# CHECKLIST OF UNITED STATES TREES

## (NATIVE AND NATURALIZED)

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(Supersedes Agriculture Handbook No. 41,
Check List of Native and Naturalized Trees
of the United States (Including Alaska), 1953)

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## Abstract

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1979. Checklist of United States trees (native and naturalized). U.S. Dep. Agric., Agric. Handb. 541, 375 p.

This revised Checklist compiles the accepted scientific names and current synonyms, approved common names and others in use, and the geographic ranges of the native and naturalized trees of the United States of America (continental, including Alaska but not Hawaii). Native trees of continental United States accepted in this Checklist total approximately 679 species in 216 genera and 73 plant families. The revision, superseding the 1953 checklist by the same compiler, lists genera, species, and important varieties alphabetically by accepted scientific name. Natural interspecific hybrids are indicated by names of parent species, with binomials added in parentheses. Citations are given for accepted names and commonly used synonyms. The range of each species has been compiled from the recently completed 6-volume Atlas of United States Trees. Naturