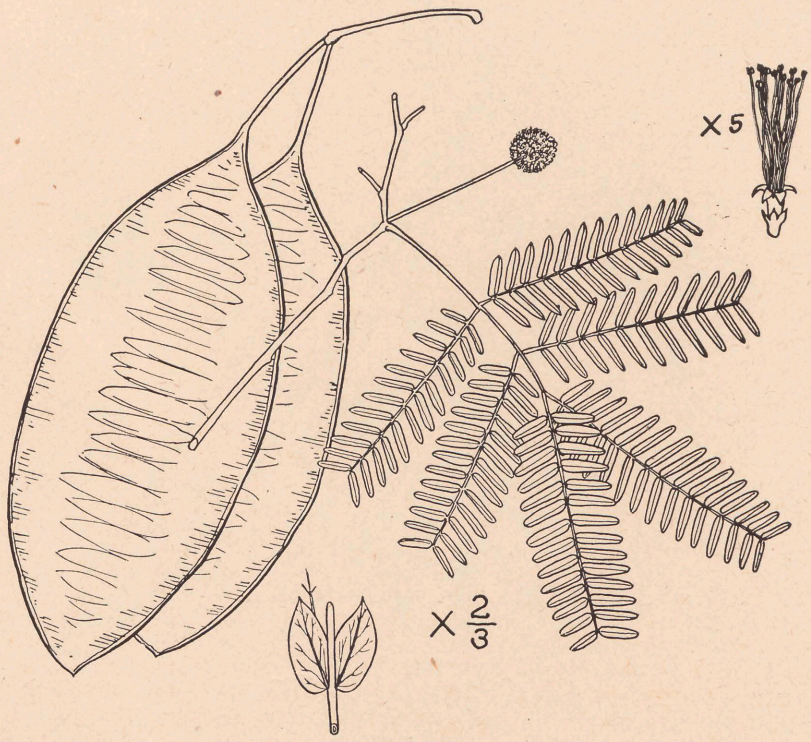
GENERAL COMMENT: The leadtree is well established on the Florida Keys and the southern portion of the peninsula, although there is some doubt that it is native. It flowers and fruits at the early age of 3 or 4 years and is very prolific. Were it not for this tendency to become a pest, it would be more valuable horticulturally.

LYSILOMA BAHAMENSIS Benth.

Bahama Lysiloma, Wild Tamarind

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—50 to 60 feet, trunks 2 to 3 feet in diameter. **Crowns**—wide, flat, composed of stout, spreading branches. **Bark**—dark brown, separating into large, plate-like scales. **Twigs**—slender, smooth, light gray to bright reddish brown. **Leaves**—persistent, alternate, 2-pinnate. **Leaflets**—numerous, thin, light green above, paler beneath, 1/4 to 1/2 inch long, unequally ovate, tips sharp or rounded, bases unequal, margins entire. **Flowers**—in April, minute with greenish-white stamens, in dense, globose, long-stalked heads about 2/3 inch in diameter. **Fruits**—maturing in fall, persisting



throughout the year, flat, dark red-brown pods, 4 to 5 inches long, 1 inch wide, sharp at both ends, on long stalks. **Seeds**—several, ovate, shining, dark brown, about 1/2 inch long.

DISTINGUISHING CHARACTERS: Bipinnate leaves; large stature; broad, thin pods.

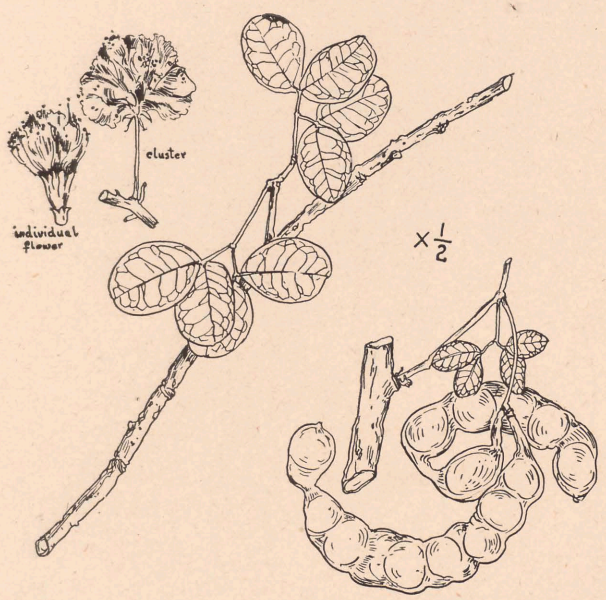
GENERAL COMMENT: The range of Bahama lysiloma is limited to the mainland south of Biscayne Bay and the Florida Keys. Here the species is abundant, especially along the Overseas Highway on the upper keys, where it overtops the shrubby vegetation. The flowers are inconspicuous, but the bunches of large, brown pods are prominent and persist from one blooming season to the next.

PITHECELLOBIUM UNGUIS-CATI (L.) Benth.

Catclaw Blackbead, Cats-claw

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—25 feet, trunks 7 to 8 inches in diameter. **Crowns**—flat, low, irregular, composed of spreading branches, from slender trunks. **Bark**—reddish brown, divided by fissures into small, square plates. **Twigs**—slender, light gray-brown to dark reddish brown, somewhat zigzag, smooth, with numerous small lenticels. **Spines**—straight, rigid, at the base of the leaves, ¼ inch long or shorter. **Leaves**—persistent, alternate, 2-pinnate. **Leaflets**—2 to 4, firm, bright green and shining above, paler beneath, ½ to 2 inches long, ovate to round with rounded tips, unequal bases, entire margins; stalk of leaf longer than stalk of leaflets. **Flowers**—in spring, summer, or all



year, minute, with long, purple stamens, in dense globose heads about 1 inch in diameter. **Fruits**—maturing all year, flat, bright reddish-brown pods, 2 to 4 inches long, net-veined, thick on the margins, irregularly coiled, especially after opening. **Seeds**—several, flat, shining, obovate, dark chestnut-brown with red appendages.

DISTINGUISHING CHARACTERS: Bipinnate leaves; stalks of leaflets shorter than stalks of leaves.

GENERAL COMMENT: The catclaw blackbead forms dense, spiny thickets on sand dunes and islands close to salt water in south peninsular Florida and the Florida Keys. In many arid areas on the upper keys this plant is the dominant shrub, but in richer soils individuals grow larger, attaining tree stature. Black, shiny seeds with red arils are the conspicuous part of this tree.

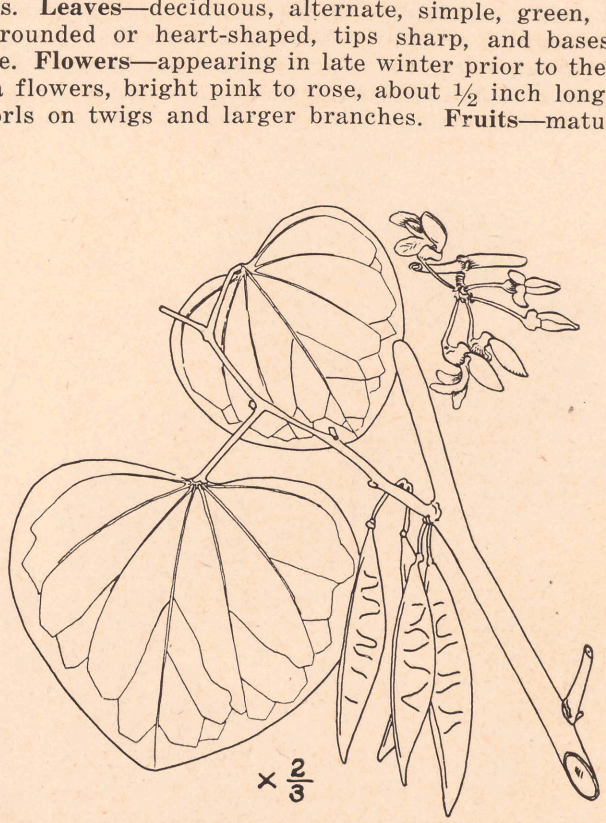
RELATED SPECIES: Another species, *P. guadelupense* (Pers.) Chapm., found in the same region, differs from the catclaw blackbead in having the stalks of the leaflets longer than the stalks of the leaves.

CERCIS CANADENSIS L.

Eastern Redbud, Judas-tree

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—30 feet, trunks 8 to 10 inches in diameter. **Crowns**—irregular or rounded, composed of spreading branches, from short trunks. **Bark**—reddish brown to dark brown, roughened by long, narrow, interlacing, flat-topped ridges. **Twigs**—light brown, slender, smooth, covered with very small lenticels. **Leaves**—deciduous, alternate, simple, green, smooth, 3 to 5 inches long, rounded or heart-shaped, tips sharp, and bases heart-shaped, margins entire. **Flowers**—appearing in late winter prior to the leaves, shaped like sweet-pea flowers, bright pink to rose, about ½ inch long, in clusters of 4 to 8 in whorls on twigs and larger branches. **Fruits**—maturing in spring,



smooth, thin, persistent pods, 2½ to 3 inches long, ½ inch wide, with pointed ends, short-stalked, rose-colored to light brown. **Seeds**—several, light brown, broadly ovate, flattened, ¼ inch wide.

DISTINGUISHING CHARACTERS: Heart-shaped leaves; rose-colored, pea-shaped flowers on bare trunks and branches.

GENERAL COMMENT: The eastern redbud, one of the common trees in rich woods of northern and central Florida as far south as Marion and Levy counties, is well known to everyone. For years it has been utilized by home gardeners in ground plantings and road beautification, and it can still be recommended unreservedly. Spring is heralded by its beautiful, rose-colored flowers, which always appear before the leaves. However, its rose-colored to light-brown pods persist until some time in July and the foliage is pleasing until fall.

GLEDITSIA AQUATICA Marsh.

Water-locust

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—50 feet, trunks 2 feet in diameter. **Crowns**—wide, irregular and flat-topped, composed of stout, crooked, spreading branches, from short trunks. **Bark**—brownish, nearly black, rather smooth, divided into rectangular, vertical plates by shallow furrows. **Twigs**—gray to reddish brown, slender, smooth, with occasional large, pale lenticels. **Spines**—dark red, straight or slightly curved, 3 to 5 inches long, shining, simple or with 1 to 3 short branches, widely branched on older wood. **Leaves**—deciduous, alternate, pinnate to 2-pinnate. **Leaflets**—numerous, about 1 inch long, thin, dull yellow-green and shining above, dark green below, elliptic, with round tips, unequal bases and blunt-toothed margins. **Flowers**—in spring after the leaves have

unfolded, staminate and pistillate on the same or different trees, small, green, in small clusters on short spikes. **Fruits**—maturing in summer, persistent, flat pods, chestnut-brown and shining, 1 to 2 inches long, 1 inch wide with sharp tips and abruptly pointed bases, long-stalked, varying 1 to several in a cluster. **Seeds**—1, rarely 2 or 3, orange-brown, flattened, nearly round, ½ inch in diameter.

DISTINGUISHING CHARACTERS: Pinnate to 2-pinnate leaves; compound thorns; dry, usually 1-seeded pods,

GENERAL COMMENT: The water-locust is an inhabitant of flood-plains and river banks as far south as the Peace River in De Soto County. The smooth-barked trunks always bear clusters of branched spines and the glossy, dark-green foliage usually shows some red-tipped new growth. Leaves on seedling plants and old branches are usually pinnate, but those on more vigorous growth are bipinnate.

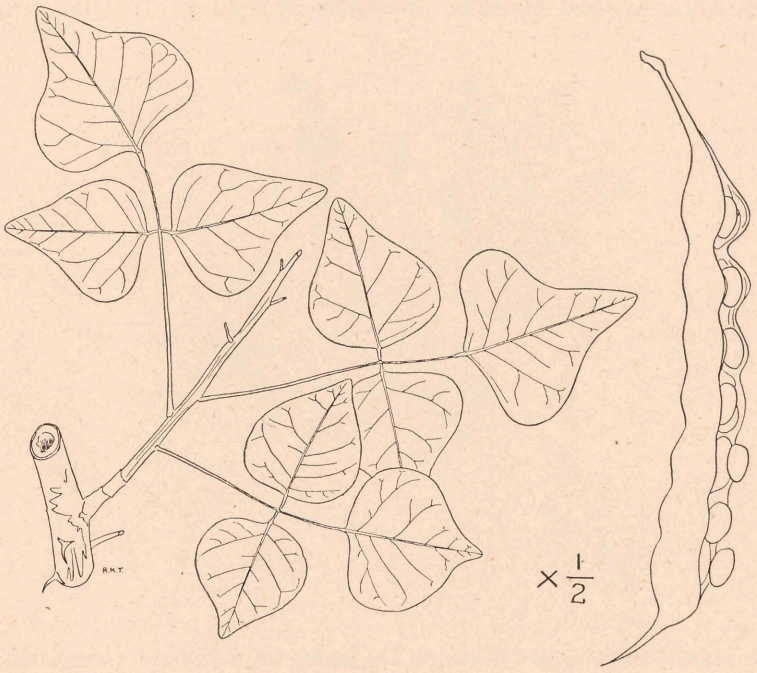
RELATED SPECIES: Another species, *G. triacanthos* L., honeylocust, occurring in western Florida, differs from water-locust in having long, narrow, many-seeded pods, and in attaining a height of 120 feet.

ERYTHRINA HERBACEA L.*

Eastern Coralbean, Cherokee-bean

(Leguminosae: Pea Family)

DESCRIPTION: **Height**—25 feet, trunks 8 to 10 inches in diameter. **Crowns**—rounded, composed of small, erect, spreading branches, from crooked trunks. **Bark**—nearly white, thick, corky, roughened by vertical furrows. **Twigs**—green, slender, smooth, armed with short, broad, recurved spines. **Leaves**—persistent, alternate, compound. **Leaflets**—3, 1 to 3 inches long, broadly ovate, thin, smooth, green, with rounded tips, enlarged bases and entire margins; midrib often prickly beneath. **Leafstalks**—sometimes armed with small, recurved prickles. **Flowers**—appearing in spring, scarlet, tubular, composed



of separate petals, about 2 inches long, on slender stalks, arranged in upright, leafless spikes 8 to 13 inches long. **Fruits**—ripening in late summer, green to dark-brown beans, 4 to 6 inches long, smooth, long-pointed, plump, sunken between seeds. **Seeds**—several, scarlet, kidney-shaped, shining, about ½ inch long.

DISTINGUISHING CHARACTERS: Leaves with 3 broad leaflets bearing prickles on midribs; tubular, red flowers on a long, erect spike; scarlet seeds.

GENERAL COMMENT: As a tree, the eastern coralbean ranges from the Dade County coastal regions around the tip of the state, then northward as far as Manatee County. Perfect trees are rare, because wind storms frequently damage the brittle branches, but the combination of pale bark, dark-green leaves and red-flowered spikes give it ornamental value. The beans that follow the flowers split open to display bright-red seeds.

*E. arborea (Chapm.) Small

PISCIDIA COMMUNIS (Blake) Harms*
Florida Fishpoison-tree, Jamaica Dogwood
(Leguminosae: Pea Family)

DESCRIPTION: **Height**—50 feet, trunks 2 feet in diameter. **Crowns**—irregular, composed of usually erect branches. **Bark**—thin, gray, blotched with olive, roughened by small, square scales. **Twigs**—bright reddish brown, smooth, with conspicuous, oblong lenticels. **Leaves**—persistent, alternate, pinnate. **Leaflets**—7 to 9, firm, dark green and shining above, paler beneath, with reddish down on the veins, ovate, with rounded or sharp tips, rounded or wedge-shaped bases and entire, wavy, thickened margins. **Flowers**—in spring prior to the leaves, shaped like sweet-pea flowers, white, tinged with red or purple, about ¾ inch long, on slender stalks in dense clusters. **Fruits**—

ripening in summer, light brown, thin-walled pods, 3 to 4 inches long, 1 to 1½ inches wide, provided with 4 thin, wavy wings. **Seeds**—several, reddish brown, dull, flattened and ovate.

DISTINGUISHING CHARACTERS: Pale flowers; winged seedpods.

GENERAL COMMENT: The Florida fishpoison-tree usually has an unsymmetrical form resulting from damage caused by tropical storms. Its greatest beauty is displayed when masses of misty, lavender flower clusters give it the appearance of an arborescent wisteria. Even the larger branches produce the pea-shaped flowers. Later, they are succeeded by gray-green foliage and wavy-winged pods. This tropical tree has horticultural possibilities in its natural range in southern Florida and the Florida Keys.

RELATED SPECIES: *Andira inermis* (Sw.) H.B.K., a rare tree of the Florida Keys, has pinnate leaves bearing 9 to 13 leaflets and large clusters of purplish, pea-like flowers followed by fleshy, 1-seeded pods.

*Ichthyomethia piscipula (L.) A. Hitchc.

GUAIACUM SANCTUM L.

Roughbark Lignumvitae

(Zygophyllaceae: Beancaper Family)

DESCRIPTION: **Height**—25 feet, trunks 2 feet in diameter. **Crowns**—round-topped with slender, drooping branches, from short, stout, gnarled trunks. **Bark**—white, thin, separating on the surface into thin scales. **Twigs**—nearly white, slender, smooth except for numerous warts. **Leaves**—persistent, opposite, pinnate. **Leaflets**—6 to 8, firm, smooth, dark green, shining on both surfaces, about 1 inch long, opposite, obovate, with sharp points, unequal bases, entire margins. **Flowers**—in late spring immediately after the new

growth appears, about ⅔ inch in diameter, 5-petalled, blue, long-stalked, solitary or in clusters of 3 or 4. **Fruits**—ripening in summer, somewhat persistent, bright orange, obovate, about ¾ inch long, 5-angled, splitting at maturity. **Seeds**—5, about ⅜ inch long, black covered with a red skin.

DISTINGUISHING CHARACTERS: White bark; opposite, pinnate leaves; blue flowers; obovate, winged fruit.

GENERAL COMMENT: The roughbark lignumvitae, one of the few native trees that bear truly blue flowers, was formerly rather common on several of the Florida Keys, but only a few large specimens now remain. However, the horticulturists have recognized its ornamental value and have used it in landscaping to a small extent. The dense crown of pendent branches, dark-green leaves, and unusual flowers and fruits recommend it for this purpose. The close-grained, tenacious wood is highly prized for fine cabinet work. When dry, the wood is so heavy that it sinks immediately in water.

BYRSONIMA LUCIDA (Sw.) DC.*

Long Key Byrsonima

(Malpighiaceae: Malpighia Family)

DESCRIPTION: **Height**—30 feet, trunks 10 to 12 inches in diameter. **Crowns**—flat-topped, branches spreading, from a fluted, crooked trunk. **Bark**—pale brown, thin, smooth. **Twigs**—pale gray, slender. **Leaves**—evergreen, opposite, simple, leathery, dark green and shining above, paler green, dull and netted beneath, 1 to 1½ inches long, narrowly obovate, tips rounded, sometimes short-pointed, bases wedge-shaped, margins entire, revolute. **Flowers**—appearing all the year, about ½ inch in diameter, 5-petalled, white or pink, turning yellow or rose in age, in open, erect clusters of 5 to 12 on slender, downy

stalks at the ends of branches. **Fruits**—ripening continuously, greenish, nearly globose, about ¼ inch in diameter. **Seeds**—solitary, pale yellow, ovate, sharp-pointed, contained in a rough, woody stone which is surrounded by thin, dry flesh.

DISTINGUISHING CHARACTERS: Smooth, fluted trunks; wedge-shaped leaves; flowers with stalked petals.

GENERAL COMMENT: The Long Key byrsonima, a native of the Everglade Keys and the Florida Keys, is seldom found as a tree. Although irregular in shape, especially when old, it is used occasionally as an ornamental. Numerous clusters of blossoms, nearly white when they first open but soon turning to some shade of pink or yellowish red, are borne almost continuously throughout the year. The wood furnishes durable cabinet material and the leaves and bark have medicinal value.

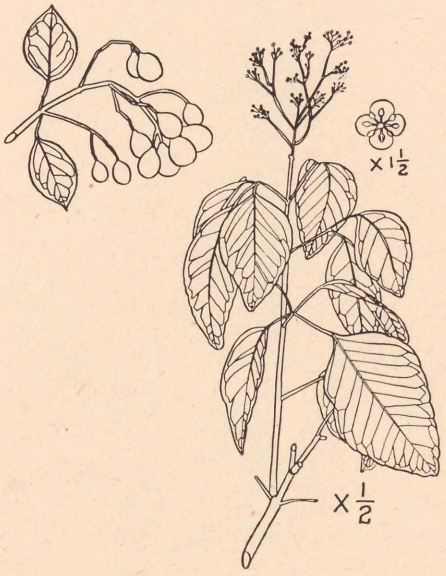
*B. cuneata (Turcz.) P. Wilson

AMYRIS ELEMIFERA L.

Sea Amyris, Torchwood

(Rutaceae: Rue Family)

DESCRIPTION: **Height**—50 feet, trunks 8 to 10 inches in diameter. **Crowns**—small, rounded, composed of a few slim branches, from slender trunks. **Bark**—gray-brown, thin, smooth, roughened with small scales. **Twigs**—slender, warty, light brown to gray. **Leaves**—persistent, pinnate, thin-leathery, green and shining above, paler and shining below. **Leaflets**—3 to 5, broadly ovate, with pointed or blunt tips, bases often wedge-shaped, margins entire, 1 to 3 inches long, covered with scattered, translucent dots, aromatic when crushed. **Flowers**—small, greenish, in clusters at ends of twigs, appearing over a period of several months in the fall. **Fruits**—ripening in the spring, globose, smooth,



about ¼ inch in diameter and black with bloom. **Seeds**—solitary, pale brown, covered by thin, watery, aromatic flesh.

DISTINGUISHING CHARACTERS: Aromatic, 3- to 5-foliate leaves, shining on both sides; globose, 1-seeded, fleshy fruits.

GENERAL COMMENT: In the moist coastal hammocks from Volusia County southward, the sea amyris is usually seen as a slender-trunked shrub topped with a small head of dark-green foliage. It is an unnoticeable element of the flora unless the foliage is crushed, and then the aromatic oil promptly reminds one of its relationship to citrus. Although birds eat the fruits, there are usually many other foods more attractive and more abundant during the same period of the year.

RELATED SPECIES: *Amyris balsamifera* L., balsam amyris, distinguished from the sea amyris by dullness of the leaves beneath and by oval fruits, ranges from Volusia County southward.

PTELEA TRIFOLIATA L.

Common Hoptree, Wafer Ash

(Rutaceae: Rue Family)

DESCRIPTION: **Height**—20 to 25 feet, trunks 6 to 8 inches in diameter. **Crowns**—round, composed of small, spreading or erect branches, from slender, crooked, fluted trunks. **Bark**—gray, smooth, roughened by small scales. **Twigs**—dark brown, slender, shining, smooth, marked by small orange lenticels. **Leaves**—deciduous, alternate, compound. **Leaflets**—3, sometimes 5, thin, dark green and shining above, pale beneath, aromatic when crushed, 2 to 5 inches long, elliptic, with sharp-pointed tips, bases usually rounded, marked with scattered, translucent dots, margins entire or finely toothed. **Flowers**—in early

spring and irregularly thereafter, greenish, ½ inch or less in diameter, in clusters on ends of new growth. **Fruits**—maturing in summer, persistent, pale yellow-green, papery, round, flat, nearly 1 inch in diameter, attached to a drooping stalk. **Seeds**—solitary, dark red-brown, ⅓ inch long.

DISTINGUISHING CHARACTERS: Aromatic, 3-foliate leaves; papery, wafer-like fruits.

GENERAL COMMENT: The common hoptree is found as a small tree growing on wooded hillsides and stream banks from Gadsden County eastward and as far south as Marion County. Its pleasantly aromatic foliage and peculiar round, flat fruits make it a good subject for garden planting. In the past, its medicinal properties were utilized, but are now superceded by more efficacious remedies.

ZANTHOXYLUM CLAVA-HERCULIS L.

Hercules-club, Toothache-tree, Prickly Ash

(Rutaceae: Rue Family)

DESCRIPTION: **Height**—30 feet, trunks 12 to 18 inches in diameter. **Crowns**—rounded, spreading, composed of numerous horizontal branches, from short trunks. **Bark**—light gray, very thin, roughened by numerous corky, blunt, cone-like warts nearly 1 inch high. **Twigs**—light gray, stout, smooth, armed with stout, straight, sharp, brown spines. **Leaves**—deciduous, alternate, pinnate, aromatic. **Leaflets**—7 to 19, firm, green and shining above, paler beneath, 1 to 2½ inches long, opposite, ovate, punctate with numerous trans-

lucent oil cells, tips pointed, bases unequal, margins toothed. **Flowers**—in early spring with half-grown leaves, staminate and pistillate on different trees, minute, greenish, in large clusters on ends of twigs. **Fruits**—maturing in May and June, chestnut-brown, thin-walled, rough, ovate, ¼ inch long, splitting at maturity. **Seeds**—1 or 2, shining, black.

DISTINGUISHING CHARACTERS: Twigs armed with spines; pointed leaflets; flower clusters at tips of branches.

GENERAL COMMENT: The Hercules-club is common along fence rows and in hammocks as far south as Dade County. All parts of this tree are strongly aromatic and the bark is used medicinally. The seeds are eaten freely by birds.

ZANTHOXYLUM FAGARA (L.) Sarg.

Lime Prickly-ash, Wild Lime-tree

(Rutaceae: Rue Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 8 to 10 inches in diameter. **Crowns**—cylindrical, composed of small, often numerous branches, from slender, inclining trunks. **Bark**—dark, thin, roughened by small, appressed, persistent scales. **Twigs**—gray, slender, zigzag, smooth, sometimes armed with 2 sharp, hooked spines at bases of leaves. **Leaves**—evergreen, alternate, pinnate, aromatic. **Leaflets**—7 to 9, firm, bright green and shining above, paler beneath, 1¼ inches long or less, opposite, obovate, tips rounded, notched,

bases wedge-shaped, margins very bluntly toothed. **Leaf rachis**—winged. **Flowers**—in spring and early summer, staminate and pistillate on different trees, minute, greenish, in small, dense clusters at base of leaves on branches of previous year. **Fruits**—ripening in fall, rusty brown, thin-walled, rough, nearly globose, about ⅛ inch in diameter, splitting at maturity. **Seeds**—1 or 2, shining, black.

DISTINGUISHING CHARACTERS: Twigs with hooked spines; evergreen, pinnate leaves; minute flowers in leaf axils.

GENERAL COMMENT: The lime prickly-ash occurs in hammocks, sometimes in large numbers, as far north as Volusia County. Frequently the small flowers and fruits are produced in such abundance that the twigs are half-covered. The crushed foliage has an aroma of limes.

The Biscayne prickly-ash, *Zanthoxylum coriaceum* A. Rich., occurring sporadically in hammocks of Dade and Monroe counties, has 6 or 8 leaflets, lacks spines, and has flowers at ends of twigs.

RELATED SPECIES: The yellowheart, *Z. flavum* Vahl, occurring sporadically in hammocks of Dade and Monroe counties, has leaves normally bearing 5 leaflets (sometimes 3 or 1), lacks spines, and has flowers at ends of twigs.

PICRAMNIA PENTANDRA Sw.

Bitterbush

(Simaroubaceae: Simarouba Family)

DESCRIPTION: **Height**—18 to 20 feet, trunks 4 to 5 inches in diameter. **Crowns**—narrow, composed of slender branches. **Bark**—thin, yellowish brown, rather smooth. **Twigs**—yellowish green to pale brown, slender, downy, minutely warty. **Leaves**—persistent, alternate, odd-pinnate, about 8 to 12 inches long. **Leaflets**—5 to 9, firm, smooth, dark green and shining above, 1½ to 3½ inches long, opposite or alternate, elliptic with abruptly sharp-pointed

tips, narrowly wedge-shaped bases, revolute, entire margins, conspicuous midribs. **Flowers**—in winter and spring, staminate and pistillate on different trees, minute, greenish, individually short-stalked, in slender, downy clusters 6 to 8 inches long. **Fruits**—maturing in summer, red becoming black, elliptic, about ½ inch long. **Seeds**—1 to 3, usually solitary, shining, light brown.

DISTINGUISHING CHARACTERS: Yellowish bark; odd-pinnate leaves; somewhat juicy fruits.

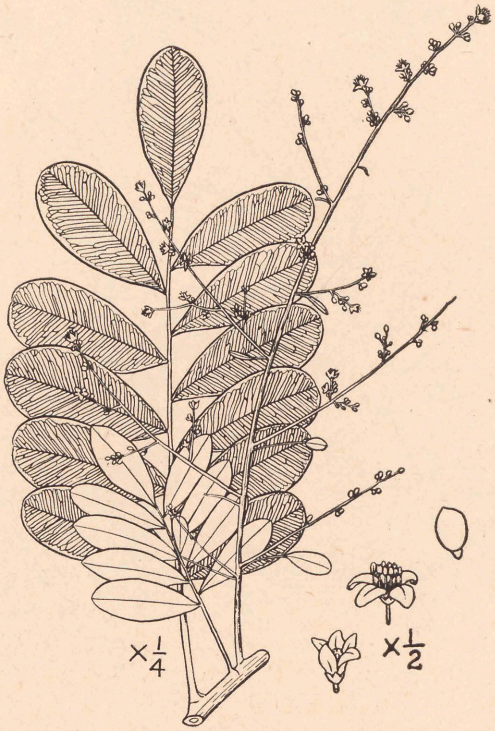
GENERAL COMMENT: The bitterbush is a rare, slender, subtropical tree that is confined to the shores of Dade and Monroe counties. It is closely related to the paradise-tree, *Simarouba glauca,* and quite similar in general characteristics. All parts of the plant contain a persistently bitter principle which has some medicinal value.

SIMAROUBA GLAUCA DC.

Paradise-tree

(Simaroubaceae: Simarouba Family)

DESCRIPTION: **Height**—50 feet, trunks 18 to 20 inches in diameter. **Crowns**—rounded, composed of slender, spreading branches, from straight trunks. **Bark**—light red-brown to brownish gray, rather thick, smooth, eventually roughened into broad, thick scales. **Twigs**—light brown, very stout, rigid, erect, slightly roughened. **Leaves**—persistent, alternate, pinnate, 6 to 16 inches long. **Leaflets**—6 to 12, leathery, smooth, dark green and shining above, pale beneath, 1½ to 3 inches long, opposite or alternate, oblong, revolute, tips rounded, bases unequal, margins entire, midribs very conspicuous. **Flowers**—



in spring, staminate and pistillate on same or different trees, small, yellowish, on short, stout, bluish stems, in large, open, many-branched, terminal clusters 12 to 18 inches long. **Fruits**—maturing in April and May, scarlet, becoming dark purple, ovate, about 1 inch long, in groups of 5 or fewer. **Seeds**—solitary, orange-brown, minutely warty, about ¾ inch long.

DISTINGUISHING CHARACTERS: Long, pinnate, leathery leaves; large, many-branched flower clusters; oval, 1-seeded, red or purple fruits.

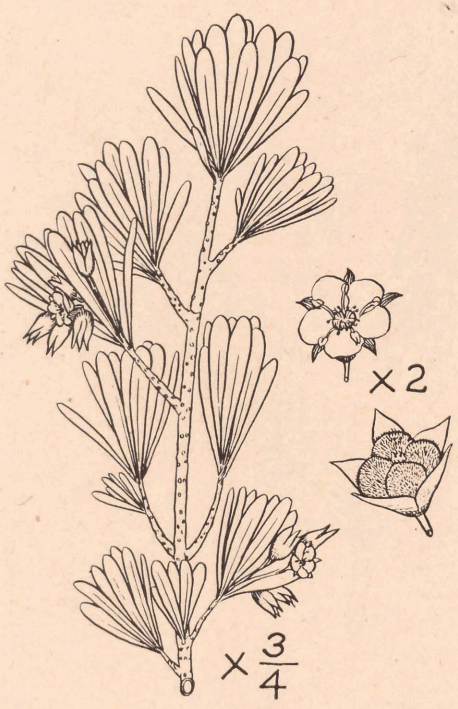
GENERAL COMMENT: The paradise-tree occurs in coastal hammocks as far north as Palm Beach County. No other tree has the combination of large compound leaves with great clusters of yellow flowers or scarlet to purplish fruits. Its medicinal value has never been exploited.

SURIANA MARITIMA L.

Bay-cedar

(Simaroubaceae: Simarouba Family)

DESCRIPTION: **Height**—15 feet, trunks 2 to 4 inches in diameter. **Crowns**—conical, composed of numerous erect or ascending, slender branches, from short trunks. **Bark**—brown, shaggy, peeling off in flexible, ragged strips. **Twigs**—dark brown, stout, downy, flexible. **Leaves**—evergreen, alternate, crowded at ends of twigs, numerous, simple, thick, fleshy, green, grayish-downy on both sides, 1 to 1½ inches long, narrowly elliptic, broadened upward, tips



pointed, margins entire. **Flowers**—all year, 5-petalled, yellow, about ½ inch in diameter, on downy stalks, in small clusters near ends of branches. **Fruits**—maturing all year, downy, pale brown, composed of 4 or 5 nearly separate, globose, dry sections, less than ¼ inch long. **Seeds**—solitary.

DISTINGUISHING CHARACTERS: Dense habit of growth; numerous small, downy, fleshy leaves; yellow flowers; dry fruits composed of 4 or 5 sections; seaside habitat.

GENERAL COMMENT: The bay-cedar, confined to salt or brackish shores, occurs from Key West to Brevard and Pinellas counties. The symmetrical crowns of this small tree, flexible and resilient, are unharmed by the constant or high winds of their habitat.

Alvaradoa amorphoides Liebm., (Simaroubaceae), confined to the Florida Keys, is distinguished by narrow, compound leaves bearing 21 to 41 small leaflets, and narrow, drooping, downy, flower spikes 3 to 4 inches long, often straight at maturity.

BURSERA SIMARUBA (L.) Sarg.*

Gumbo-limbo

(Burseraceae: Bursera Family)

DESCRIPTION: **Height**—60 feet, trunks 2½ to 3 feet in diameter. **Crowns**—rounded, composed of few, very large, crooked, horizontal branches, from short, thick trunks. **Bark**—red-brown to green, very thick, resinous, smooth, flaking freely into thin, papery scales. **Twigs**—red-brown, stout, crooked, smooth, marked with conspicuous lenticels. **Leaves**—deciduous, alternate, pinnate, 6 to 8 inches long. **Leaflets**—3 to 7, opposite, 1 to 3 inches long, ovate to oblong, firm, smooth, dark green, with sharp-pointed tips, unequal bases and entire margins. **Flowers**—in winter and spring prior to or with the leaves,

minute, greenish, stalked, in erect spikes 2 to 5 inches long, staminate and pistillate on the same tree. **Fruits**—ripening in summer, dark red, elliptic, less than ½ inch long, 3-angled, separating readily into 3 sections. **Seeds**—1 or 2, rose-colored, triangular, bony.

DISTINGUISHING CHARACTERS: Deciduous habit; smooth, resinous, flaky bark; fruits splitting into 3 parts.

GENERAL COMMENT: The gumbo-limbo, a tropical American tree, occurs naturally along the coasts of the Florida peninsula from Cape Canaveral and Tampa Bay southward. Its deciduous habit and massive proportions are unusual for this region. Winter or summer it is easily recognized by the smooth, oily appearance of the bark on the rugged trunk and largest branches. Although the dry wood is light and decays rapidly, green branches, even large ones, will grow when planted in the soil.

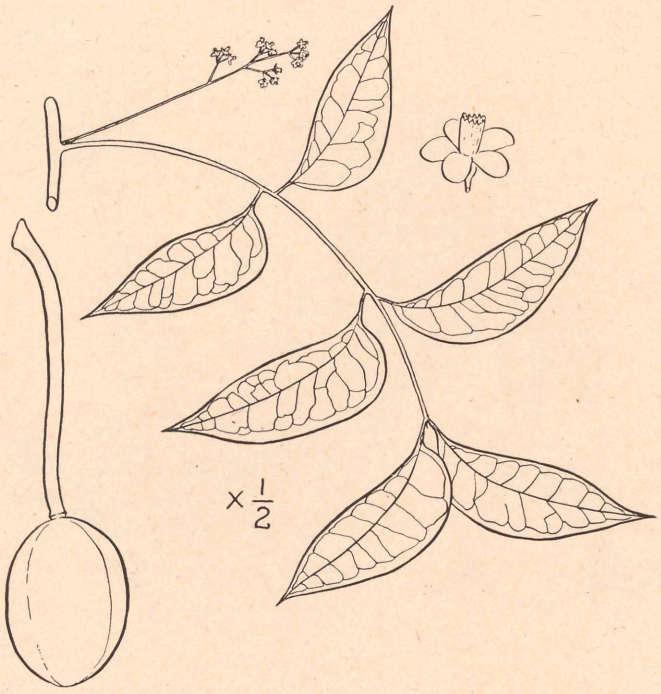
*Elaphrium simaruba (L.) Rose

SWIETENIA MAHAGONI Jacq.

West Indies Mahogany

(Meliaceae: Chinaberry Family)

DESCRIPTION: **Height**—40 to 50 feet, trunks 2 feet or more in diameter. **Crowns**—broad, rounded, dense. **Bark**—reddish brown, thick, roughened by short, broad, thick, scales. **Twigs**—reddish gray, slender, angled, smooth, thickly covered with lenticels. **Leaves**—persistent, alternate, pinnate, 4 to 8 inches long. **Leaflets**—4 to 8, opposite, 1 to 4 inches long, leathery, smooth, dark green above, pale yellow or reddish brown beneath, narrowly ovate, tips sharp-pointed, bases unequal, margins entire, conspicuously net-veined, midrib



prominent, reddish brown. **Flowers**—in summer, small, greenish, on slender, downy stalks in slender clusters in axils of leaves of current year. **Fruits**—maturing in late fall or winter, dark reddish brown, ovate, 3 to 5 inches long, splitting from the base upward. **Seeds**—numerous, flat, square, winged, reddish brown, about ¾ inch long.

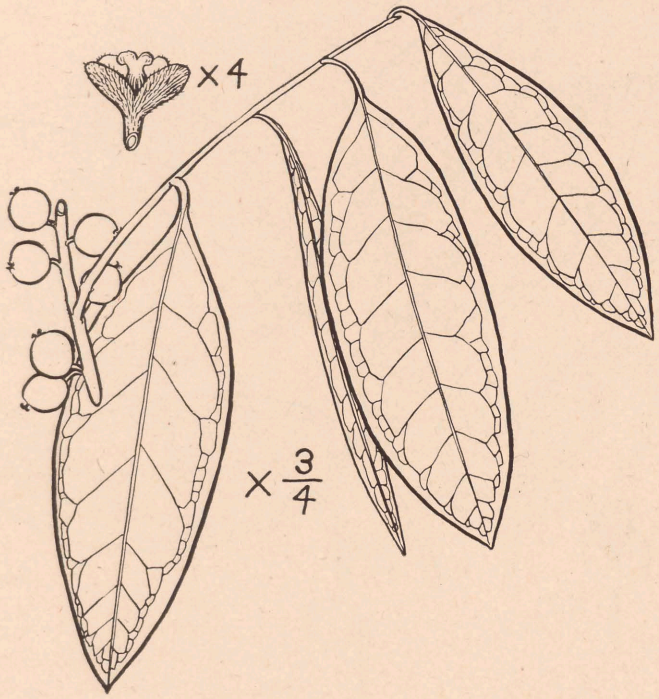
DISTINGUISHING CHARACTERS: Reddish-brown bark and twigs; evenly pinnate leaves; conspicuous, reddish-brown fruit splitting from the base.

GENERAL COMMENT: The natural range of West Indies mahogany is limited to the hammocks in southern Dade and Monroe counties. Most of the large specimens have been cut for lumber, but small trees are numerous, especially on some of the Florida Keys. It has been recognized as a valuable street and shade tree because of its rapid growth and copious evergreen foliage.

DRYPETES DIVERSIFOLIA Krug & Urban
Milkbark

(Euphorbiaceae: Spurge Family)

DESCRIPTION: **Height**—30 to 40 feet, trunks 1 foot in diameter. **Crowns**—cylindrical, composed of stout, erect branches. **Bark**—smooth, milk-white, often marked with gray or brown patches. **Twigs**—ashy gray, stout, roughened by numerous raised lenticels. **Leaves**—evergreen, alternate, simple, leathery, dark green and shining above, 3 to 5 inches long, elliptic with round or pointed tips, rounded or wedge-shaped bases and thick, revolute margins. **Flowers**—in spring, on 1-year-old wood, yellow-green, very small; staminate and pistillate on different plants; staminate in dense clusters; pistillate solitary or in few-flowered clusters. **Fruits**—ripening in fall, ivory white, oblong, 1 inch or less in length. **Seeds**—solitary, light brown, nearly ½ inch long, enclosed in thick, mealy flesh.



DISTINGUISHING CHARACTERS: Thick leaves with revolute margins; 1-seeded, milk-white, oval fruits.

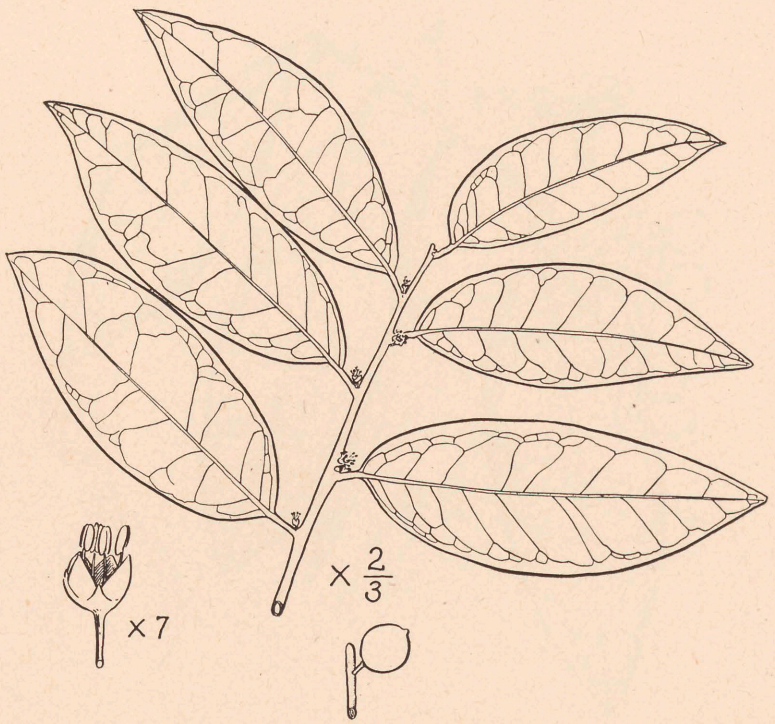
GENERAL COMMENT: The milkbark derives its name from the smooth, milk-white bark, which distinguishes it at once from its associates that have uniformly darker colored trunks. As if to carry out the color scheme still further, the fruits also are white when mature. This is a rare tree that occurs only on a few of the Florida Keys.

DRYPETES LATERIFLORA (Sw.) Krug & Urban

Guiana-plum

(Euphorbiaceae: Spurge Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 5 to 6 inches in diameter, branches small, ascending. **Bark**—reddish-tinged, light brown, smooth, separating into small, irregular scales. **Twigs**—ashy gray, slender, smooth, with a few scattered lenticels. **Leaves**—evergreen, alternate, simple, firm, smooth, dark green and shining above, 3 to 4 inches long, elliptic, sharp-pointed with narrowly wedge-shaped bases, margins entire or wavy-toothed. **Flowers**—during fall and winter, on 1- or 2-year-old wood, very small, greenish white,



staminate and pistillate on different trees; staminate in dense clusters; pistillate solitary or few. **Fruits**—maturing in spring and summer, red, softly downy, globose, less than ¼ inch in diameter. **Seeds**—pale, ovate, solitary, about ⅛ inch long, enveloped in thin, dry flesh.

DISTINGUISHING CHARACTERS: Pointed leaves; 1-seeded, globose, red fruits.

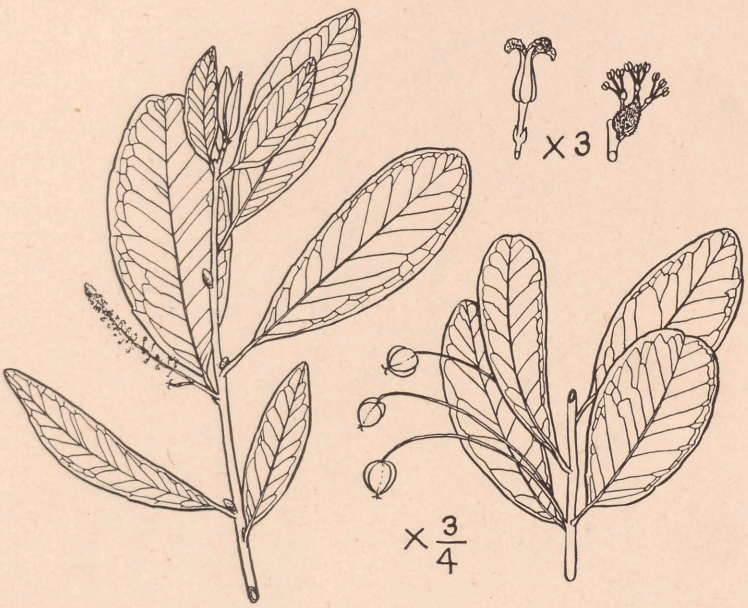
GENERAL COMMENT: The Guiana-plum, a slender subtropical tree, occurs only in coastal hammocks from Brevard County southward over the Florida Keys. Its vegetative characters are similar to those of its associates, so that the one outstanding mark of identification is its softly downy, globose fruit. This tree produces weak wood of no economic importance and lacks horticultural value.

GYMNANTHES LUCIDA Sw.

Oysterwood, Crabwood

(Euphorbiaceae: Spurge Family)

DESCRIPTION: **Height**—30 feet, trunks 8 inches in diameter. **Crowns**—narrow, open, composed of slender, erect branches, from slender, buttressed trunks. **Bark**—dark red-brown, thin, smooth, flaking into thin, irregular plates that expose light-brown inner bark. **Twigs**—ashy gray, smooth, slender, roughened by numerous lenticels. **Leaves**—evergreen, alternate, simple, leathery, smooth, dark green and shining above, pale and dull beneath, 2 to 4 inches long, narrowly obovate, with blunt tips, wedge-shaped bases and margins entire or with a few shallow teeth; vein network of leaves very conspicuous. **Sap**—milky. **Flowers**—in spring, very small; staminate on narrow spikes up to 2 inches long; pistillate solitary, long-stalked, growing from the axils of the previous year's leaves, usually accompanied by the staminate spikes. **Fruits**—ripening in the fall, nearly globose, ⅓ inch in diameter, 3-lobed, reddish brown to black. **Seeds**—1 to 3, ovate, nearly ⅓ inch long, encased in thin, dry flesh.



DISTINGUISHING CHARACTERS: Conspicuously veined, leathery leaves; arrangement of flowers; milky sap.

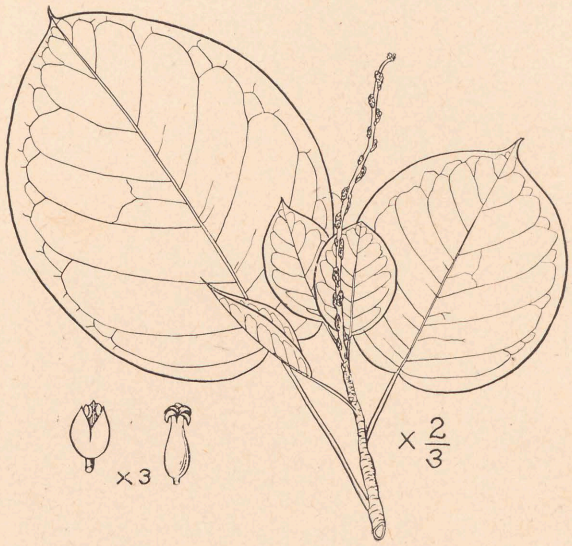
GENERAL COMMENT: The range of oysterwood, a subtropical tree, is limited in its distribution to the Florida Keys and southern coastal areas. The hard, heavy, close-grained wood is variegated in shades of brown and yellow and can be highly polished. These attractive qualities make it valuable in the manufacture of many small wooden novelties, especially canes.

HIPPOMANE MANCINELLA L.

Manchineel

(Euphorbiaceae: Spurge Family)

DESCRIPTION: **Height**—10 to 20 feet, trunks 5 to 6 inches in diameter. **Crowns**—rounded, composed of long, spreading, drooping branches, from short trunks. **Bark**—dark brown, usually roughened, forming small, thick plates. **Twigs**—brown, tinged with red, stout, pithy, covered with round, raised lenticels. **Leaves**—persistent, alternate, simple, leathery, smooth, dark green and shining above, paler beneath, 2 to 4 inches long, long-stalked, broadly ovate, with tips abruptly long-pointed, bases rounded, margins with remote and shallow teeth. **Sap**—clear, thick, caustic. **Flowers**—in spring, very small, yellowish green; staminate numerous, in narrow spikes 4 to 6 inches long; pistillate several, at the base of staminate spike. **Rachis**—dark purple, cov-



ered with bloom. **Fruits**—maturing in the fall, persistent, apple-shaped, 1 to 1½ inches in diameter, light yellow-green with bright-red cheek. **Seeds**—6 to 8, ovoid, dark brown, about ¼ inch long, enclosed in a rough, bony stone covered by thick, milky flesh.

DISTINGUISHING CHARACTERS: Broad, abruptly pointed leaves; crab apple-like fruits.

GENERAL COMMENT: Manchineel trees are rather uncommon now, although formerly quite abundant. They have been carefully destroyed in the vicinity of all habitations, because they are the most poisonous trees in North America. Fresh sap of all parts of these plants contains a caustic principle active on both external and internal tissues. Smoke from burning tops and rainwater dripping from the leaves contain injurious amounts of poison. Chronicles of the early explorers contain numerous accounts of the disastrous effects which resulted from eating the small, crab apple-like fruits.

WARNING: Sap of all parts of the manchineel tree acts as a violent poison to human flesh.

SAVIA BAHAMENSIS Britton

Bahama Maidenbush

(Euphorbiaceae: Spurge Family)

DESCRIPTION: **Height**—10 feet. **Bark**—pale gray or whitish. **Twigs**—light reddish brown to brownish gray, rigid, roughened by numerous lenticels. **Leaves**—evergreen, alternate, in 1 plane, simple, thick, smooth, dark green and shining above, ¾ to 2 inches long, obovate, tips rounded, bases rounded or nearly so, margins entire. **Flowers**—in spring, staminate and pistillate on

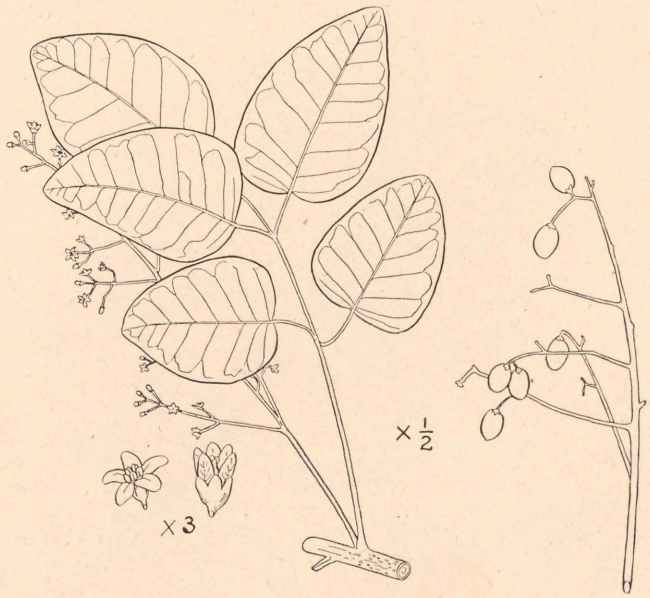
different trees; staminate very small, stalkless, arranged in dense clusters; pistillate stalked, solitary or very few together. **Fruits**—maturing in summer, dry, 3-lobed, globose, ¼ inch in diameter. **Seeds**—6, about ⅛ inch in diameter.

DISTINGUISHING CHARACTERS: Broad, blunt leaves in 1 plane; minute flowers; dry fruit.

GENERAL COMMENT: The Bahama maidenbush, very limited in its range, occurs in the hammocks on some of the Florida Keys. The dry, 3-lobed fruits, characteristic of the spurge family, are often produced in great quantities.

METOPIUM TOXIFERUM (L.) Krug & Urban
Florida Poisontree, Poisonwood
(Anacardiaceae: Cashew Family)

DESCRIPTION: **Height**—30 to 40 feet, trunks 2 feet in diameter. **Crowns**—low, broad, composed of stout, spreading, often drooping branches, from short trunks. **Bark**—light reddish brown, thin, flaking into large, thin, plate-like scales showing orange inner bark. **Twigs**—reddish brown, stout, smooth, covered by numerous orange lenticels. **Leaves**—persistent, alternate, pinnate, 9 to 10 inches long. **Leaflets**—3 to 7, leathery, smooth and shining above, 1 to 3½ inches long, opposite, ovate, tips rounded or somewhat pointed, bases rounded, margins thick, slightly revolute. **Sap**—milky, caustic. **Flowers**—in



spring or all year, yellow-green, small, in loose clusters as long as the leaves. **Fruits**—ripening in fall, orange-colored, smooth, ovate, ¾ inch long. **Seeds**—solitary, smooth, bony, 4-sided, dark brown, about ¼ inch long, embedded in thick, resinous flesh.

DISTINGUISHING CHARACTERS: Pinnate leaves with long-stalked, blunt leaflets; orange fruits in drooping clusters.

GENERAL COMMENT: The Florida poisontree occurs in pinelands, hammocks, and sand dunes from Martin County southward. In general, the growth habit and characters of bark, leaves, and fruit resemble those of non-poisonous gumbo-limbo. It differs from gumbo-limbo in having less resinous bark, persistent leaves, longer stalked leaflets and fruits, while the last are larger and do not split open. Great precautions should be taken in identifying this tree, as it is as poisonous as poison ivy.

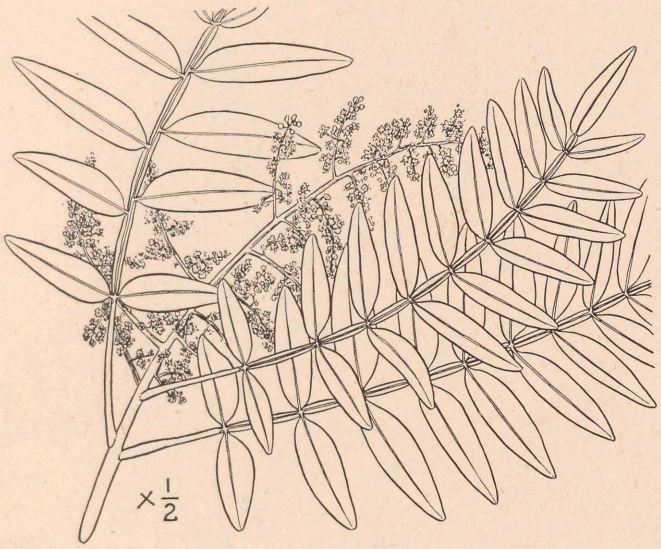
WARNING: All parts of this tree act as a contact skin-poison to many people.

RHUS COPALLINUM L.

Shining Sumac

(Anacardiaceae: Cashew Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 8 to 10 inches in diameter. **Crowns**—open, irregular, composed of erect, spreading branches, from short, stout trunks. **Bark**—light brown to gray, rather smooth, covered with large, round, raised, dark red-brown excrescences that separate into large, thin, papery scales. **Twigs**—pale, reddish brown, stout, slightly zigzag, downy, covered with conspicuous dark lenticels. **Leaves**—deciduous, alternate, pinnate, 6 to 8 inches long. **Leaflets**—9 to 21, opposite, firm, smooth, dark green and shining above, pale and downy beneath, 1 to 3 inches long, elliptic, tips sharp, bases unequal, margins entire, revolute. **Rachis**—winged. **Flowers**—in summer, staminate and pistillate on different plants, small, in dense,



branched, terminal clusters as long as leaves. **Fruits**—maturing in late summer, downy, bright red, ovate, 1/8 inch in diameter. **Seeds**—solitary, smooth, bony, orange-brown, enclosed in thin flesh.

DISTINGUISHING CHARACTERS: Dull, gray-brown bark; smooth, pinnate leaves with a winged rachis; dense clusters of downy, red fruits.

GENERAL COMMENT: Shining sumac occurs on dry soil nearly everywhere north of the Florida Keys. Its red fruits furnish such large quantities of food for seed-eating birds that it is recommended for conservation plantings. This species of sumac is non-poisonous.

RELATED SPECIES: Two other species—*R. glabra* L., smooth sumac, and *R. copallinum leucantha* (Jacq.) DC.—are found in the state. The former grows sparingly in western Florida and can be distinguished from the other two by its wingless rachis. The latter closely resembles *R. copallinum* but differs from it in having red bark and in being confined strictly to the extreme southern portion of the state.

TOXICODENDRON VERNIX (L.) Kuntze

Poison-sumac, Thunderwood

(Anacardiaceae: Cashew Family)

DESCRIPTION: **Height**—10 to 20 feet, trunks 4 to 6 inches in diameter. **Crowns**—narrowly rounded, composed of erect, spreading branches, from short trunks. **Bark**—light gray, thin, smooth. **Twigs**—gray, stout, flexible, smooth, covered with numerous raised lenticels. **Leaves**—deciduous, alternate, pinnate, 7 to 14 inches long. **Leaflets**—7 to 13, thin, smooth, dark green and shining above, pale beneath, becoming conspicuously red and yellow in autumn, 1½ to 5 inches long, opposite, elliptic, tips pointed, bases unequal, margins entire, wavy. **Sap**—clear, thin, caustic. **Flowers**—in early summer, staminate

and pistillate usually on different trees, very small, yellowish, on downy stalks in slender, open clusters near ends of branches in axils of leaves. **Fruits**—persistent, ripening in late summer, ivory white or yellowish, shining, nearly globose, less than ¼ inch in diameter, in slender, drooping clusters. **Seeds**—solitary, enclosed in ribbed stones covered with thin, resinous flesh.

DISTINGUISHING CHARACTERS: Pinnate leaves; drooping clusters of whitish fruits; brilliant autumnal foliage.

GENERAL COMMENT: The poison-sumac is found on moist soil and around bayheads from Marion County northward. Because of its poisonous properties, this tree should be avoided by all persons susceptible to irritation by poison ivy. Fortunately poison-sumac is not a common tree.

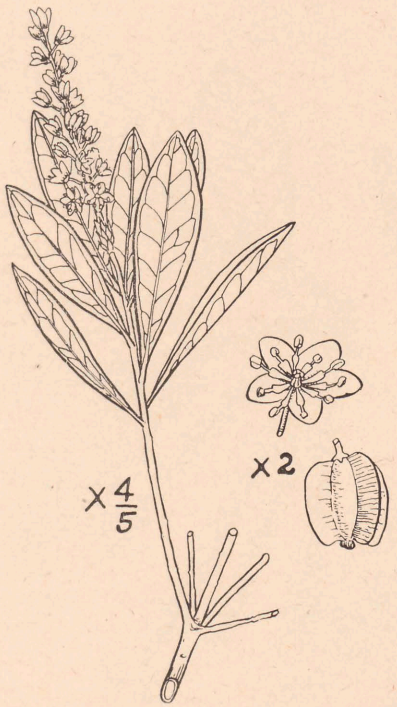
WARNING: All parts of this tree act as a contact skin-poison to many people.

CLIFTONIA MONOPHYLLA (Lam.) Britt.

Buckwheat-tree, Black Titi

(Cyrillaceae: Cyrilla Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 12 to 15 inches in diameter. **Crowns**—narrow, composed of stout, ascending branches, from short, slender, inclined or crooked trunks. **Bark**—thin, dark red-brown, divided into thin, persistent scales; deeply furrowed and broken into short, broad scales near the base of the trunk. **Twigs**—pale red-brown, slender, rigid. **Leaves**—evergreen, alternate, simple, firm, green and shining above, paler beneath, 1½ to 2¼ inches long, narrowly elliptic to obovate, with blunt tips, wedge-shaped bases and entire margins. **Flowers**—in early spring, small, fragrant, white or



pinkish, on slender spikes 1 to 3½ inches long on the ends of twigs, nodding in bud, erect in bloom. **Fruits**—ripening in late summer, dry, brown, ovate, with 2 to 4 wings, about ¼ inch long. **Seeds**—3 or 4, globose, light brown.

DISTINGUISHING CHARACTERS: Simple, evergreen leaves; dry, winged fruits in slender, terminal spikes.

GENERAL COMMENT: This plant attains its greatest size in the tree-covered swamps which border large, shallow streams of the pinelands from Jefferson County throughout western Florida. However, it may be observed more frequently growing as a shrub with waxmyrtle and various ericaceous plants in open, shallow swamps, and in bayheads. Its attractive and fragrant flowers are an important source of honey.

CYRILLA RACEMIFLORA L.

Swamp Cyrilla, White Titi

(Cyrillaceae: Cyrilla Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 10 to 14 inches in diameter. **Crowns**—broad, open, often 1-sided, with numerous wide-spreading branches, from a short trunk. **Bark**—thin, gray, smooth, checked at the base of the trunk with small, thin plates. **Twigs**—slender, smooth, slightly angular, brown to ashy gray. **Leaves**—late-falling, alternate, sometimes clustered, simple, shining above, dull and paler beneath, 2 to 4 inches long, narrowly elliptic, with blunt or sharp tips, narrowly wedge-shaped bases and entire, wavy margins. **Flowers**—appearing in spring, is small, white, in slender, erect spikes 4 to 6 inches long, usually 6 to 10 spikes in a cluster at the base of the new growth. **Fruits**—

ripening in late summer, yellow, persistent, very small, ovate, adhering tightly to the depressed spikes. **Seeds**—2, narrow, light brown, dry.

DISTINGUISHING CHARACTERS: Clustered, simple leaves; flowers in slender spikes in groups of 6 to 10; persistent fruits.

GENERAL COMMENT: The swamp cyrilla is found growing in several different habitats. In company with another member of the same family, the buckwheat-tree, it grows in damp, sour, sandy peat-soil in the shady bayheads of western Florida. In this habitat it rarely attains arborescent form, but on the high, sandy, exposed ridges rising above streams near the Gulf Coast, where it is surrounded by yaupon, water oaks, and gum trees, it assumes its largest size. Near Apalachicola it has been known to grow in swamps inundated for three fourths of the year, where it develops a shrubby, stoloniferous habit, producing impenetrable thickets.

Cyrilla arida Small, confined to a small area in the scrub of south-central Florida, has small leaves and yellowish flowers.

ILEX AMBIGUA (Michx.) Torr.

Carolina Holly

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—15 feet. **Crowns**—rounded, broad, sometimes irregular, composed of a few main branches, from slender trunks. **Bark**—black, shining, smooth except for elongated lenticels, resembling cherry bark, eventually flaking in age. **Twigs**—pale brown to purple, rather slender, straight or slightly zigzag, smooth except for prominent lenticels. **Leaves**—deciduous, alternate, simple, flat, smooth, 1½ to 3 inches long, elliptic to ovate, with sharp tips, rounded bases and margins bearing appressed teeth. **Flowers**—in spring, staminate and pistillate usually on different trees, small,

white, clustered along the twigs. **Fruits**—maturing in late summer, not persistent, dark red, translucent, globose, nearly ¼ inch in diameter. **Seeds**—4 to 8, light brown, faintly ribbed on the back, surrounded by watery flesh.

DISTINGUISHING CHARACTERS: Small, thin, deciduous leaves, broadest below the middle.

GENERAL COMMENT: The Carolina holly is widely distributed in dry woods but the individuals are usually solitary. In general vegetative characters, the tree resembles a wild plum, but the large, translucent, red berries distinguish it. The deciduous berries and the early deciduous leaves are in sharp contrast with those of other hollies.

RELATED SPECIES: *I. buswelli* Small is very similar to *I. ambigua* but has berries nearly ½ inch in diameter and leaves somewhat firmer.

ILEX CASSINE L.

Dahoon

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—40 feet, trunks 1 foot or more in diameter. **Crowns**—variable, composed of numerous branches. **Bark**—grayish black, smooth, becoming roughened and covered with epiphytes in age. **Twigs**—pale-colored, slender, downy. **Leaves**—evergreen, alternate, simple, leathery, usually flat, smooth above, more or less downy beneath, 2 to 4 inches long, elliptic, with blunt tips, rounded bases, margins with a few teeth near the tip. **Flowers**—

in spring, staminate and pistillate usually on different trees, numerous, small, white, clustered on a common stalk. **Fruits**—maturing in late fall, often abundant, persistent, red or sometimes nearly yellow, globose, about ¼ inch in diameter. **Seeds**—4 to 8, pale brown, bony, ribbed on the back, embedded in yellow, mealy flesh.

DISTINGUISHING CHARACTERS: Large, broad leaves with few spines.

GENERAL COMMENT: The dahoon is found in swamps and lake margins as far south as Biscayne Bay. Because the leaves are not conspicuously spiny, it is rarely recognized as a holly. Nevertheless, it is used so widely during the holiday season that it is commonly called Christmas berry.

ILEX CASSINE MYRTIFOLIA (Walt.) Sarg.*

Myrtle Dahoon

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—25 feet. **Crowns**—compact, broad, composed of numerous horizontal branches, from crooked trunks. **Bark**—dull black, smooth, often covered with lichens and moss. **Twigs**—pale-colored, slender, rigid, smooth. **Leaves**—evergreen, alternate, simple, leathery, smooth, ½ to 1½ inches long, narrowly elliptic to linear, with rounded bases, blunt tips with a single spine, thickened margins and prominent midribs. **Flowers**—in spring, staminate and pistillate usually on different trees, numerous, small, inconspicuous, white, clustered, several on a common stalk. **Fruits**—maturing in late fall, persistent, light red to yellow, globose, less than ¼ inch in diameter. **Seeds**—4 to 8, pale, yellowish brown, bony, covered by thin, yellow flesh.

DISTINGUISHING CHARACTERS: Compact head; narrow leaves; habitat.

GENERAL COMMENT: The myrtle dahoon occurs sporadically from Orange County northward around flatwoods ponds and cypress ponds. The rounded heads of small, narrow leaves with solitary spines at the tips differ markedly from those of other hollies, although flower and fruit arrangements resemble those of dahoon.

*I. myrtifolia Walt.

ILEX DECIDUA CURTISSI Fernald*

Curtiss Possumhaw, Winterberry

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—15 feet. **Crowns**—very open, with a few spreading branches, from slender trunks. **Bark**—smooth, dark when young, becoming very dark and somewhat roughened with age. **Twigs**—brown, very slender, somewhat flexible and smooth except for scattered lenticels. **Leaves**—tardily deciduous, alternate, simple, thin-leathery, flat, up to ¾ inch long, spatulate, with usually blunt tips, rounded bases, and shallowly scalloped margins. **Flowers**—in spring, staminate and pistillate usually on different trees, few, small, inconspicuous, white, scattered along the twigs, usually 2 or 3 in a leaf axil. **Fruits**—maturing in winter, few, persistent, dark red, globose, less than ¼ inch in diameter, longer than their stalks. **Seeds**—4 to 8, pale brown, bony, faintly ribbed, covered with thin, yellow flesh.

DISTINGUISHING CHARACTERS: Very small leaves; scattered berries on very short stalks; habitat.

GENERAL COMMENT: Of the various deciduous hollies that grow in Florida, the Curtiss possumhaw is in all probability the most common. Great numbers are found along some of our rivers, especially the Suwannee, the Aucilla, and their tributaries. It forms a small tree with open, spreading top, usually interlacing with other trees, among which it may be easily confused with *Viburnum corymbosum,* owing to the similarity of the individual leaves. However, the plant is inconspicuous even in fruit, because the bright-colored berries are very small.

RELATED SPECIES: *I. decidua* Walt. is similar to the above but has downy foliage. *I. longipes* Chapm., with smooth leaves, and *I. cuthberti* Small, with downy leaves, have fruits shorter than their stalks. *I. verticillata* (L.) A. Gray, a deciduous-leaved holly occurring in the swamps of northern Florida, is distinguished by sharp-pointed, toothed leaves, and short-stalked, red berries containing smooth seeds.

*I. curtissi (Fernald) Small

ILEX KRUGIANA Loesener

Tawnyberry Holly

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—35 feet. **Crowns**—irregular, composed of slender, upright branches, from crooked trunks. **Bark**—smooth, white, dark with age and broken by vertical furrows. **Twigs**—white, straight, smooth. **Leaves**—evergreen, alternate, simple, flat, leathery, deep green, shining, 1½ to 3 inches long, elliptic to ovate, with long tips and entire margins, on stalks ¼ the

length of blades. **Flowers**—in winter, small, inconspicuous, white, in clusters in the axils of the leaves. **Fruits**—maturing in summer, globose, black, about ¼ inch in diameter, approximately as long as the stalks. **Seeds**—pale, smooth, bony.

DISTINGUISHING CHARACTERS: Black fruits; long leafstalks; limited distribution.

GENERAL COMMENT: Among the black-berried species, tawnyberry holly, the rarest, is limited to a small portion of the subtropical region. The leaf shape with its long point is very unusual among native hollies and serves to distinguish the species from all others.

ILEX OPACA Ait.

American Holly

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—50 feet, trunks 3 feet in diameter. **Crowns**—conical to cylindrical, composed of slender, crooked, very rigid branches, from straight trunks. **Bark**—pale grayish to yellowish brown, smooth, thin, becoming slightly roughened in age. **Twigs**—pale, rather slender, very crooked, smooth except for scattered lenticels. **Leaves**—evergreen, alternate, simple, thick, smooth, shining, flat or often contorted, dark green, 2 to 4 inches long, spatulate to elliptic, with rounded to broadly wedge-shaped bases, wavy margins bearing

1 to several spiny teeth, conspicuous midribs. **Flowers**—in spring, staminate and pistillate usually on different trees, small, white; staminate borne 2 to 9 on a common stalk; pistillate solitary. **Fruits**—ripening in late fall, persistent, light to dark red, rarely yellow, globose, 1/4 inch in diameter. **Seeds**—4 to 8, pale brown, bony, ribbed on back, embedded in yellow flesh.

DISTINGUISHING CHARACTERS: Large size; hammock habitat; red berries; spiny, shining, evergreen leaves.

GENERAL COMMENT: The American holly occurs naturally in hammocks from Orange County northward. The combination of pale trunk, dark-green leaves, and bright-red fruits make this an outstanding tree in its usual habitat. As a result of its continual use for Christmas decorations, the tree has disappeared from the vicinity of large cities and is fast becoming rare in more rural districts.

ILEX OPACA ARENICOLA Ashe*

Hummock Holly, Scrub Holly

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—15 feet. **Crowns**—usually narrowly cylindrical, composed of rigid, typically ascending branches, from very short trunks. **Bark**—pale gray or whitish, permanently smooth. **Twigs**—pale-colored, slender, stiff, very crooked, smooth except for rather prominent lenticels. **Leaves**—evergreen, alternate, simple, thick, smooth, shining, contorted, 1 to 2 inches long, spatulate to narrowly elliptic, with blunt tips, wedge-shaped bases, and thickened margins bearing few to many rigid, spiny teeth, and prominent

midribs. **Flowers**—in spring, staminate and pistillate usually on different trees, small, white, relatively inconspicuous; staminate 2 to 9 in a cluster on a common stalk; pistillate solitary. **Fruits**—maturing in late fall, persistent, red to yellowish red, globose, ¼ inch in diameter. **Seeds**—4 to 8, pale brown, bony, deeply ribbed on the back, embedded in yellow flesh having the odor of fresh apples.

DISTINGUISHING CHARACTERS: Small leaves; large fruit; xerophytic habitat.

GENERAL COMMENT: The hummock holly, a miniature of American holly, is confined to the scrubs of central Florida. While variable in most of its characters, it always presents a dense crown of yellowish-green leaves on stiff, erect twigs. The large, red berries are very decorative.

*I. cumulicola Small

ILEX VOMITORIA Ait.

Yaupon

(Aquifoliaceae: Holly Family)

DESCRIPTION: **Height**—25 feet or less. **Crowns**—rounded, composed of slender, crooked branches, often very much interlaced. **Bark**—grayish black, permanently smooth except for lenticels. **Twigs**—dark, very slender, very crooked, rigid, intricately branched, smooth except for scattered lenticels. **Leaves**—evergreen, alternate, simple, leathery, smooth, flat, very dark green above, ½ to 1 inch long, elliptic to round, with blunt tips, rounded bases.

scalloped margins without spines. **Flowers**—in spring, staminate and pistillate usually on different trees, small, white, clustered on the twigs. **Fruits**—maturing in late fall, persistent, dark red, globose, about ¼ inch in diameter. **Seeds**—4 to 8, pale brown, ribbed on the back, enveloped in juicy flesh.

DISTINGUISHING CHARACTERS: Dense, low crown; dark green, persistent leaves without spines; dark-red berries.

GENERAL COMMENT: The range of yaupon extends from Pasco County northward, but the tree is common only locally. It is a well-established fact that the Indians used an infusion of its leaves, known as "black draught," in their ceremonials. Horticulturally, yaupon is important as an evergreen hedge-plant adaptable to severe trimming. Like other red-berried evergreen hollies, it is much used for Christmas decoration.

MAYTENUS PHYLLANTHOIDES Benth.

Gutta-percha Mayten

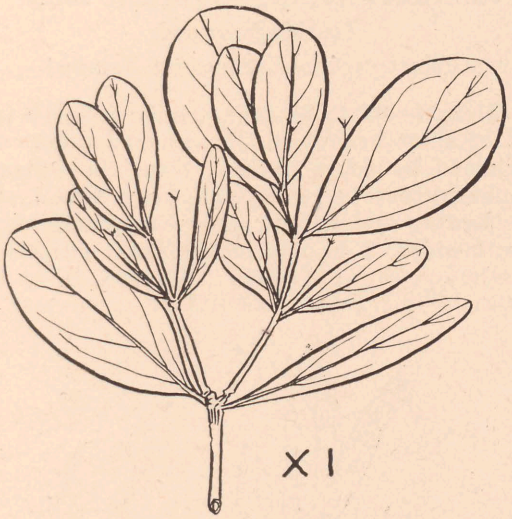
(Celastraceae: Bittersweet Family)

DESCRIPTION: **Height**—20 feet, usually a shrub. **Crowns**—round-topped. **Twigs**—pale gray, slender, smooth, alternate. **Leaves**—persistent, alternate, simple, leathery, deeply tinged with red when unfolding, grayish green at maturity, 1 to 1½ inches long, obovate, with blunt or sharp tips, wedge-shaped bases, entire revolute margins, sometimes slightly wavy. **Flowers**—in spring and summer, very small, short-stalked, solitary or clustered in the axils of

leaves. **Fruits**—ripening in winter, bright red, persistent, obovate, about ¼ inch long, 4-angled, splitting at maturity. **Seeds**—2 to 4, very small, partly surrounded by red flesh.

DISTINGUISHING CHARACTERS: Grayish-green foliage; persistent, 4-angled, small, red fruits.

GENERAL COMMENT: The gutta-percha mayten is restricted to Lee, Collier, Dade, and Monroe counties. Like many other subtropical species, it is usually a low shrub, though occasional specimens in favorable habitats, such as those on Captiva Island, reach tree stature. In common with some other members of its family, it is characterized by fruits that split open at maturity, exposing seeds in bright-red coverings.



West Indies falsebox, *Gyminda latifolia* (Sw.) Urban, a small tree related to gutta-percha mayten, has opposite, oval leaves borne on 4-angled twigs. Black or dark-blue, fleshy fruits with 1 or 2 seeds are borne in small, open clusters. Distribution is limited to the hammocks of the Florida Keys.

Another small tree, known as *Rhacoma crossopetalum* L., has small, oval, leathery, evergreen leaves, either alternate or opposite, and slightly fleshy, non-splitting, small, 1-seeded, red fruits borne on stalks about ½ inch long.

SCHAEFFERIA FRUTESCENS Jacq.

Florida-boxwood

(Celastraceae: Bittersweet Family)

DESCRIPTION: **Height**—35 to 40 feet, trunks 8 to 10 inches in diameter. Crowns—composed of erect branches, from short trunks. **Bark**—pale brown, thin, smooth, roughened by many narrow, thin, flat ridges sparingly interlaced. **Twigs**—slender, green becoming pale gray, round, smooth, with raised longitudinal lines. **Leaves**—persistent, alternate, simple, firm, smooth, bright yellow-green on both sides, 2 to 2½ inches long, elliptic to spatulate, tips

rounded or sometimes pointed, bases wedge-shaped, margins entire, thick, revolute. **Flowers**—in spring, staminate and pistillate on different plants, very small, in clusters in axils of leaves. **Fruits**—maturing in November, bright red, stalked, slightly warty, slightly grooved, nearly globose, less than ¼ inch in diameter. **Seeds**—2, enclosed in bony shells.

DISTINGUISHING CHARACTERS: Yellow-green foliage; grooved, red fruits.

GENERAL COMMENT: The Florida-boxwood occurs only in hammocks of Dade and Monroe counties. In contrast to most of the other trees of that region, its habit is upright and its foliage yellow-green. Its economic importance is limited by the insufficient size and quantity of logs produced from it.

AESCULUS PAVIA L.

Red Buckeye

(Hippocastanaceae: Horsechestnut Family)

DESCRIPTION: **Height**—30 feet, trunks 8 inches in diameter. **Crowns**—rounded, dense, composed of numerous short, ascending branches; trunks always crooked, often inclined. **Bark**—gray-brown, smooth, roughened by scattered, corky blocks, flaking off in small, thin, irregular patches. **Twigs**—smooth, stout, very crooked, olive-green to gray-brown, with scattered, raised, orange lenticels. **Leaves**—deciduous, opposite, compound, smooth, dark green and shining above, paler beneath. **Leaflets**—5 to 7, narrowly obovate, long-pointed, gradually narrowed at the base, with fine-toothed margins, 3½ to

6 inches long, borne on red leafstalks 3 to 7 inches long. **Flowers**—tubular, composed of separate petals about 1½ inches long, light red, borne on slender, downy stalks in early spring at the tips of the new growth, in narrow erect clusters 4 to 8 inches long. **Fruits**—1 to 2 inches in diameter, nearly globose, smooth, light brown, splitting at maturity in late summer into 2 or 3 sections. **Seeds**—1 or 2, globose, shining chestnut-brown, about 1 inch in diameter.

DISTINGUISHING CHARACTERS: Opposite, compound leaves having red stalks; narrow, red flowers in upright spikes; nearly globose, large-seeded fruits.

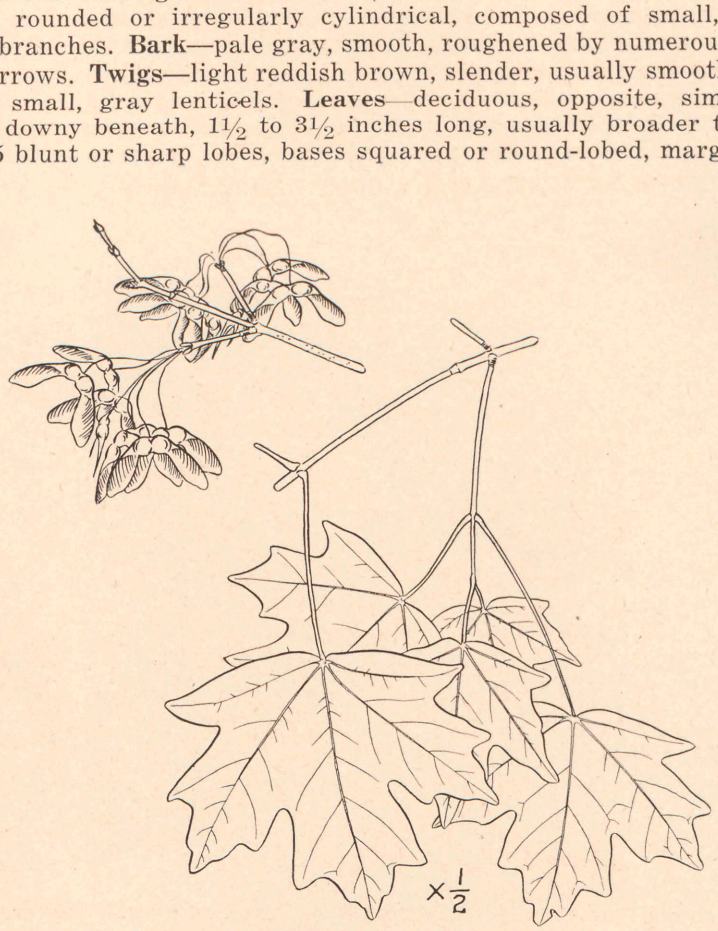
GENERAL COMMENT: The red buckeye grows commonly in rich woods, either wet or dry, of northern and north-central Florida, as far south as Alachua County. Although occasionally large in size, it usually occurs as a clump of coarse, shrubby stems. Its erect, red flower clusters, conspicuous in early spring woods like small flames or firecrackers, are the source of the colloquial name "firecracker plant." It does not have any commercial importance.

ACER FLORIDANUM (Chapm.) Pax*

Florida Maple

(Aceraceae: Maple Family)

DESCRIPTION: **Height**—50 to 60 feet, trunks 2 feet in diameter. **Crowns**—dense and rounded or irregularly cylindrical, composed of small, erect or spreading branches. **Bark**—pale gray, smooth, roughened by numerous vertical, shallow furrows. **Twigs**—light reddish brown, slender, usually smooth, covered with very small, gray lenticels. **Leaves**—deciduous, opposite, simple, thin, smooth or downy beneath, 1½ to 3½ inches long, usually broader than long, with 3 to 5 blunt or sharp lobes, bases squared or round-lobed, margins wavy,



on green leafstalks. **Flowers**—in early spring with leaves, small, yellowish green, on long, slender stalks, in small clusters at ends of branches. **Fruits**—maturing in early summer, pale reddish brown, wings papery, ⅜ to ¾ inch long, paired on clustered, slender stalks. **Seeds**—solitary, shining, green.

DISTINGUISHING CHARACTERS: Leaves with 3 to 5 angular lobes, broader than long; fruit ripening in early summer.

GENERAL COMMENT: The Florida maple is common on shallow soils over limestone as far south as Hillsborough County with rich stands near Brooksville, Hernando County, and Gulf Hammock, Levy County. Its dead, brown leaves persist on the twigs until late in spring. The long, straight trunks produced on moist soils are lumbered for flooring and furniture.

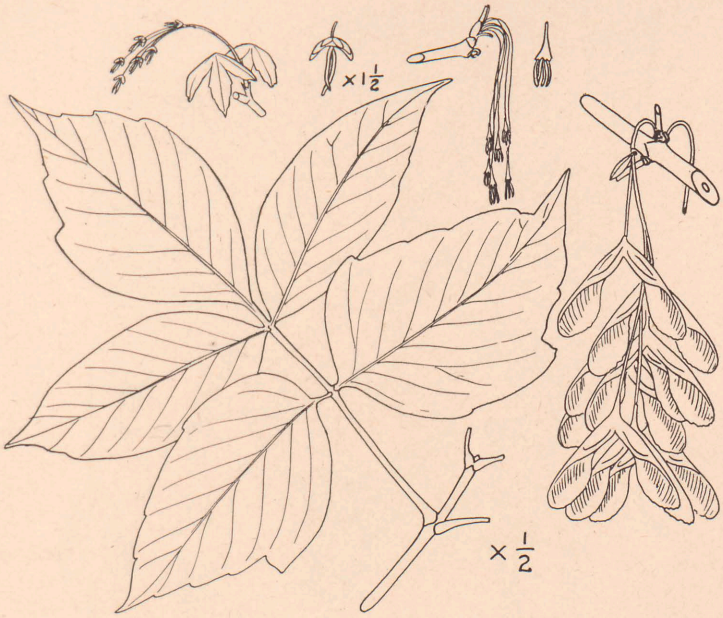
*Saccharodendron floridanum (Chapm.) Nieuwl.

ACER NEGUNDO L.*

Boxelder

(Aceraceae: Maple Family)

DESCRIPTION: **Height**—60 to 70 feet, trunks 2 feet in diameter. **Crowns**—broad, irregular, composed of numerous horizontal, crooked, brittle branches, from well-developed, crooked trunks. **Bark**—gray to brownish gray, rather smooth, broken into small, scaly plates by numerous shallow, vertical furrows. **Twigs**—green, slender, smooth. **Leaves**—deciduous, opposite, compound. **Leaflets**—3 to 7, thin, smooth, deep green above, 2 to 4 inches long, ovate, tips sharp, bases wedge-shaped to broadly rounded, margins coarsely toothed. **Flowers**—in spring with leaves, staminate and pistillate on different trees, very



small, greenish, pendent on slender stalks in clusters near the ends of twigs. **Fruits**—maturing in early summer, greenish with papery wings, 1 to 1½ inches long, paired on slender stalks in large, dense, pendent clusters. **Seeds**—solitary, red-brown, about ½ inch long.

DISTINGUISHING CHARACTERS: Pinnate, usually 3-foliate leaves; fruit ripening in summer.

GENERAL COMMENT: The boxelder, although occasionally common, is not generally distributed in the state. Sporadic colonies are found as far south as Hernando County, but the largest and most abundant stands now known occur in Alachua County, where the tree attains considerable size. Its rapid growth makes it desirable for quick effects in landscaping but, owing to its normally short life, other trees should be planted to replace it later.

*Negundo negundo (L.) Karst.

ACER RUBRUM L.*

Red Maple

(Aceraceae: Maple Family)

DESCRIPTION: **Height**—80 to 90 feet, trunks 2 feet in diameter. **Crowns**—narrowly cylindrical, composed of short, crooked, ascending branches, from tall, well-developed trunks. **Bark**—brownish gray, roughened with numerous shallow furrows dividing surface into small, irregular, vertical, flat-topped ridges. **Twigs**—smooth, slender, reddish brown to gray. **Leaves**—deciduous, opposite, simple, thin, papery, deep green above and paler beneath, 2½ to 5 inches long, often as broad as long, with 3 to 5 deep, sharp lobes, bases squared to round-lobed, margins toothed, stalks red. **Flowers**—in winter and spring prior to leaves, small, red, nearly stalkless, in dense clusters near ends of

branches. **Fruits**—maturing in spring, commonly red, wings papery, 1 inch or less long, paired on slender stalks in clusters. **Seeds**—solitary, green, shining.

DISTINGUISHING CHARACTERS: Very early, red flowers; red-stalked leaves with 3 to 5 lobes; conspicuous, red fruit.

GENERAL COMMENT: The red maple and its variety, trident red maple, which has leaves with 3 shallow lobes, are among the commonest trees that may be found on moist or wet ground in every county. Their red flowers and fruit clusters are conspicuous in very early spring, while the red and yellow foliage appears consistently in fall. The timber is not lumbered extensively.

RELATED SPECIES: The silver maple, *Acer saccharinum* L., sometimes found in northern Florida, may be identified by its large leaves with 3 to 5 sharp lobes, which are waxy in appearance on the lower surface. Its flowers appear prior to the leaves.

*Rufacer rubrum (L.) Small

EXOTHEA PANICULATA (Juss.) Radlk.

Butterbough, Inkwood

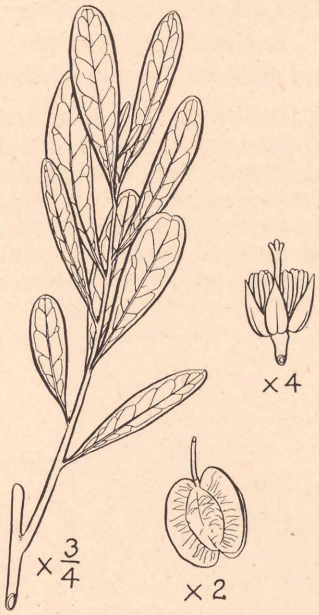
(Sapindaceae: Soapberry Family)

DESCRIPTION: **Height**—40 feet, trunks 1 foot in diameter. **Crowns**—composed of slender, upright branches, from tall trunks. **Bark**—reddish brown, thin, separating into large scales. **Twigs**—dark reddish brown, slender, stiff, smooth, with numerous raised lenticels. **Leaves**—persistent, alternate, pinnately compound. **Leaflets**—2 to 6, usually 4, firm, smooth, dark green and shining, 2 to 5 inches long, elliptic, with tips rounded to blunt-pointed, bases unevenly wedge-shaped and margins wavy. **Flowers**—in spring, staminate and

pistillate on different plants, numerous, small, white, in irregular clusters. **Fruits**—maturing in fall, purple, smooth, globose, about ½ inch in diameter. **Seeds**—solitary, orange-brown, about ¼ inch in diameter, contained in juicy flesh.

DISTINGUISHING CHARACTERS: Leaves usually bearing 4 leaflets; small, juicy, purple fruit.

GENERAL COMMENT: The butterbough is found along the East Coast from Brevard County to the Florida Keys, but is never very common and only occasionally becomes a large tree. The bright reddish-brown bark of the larger trunks is quite distinctive. While the compound character of the leaves is not apparent at first glance, the fruits are quite conspicuous. They remain reddish brown all summer, becoming juicy and dark purple in the fall.



Dodonaea microcarya Small, Florida hopbush, is a small tree found growing on the lower Florida Keys. It has spatulate leaves, 1 to 2 inches long, glistening as though with a coat of varnish, and bears clusters of small flowers and papery fruits, ¼ inch long, equipped with 3 or 4 papery, net-veined wings.

Cupania glabra Sw., Florida cupania, is a tree of rare occurrence on the Florida Keys. It differs from other members of the family represented in Florida in having a dry, 3-lobed capsule, which is stalked.

SAPINDUS MARGINATUS Willd.

Florida Soapberry

(Sapindaceae: Soapberry Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 1 foot in diameter. **Crowns**—rounded, composed of a few ascending branches, from rather short, buttressed trunks. **Bark**—very pale brown or brownish gray, smooth or slightly shaggy, broken into small, often loose plates. **Twigs**—pale gray, dull, smooth, stout. **Leaves**—deciduous, alternate, pinnately compound. **Leaflets**—7 to 13, firm, smooth, dark green and shining above, paler beneath, 2 to 5 inches long, opposite or alternate, equally lanceolate, tips long-pointed, bases narrowed, margins entire, wavy. **Rachis**—up to 10 inches long with a narrow ridge on each

side. **Flowers**—in spring, numerous, small, white, greenish white or sometimes tinged with red, in broad, pointed, erect clusters, 4 to 5 inches long, on ends of new growth. **Fruits**—maturing in late summer, smooth, resinous, pale yellowish brown, 3-lobed, often unequally so. **Seeds**—solitary, hard, black, nearly globose, about ½ inch in diameter.

DISTINGUISHING CHARACTERS: Brownish-gray bark without furrows; wingless leaf rachis; peculiar 3-parted fruits.

GENERAL COMMENT: The Florida soapberry occurs sporadically in dry hammocks from Marion County northward. Although the fruits should be 3-parted, 1 or 2 cells usually remain small and lack the large, black seeds. Flesh of the fruit contains a principle, which makes it valuable as a substitute for soap.

RELATED SPECIES: *S. saponaria* L., found in Dade, Collier, and Monroe counties, has a winged leaf rachis, blunt leaflets, and large fruits.

COLUBRINA RECLINATA (L'Hér.) Brongn.

Soldierwood, Naked-wood

(Rhamnaceae: Buckthorn Family)

DESCRIPTION: **Height**—50 feet, trunks 3 feet in diameter. **Bark**—orange-brown, thin, flaking into large, papery scales. **Twigs**—gray or light brown, smooth, covered with numerous raised lenticels. **Leaves**—persistent, alternate, simple, smooth, firm, yellow-green, with stout midribs, 2 to 4 inches long, elliptic, sometimes narrowly so, abruptly sharp-pointed, with round bases and entire margins. **Flowers**—appearing in spring, small, yellowish, grouped

in small, downy clusters in the axils of leaves of the season. **Fruits**—maturing in late fall, orange-red, smooth, nearly globose, shallowly 3-lobed, ¼ inch in diameter. **Seeds**—3, hard, light red-brown, encased in dry flesh.

DISTINGUISHING CHARACTERS: Smooth, alternate leaves; dry, 3-lobed fruits.

GENERAL COMMENT: Although the soldierwood is local and rare in Florida, occurring only in the Everglade Keys and on the Florida Keys, it is widely distributed in some of the West Indies. Under favorable conditions, it becomes a large tree, but most Florida specimens are rather small. The scaling-off of patches of bark is one of the outstanding characters for the field identification of the species.

Colubrina arborescens (Mill.) Sarg.,* occurring on the Florida Keys, has rusty-brown down on the flower clusters, twigs, and leaves.

Colubrina cubensis (Jacq.) Brongn., occurring on the Florida Keys, is pale downy on flower clusters, twigs, and leaves, which are also toothed.

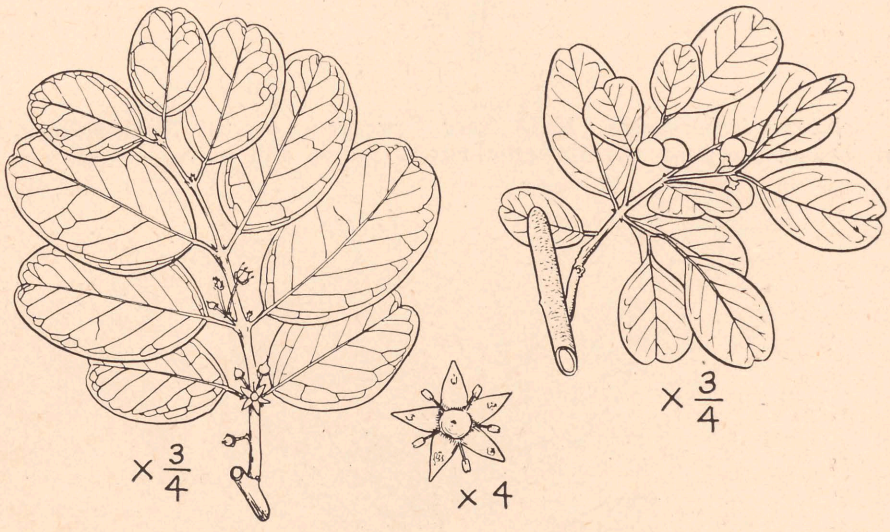
*Colubrina colubrina (Jacq.) Millsp.

KRUGIODENDRON FERREUM (Vahl) Urban

Leadwood, Black Ironwood

(Rhamnaceae: Buckthorn Family)

DESCRIPTION: **Height**—30 feet, trunks 8 to 10 inches in diameter with slender branches. **Bark**—thin, roughened with rounded, vertical ridges, covered with small, light-gray scales. **Twigs**—gray, slender, rigid, smooth, covered with numerous raised lenticels. **Leaves**—persistent, opposite or nearly so, simple, smooth, firm, bright green and shining above, yellow-green beneath, 1 to 1½ inches long, ovate, with rounded or notched tips, rounded bases, with entire and wavy margins. **Flowers**—in late spring, small, green, in few-



flowered, erect clusters in the axils of the upper leaves. **Fruits**—maturing in summer, black, smooth, ovate, ⅓ inch long. **Seeds**—solitary, bony, contained in thin flesh.

DISTINGUISHING CHARACTERS: Prominently ridged bark; opposite leaves; 1-seeded, fleshy fruits.

GENERAL COMMENT: One of the more common small trees on the lower East Coast, leadwood is inconspicuous among the scrub oaks. There are no outstanding gross characters to distinguish it, as it grows crowded in with other shrubby vegetation. With its small leaves opposite, or nearly so, it resembles the myrtaceous trees but lacks their aromatic oils. However, the hard, red-brown wood is unique, because it is the heaviest wood growing naturally within the boundaries of the United States.

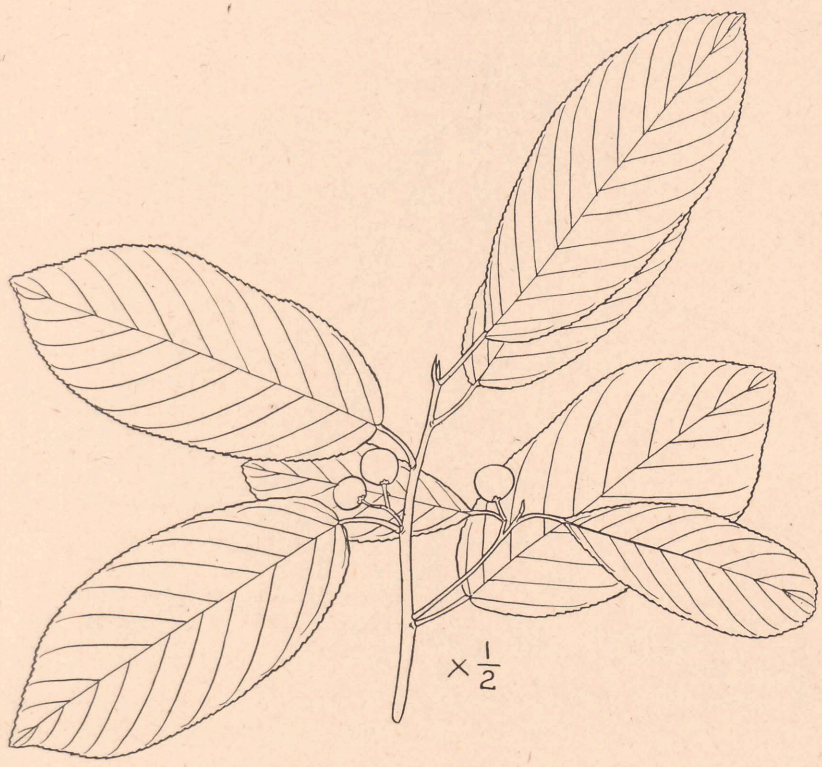
RELATED SPECIES: *Reynosia septentrionalis* Urban, darling-plum, occurring on the Florida Keys, is a small tree related to leadwood. It is distinguished from it by large plate-like scales on reddish-brown bark.

RHAMNUS CAROLINIANA Walt.

Carolina Buckthorn

(Rhamnaceae: Buckthorn Family)

DESCRIPTION: **Height**—30 feet, trunks 5 inches in diameter. **Crowns**—irregularly rounded, composed of numerous small, slender, spreading branches. **Bark**—grayish brown, smooth, with shallow, paler furrows. **Twigs**—dark brown, slender, straight, smooth. **Leaves**—deciduous, alternate, simple, smooth, dark green, shining, prominently veined on both sides, 2 to 6 inches long, elliptic, with tips pointed, bases rounded and margins finely toothed. **Flowers**—in late spring, small, green, in dense, few-flowered, short-stalked clusters in



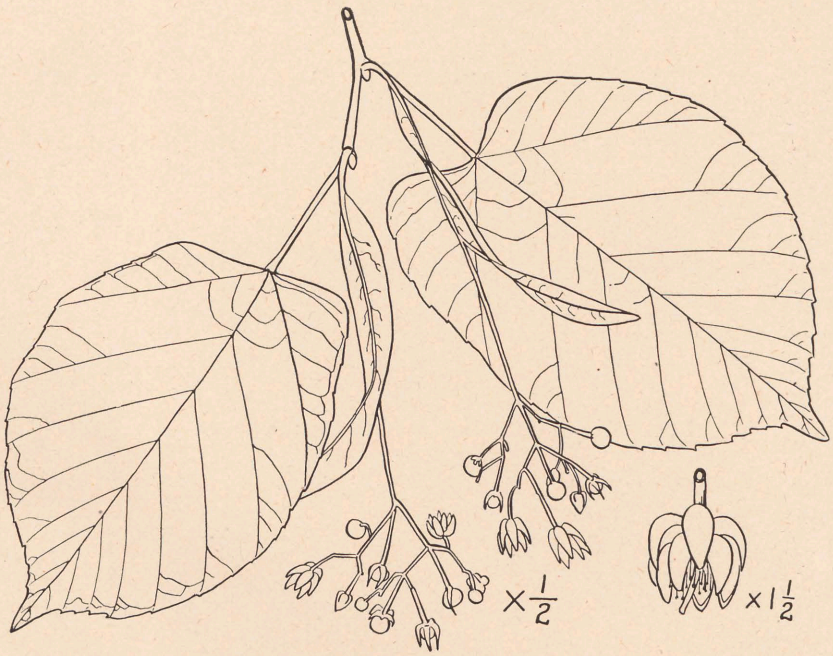
axils of leaves of new growth. **Fruits**—maturing in summer, smooth, black, globose, ⅓ inch in diameter. **Seeds**—2 to 4, woody, reddish brown, enclosed in thin, juicy flesh.

DISTINGUISHING CHARACTERS: Alternate, fine-toothed leaves; several-seeded, black, juicy berries.

GENERAL COMMENT: The Carolina buckthorn, a small tree growing commonly on limestone outcroppings as far south as Orange County, is most conspicuous at fruiting time. Round, black berries, often borne in such large quantities that the branches are pendent under their weight, were formerly used as a source of yellow dye. However, this tree has never been economically important.

TILIA FLORIDANA Small
Florida Basswood, Linden
(Tiliaceae: Basswood Family)

DESCRIPTION: **Height**—60 feet, trunks 2 feet in diameter. **Crowns**—irregularly rounded, composed of a few ascending branches, from straight trunks. **Bark**—gray, roughened by flat-topped, interlacing ridges forming numerous small, angular blocks separated by shallow furrows. **Twigs**—reddish brown to gray, downy, slender, flexible, sometimes zigzag. **Leaves**—deciduous, alternate, simple, dark green above, paler and stellate-downy beneath, 3 to 6 inches long, broadly ovate, tips abruptly pointed, bases very unequally rounded, margins shallowly toothed. **Flowers**—in early summer,



creamy to yellow, about ½ inch in diameter, in downy, open, flat-topped clusters of 20 or more on long, downy, drooping stalks, from axils of leaves. stalks or longer and attached to them for ⅓ of their length. **Fruits**—maturing in early fall, downy, woody, globose, ¼ inch or more in diameter. **Seeds**—1 or 2.

DISTINGUISHING CHARACTERS: Leaves with unequal bases; flowers in bracted clusters.

GENERAL COMMENT: The Florida basswood is widely distributed in hammocks from Orange County northward. While usually found as a small tree sprouting freely at its base, it occasionally has a tall, straight trunk. Many trees of this species have been marketed for their valuable timber.

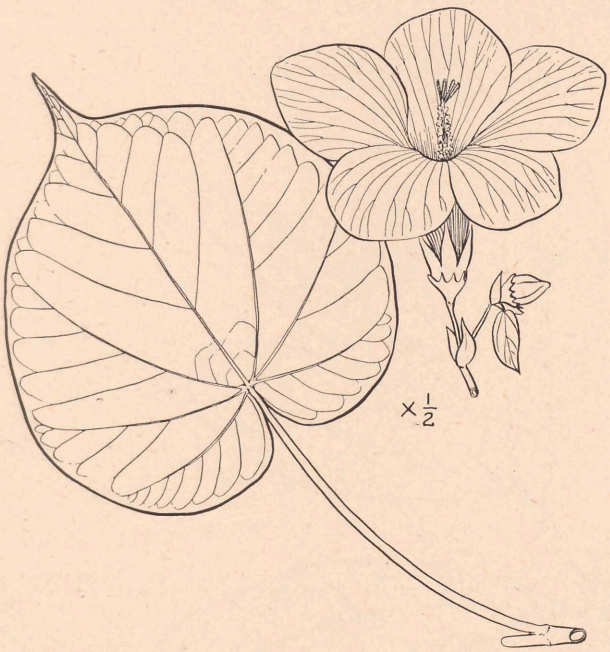
RELATED SPECIES: There are 6 other species of basswood, all rather local in their distribution and varying in minor characters.

HIBISCUS TILIACEUS L.*

Sea Hibiscus, Mahoe

(Malvaceae: Mallow Family)

DESCRIPTION: **Height**—15 feet, trunks 8 to 10 inches in diameter. **Crowns**—very broadly rounded, composed of wide-spreading branches, from short, irregular trunks. **Twigs**—stout, brown, smooth, somewhat downy. **Leaves**—persistent, alternate, simple, leathery, dark green and dull above, paler and downy beneath, 4 to 8 inches long, round, with abruptly pointed tips, broadly rounded bases, margins nearly entire. **Flowers**—all year, 5-petalled, yellow becoming red, about 4 inches in diameter, on long, slightly downy stalks, solitary in axils of leaves of new growth. **Fruits**—maturing all year, pointed,



silky, dry, conical, 3/4 inch or more in diameter, splitting into 5 parts. **Seeds**—numerous, brown, kidney-shaped, about 1/4 inch long.

DISTINGUISHING CHARACTERS: Nearly round, abruptly pointed leaves; large, yellow flowers becoming red; silky, 5-parted fruit.

GENERAL COMMENT: The sea hibiscus is restricted in its range to shore hammocks and sand dunes along the coast of the southern peninsula and the Florida Keys. On muddy shores, the main trunk seldom attains much height before leaning over and rooting. Since the branches also root on contact with the mud, a single tree covers a large area with a mass of tangled stems.

RELATED SPECIES: Upland cotton, *Gossypium hirsutum* L., grows as a small tree on sand dunes at the extreme southern end of the state, including the Florida Keys. It is characterized by large, 3-lobed leaves and large, creamy-white flowers with a purple center. The seeds are covered with tawny cotton.

*Pariti tiliaceum (L.) St. Hil.

CANELLA WINTERANA (L.) Gaertn.

Canella, Cinnamon-bark

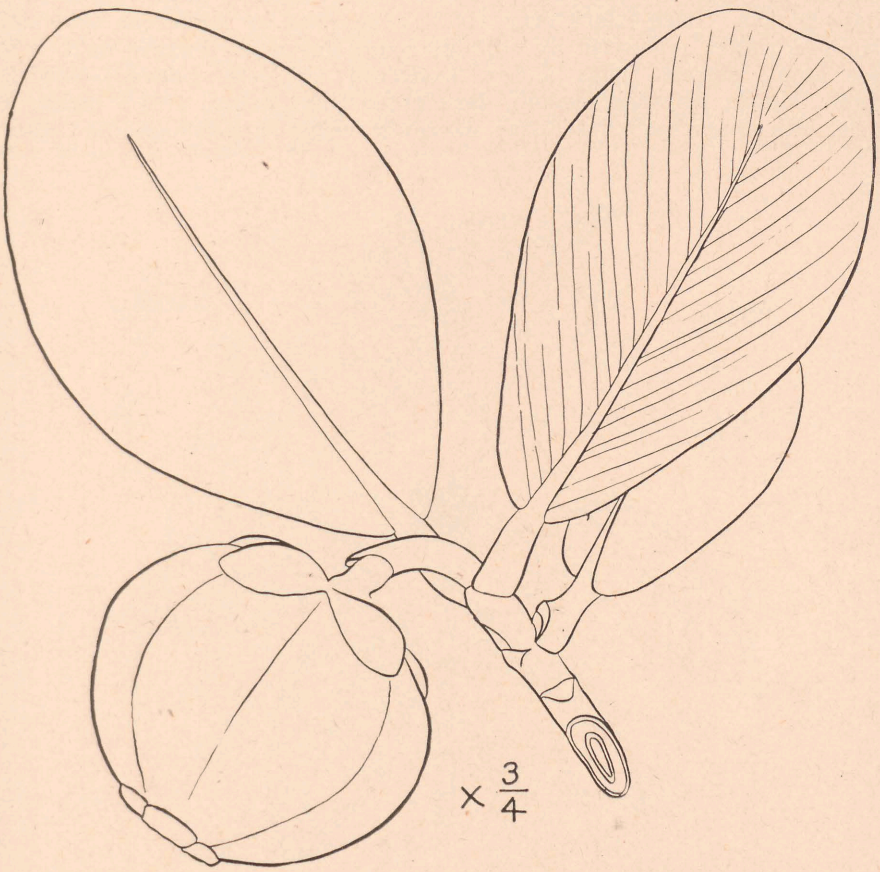
(Canellaceae: Canella Family)

DESCRIPTION: **Height**—25 to 30 feet, trunks 8 to 10 inches in diameter. **Crowns**—broadly rounded, composed of wide-spreading branches, from straight trunks. **Bark**—light gray, thin and broken into numerous short, thick scales exposing yellow, aromatic inner bark. **Twigs**—green to gray, stout, smooth. **Leaves**—persistent, aromatic, alternate, simple, leathery, dark green and shining above, 2½ to 5 inches long, obovate, with rounded tips, wedge-shaped bases and entire, revolute margins. **Flowers**—in the fall, white to purplish, about ½ inch in diameter, in dense clusters at ends of new growth. **Fruits**—

maturing in spring, very dark red, smooth, nearly globose, ½ inch in diameter. **Seeds**—2 to 4, black, shining, enclosed in pulpy flesh.

DISTINGUISHING CHARACTERS: Aromatic bark; obovate, leathery leaves; clusters of purplish flowers; very dark-red fruit.

GENERAL COMMENT: The range of canella is limited to the subtropical portion of the state, including only the Cape Sable region and the Florida Keys. The round-topped head is usually produced in the shade of other trees, where the pale bark and dark-green foliage make a striking contrast. Unlike most other trees, canella blooms in the fall and produces a large number of dark-crimson fruits in the spring.



Clusia flava Jacq., (Guttiferae), Key West clusia, has been reported from the Florida Keys a few times during the last century. It is characterized by thick, obovate leaves, yellow flowers, and round, fleshy fruits.

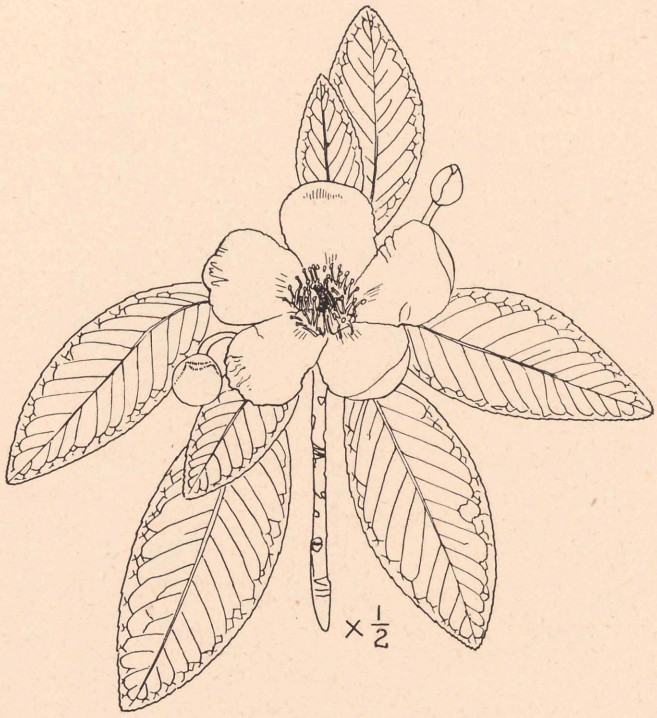
RELATED SPECIES: *Clusia rosea* Jacq., bearing pink flowers, is similar in vegetative characters.

GORDONIA LASIANTHUS (L.) Ellis

Loblolly-bay

(Theaceae: Tea Family)

DESCRIPTION: **Height**—70 feet, trunks 12 to 15 inches in diameter. **Crowns**—conical to cylindrical, composed of short, stout, crooked branches, from tall, straight trunks. **Bark**—dark gray, thick, roughened by numerous interlacing, flat-topped ridges separated by narrow, rough furrows. **Twigs**—dark brown, rather stout, smooth, with a few scattered lenticels. **Leaves**—persistent, alternate, simple, leathery, smooth, dark green and shining, 4 to 5 inches long, elliptic, with somewhat pointed tips, narrowly wedge-shaped bases and margins



with very shallow teeth. **Flowers**—in summer, 3 inches in diameter, 5-petalled, white, silky on the back, solitary on long stalks from axils of leaves of new growth. **Fruits**—ripening in fall, silky, woody, capsular, about 3/4 inch long, ovate, long-pointed, splitting halfway into 5 parts. **Seeds**—10 to 40, winged.

DISTINGUISHING CHARACTERS: Large, 5-parted, white flowers; shallow-toothed, persistent leaves green on both sides.

GENERAL COMMENT: The loblolly-bay, a native of swamps, ditches, and bayheads, is widely distributed as far south as Lake Okeechobee. Its symetrical shape, glossy, green, persistent leaves and large, 5-parted, white flowers recommend it highly for ornamental purposes. Under natural conditions, its shallow root system causes it to be short-lived, a handicap that is overcome by better growing conditions when the tree is used in landscaping.

OCOTEA CORIACEA (Sw.) Britton*

Jamaica Ocotea, Lancewood

(Lauraceae: Laurel Family)

DESCRIPTION: **Height**—20 to 30 feet, trunks 12 to 15 inches in diameter. **Crowns**—narrow, round-topped, composed of slender, spreading branches. **Bark**—dark reddish brown, thin, covered with numerous small warts. **Twigs**—light brown, slender, smooth, with numerous pale lenticels. **Leaves**—persistent, alternate, simple, leathery, smooth, dark green and shining above, paler beneath, aromatic, 3 to 6 inches long, narrowly elliptic, tips pointed to long-pointed, bases wedge-shaped, margins entire. **Flowers**—in late spring, small, fragrant, creamy white, in dense clusters on ends of twigs. **Fruits**—

ripening in fall, smooth, dark blue or black, ovate, ½ inch or more long, seated in red or yellow, cup-like bases. **Seeds**—solitary, red-brown, enclosed in thin flesh.

DISTINGUISHING CHARACTERS: Narrow leaves; large clusters of fragrant flowers; drooping clusters of blue or black fruits seated in bright-colored cups.

GENERAL COMMENT: The Jamaica ocotea, a comparatively common tree, ranges along the coasts south of Cape Canaveral. The dark-green, pleasantly aromatic leaves nearly all point downward, while both the fragrance of the flowers and the size of the fruits are conspicuous. As timber, it is rarely large enough for practical use.

*Nectandra coriacea (Sw.) Griseb.

PERSEA BORBONIA (L.) Spreng.*

Redbay

(Lauraceae: Laurel Family)

DESCRIPTION: **Height**—60 to 70 feet, trunks 2½ to 3 feet in diameter. **Crowns**—round-topped to cylindrical and dense, composed of a few stout, erect branches, from straight, leaning trunks. **Bark**—purplish brown, thick, roughened by numerous vertical, somewhat interlacing, shallow furrows forming flat-topped, brownish-gray ridges scaling off tardily. **Twigs**—green, slender, smooth. **Leaves**—persistent, alternate, simple, leathery, bright green and shining above, paler and waxy beneath, 3 to 5 inches long, elliptic, tips pointed, bases wedge-shaped, margins entire, revolute. **Flowers**—in spring, small, greenish, on stalks in few-flowered clusters in axils of leaves of new

growth. **Fruits**—maturing in fall, blue to nearly black, ovate, about ½ inch long. **Seeds**—bony, pale brown, solitary, enclosed in thin, dry flesh.

DISTINGUISHING CHARACTERS: Purplish-brown bark; smooth, green twigs; aromatic leaves, smooth on both sides, with pointed tips.

GENERAL COMMENT: The redbay, a tree typical of hammocks, is well distributed from Dade and Collier counties northward. Considering the distinctiveness of its purplish-brown bark and dark evergreen leaves, it merits wider use as an ornamental. The hard, close-grained wood is suitable for cabinet work, but large, straight timber is difficult to obtain.

RELATED SPECIES: The silkbay, *P. humilis* Nash, a small tree confined to scrubs, differs from its relatives in having leaves that are shining and golden-silky beneath.

*Tamala borbonia (L.) Raf.

The shorebay, *Persea littoralis* Small,* a small tree of coastal hammocks, is characterized by small leaves (smooth beneath) usually having blunt tips, and nearly globose fruits.

The swampbay, *Persea palustris* (Raf.) Sarg.,† a small tree growing on wet ground, is coarsely downy on twigs, lower surfaces of leaves, and flower clusters.

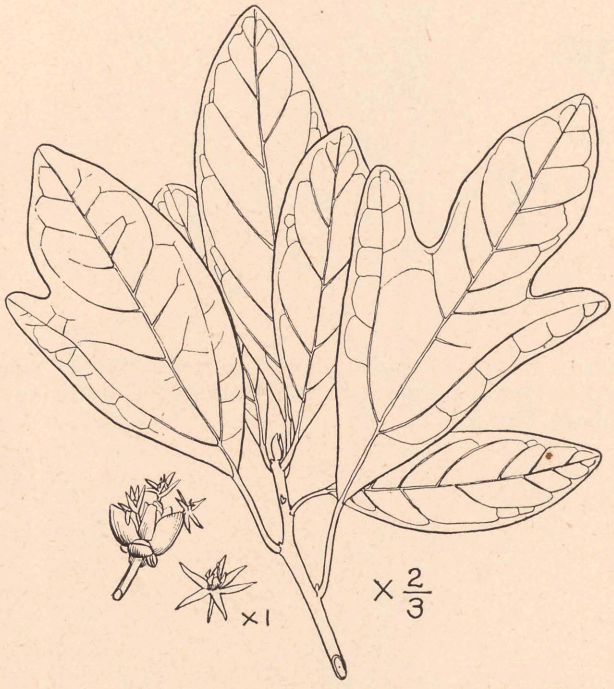
*Tamala littoralis Small
†Tamala pubescens (Pursh) Small

SASSAFRAS ALBIDUM (Nutt.) Nees*

Sassafras

(Lauraceae: Laurel Family)

DESCRIPTION: **Height**—50 feet, trunks 18 inches in diameter. **Crowns**—cylindrical, narrow, composed of short, crooked, ascending branches, from irregular trunks. **Bark**—mottled light and dark gray, thick, broken by shallow, interlacing furrows into numerous small, rectangular plates eventually flaking off to expose cinnamon-brown inner bark. **Twigs**—green or yellow-brown, slender, smooth. **Leaves**—deciduous, alternate, simple, downy especially when young, pale green, aromatic, 3 to 5 inches long, ellipitic, mitten-shaped or with 2 lateral lobes, tips usually blunt, bases wedge-shaped, margins entire. **Flowers**—



in spring prior to or with new leaves, staminate and pistillate flowers usually on different trees, small, fragrant, yellow, in dense clusters at base of new growth. **Fruits**—maturing in fall, smooth, dark blue, ovate, less than ½ inch long, seated in red, cup-shaped bases. **Seeds**—solitary, dark brown, covered with thin, aromatic flesh.

DISTINGUISHING CHARACTERS: Aromatic, lobed leaves throughout; dark-blue fruits in red cups.

GENERAL COMMENT: The sassafras, widely distributed from Orange County northward, is most common on clay soils. Its aromatic qualities have been utilized in medicines and beverages since colonial times.

*S. sassafras (L.) Karst.

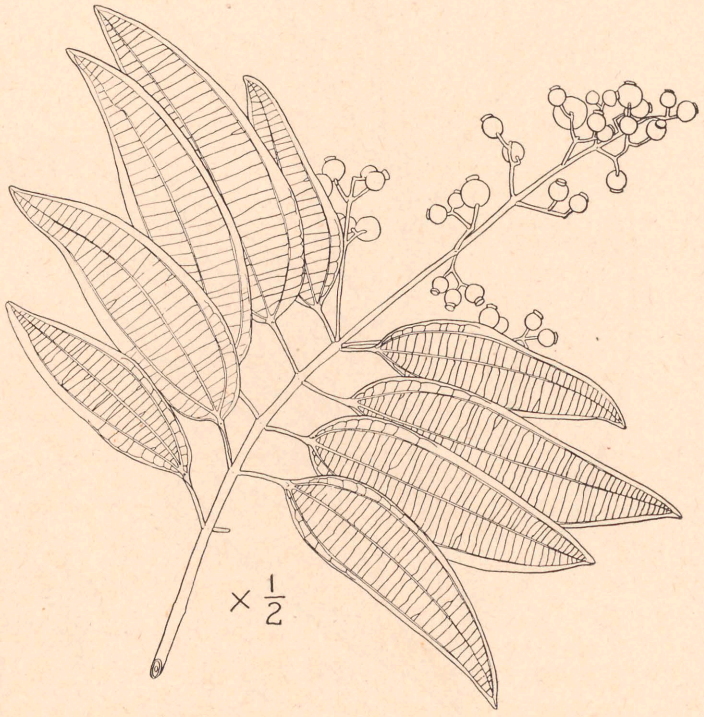
A very rare tree in Lauraceae, *Misanteca triandra* (Sw.) Mez, Gulf misanteca, native in the Everglade Keys, is characterized by large, persistent, elliptic leaves with long tips, blue fruits nearly 1 inch long, seated in large, rough, reddish cups.

TETRAZYGIA BICOLOR (Mill.) Cogn.

Florida Tetrazygia

(Melastomaceae: Melastoma Family)

DESCRIPTION: **Height**—30 feet, trunks 4 inches in diameter. **Crowns**—composed of spreading branches becoming erect at ends. **Bark**—light gray-brown, thin, roughened with shallow, somewhat flaky ridges. **Twigs**—light gray-brown, stout, rigid, roughened with numerous minute, short furrows. **Leaves**—persistent, opposite, simple, firm, dark green and dull above, silvery and scurfy beneath, 3½ to 5 inches long, narrowly elliptic, prominently 3-nerved, tips long-pointed, bases usually rounded, margins wavy, revolute. **Flowers**—in late spring and summer, in dense clusters 4 to 5 inches long, erect



on ends of twigs with 4 to 6 petals, white, ¾ inch or more in diameter. **Stemens**—8 to 12, large, bright yellow. **Fruits**—ripening in summer and fall, nearly black, smooth, nearly globose, about ½ inch in diameter, with conspicuous disc-like crowns. **Seeds**—numerous, minute.

DISTINGUISHING CHARACTERS: Conspicuously 3-nerved leaves; white flowers with long, yellow stamens.

GENERAL COMMENT: The Florida tetrazygia, native of hammocks and pinelands in Dade County, is the sole arborescent representative of its family in the United States. Its large clusters of white flowers, black, berry-like fruits, and dense foliage make it suitable for use in gardens of the subtropical region.

BUCIDA BUCERAS L.

Oxhorn Bucida

(Combretaceae: Combretum Family)

DESCRIPTION: **Height**—40 to 50 feet, trunks 2 to 3 feet in diameter. **Crowns**—broadly rounded, composed of stout, horizontal branches, from straight trunks. **Bark**—thick, gray, roughened into short, tight scales exposing orange-brown inner bark around the edges. **Twigs**—gray-brown, rigid, smooth except at the joints. **Leaves**—persistent, apparently in dense whorls, simple, leathery, bluish green above, yellowish green beneath, 2 to 3 inches long, ovate to narrowly oblong, tips usually blunt, bases narrowly wedge-shaped, margins

slightly wavy, revolute. **Flowers**—in late spring, greenish white, about 1/8 inch long, in narrow spikes on long stalks near the ends of branches. **Fruits**—maturing in summer, dry, brown, narrowly conical, curved, downy, about 1/4 inch long. **Seeds**—chestnut-brown, solitary.

DISTINGUISHING CHARACTERS: Whorls of small leaves at the end of twigs; small flowers and fruits on long-stalked spikes.

GENERAL COMMENT: The oxhorn bucida is better known as a cultivated subject than as a wild tree, for its natural range is limited to a few of the Florida Keys. The stiff appearance of the mature tree is due to the rather evenly spaced, whorled branches with clusters of leaves at the tips of robust twigs. The dense head of foliage and symmetrical shape have made it a favorite of horticulturists in the Miami region. Naturally a salt-loving plant, it is particularly valuable as an ornamental for that southern coastal area.

CONOCARPUS ERECTUS L.

Button-mangrove, Buttonwood

(Combretaceae: Combretum Family)

DESCRIPTION: **Height**—40 to 60 feet, trunks 20 to 30 inches in diameter, but usually a shrub. **Crowns**—narrow, regular, composed of short branches, from leaning trunks. **Bark**—dark brown, divided by irregular furrows into broad, flat ridges, covered with small, thin flakes. **Twigs**—red-brown, stout, stiff, smooth, but marked with several lengthwise raised lines. **Leaves**—persistent, alternate, simple, leathery, green (but covered with pale silky down in one variety), 2 to 4 inches long, elliptic, tips short-pointed, bases long wedge-shaped and margins wavy. **Flowers**—all year, minute, greenish, in dense, globose heads, about ⅓ inch in diameter, on stalks ½ to 1½ inches

long in narrow clusters 6 to 8 inches long. **Fruits**—maturing all year, red-brown, cone-like, round to ovate, about ½ inch in diameter. **Seeds**—numerous, red-brown, scale-like, winged, about ⅛ inch in diameter.

DISTINGUISHING CHARACTERS: Salt-water habitat; clusters of cone-like fruits.

GENERAL COMMENT: In one form or another, the button-mangrove occurs from Brevard and Levy counties southward over the Florida Keys. It is one of a group of shore trees, all of which have the common characteristic of being shore-builders. Their numerous roots bind the muddy saline shores, counteracting the erosive effects of wave action, and extending even farther out toward deep water. This species forms straight-trunked trees when growing in dense stands away from the water's edge in the southernmost part of the peninsula. The wood provides a fuel that burns without smoke and produces high-grade charcoal.

LAGUNCULARIA RACEMOSA (L.) Gaertn. f.

White-mangrove, White Buttonwood

(Combretaceae: Combretum Family)

DESCRIPTION: **Height**—30 feet or more, trunks 12 inches in diameter. **Crowns**—narrow, round-topped, stout, composed of spreading branches, from crooked, leaning trunks. **Bark**—brown, thin, roughened by long, ridge-like flakes. **Twigs**—light reddish brown, slender, rigid, smooth. **Leaves**—persistent, opposite, simple, leathery, dark green above, lighter beneath, 1 to 3 inches long, elliptic, tips and bases rounded, margins entire. **Flowers**—all year, small,

downy, greenish white, in narrow spikes from axils of leaves and ends of twigs. **Fruits**—maturing all year, downy, greenish brown, obovate, 3/4 inch long, with several vertical ridges and a shallow crown. **Seeds**—solitary, dark red.

DISTINGUISHING CHARACTERS: Opposite leaves rounded at both ends; small flowers; obovoid fruits in narrow spikes at ends of branches.

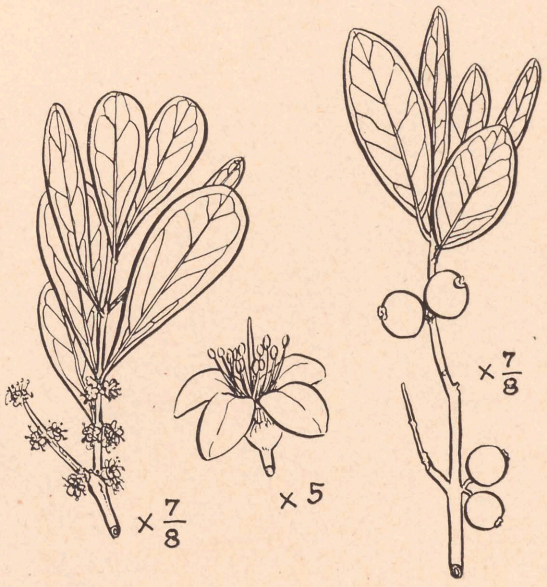
GENERAL COMMENT: The white-mangrove is confined to salt shores from Brevard and Manatee counties southward, where it is the least efficient of the erosion-resisting mangroves. The small, irregular trees seldom attain trunks of marketable size, but the wood is hard and polishes well.

EUGENIA MYRTOIDES Poir.*

Boxleaf Eugenia, Gurgeon Stopper

(Myrtaceae: Myrtle Family)

DESCRIPTION: **Height**—15 feet, trunks 8 inches in diameter. **Crowns**—rounded, composed of many small, mostly erect branches, from short trunks. **Bark**—light reddish brown, thin, smooth, divided into small, thick, square scales. **Twigs**—gray to brownish gray, slender, crooked and nearly smooth. **Leaves**—persistent, opposite, simple, leathery, aromatic, dark green above, yellow-green beneath, ¾ to 1½ inches long, ovate to obovate, tips rounded, bases wedge-shaped, margins entire or nearly so, slightly revolute. **Flowers**—appearing from June to September, minute, white, arranged in small, dense, stalkless clusters in axils of leaves and sometimes on bare twigs. **Fruits**—

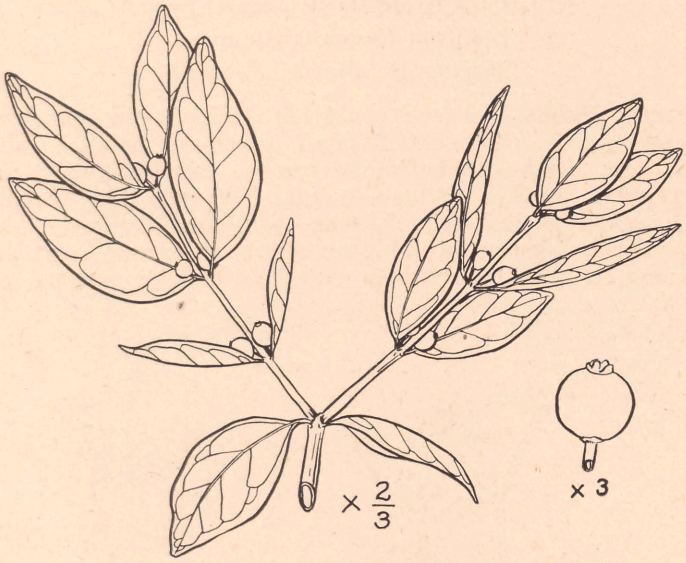


ripening in summer and fall, black, ovate, bearing a very small crown, about ¼ inch in diameter. **Seeds**—1 or 2, pale brown, enclosed in thin, aromatic flesh.

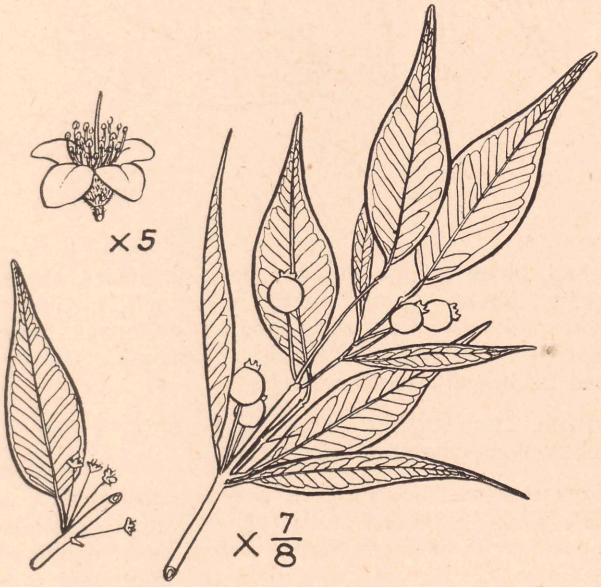
DISTINGUISHING CHARACTERS: Small, blunt leaves; stalkless flower clusters; oval, black fruits.

GENERAL COMMENT: The boxleaf eugenia, one of the most widely distributed of its group, occurs from Cape Canaveral on the east coast and the Caloosahatchee River on the west coast southward. It is the dominant plant on some of the Florida Keys, where it occurs most commonly as a bushy shrub, although occasional arborescent individuals may be found. Like most of the eugenias, the bark is relatively smooth, thin, and light-colored, because these plants are continually shedding the outer layers and exposing new surfaces. Rather small leaves are borne in such profusion that the crown is usually quite dense. Heavy crops of black, aromatic fruits are an abundant source of food for birds.

*Eugenia buxifolia (Sw.) Willd.



Eugenia axillaris (Sw.) Willd., white-stopper eugenia, is a small tree occurring in coastal hammocks near Cape Canaveral and Pinellas County southward. It is characterized by short-pointed leaves, ashy-gray, warty twigs, and black fruits.



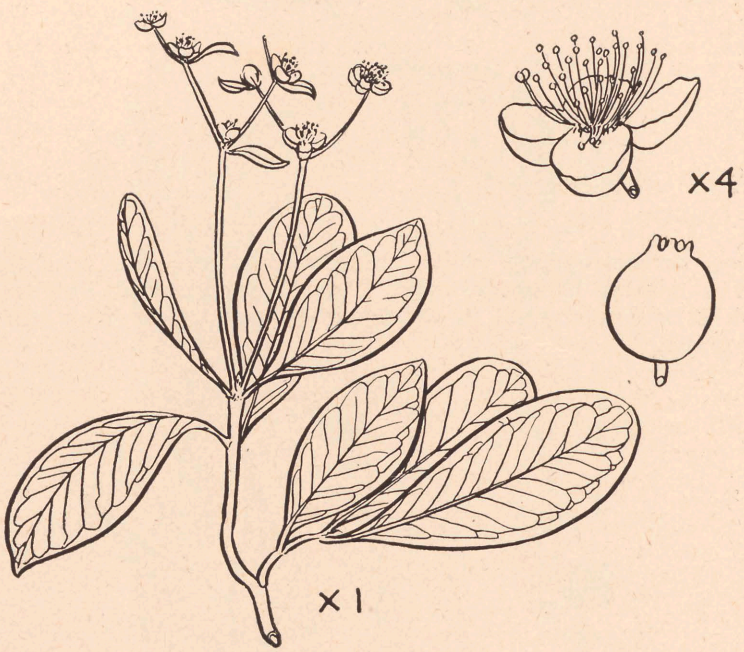
Eugenia confusa DC., redberry eugenia, is a rare tree in the vicinity of Biscayne Bay, characterized by bright-scarlet fruits and long-pointed leaves.

EUGENIA SIMPSONI (Small) Sarg.*

Simpson Eugenia, Stopper

(Myrtaceae: Myrtle Family)

DESCRIPTION: **Height**—50 feet, trunks 12 to 15 inches in diameter. **Crowns**—narrow, round-topped, composed of small, erect, spreading branches, from buttressed trunks. **Bark**—light reddish brown, thin, smooth, flaking off in rounded, irregular plates. **Twigs**—smooth, slender, light reddish brown, covered with numerous lenticels. **Leaves**—persistent, opposite, simple, firm, aromatic, dark yellow-green and shining above, paler and dull beneath, 1 to 2½ inches long, elliptic to obovate, with tips slightly pointed or rounded,

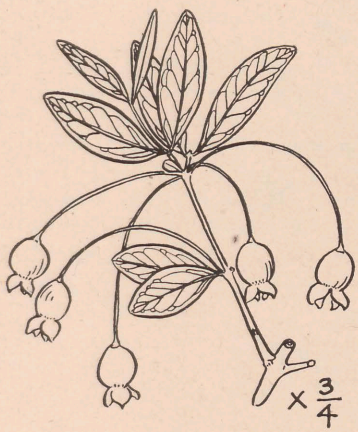


sometimes notched, bases wedge-shaped, margins entire, thickened, revolute. **Flowers**—in spring, about ½ inch in diameter, white, fragrant, 7 to 15 in dichotomous clusters on stalks about as long as the leaves. **Fruits**—ripening in summer, less than ½ inch long, smooth, ovate, red, with small crowns. **Seeds**—1 or 2, contained in juicy, aromatic flesh.

DISTINGUISHING CHARACTERS: Flowers ½ inch in diameter, 7 to 15 in long-stalked, dichotomous clusters; red fruit.

GENERAL COMMENT: The Simpson eugenia occurs in coastal hammocks and on Everglade Keys in Dade County. The natural exfoliation of the bark continually exposes areas of fresh, light-colored bark, which gives the trunks a mottled appearance. In its natural range, the persistent, glossy leaves and fragrant flowers make it horticulturally useful, while the edible, aromatic fruits are readily eaten by birds.

*Anamomis simpsoni Small

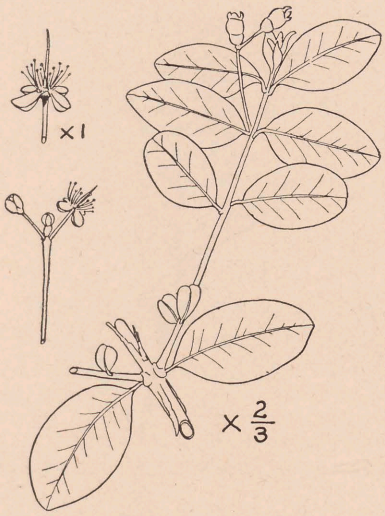


Eugenia longipes

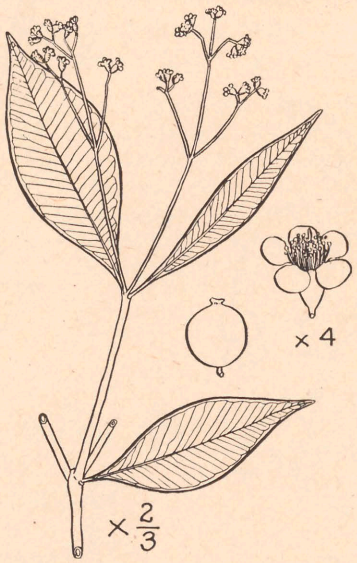
Eugenia bahamensis

Eugenia longipes Berg, trailing eugenia, bears nearly stalkless flower clusters and seedy fruits. In the Everglade Keys, it is usually observed as a shrub, occasionally as a tree, with wide-spreading branches.

Eugenia bahamensis Kiaersk., Bahama eugenia, native on the Florida Keys and Everglade Keys, bears nearly stalkless flower clusters, seedy fruits, and upright branches.



Eugenia dicrana Berg, twinberry eugenia, often a shrub but sometimes a small tree, possessing flowers 1/4 inch in diameter in long-stalked clusters of 3 and reddish-brown fruits, occurs near the coast from Cape Canaveral and the Caloosahatchee River southward.



Calyptranthes pallens (Poir.) Griseb., pale lidflower, confined to Dade and Monroe counties, has petalless flowers in large clusters. Twigs, flower clusters, and lower leaf surfaces are covered with reddish silk.

Calyptranthes zuzygium (L.) Sw., myrtle-of-the-river, occurs on Paradise Key and Long Key in the Everglades. The large clusters of petalless flowers, as well as the new growth and leaves, are smooth.

RHIZOPHORA MANGLE L.

Mangrove

(Rhizophoraceae: Mangrove Family)

DESCRIPTION: **Height**—15 feet, occasionally 75 feet, trunks 5 inches to 4 feet in diameter. **Crowns**—flat-topped and rounded, or tall and narrow, composed of wide-spreading branches, from tall, straight trunks. **Bark**—reddish brown, thin, smooth, becoming slightly furrowed. **Twigs**—dark reddish brown, stout, flexible, smooth. **Leaves**—persistent, opposite, simple, leathery, dark green and shining above, paler and black-dotted beneath, 2 to 6 inches long, elliptic, tips rounded, bases abruptly wedge-shaped, margins entire, slightly thickened. **Flowers**—all year, 4-petalled, yellow, hairy, about ¾ inch

in diameter, on long stalks, in clusters of 2 or 3 from axils of young leaves. **Fruits**—maturing all year, rough, rusty-brown, cone-shaped, about 1 inch long. **Seeds**—embedded in woody flesh, solitary, germinating while attached, 10 to 12 inches long when fully grown.

DISTINGUISHING CHARACTERS: Numerous stout, aerial roots anchoring the plant against wave action; habit of germinating seeds while attached.

GENERAL COMMENT: The mangrove occurs naturally on salt shores from Brevard County southward, but seedlings have been found temporarily established as far north as Panama City. The common low form, producing numerous arching, aerial roots, retards erosion or even extends shore lines by holding wave-borne debris. Tall specimens occur only on deep, undisturbed soil close to salt water, especially in the Cape Sable region.

CORNUS FLORIDA L.*

Flowering Dogwood

(Cornaceae: Dogwood Family)

DESCRIPTION: **Height**—50 feet, trunks 12 inches in diameter. **Crowns**—broadly rounded, composed of numerous slender, upright or spreading branches, from short trunks. **Bark**—thin, dark brown, divided by numerous shallow furrows into many, small, thin, angular blocks which eventually flake off. **Twigs**—smooth, slender, green becoming gray. **Leaves**—deciduous, simple, opposite, dark green and dull above, pale beneath, 2 to 7 inches long, elliptic to ovate, sometimes broadly so, with tips abruptly pointed, bases broadly wedge-shaped or rounded, margins entire or with shallow teeth. **Flowers**—

appearing in spring, minute, yellow, arranged in small, dense clusters, surrounded by 4 large, white, petal-like bracts. **Fruits**—ripening in fall, 3, 4 or more in a cluster, scarlet, smooth, ovate, about ½ inch long. **Seeds**—pale brown, solitary, ovate, bony, contained in yellow, mealy flesh.

DISTINGUISHING CHARACTERS: Conspicuous white bracts surrounding the flower clusters; dense clusters of scarlet berries.

GENERAL COMMENT: The flowering dogwood, one of the best-known native trees, ranges as far south as Orange County. It blooms about the same time as redbud with which its white-bracted flower clusters are in distinct contrast. In the fall the clustered scarlet berries are ornamental and furnish food for many birds and animals.

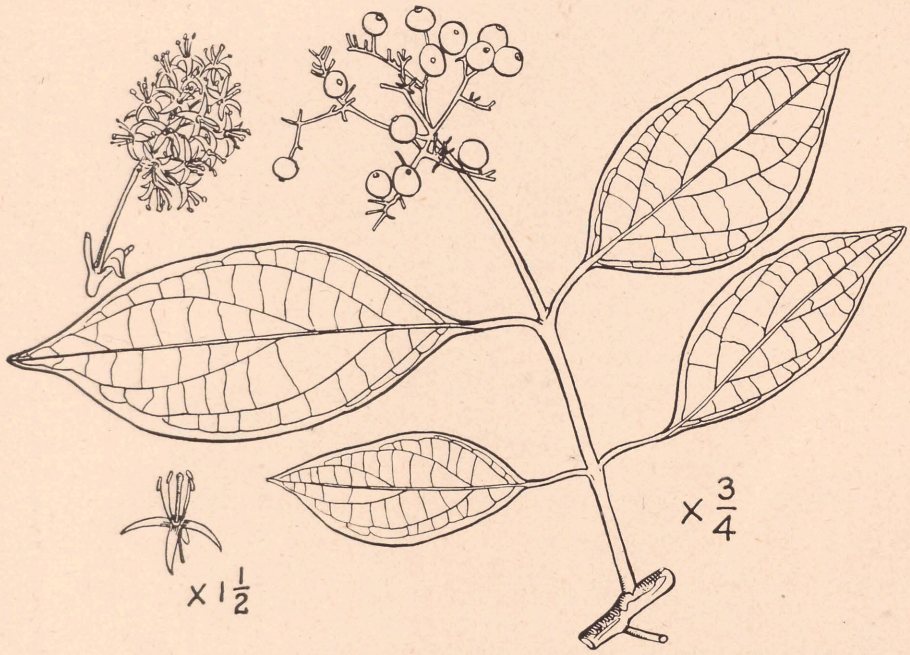
*Cynoxylon floridum (L.) Raf.

CORNUS STRICTA LAM.*

Stiffcornel Dogwood

(Cornaceae: Dogwood Family)

DESCRIPTION: **Height**—15 feet, trunks 3 to 4 inches in diameter. **Crowns**—flat-topped, composed of slender, upright branches, from slender trunks. **Bark**—gray, smooth, checked with very small, shallow ridges and furrows exposing brown inner bark. **Twigs**—slender, smooth, shining, red above, green below, soon becoming gray. **Leaves**—deciduous, opposite, simple, dark green and dull above, paler beneath, 1½ to 5 inches long, elliptic to ovate, tips abruptly pointed, bases broadly wedge-shaped, margins entire. **Flowers**—in spring,



small, creamy white, in dense, flat-topped clusters on ends of new growth. **Fruits**—maturing in fall, pale blue, globose, ¼ inch in diameter. **Seeds**—1 or 2, hard, nearly white, embedded in white, pulpy flesh.

DISTINGUISHING CHARACTERS: Abruptly pointed, opposite leaves; small, white flowers in flat-topped clusters; globose, pale-blue berries.

GENERAL COMMENT: The stiffcornel dogwood, found as far south as Osceola County, grows in swampy areas along such flowing streams as the Oklawaha River, where it is very abundant. Its springtime masses of flowers are attractive, while the berries supply food for many birds.

RELATED SPECIES: The alternate-leaf dogwood, *C. alternifolia* L. f., reported in Gadsden County, has alternate leaves clustered at tips of branches, and dark-blue berries.

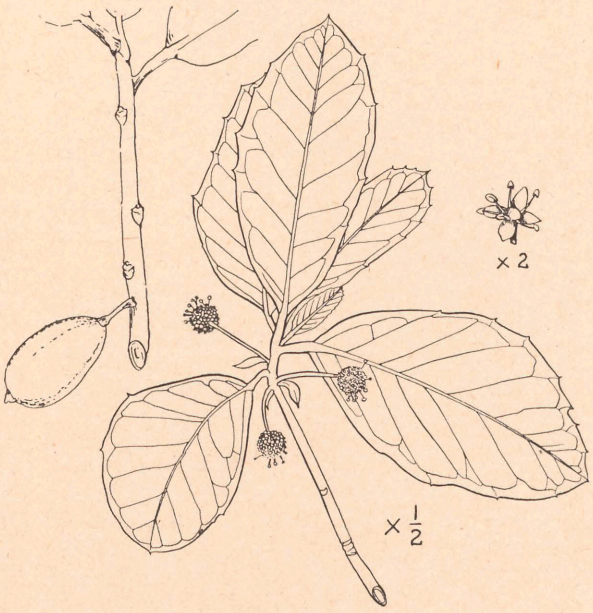
*Svida stricta (Lam.) Small

NYSSA OGECHE Bartr.

Ogeechee Tupelo, Ogeechee Lime

(Nyssaceae: Nyssa Family)

DESCRIPTION: **Height**—50 feet, trunks 15 inches in diameter. **Crowns**—narrow, round-topped, composed of a few stout, crooked branches, from leaning trunks. **Bark**—dark brown, thin, irregularly furrowed, broken into persistent, plate-like scales. **Twigs**—reddish brown, slender, smooth. **Leaves**—deciduous, alternate, simple, dark green and dull above, paler beneath, 2 to 8 inches long, oblong to obovate, with blunt or rounded tips, rounded to wedge-shaped bases, margins entire or sometimes distinctly toothed. **Flowers**—in spring after the new leaves have attained full growth, staminate and pistillate



on different trees, small, greenish; staminate in dense, round clusters or heads on long stalks; pistillate solitary on short stalks. **Fruits**—maturing in summer, smooth, red, oblong to obovate, longer than their stalks, about 1½ inches long. **Seeds**—solitary, bony, about 1 inch long, attached by several papery wings to skin of fruits.

DISTINGUISHING CHARACTERS: Large leaves sometimes toothed; fruits longer than their stalks.

GENERAL COMMENT: The Ogeechee tupelo is distributed sporadically from Dixie and St. Johns counties to western Florida, typically on river banks. The sour, juicy fruits of this small, irregular tree are occasionally used to prepare a cooling summer beverage. In the absence of the fruit, there are few characters to distinguish Ogeechee tupelo from water tupelo.

RELATED SPECIES: *N. uniflora Wangenh.*, water tupelo, is a large tree, attaining a height of 100 feet or more, which is characterized by large leaves often toothed, and fruits shorter than their stalks. The trunks produce commercial timber and the flowers are an important source of honey that does not crystallize.

NYSSA SYLVATICA BIFLORA (Walt.) Sarg.*

Swamp Tupelo, Black Gum

(Nyssaceae: Nyssa Family)

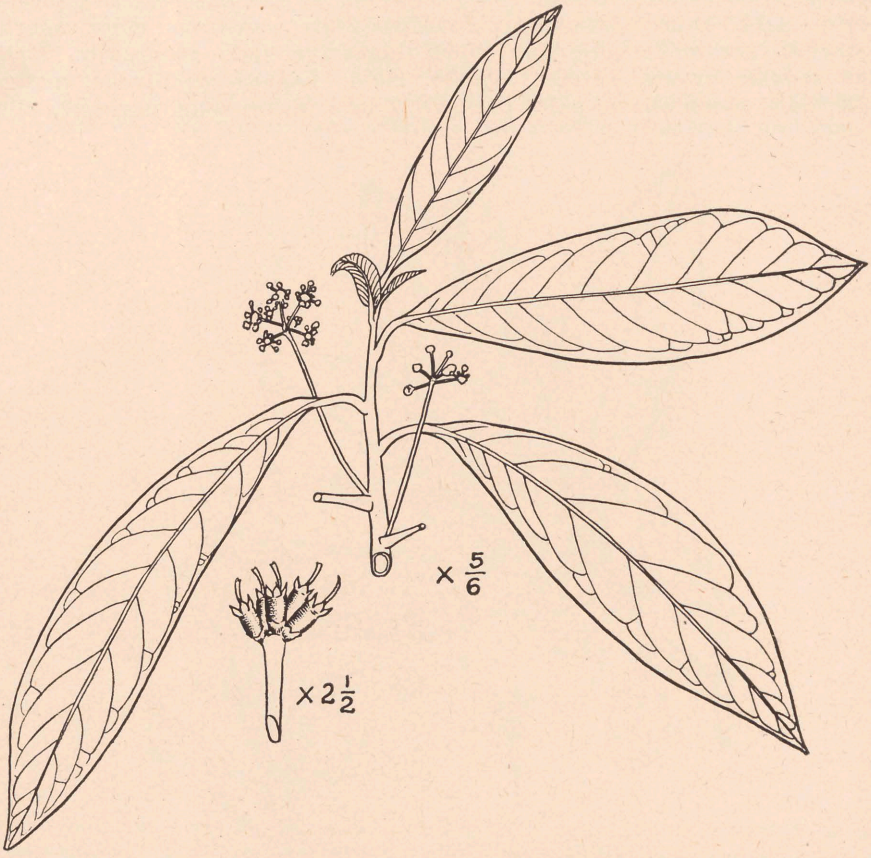
DESCRIPTION: **Height**—50 feet or more, trunks 1 to 2 feet in diameter. **Crowns**—narrow, conical or round-topped, composed of small, spreading branches, from slender trunks often enlarged at the base when growing in water. **Bark**—thick, dark gray, roughened by numerous deep, sparingly interlacing furrows forming flat-topped ridges that flake eventually. **Twigs**—bright reddish brown, slender, smooth, rigid. **Leaves**—deciduous, alternate, simple, dark green above, paler beneath, 2 to 5 inches long, narrowly elliptic

to ovate, with pointed tips, wedge-shaped bases, entire margins. **Flowers**—in spring after the new leaves have attained full growth, staminate and pistillate on different trees, small, greenish, long-stalked in axils of new leaves; staminate clustered; pistillate paired. **Fruits**—maturing in fall, dark blue, ovate, smooth, about ½ inch long, usually paired. **Seeds**—solitary, pale brown, bony, somewhat flattened, distinctly ribbed, encased in juicy, purple flesh.

DISTINGUISHING CHARACTERS: Smooth-edged, oval to elliptic leaves; blue fruits usually in pairs; ribbed seeds.

GENERAL COMMENT: The swamp tupelo, restricted to shallow water at savannah margins and wet soil adjacent to streams and lakes, is a common tree in northern Florida, ranging southward as far as the Caloosahatchee River. In addition to the fall coloration of the foliage, the tree produces large crops of juicy, blue berries which furnish abundant food for birds.

*N. biflora Walt.



Nyssa sylvatica Marsh., black tupelo, a large tree of the same region, is distinguished from *N. sylvatica biflora* by fruits with nearly smooth seeds, often occurring in clusters of 3 or more.

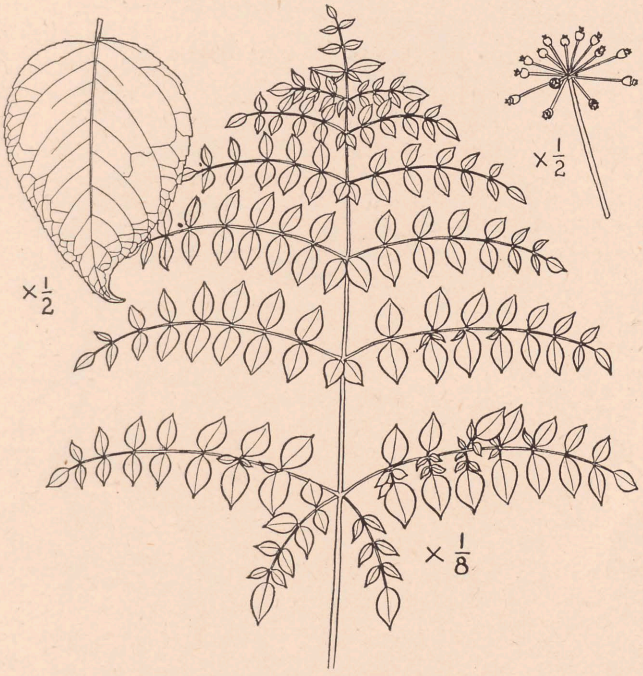
RELATED SPECIES: *N. ursina* Small, occurring in western Florida, is a small, many-branched tree with numerous globose fruits.

ARALIA SPINOSA L.

Devil's-walkingstick

(Araliaceae: Aralia Family)

DESCRIPTION: **Height**—15 feet, trunks 4 inches in diameter, but usually a thicket-forming shrub. **Crowns**—cylindrical, composed of very upright branches, from a straight, slender trunk. **Bark**—gray-brown, thin, smooth, becoming finely shaggy, with numerous sharp-pointed thorns usually in rings around the trunk. **Twigs**—brown, very stout, smooth except for numerous spines. **Leaves**—alternate, 2- or 3-pinnate, 2 to 4 feet long. **Leaflets**—1 to 4 inches long, firm, smooth, dark green and shining above, paler beneath,



numerous, opposite, ovate to oblong, with abruptly pointed tips, rounded bases and sharp-toothed margins. **Rachis**—often spiny on the lower side. **Flowers**—appearing in summer, small, white, long-stalked, in globose heads on many branches of large clusters 2 to 3 feet long, produced from axils of leaves. **Fruits**—maturing in late summer, about ¼ inch in diameter, black, globose, smooth except for crown at the top. **Seeds**—4 or 5, bony, pale brown, embedded in very juicy, purple flesh.

DISTINGUISHING CHARACTERS: Large, much-divided leaves; slender, spiny trunks.

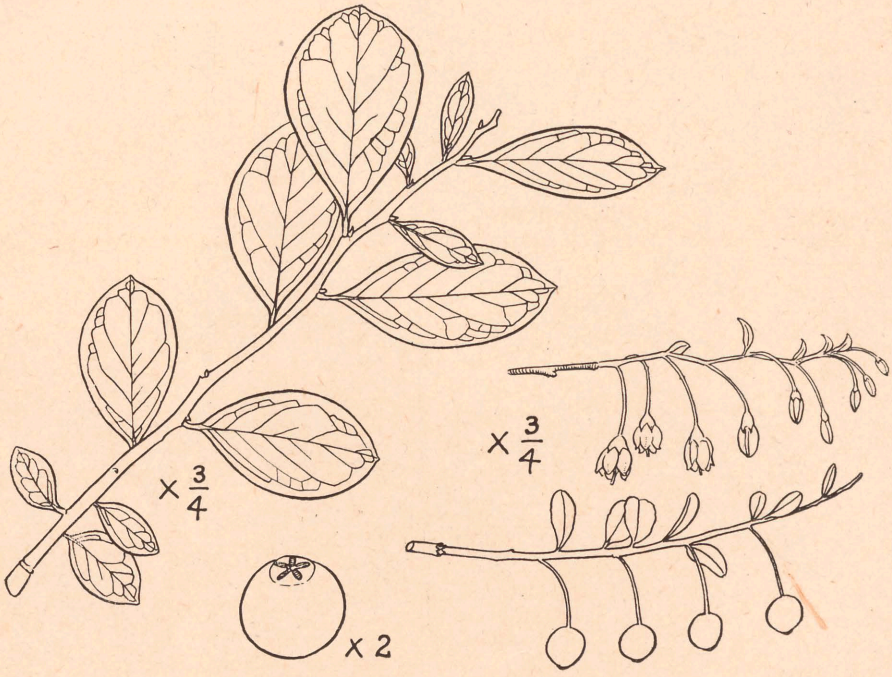
GENERAL COMMENT: The devil's-walkingstick is a native of low grounds and woods in northern and north-central Florida, at least as far south as Alachua County. The very large, compound leaves give it an appearance so exotic that it is sometimes used as an ornamental. When the leaves have fallen, it consists of a stout, skeleton-like trunk with few, upright, spiny branches. The bark and fruits are sometimes used medicinally.

VACCINIUM ARBOREUM Marsh.*

Tree Sparkleberry, Tree Huckleberry

(Ericaceae: Heath Family)

DESCRIPTION: **Height**—25 feet, trunks 6 to 8 inches in diameter. **Crowns**—irregularly rounded, composed of slender, crooked branches, from crooked, often leaning trunks. **Bark**—brown, thin, smooth, flaking off in large, thin, irregular plates. **Twigs**—slender, dark red-brown, smooth, crooked. **Leaves**—persistent, alternate, simple, firm, shining, dark green above, paler beneath, ½ to 2 inches long, ovate to elliptic, often broadly so, with rounded or somewhat pointed tips furnished with a minute tooth, bases wedge-shaped, margins

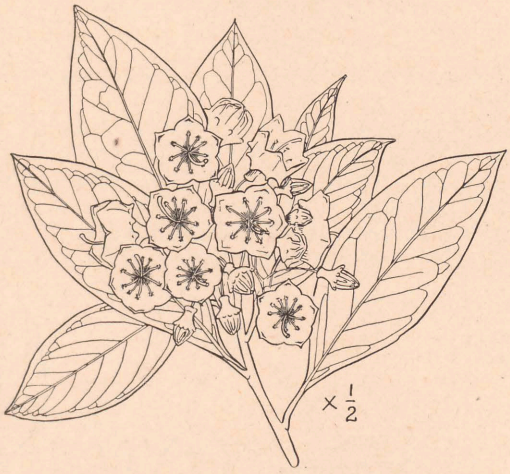


entire or very shallow-toothed; light-colored veins prominent on upper surface. **Flowers**—in spring, fragrant, white, bell-shaped, about ¼ inch in diameter, usually pendent in short, leafy spikes. **Fruits**—ripening in fall, persistent, globose, about ¼ inch in diameter, shining, black, long-stalked. **Seeds**—8 to 10, small, bony, brown, contained in rather dry, purple flesh.

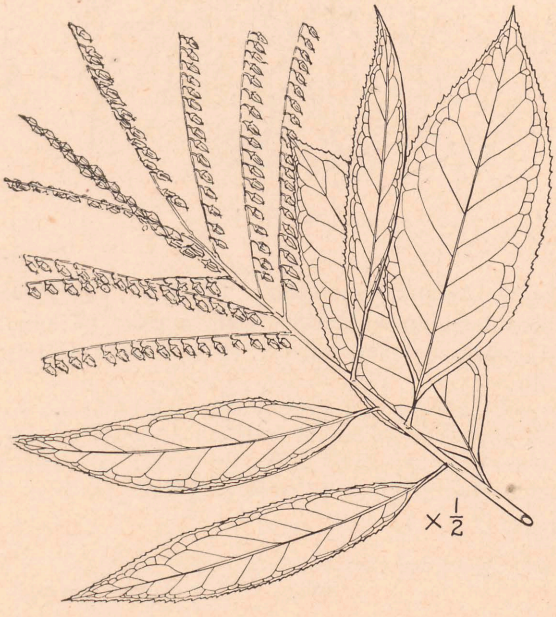
DISTINGUISHING CHARACTERS: Glossy, rounded, dark-green leaves; white, pendent, bell-shaped flowers in short, leafy spikes.

GENERAL COMMENT: The tree sparkleberry, common in hammocks and open woods, is found as far south as Manatee County. Although irregular in shape, it is valuable in informal plantings because of the profusion of fragrant, white, bell-shaped flowers and persistent, glossy foliage. The fruits are eaten by many birds.

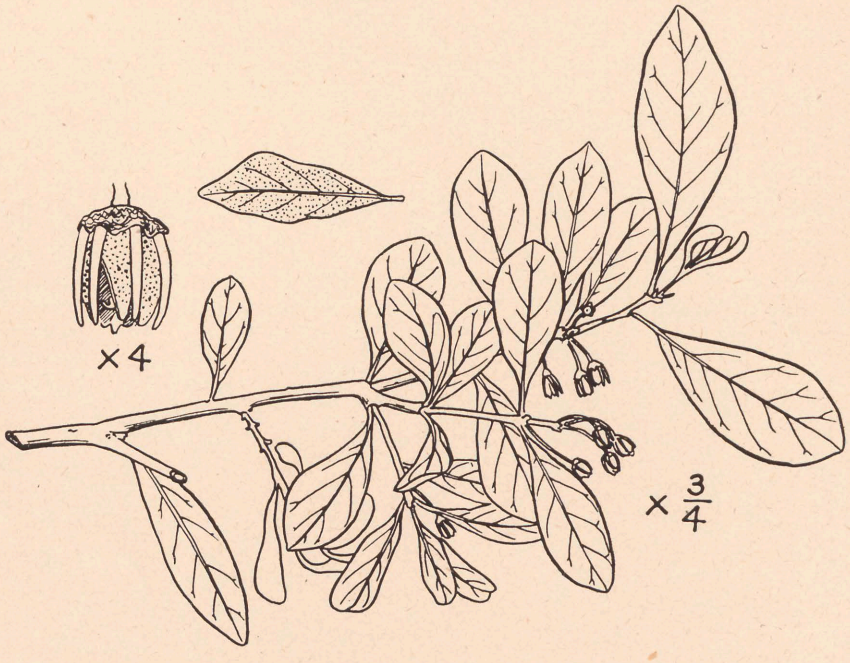
*Batodendron arboreum (Marsh.) Nutt.



The mountain-laurel, *Kalmia latifolia* L., a small tree bearing dark-green, persistent, narrowly elliptic leaves, and large clusters of pink to white, star-shaped flowers nearly 1 inch in diameter, occurs along small streams in western Florida.



The sourwood, *Oxydendrum arboreum* (L.) DC., a tall, slender tree with upright branches and lanceolate, deciduous leaves, bears terminal clusters of small, white flowers in summer, and fruits in fall. It occurs sparingly on well-drained slopes and banks of streams in northern Florida.



The tree lyonia, *Lyonia ferruginea* (Walt.) Nutt.,* occasionally forms small, crooked trees bearing numerous leafy spikes of small, globular, white flowers and small, rusty-colored leaves. It is widely distributed in northern and central Florida.

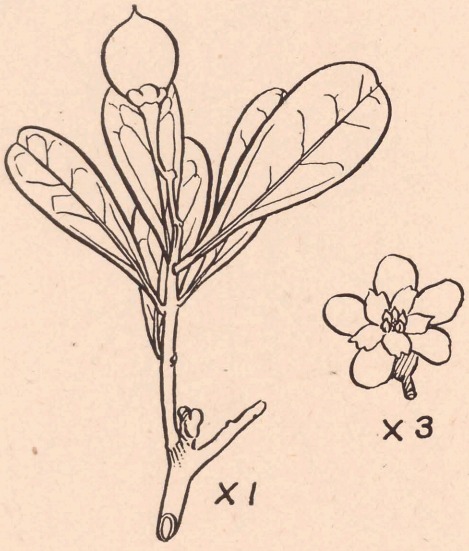
*Xolisma ferruginea (Walt.) Heller

JAQUINIA KEYENSIS Mez

Joewood

(Theophrastaceae: Theophrasta Family)

DESCRIPTION: **Height**—15 feet, trunks 6 inches in diameter. **Crowns**—compact, regular, round-topped, composed of stout, rigid, spreading branches, from straight trunks. **Bark**—mottled light gray, thin, smooth. **Twigs**—gray-brown, smooth, rigid, crooked, covered with minute, gray scales. **Leaves**—persistent, alternate or clustered near the ends of twigs, simple, leathery, shining, yellow-green, 1 to 3 inches long, obovate, with rounded or notched



tips, wedge-shaped bases and entire, revolute margins. **Flowers**—continuous, fragrant, pale yellow, nearly ½ inch in diameter, in dense clusters on ends of new growth. **Fruits**—ripening continuously, orange-red, smooth, almost globose, nearly ½ inch in diameter. **Seeds**—several, light brown, contained in dry flesh.

DISTINGUISHING CHARACTERS: Pale bark; yellow-green, obovate leaves; fragrant, yellow flowers; orange-red fruits.

GENERAL COMMENT: The joewood is distributed in coastal hammocks from Lee County southward over the Florida Keys, where it attains its largest size. Its dense crown of yellowish-green foliage gives it horticultural value, while the small, yellowish flowers are pleasingly fragrant. The hard, close-grained wood has a distinctive grain, but pieces of workable size are rarely found.

ARDISIA ESCALLONIOIDES Schlecht. & Cham.*

Marbleberry, Marlberry

(Myrsinaceae: Myrsine Family)

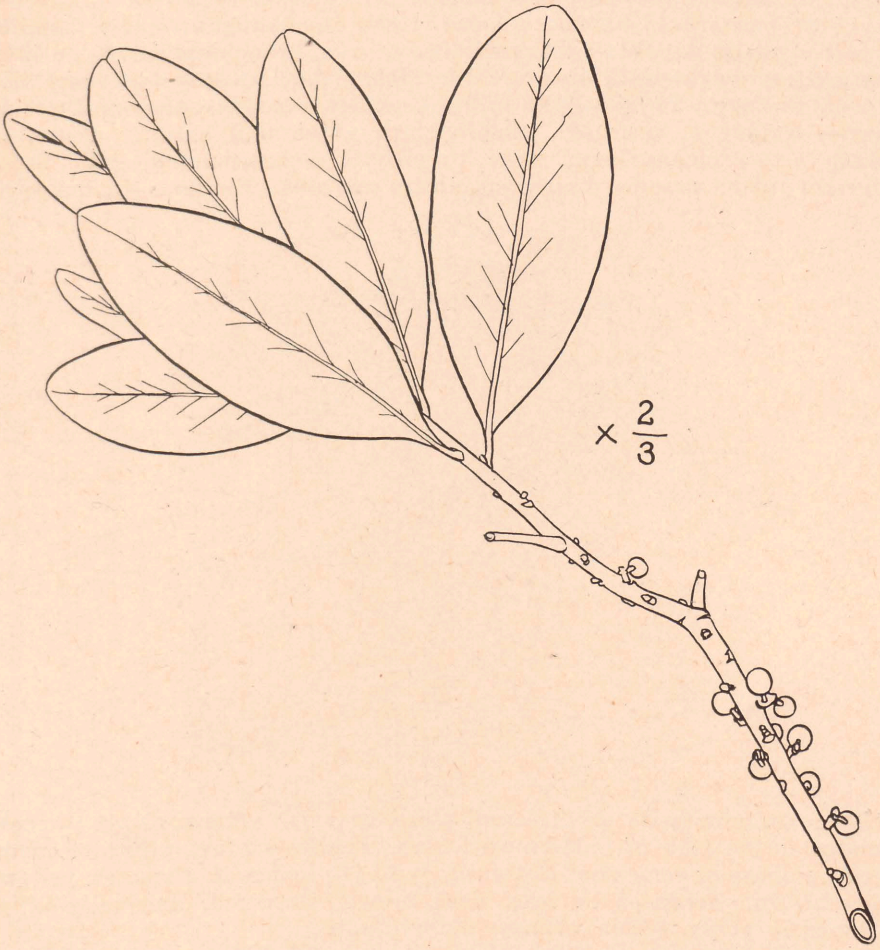
DESCRIPTION: **Height**—20 feet, trunks 5 inches in diameter. **Crowns**—narrow, composed of slender, upright branches, from slender trunks. **Bark**—pale gray to white, thin, minutely roughened, flaking in thin sheets. **Twigs**—dark brown, stout, straight or crooked, smooth, marked with numerous small lenticels. **Leaves**—persistent, alternate, simple, firm, dark green above, pale below, marked with minute black dots, 3 to 6 inches long, narrowly elliptic to narrowly ovate, with rounded or pointed tips, wedge-shaped bases and entire margins. **Flowers**—all year, fragrant, about ¼ inch in diameter, 5-petalled, white with purple lines, yellow stamens, conspicuous in large clusters on the

ends of new growth. **Fruits**—maturing all year, smooth, shining, black, globose, about ¼ inch in diameter. **Seeds**—solitary, globose, bony, brown, contained in thin, juicy flesh.

DISTINGUISHING CHARACTERS: Large, dark-green leaves; large clusters of fragrant, white flowers with purple markings; globose, black, shining fruits.

GENERAL COMMENT: The marbleberry, one of the common and well-known small trees of the coastal hammocks, occurs inland to some extent in moist hammocks of the southern part of the peninsula. In the shade of live oaks, palmettos, and other taller trees, where it commonly thrives, the slender trunks carry the small crowns 10 feet or so above the ground. The tips of the branches, however, usually bend over under the weight of large panicles of purplish flowers and the even heavier fruit clusters, one or the other of which is present at almost all times. Each fruit contains a little, globose, ribbed seed that is sharp-pointed on the top.

*Icacorea paniculata (Nutt.) Sudw.



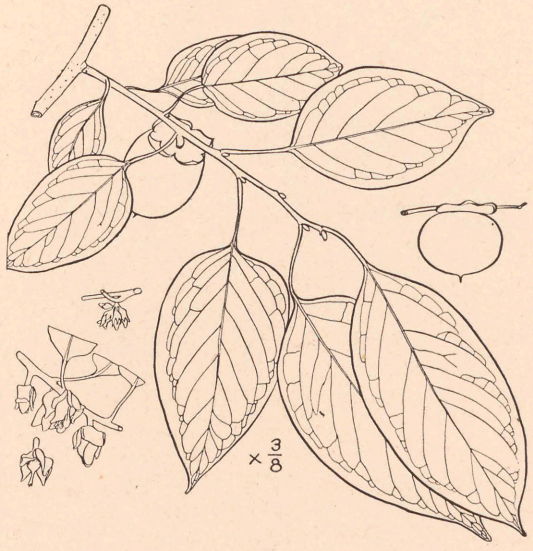
The Guiana rapanea, *Rapanea guianensis* Aubl., is related to the marbleberry, but has somewhat smaller leaves and very small flowers borne in small, dense, short-stalked clusters on twigs of previous year, followed by small, globose berries, dark blue or black.

DIOSPYROS VIRGINIANA L.

Common Persimmon

(Ebenaceae: Ebony Family)

DESCRIPTION: **Height**—50 feet, trunks 15 inches in diameter. **Crowns**—broad, rounded, with numerous spreading branches, from a short trunk when grown in open areas; hammock-grown trees frequently attaining height of 100 feet or more, with straight, undivided trunks, branchless for 40 or 50 feet from ground. **Bark**—dark brown, thick, divided into rectangular, scaly blocks by deep fissures. **Twigs**—light brown, slender, smooth, sometimes crooked. **Leaves**—deciduous, alternate, simple, dark green and shining above, pale beneath, 4 to 6 inches long, ovate to elliptic, sharp-pointed, with broadly wedge-shaped or rounded bases and entire margins. **Flowers**—in the spring,



pistillate and staminate on different trees, greenish yellow, about ½ inch in diameter, in the axils of half-grown leaves. **Fruits**—maturing in late summer, smooth, globose or somewhat flattened, ¾ to 1½ inches in diameter, yellow- to orange-brown. **Seeds**—5 or less, dark brown, flattened, unequally elliptic, contained in pulpy, edible, orange-colored flesh.

DISTINGUISHING CHARACTERS: Deeply checkered bark; dark-green leaves very pale beneath; large, edible fruits.

GENERAL COMMENT: The ubiquitous persimmon is well known to everyone, since it ranges as far south as De Soto and Pasco counties. It multiplies vigorously in abandoned fields by means of stolons, a trait which recommends it for soil conservation. Its fruits are eaten by a wide variety of wildlife, as well as by man. History records its presence from the time of De Soto, whose men learned its nutritional value from the Indians. The commercial value of the wood is limited by the scarcity of large specimens. The bark was formerly used medicinally.

RELATED SPECIES: *D. virginiana mosieri* (Small) Sarg., growing farther south, is distinguished by light-gray, shallow-furrowed bark, thick-skinned, globose fruits, and plump seeds.

BUMELIA LANUGINOSA (Michx.) Pers.

Gum Bumelia, False Buckthorn

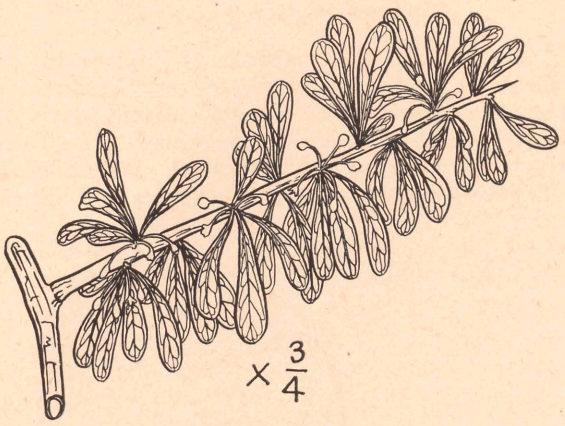
(Sapotaceae: Sapota Family)

DESCRIPTION: **Height**—20 feet, trunks 4 inches in diameter, usually occurring as a shrub. **Crowns**—rounded, frequently distorted, composed of flexible, stout branches, from short trunks. **Bark**—dark gray-brown, thin, smooth or broken into small scales. **Twigs**—slender, flexible, at first brown and downy, later marked with numerous lenticels, with one or more thorn-like lateral branches. **Leaves**—deciduous or partly persistent, alternate or clustered,

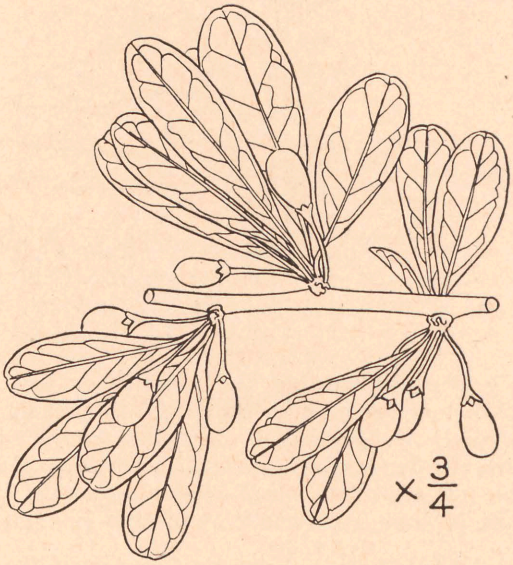
thin, simple, firm, green and shining above, more or less dull, rusty-woolly beneath, 1 to 3 inches long, elliptic to narrowly oblanceolate, tips pointed or rounded, bases narrowly wedge-shaped, margins wavy, entire. **Flowers**—in spring, small, white, slender-stalked, in small, crowded clusters on previous year's twigs. **Fruits**—in fall, ovate, smooth, shining, about ½ inch long, black. **Seeds**—solitary, oval, ¼ inch in diameter, enclosed in juicy flesh.

DISTINGUISHING CHARACTERS: More or less thorn-like branchlets; large leaves, smooth and shining above, dull, rusty-woolly beneath; dense clusters of small, white flowers; black, shining, juicy fruits.

GENERAL COMMENT: The gum bumelia is a common plant in high hammocks and margins of rich woods as far south as Osceola and Hernando counties. It is found most often as an irregularly shaped shrub, but occasional individuals become arborescent. The close-grained wood seldom attains useful size.

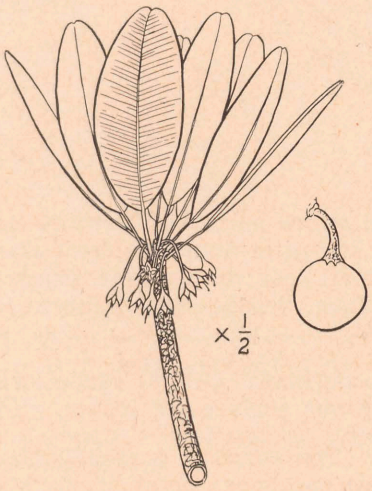


Bumelia angustifolia Nutt., confined to coastal hammocks and keys, has numerous spine-like branchlets and small, narrow leaves, usually less than 1 inch long.



Bumelia tenax (L.) Willd., a coastal plant, has leaves with very silky rust-colored down on lower surfaces.

The willow bustic, *Dipholis salicifolia* (L.) A. DC., is found in hammocks of the Everglade Keys and Florida Keys. The slender, unarmed twigs bear narrowly obovate leaves, green on both sides, and 3 to 5 inches long.



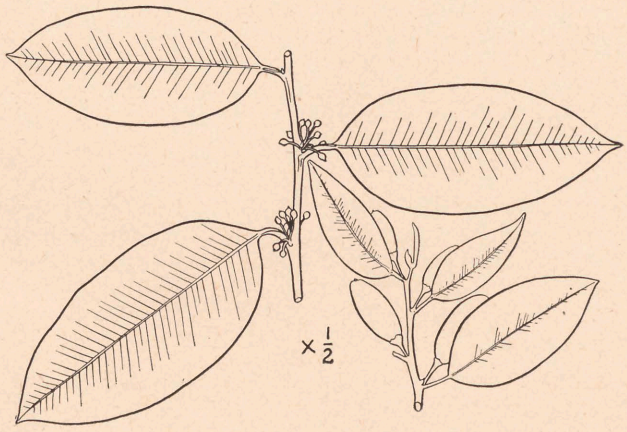
The wild-dilly, *Mimusops emarginata* (L.) Britton, which occurs occasionally on the Florida Keys, is characterized by thick, leathery, blunt, elliptic leaves clustered at the ends of twigs, and globose, fleshy, rusty-brown fruits containing milky juice and 1 seed.

CHRYSOPHYLLUM OLIVIFORME L.

Satinleaf

(Sapotaceae: Sapota Family)

DESCRIPTION: **Height**—30 feet, trunks 10 inches in diameter. **Crowns**—narrow, composed of small, upright branches, from straight, slender trunks. **Bark**—light reddish brown, thin, broken by shallow fissures into large, irregularly shaped blocks, covered with small, thin, scales. **Twigs**—light gray, smooth, slender, flexible, with very inconspicuous lenticels. **Leaves**—persistent, alternate, simple, firm, dark green and shining above, covered with satin-like, rust-colored down beneath, 2 to 6 inches long, ovate, with abruptly pointed



tips, rounded bases, and entire margins. **Flowers**—occurring all year, small, white, on brown, downy stalks, arranged in small clusters in the axils of new leaves. **Fruits**—ripening all year, dark purple, nearly smooth, ovate or nearly globose, ½ inch or more long. **Seeds**—solitary, about ½ inch long, contained in juicy, purplish flesh.

DISTINGUISHING CHARACTERS: Bright, rust-colored down on flower buds, very young twigs, and lower surfaces of leaves, glistening in sunlight.

GENERAL COMMENT: The satinleaf is usually found in hammocks near the coast, and especially fine specimens occur in the Cape Sable region. When quiet, it is clothed with a dense coat of shining, dark-green foliage relieved by a few brown tips of new growth, but in a breeze it turns to a mass of shimmering golden brown, as the lower sides of the leaves are exposed. The upright, plume-like crown is unusual in form among its many round-topped neighbors.

SIDEROXYLON FOETIDISSIMUM Jacq.

False-mastic

(Sapotaceae: Sapota Family)

DESCRIPTION: **Height**—60 feet, trunks 3 feet in diameter. **Crowns**—dense, irregularly rounded, composed of large, ascending branches, from a straight trunk. **Bark**—brown to gray-brown, thick, broken by deep furrows into thick, flaky, angular blocks. **Twigs**—gray-brown, stout, smooth. **Leaves**—persistent, alternate, simple, firm, yellow-green and glossy on both sides, 2 to 6 inches long, ovate to elliptic, tips pointed or rounded, bases rounded to broadly wedge-shaped, margins wavy, entire, stalks long. **Flowers**—all year, small,

yellowish, in small clusters on leafless portions of the twigs. **Fruits**—maturing all year, yellow, smooth, ovate to nearly globose, about 1 inch long. **Seeds**—solitary, ovate, about ½ inch long, embedded in yellow, juicy, somewhat resinous flesh.

DISTINGUISHING CHARACTERS: Long-stalked, yellow-green leaves glossy on both sides; large, yellow, juicy fruits.

GENERAL COMMENT: The false-mastic, a large tree among its associates, is common in coastal hammocks as far north as Brevard County. The leaves on unusually long petioles flutter in the breeze like those of aspen trees. Its yellow, plum-like fruits are edible but the peppery flavor and persistent gumminess are unpleasant.

SYMPLOCOS TINCTORIA (Garden) L'Her.

Common Sweetleaf, Horse-sugar

(Symplocaceae: Sweetleaf Family)

DESCRIPTION: **Height**—25 feet, trunks 6 inches in diameter. **Crowns**—open, more or less conical, composed of slender, upright branches, from short trunks. **Bark**—gray, thick, rather smooth, with occasional shallow fissures. **Twigs**—reddish brown, stout, smooth, rigid. **Leaves**—persistent, alternate, simple, firm, yellow-green on both sides, 2 to 6 inches long, elliptic, sometimes

narrowly so, tips pointed, bases wedge-shaped, margins entire or with very shallow teeth. **Flowers**—in spring, small, fragrant, yellow, in crowded clusters on previous year's twigs. **Fruits**—maturing in summer, smooth, orange-brown, ovate, about ½ inch long. **Seeds**—solitary, narrowly ovate, brown, covered with thin flesh.

DISTINGUISHING CHARACTERS: Large, yellow-green leaves; sweet taste; crowded clusters of flowers on previous year's wood; orange-brown fruits.

GENERAL COMMENT: The common sweetleaf occurs in rich hammocks, often in shade, from Alachua County northward but reaches its greatest size farther west. When bruised between the teeth, the leaves release a sweet-tasting substance which accounts for the vernacular names.

HALESIA DIPTERA Ellis

Two-wing Silverbell

(Styracaceae: Styrax Family)

DESCRIPTION: **Height**—25 feet, trunks 6 to 8 inches in diameter. **Crowns**—widely rounded, composed of spreading branches, from short trunks. **Bark**—reddish brown, thick, divided into irregular, vertical, broad fissures by ridges later separating into small, thin, tight flakes. **Twigs**—gray-brown, slender, nearly smooth, slightly crooked. **Leaves**—deciduous, alternate, simple, light green and smooth above, paler and downy beneath, 3 to 5 (occasionally 8) inches long, ovate, with abruptly pointed tips, usually rounded or broadly wedge-shaped bases, coarsely shallow-toothed margins. **Flowers**—in spring

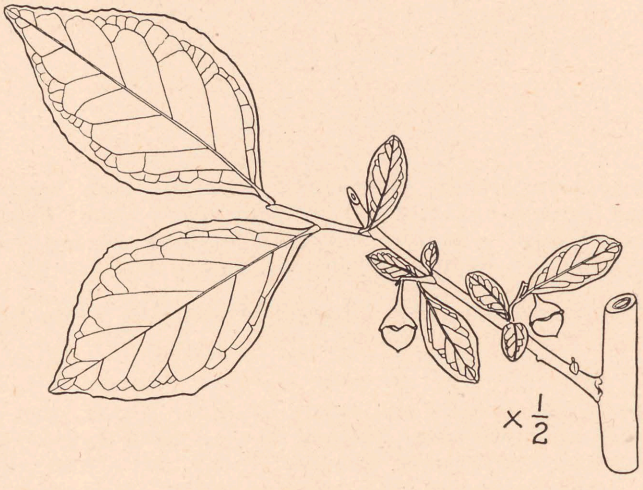
with the young leaves, white, bell-shaped, nearly 1 inch long, long-stalked, in few-flowered, drooping clusters on previous year's wood. **Fruits**—maturing in summer, pale brown, smooth, about 2 inches long, narrowly ovate, with 2 broad wings. **Seeds**—about 3/4 inch long, solitary.

DISTINGUISHING CHARACTERS: Large, bell-shaped, white flowers; broad, 2-winged fruit.

GENERAL COMMENT: The two-wing silverbell received this common name from the shape of the flowers and fruit. In early spring, just as the leaves are beginning to unfold, the large, pendent flowers make these trees conspicuous objects in the ravines of western Florida. In natural stands, the crowns are so crowded by other vegetation that they are seldom symmetrical. When used as garden subjects, however, the tops assume much better proportions.

RELATED SPECIES: *H. parviflora* Michx., little silverbell, has flowers less than 1/3 inch long and small, 4-winged fruits.

Halesia carolina Ellis, Carolina silverbell, has flowers about ½ inch long and 4-winged fruits.



Styrax grandifolia Ait., bigleaf snowbell, is characterized by white flowers, ¾ inch long, produced on short spikes at ends of new growth in the spring, followed by hard, globose, brown fruits containing 1 seed.

CHIONANTHUS VIRGINICUS L.

Fringetree, Old-man's-beard

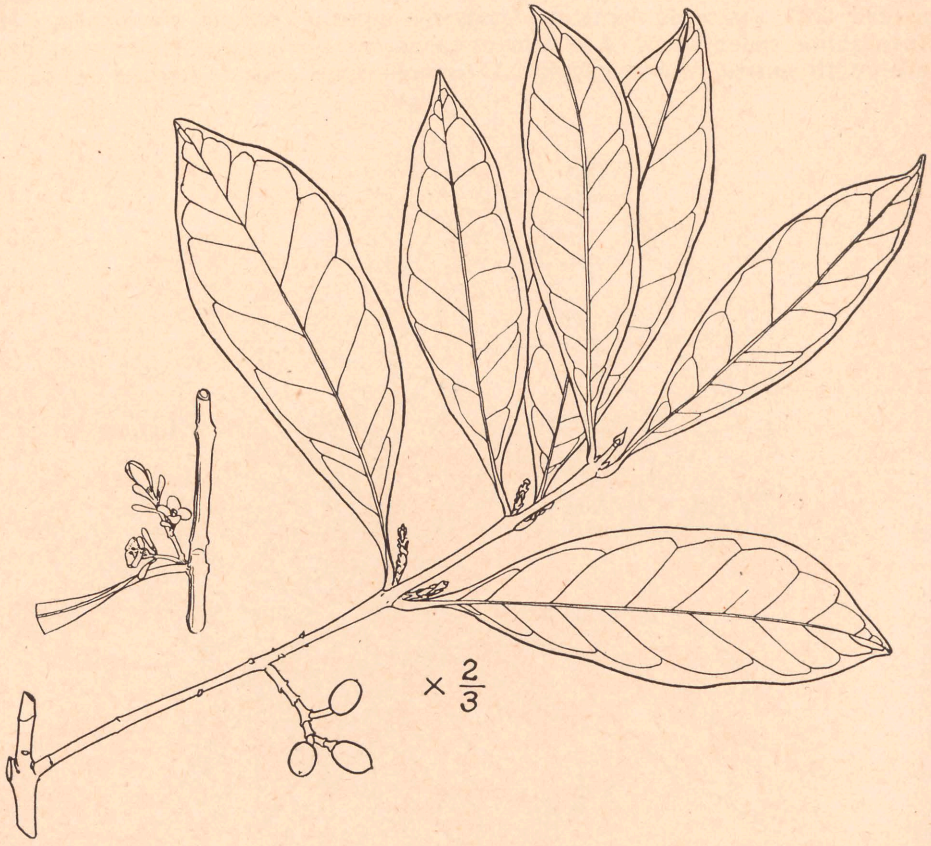
(Oleaceae: Olive Family)

DESCRIPTION: **Height**—25 feet, trunks 8 inches in diameter. **Crowns**—varying from round and dense to narrow and open, with spreading or erect branches, from a very short trunk. **Bark**—irregularly divided into small, thin, appressed scales, brown tinged with red. **Twigs**—brown, smooth, slender, rigid, covered with scattered lenticels. **Leaves**—opposite, simple, deciduous, dark green above, paler below, 4 to 8 inches long, narrowly elliptic, acute at both ends, with entire, wavy margins. **Flowers**—appearing in spring with the

young leaves, about 1 inch long, with 4 white, narrow, ribbon-like petals, slightly fragrant, in loose, drooping clusters 4 to 6 inches long. **Fruits**—ripening in late summer, dark blue or black, smooth, ovate, about 3/4 inch long, in drooping clusters. **Seeds**—solitary, pale brown, bony, oval, about 1/3 inch long, embedded in thick flesh.

DISTINGUISHING CHARACTERS: Large, thin, opposite, narrowly elliptic leaves; loose, drooping clusters of large, fringe-like flowers; olive-like fruits.

GENERAL COMMENT: For more than a century, this little tree has been a favorite for home gardens. As one of the latest of spring-flowering trees and shrubs, it is a desirable ornamental to follow the maples, dogwoods, and redbuds. It occurs naturally in the northern and central areas of the state as far south as Manatee County.



Osmanthus americanus (L.) Benth. & Hook. f.,* devilwood, bears large, opposite, evergreen leaves having revolute margins with small, yellowish flowers in small, dense clusters in the axils of leaves, and oval fruits about ½ inch in diameter.

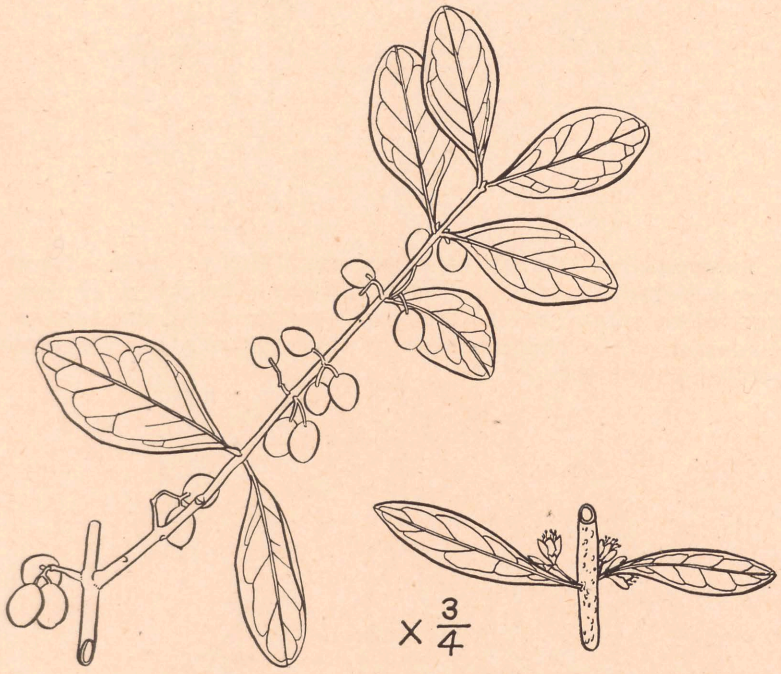
*Amarolea americana (L). Small

FORESTIERA PORULOSA (Michx.) Poir.

Florida Forestiera

(Oleaceae: Olive Family)

DESCRIPTION: **Height**—12 feet, trunks 3 inches in diameter. **Crowns**—dense, irregular, composed of small branches, from short, crooked trunks. **Bark**—pale gray, thin, smooth. **Twigs**—pale gray, slender, rigid, smooth, with numerous white lenticels. **Leaves**—persistent, opposite, simple, firm, dark green above, pale beneath, ¾ to 2 inches long, narrowly elliptic to narrowly obovate, tips rounded or blunt-pointed, bases narrowly wedge-shaped, margins entire. **Flowers**—in spring, staminate and pistillate on different trees, small,

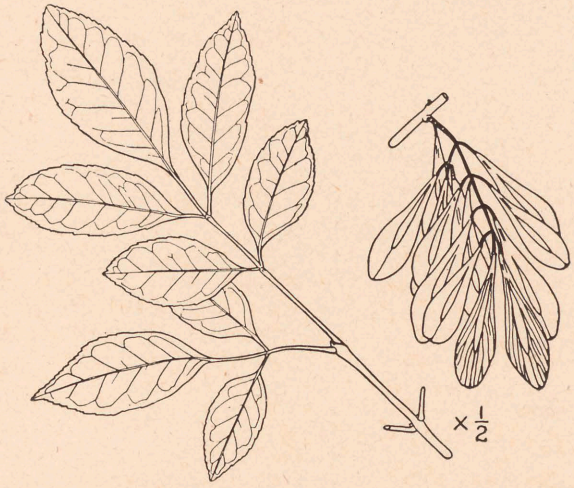


yellow, in 3- or 4-flowered, dense, stalkless clusters growing in the axils of the previous year's leaves. **Fruits**—ripening in early summer, green or black, smooth, ovate, about ⅓ inch long, slender-stalked. **Seeds**—solitary, many-ribbed, contained in thin flesh.

DISTINGUISHING CHARACTERS: Pale twigs; narrow, opposite leaves; small, yellow flowers; small, black fruits.

GENERAL COMMENT: The Florida forestiera, which seldom attains true tree stature, is usually crowded among the dense, shrubby vegetation growing near the coast. The dense crowns are composed of so many rigid twigs that only a few of the vines are able to penetrate these thickets and overgrow the forestiera. During the summer and fall, it produces great quantities of blue-black fruits which add to the beauty of evergreen foliage.

The swamp-privet, *Forestiera acuminata* (Michx.) Poir., found in the moist river bottoms of northern Florida, attains a height of 40 feet, but the pale trunks often sprawl on the mud and produce roots and sprouts at each point of contact. It is characterized by its large size and large, deciduous leaves, pointed at both ends.



The Florida ash, *Fraxinus pauciflora* Nutt., is a small tree common in low hammocks as far south as Lake Okeechobee. It is characterized by fruits bearing parallel veins in their wings.

FRAXINUS AMERICANA L.

White Ash

(Oleaceae: Olive Family)

DESCRIPTION: **Height**—100 feet, trunks 3 feet in diameter. **Crowns**—narrow or round-topped, composed of stout, upright or spreading branches, from straight trunks. **Bark**—dark brown, thick, divided by numerous narrow fissures into broad, interlacing ridges bearing numerous small flakes. **Twigs**—slender, brown to gray, rigid, smooth except for scattered, raised lenticels. **Leaves**—deciduous, opposite, pinnate, 8 to 12 inches long. **Leaflets**—5 to 9, usually 7, firm, smooth, dark green and shining above, paler beneath, 3 to 5

inches long, opposite, ovate to narrowly ovate, with sharp tips, rounded or wedge-shaped bases, entire or shallow-toothed margins. **Flowers**—in spring with the new leaves, staminate and pistillate on the previous year's wood of different trees, minute, greenish; staminate in short, dense clusters; pistillate in slender, open clusters about 2 inches long. **Fruits**—maturing in summer, strap-shaped, smooth, thin, flat, 1½ inches long, yellowish brown, in very crowded clusters. **Seeds**—solitary, permanently embedded in base of fruit.

DISTINGUISHING CHARACTERS: Large size; pinnate leaves with 5 to 9 leaflets; dense clusters of strap-shaped fruits.

GENERAL COMMENT: The white ash, distributed as far south as Alachua County, is properly classed as a timber tree on the basis of its strong, tough wood. Although it will reach great size in low, swampy woods, it is usually felled as soon as a marketable log can be obtained. The tall trunks carry the crown so high that the flowers and fruits are seldom seen until they fall.

FRAXINUS CAROLINIANA Mill.

Carolina Ash, Pop Ash

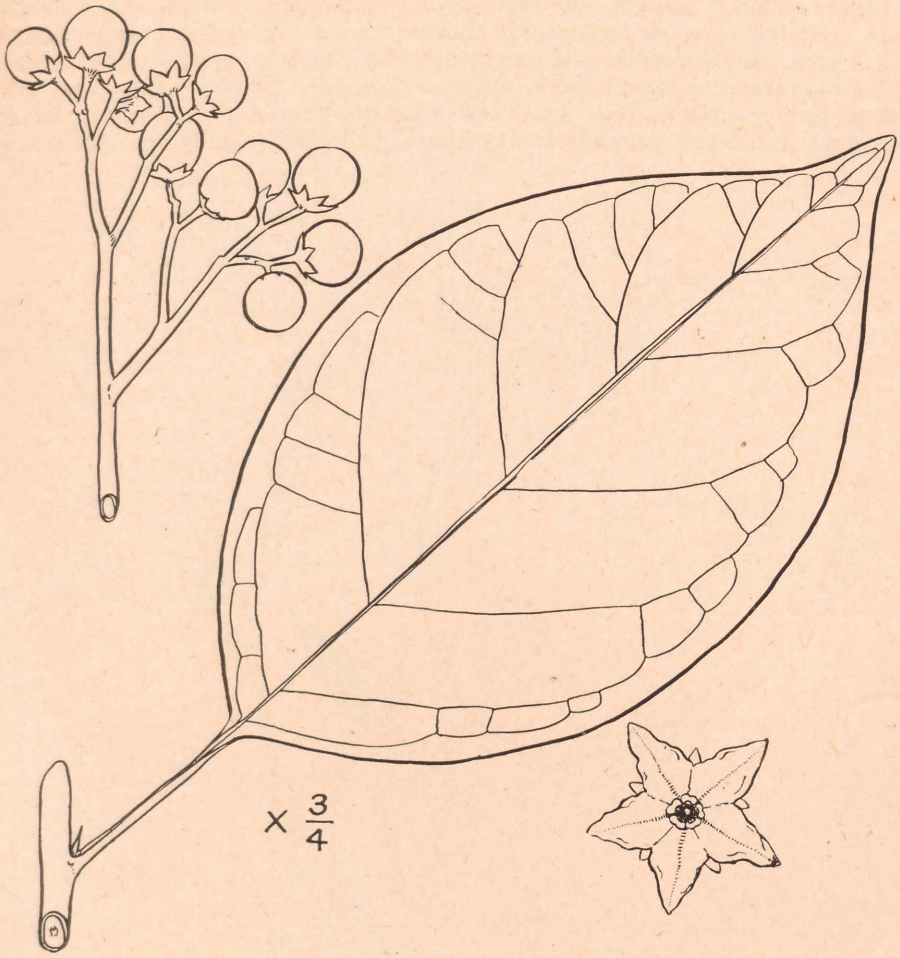
(Oleaceae: Olive Family)

DESCRIPTION: **Height**—25 feet, trunks 6 to 8 inches in diameter. **Crowns**—open, rounded, composed of small, upright branches, from slender trunks. **Bark**—light gray, thin, smooth, with raised, corky warts. **Twigs**—brown, slender, somewhat enlarged at the joints, smooth, with a few raised lenticels. **Leaves**—deciduous, opposite, pinnate, 7 to 12 inches long. **Leaflets**—5 to 7, firm, smooth, dark green and shining above, paler beneath, 2 to 4 inches long,

opposite, ovate, sharp-pointed, with rounded or broadly wedge-shaped bases, fine-toothed margins. **Flowers**—in spring with the new leaves, staminate and pistillate on different trees on previous year's wood, minute, greenish; staminate in dense clusters; pistillate in slender clusters about 2 inches long. **Fruits**—maturing in summer, narrowly obovate, smooth, thin, flat, 1½ inches long, yellowish brown or sometimes purplish. **Seeds**—solitary.

DISTINGUISHING CHARACTERS: Large, pinnate leaves with 5 to 7 leaflets; broad fruits.

GENERAL COMMENT: The Carolina ash, growing in the vicinity of lakes, savannahs, swamps, and streams, occurs as far south as Lake Okeechobee. Thriving with its roots under water for many months, it produces great numbers of stiff, pale trunks and large crops of flat fruits. Unlike other members of the ash family, it forms light, weak wood.



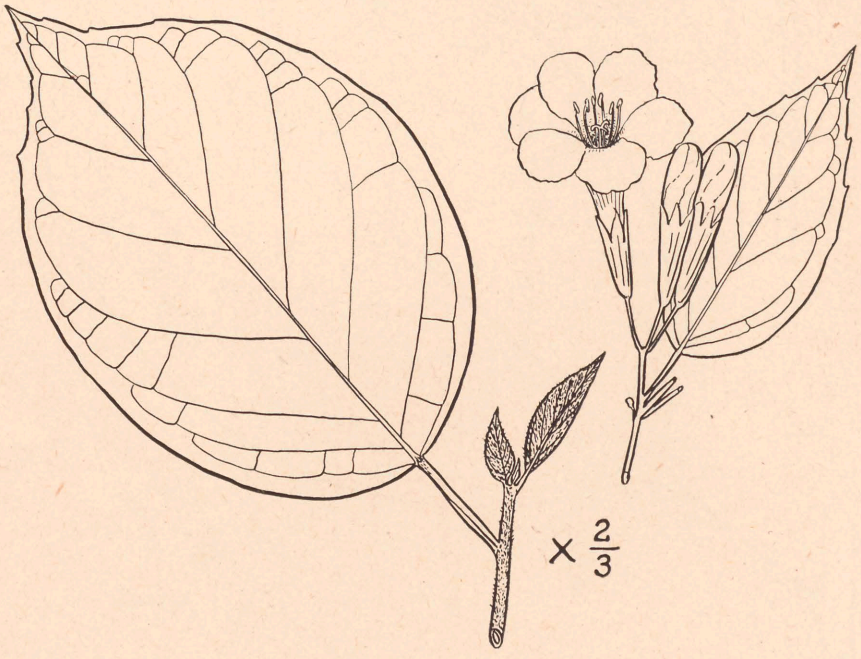
The mullein nightshade, *Solanum verbascifolium* L., (Solanaceae), a small, arborescent relative of the common Irish potato, is distinguished by large, fuzzy, narrowly elliptic leaves, sometimes 1 foot long; large, fuzzy, flat-topped flower clusters; 5-pointed, white flowers about ¾ inch in diameter and yellow berries, ½ inch or more in diameter.

CORDIA SEBESTENA L.*

Geiger-tree

(Boraginaceae: Borage Family)

DESCRIPTION: **Height**—25 feet, trunks 6 inches in diameter. **Crowns**—dense, rounded, composed of erect branches, from short, crooked trunks. **Bark**—dark brown, thick, deeply and irregularly divided into narrow ridges broken on the surface into short, thick, appressed scales. **Twigs**—ashy gray, stout, with a few scattered, pale lenticels. **Leaves**—persistent, alternate, simple, firm, dark green and roughly downy above, paler and nearly smooth beneath,



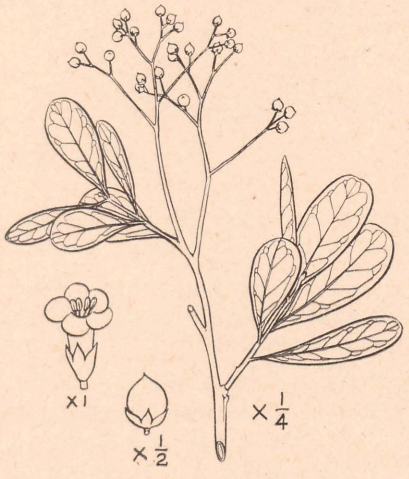
4 to 6 inches long, ovate, tips short-pointed or rounded, bases rounded, margins very shallow-toothed. **Flowers**—all year, orange, about 1½ inches in diameter, in flat-topped clusters at ends of new growth. **Fruits**—maturing all year, smooth, white, ovate, about 1½ inches long, with small crowns at tips. **Seeds**—1 or 2, embedded in thick-walled stones covered with thin, corky flesh.

DISTINGUISHING CHARACTERS: Large, orange flowers; white fruits.

GENERAL COMMENT: The range of the geiger-tree includes Dade and Monroe counties, but it is most abundant on the Florida Keys. In spite of an irregular habit of growth, its bright-orange flowers and dark evergreen foliage make it a valuable ornamental.

*Sebestena sebestena (L.) Britton

Bourreria ovata Miers, Bahama strongbark, has long-stalked, smooth, shining leaves, white flowers about ½ inch in diameter, and orange fruits containing 2 to 4 bony seeds. It occurs on the Everglade Keys and the Florida Keys.



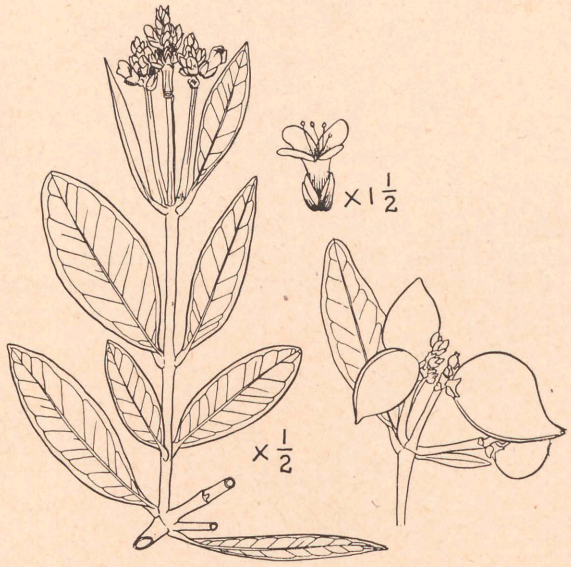
Bourreria revoluta H.B.K., rough strongbark, occurring on the Everglade Keys and the Florida Keys, has small, white flowers, ½ inch in diameter, orange fruits containing 2 to 4 bony seeds, and short-stalked, rough leaves.

AVICENNIA NITIDA Jacq.

Black-mangrove

(Verbenaceae: Verbena Family)

DESCRIPTION: **Height**—60 feet, trunks sometimes about 2 feet in diameter, but usually much smaller. **Crowns**—round-topped, composed of spreading branches, from very short trunks. **Bark**—dark brown, thick, roughened with small, thin, irregular, appressed scales. **Twigs**—gray, stout, smooth, rigid, enlarged at the joints. **Leaves**—persistent, opposite, simple, leathery, yellow-green to dark green above, pale and downy beneath, 2 to 4 inches long, narrowly elliptic, with rounded or pointed tips, wedge-shaped bases, and entire margins. **Flowers**—all year, white, about ½ inch in diameter, all parts of the flower clusters except the flowers themselves very downy, in dense, conical heads at



ends of new growth. **Fruits**—ripening all year, green, downy, ovate but with unequal sides, flattened, 1 inch or more long. **Seeds**—single, flat, filling the fruit.

DISTINGUISHING CHARACTERS: Salty habitat; opposite, green leaves downy on lower surfaces; downy, flattened fruits.

GENERAL COMMENT: One of three species of this tropical genus in the world, black-mangrove grows in abundance in coastal hammocks and on shorelines of the peninsula from St. Johns and Levy counties southward. Its complicated root system retains much of the debris deposited by high tides; as a result, later accumulations of sand soon form small islands. The flowers are so rich in nectar attractive to bees that some beekeepers specialize in this kind of honey. During June and July, when bloom is most profuse, hives are carried to the vicinity of dense stands along the seacoast, in order that the bees may harvest the nectar and produce a clear, white honey with a characteristic flavor.

CITHAREXYLUM FRUTICOSUM L.

Florida Fiddlewood

(Verbenaceae: Verbena Family)

DESCRIPTION: **Height**—25 feet, trunks 6 inches in diameter. **Crowns**—narrow, irregular, composed of slender, upright, recurved branches, from slender trunks. **Bark**—light reddish brown to greenish gray, slender, smooth, with a few pale lenticels. **Leaves**—persistent, opposite, simple, leathery, pale green and shining above, paler beneath, 3 to 6 inches long, elliptic, tips variable, bases wedge-shaped, margins entire, thickened, wavy. **Flowers**—

throughout the year, small, downy, whitish, fragrant, in slender, drooping spikes in axils of new leaves. **Fruits**—ripening all year, black, smooth, shining, nearly globose, about ½ inch in diameter, weighting down the long, slender spikes. **Seeds**—2, bony, about ⅛ inch long, contained in sweet, juicy flesh.

DISTINGUISHING CHARACTERS: Opposite, shining, pale-green leaves; shining, black fruits in long, drooping spikes.

GENERAL COMMENT: Occasional Florida fiddlewoods are found in Brevard and Manatee counties, which represent the northern extension of the range of this subtropical species. In spite of the attractive glossy foliage, its growth-habit is too irregular to recommend it as an ornamental. The very hard, heavy, fine-grained wood is desirable for cabinet-making, including musical instruments. From the latter use arose the common name "fiddlewood."

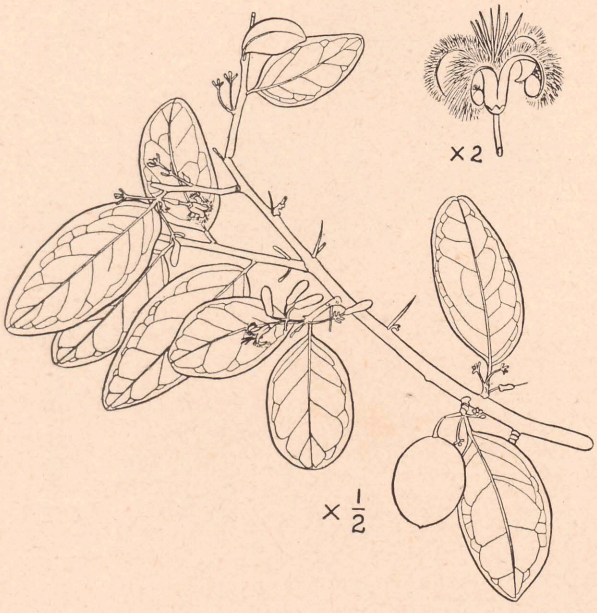
The skyflower or golden dewdrop, *Duranta repens* L., usually seen as a shrub and widely grown as an ornamental, is native only in the Everglade Keys and the Florida Keys. It is characterized by long, drooping spikes of pale-purple flowers, and yellow fruits.

XIMENIA AMERICANA L.

Tallowwood, Hog Plum

(Olacaceae: Ximenia Family)

DESCRIPTION: **Height**—25 feet, trunks 3 to 4 inches in diameter. **Crowns**—narrow, irregular, composed of slender, crooked branches, from crooked trunks. **Bark**—red-brown, thin, smooth. **Twigs**—pale brown to dark brown, slender, crooked, often thorny at the joints, smooth, sometimes bearing numerous raised lenticels. **Leaves**—persistent, alternate, simple, firm, yellow-green and shining above, paler beneath, 1 to 3 inches long, elliptic, tips blunt-pointed, bases wedge-shaped, margins entire, wavy. **Flowers**—all year, fragrant, yellowish, less than ½ inch in diameter, with 4 petals very fuzzy on their inner



surface, stalked, in 3- or 4-flowered clusters on old or new growth. **Fruits**—ripening all year, yellow, smooth, globose to ovate, 1 to 1¼ inches long. **Seeds**—solitary, smooth, bony, pale yellow, ovate, embedded in yellow, juicy, sour flesh.

DISTINGUISHING CHARACTERS: Yellow-green foliage; 4-petalled, yellow flowers fuzzy within; yellow, plum-like fruits.

GENERAL COMMENT: As a tree, the tallowwood occurs in hammocks as far north as Alachua County, but it is most common in the scrubs of peninsular Florida as a low, spiny shrub. Although the flavor of its edible, plum-like fruits is strong, the fragrance of the flowers is unusually pleasing. The plant is misleadingly like citrus in its general vegetative appearance.

RELATED SPECIES: The Gulf graytwig, *Schoepfia chrysophylloides* (A. Rich.) Planch., a small tree with thin, pale bark, pale, unarmed branches, small, reddish flowers and fleshy, red fruits less than ½ inch long, occurs south of Lake Okeechobee.

CEPHALANTHUS OCCIDENTALIS L.

Common Buttonbush

(Rubiaceae: Madder Family)

DESCRIPTION: **Height**—25 feet, trunks 6 inches in diameter, more frequently found as a shrub. **Crowns**—rounded, irregular, with stout branches, from short trunks. **Bark**—thick, red-brown, roughened with deep, vertical furrows and rough, scaly ridges. **Twigs**—red-brown, smooth, stout, with prominent, pale lenticels. **Leaves**—deciduous or somewhat persistent, opposite, simple, dark green and smooth above, paler beneath, 2 to 7 inches long, elliptic, with pointed tips, wedge-shaped or rounded bases and entire margins.

Flowers—appearing sporadically all summer, tubular, white, very small, fragrant, in dense, globose heads about 1½ inches in diameter; heads in loose clusters on long stalks at ends of new growth. **Fruits**—maturing in fall, green to brown, angular "pegs" thrust solidly into hard, globose heads about ¾ inch in diameter.

DISTINGUISHING CHARACTERS: Small, white, tubular flowers in very dense, globose heads.

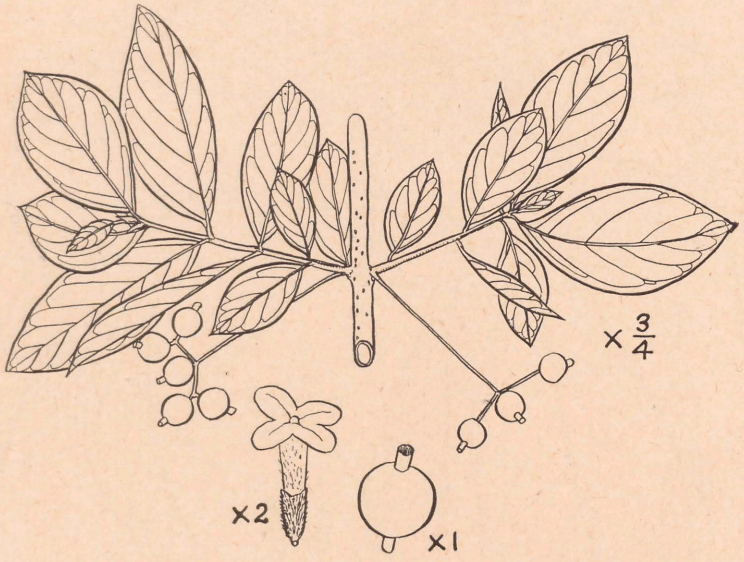
GENERAL COMMENT: As its name implies, the common buttonbush is usually shrubby in stature but reaches the proportions of a small tree along streams, or more often, around ponds where it stands in shallow water. Its pale, deeply furrowed bark, covering trunks that are as crooked as the proverbial "dog's hind leg," differs from that of its associates. The arching branchlets are terminated with balls of small, white flowers so thickly beset with styles that the plant is sometimes called pincushion flower. In moist or wet soil, it grows everywhere in the state, except on the Florida Keys.

GUETTARDA ELLIPTICA Sw.

Everglade Velvetseed

(Rubiaceae: Madder Family)

DESCRIPTION: **Height**—15 feet, trunks 5 inches in diameter. **Crowns**—open, irregular, composed of small, upright branches, from irregular, somewhat buttressed trunks. **Bark**—dark brown, thin, smooth. **Twigs**—red-brown, slender, smooth, with numerous pale lenticels. **Leaves**—persistent, opposite, simple, firm, dark green and sometimes downy above, paler and downy beneath, 1 to 2 inches long, elliptic, with blunt tips, wedge-shaped bases and entire margins. **Flowers**—in summer, small, tubular, yellowish white, in few-



flowered, dichotomous clusters on stalks little shorter than the leaves, near the ends of new growth. **Fruits**—ripening in fall and winter, globose, downy, dark purple, about 1/3 inch in diameter, bearing a small crown. **Seeds**—2 to 4, enclosed in a bony shell, surrounded by sweet, mealy flesh.

DISTINGUISHING CHARACTERS: Limited distribution; opposite, elliptic, downy leaves; small, downy, purple fruits.

GENERAL COMMENT: The Everglade velvetseed, an inhabitant of the subtropical region, occurs commonly as a shrub, although a few individuals attain tree stature at the most southern part of its range. The crowding effect of neighboring shrubs and trees almost precludes the chances of any specimen assuming a symmetrical shape; as a result, the trunks are usually slender and crooked. Perhaps its most outstanding character is the small, round, downy fruits, topped by the little, cylindrical crown.

RELATED SPECIES: *Guettarda scabra* (L.) Vent., roughleaf velvetseed, is separated from *G. elliptica* Sw. by the presence of larger, broader, leathery leaves, rough above, and larger flowers growing more densely in the clusters.

Psychotria undata Jacq.,* Seminole balsamo, has flat-topped, stalkless clusters of small, white flowers, and juicy, orange-red berries about 1/4 inch long, containing 2 coffeebean-like seeds. It is subtropical.

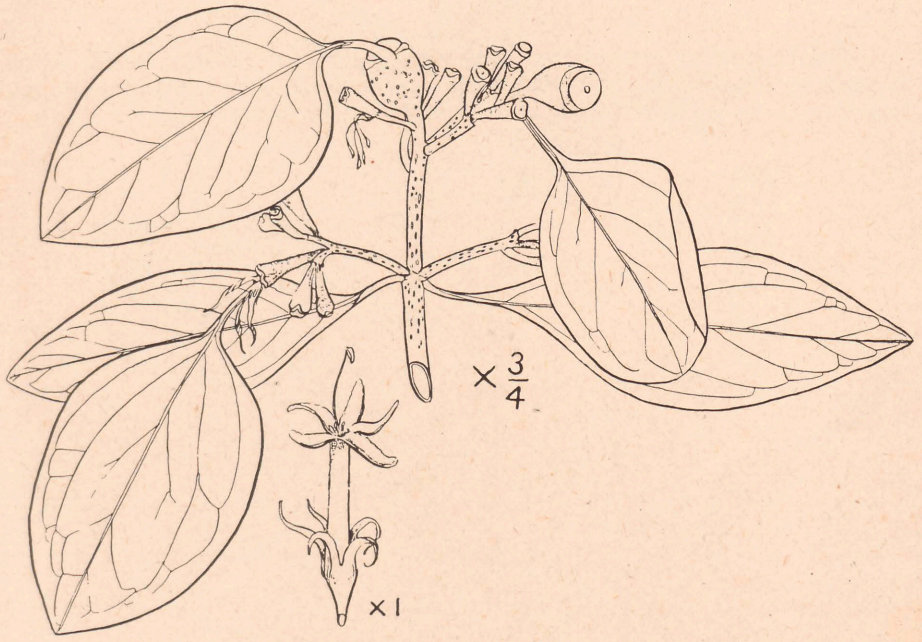
*P. nervosa Sw.

PINCKNEYA PUBENS Michx.

Pinckneya, Fevertree

(Rubiaceae: Madder Family)

DESCRIPTION: **Height**—25 feet, trunks 6 inches in diameter. **Crowns**—narrow, round-topped, composed of slender, spreading branches, from short trunks. **Bark**—light brown, thick, smooth, flaking into minute, thin, papery scales. **Twigs**—dark red-brown, stout, flexible, smooth, with scattered, pale lenticels. **Leaves**—deciduous, opposite, simple, dark green and slightly downy above, paler and downy beneath, 5 to 8 inches long, elliptic, with pointed tips, wedge-shaped bases and entire, wavy margins. **Flowers**—in early summer,

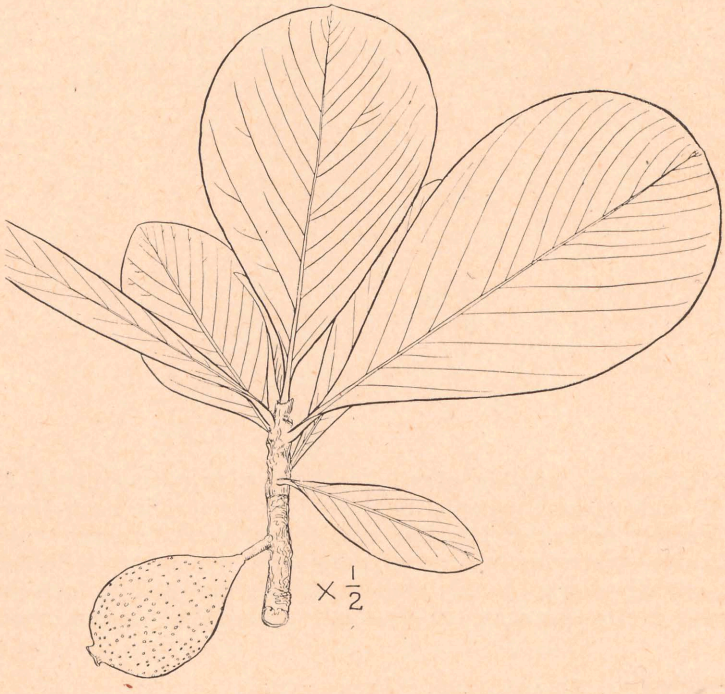


creamy white, downy, tubular, about 1 inch long, in open clusters 6 inches in diameter, at ends of new growth. **Sepals**—1 to several in each flower cluster becoming greatly enlarged, leaf-like and conspicuous, creamy white or pink in color. **Fruits**—maturing in summer, persistent, dry, brown with conspicuous, pale spots, slightly downy, nearly globose, faintly grooved, ¾ inch in diameter, crowned with a circular scar. **Seeds**—numerous, thin, winged, about ¼ inch long.

DISTINGUISHING CHARACTERS: Large, white or pink sepals; persistent, spotted seedpods.

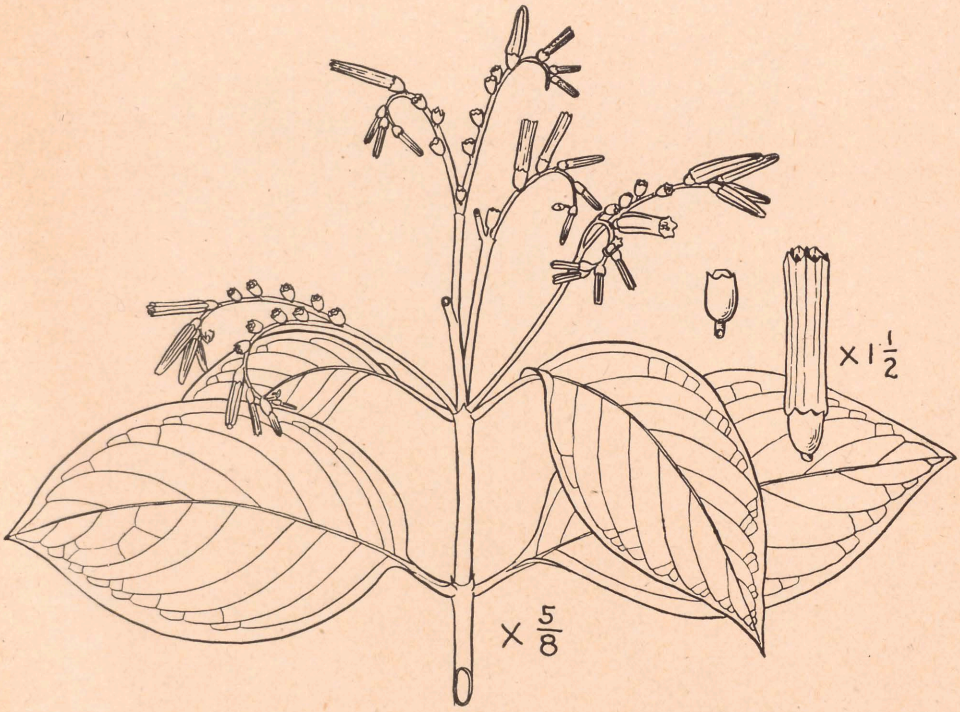
GENERAL COMMENT: The pinckneya is very sporadically distributed in seepage swamps as far south as Marion County. Its characteristic, large, pink sepals and large, opposite leaves are distinctive. The tree was formerly used medicinally as a fever remedy.

The Caribbean princewood, *Exostema caribaeum* (Jacq.) Roem., is characterized by white axillary flowers 1½ inches long, dry seedpods, and pointed leaves 1 to 2½ inches long. It is subtropical in distribution.



Genipa clusiaefolia (Jacq.) Griseb.,* the seven-year-apple, is distinguished by white axillary flowers ¾ inch long, large, woody, ovoid fruits 2 to 3 inches long, and blunt leaves 2 to 6 inches long. It is subtropical in distribution.

*Casasia clusiifolia (Jacq.) Urban



The scarletbush, *Hamelia patens* Jacq., is set off by bright-red flowers and flower stalks, black berries 1/4 inch in diameter and thin, pointed leaves 2 to 6 inches long. It is confined to subtropical areas.

SAMBUCUS SIMPSONI Rehder

Florida Elder, Elderberry

(Caprifoliaceae: Honeysuckle Family)

DESCRIPTION: **Height**—15 feet, trunks 6 inches in diameter. **Crowns**—round, often irregular, composed of small, spreading branches. **Bark**—brownish gray, thick, with numerous vertical furrows forming interlaced, flat-topped, corky or scaly ridges. **Twigs**—stout, purplish brown to gray-brown, smooth, with scattered, raised lenticels. **Leaves**—persistent, opposite, 4 to 7 inches

long. **Leaflets**—5 to 9, smooth, dark green and shining above, paler beneath, 1 to 3 inches long, opposite, elliptic, tips sharp-pointed, bases wedge-shaped, margins sharp-toothed, lower pair usually divided into 3 segments each. **Flowers**—all year, very small, fragrant, white, in flat-topped clusters, on long stalks at ends of new growth. **Fruits**—maturing all year, dark purplish black, smooth, globose, about ¼ inch in diameter. **Seeds**—3 to 5, rough, brown, in juicy, purple flesh.

DISTINGUISHING CHARACTERS: Flat-topped clusters of tiny, white flowers; purple-black berries; pinnate leaves with extra divisions in lower leaflets.

GENERAL COMMENT: The Florida elder is found on moist, unshaded soil everywhere in the state. Its berries, produced almost continuously, are used in cookery and wine, and furnish food for many birds.

VIBURNUM CORYMBOSUM (Mill.) Rehder*

Walter Viburnum, Blackhaw

(Caprifoliaceae: Honeysuckle Family)

DESCRIPTION: **Height**—20 feet, trunks 5 to 6 inches in diameter. **Crowns**—broad, spreading, composed of small, erect, spreading branches, from slender trunks. **Bark**—nearly black, thick, divided by numerous furrows into many thick, angular blocks. **Twigs**—red-brown to gray, slender, flexible, smooth, with scattered, raised, brown lenticels. **Leaves**—persistent, opposite, simple, leathery, dark green and shining above, paler beneath, ½ to 2 inches long, obovate, tips blunt, bases wedge-shaped, margins with shallow, blunt teeth

or sometimes entire. **Flowers**—in spring, numerous, very small, white, in flat-topped clusters at ends of new growth. **Fruits**—ripening in summer, persistent, black, smooth, slightly flattened, ovate, about ¼ inch long. **Seeds**—solitary, bony, nearly ovate, covered with purplish, mealy flesh.

DISTINGUISHING CHARACTERS: Small, leathery, obovate leaves; flat-topped clusters of small, white flowers; small, 1-sided, black fruits.

GENERAL COMMENT: The Walter viburnum, a common species in low woods and along stream banks as far south as Sarasota County, reaches its greatest size in the Suwannee River basin. In common with related species, it often produces straight, slender shoots, 5 to 8 feet long in one season. Large crops of fruit furnish valuable food for birds.

RELATED SPECIES: The rusty blackhaw, *V. rufidulum* Raf., with large leaves 1 to 4 inches long, and dark-blue fruits ½ inch or more long, has approximately the same range as *V. corymbosum.*

*V. obovatum Walt.

BACCHARIS HALIMIFOLIA L.

Eastern Baccharis, Groundsel-tree

(Compositae: Thistle Family)

DESCRIPTION: **Height**—12 feet, trunks 5 inches in diameter, usually a shrub. **Crowns**—narrow, conical, composed of numerous small, stiff, erect branches, from short trunks. **Bark**—dark brown, thin, divided by wide, shallow furrows into thin, flat, interlacing and overlapping ridges. **Twigs**—stout, rigid, crooked, smooth, marked with minute ridges, red-brown to gray-brown. **Leaves**—persistent, alternate, simple, firm, dark gray-green and dull above, paler beneath, ½ to 3 inches long, narrowly elliptic to broadly ovate, tips pointed, bases wedge-shaped, margins coarse-toothed near the tips. **Flowers**—

in autumn, staminate and pistillate flowers on different plants, minute, greenish, in dense heads on stalks in axils of leaves near ends of new growth. **Seeds**—in the fall, minute, bearing tufts of long, white hairs, making heads on pistillate plants appear like silvery, water-color brushes.

DISTINGUISHING CHARACTERS: Coarse-toothed, gray-green leaves; stalked flower clusters; silvery-white tuft of hairs on each fruit.

GENERAL COMMENT: The eastern baccharis, an arborescent species of the thistle family, occurs naturally everywhere in Florida. The pistillate plants mature a profusion of flowers resembling silvery paint brushes in late fall, when there is usually a dearth of flowering plants in the garden. On account of this late flowering, the species makes a very good subject for shrubbery borders. It is necessary, however, to tolerate the unhandsome, staminate plant in order to have the desired silvery paint brushes.

RELATED SPECIES: The southern baccharis, *Baccharis glomeruliflora* Pers., differs from the eastern baccharis in having the flower heads stalkless. It occupies the same habitat as its relative but is more shade-loving.

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GLOSSARY

Axil. Angle formed between the axis and any organ which arises from it, especially of a leaf.

Axillary. Borne in an axil.

Berry. Pulpy fruit with two or more seeds buried in it.

Bloom. Thin, white waxy covering on many fruits, such as plums and grapes.

Bract. Modified leaf intermediate between calyx and normal leaves.

Buttressed. Descriptive of a tree trunk fluted at base, the ridges extending to the roots.

Capsule. Descriptive of a dry, dehiscent seed pod.

Catkin. Deciduous spike consisting of petalless flowers of one sex.

Compound. Leaf, one divided into separate leaflets.

Conical. Having the figure of a geometrical cone.

Crown. Upper portion of a tree, including the branches and their foliage.

Cylindrical. Elongated with circular cross-section.

Deciduous. Falling in season, as leaves of some plants in autumn.

Dichotomous. Forked, parted by pairs.

Drupe. Stone fruit, as plum, peach.

Elliptic. Oblong with regularly rounded ends.

Epiphyte. Plant which grows on other plants, but not parasitically.

Evergreen. Bearing green foliage all the year.

Excrescence. Wart on stem of tree.

Globose. Nearly spherical.

Kernel. Fleshy part of a seed or nut.

Lanceolate. Narrow, tapering to each end; however, base is usually somewhat broadened with greatest breadth about 1/3 from base.

Lenticels. Tiny corky areas on bark of twigs.

Linear. Very narrow, many times longer than wide.

Needle. Stiff linear leaf of a pine or other conifer.

Nut. Hard, indehiscent one-seeded fruit.

Oblanceolate. Reversed lanceolate, with broadest part of a lanceolate body away from point of attachment.

Obovate. Reversed ovate, the distal end the broader.

Odd-pinnate. Leaf bearing an uneven number of leaflets.

Ovate. Shaped like longitudinal section of hen's egg, the broader end basal.

Ovulate. Female, bearing ovules.

Palmate. Suggesting the outspread fingers of the hand.

Pendent. Drooping from its support.

Persistent. Remaining green or in place for a long time or after neighboring parts have matured; nearly evergreen.

Petal. Term for each segment composing a corolla; innermost of the floral envelopes.

Pinnate. Leaf with leaflets arranged each side of a common stalk (rachis).

Pistillate. Applied to flower having pistils only; i.e. female flower.

Rachis. Main stem of an inflorescence, compound leaf or frond.

Resinous. Containing or covered with resin.

Revolute. Margin rolled or turned back from upper surface.

Ruminate. Looking as though chewed.

Samara. Indehiscent, winged fruit; i.e. fruit of ash.

Sepals. Term for each segment composing a calyx; outermost of the floral envelopes.

Simple. Leaf of one blade.

Sinus. A recess or re-entering angle.

Spatulate. Oblong, with basal end attenuated like a spatula.
Sporadic. Irregularly distributed; scattered.
Staminate. Applied to flowers having stamens only; i.e. male flowers.
Stellate. Star-shaped, or radiating like points of a star.
Subglobose. Nearly globular (ball-shaped).
Taxonomy. Study of the classification of plants and the relationship of one plant to another.
Three-pinnate. Leaf thrice-pinnate.
Two-pinnate. Leaf with both primary and secondary divisions pinnate.
Ultimate. Last of a series; such as a leaf farthest from the base of a twig.
Weed. A useless or troublesome plant.

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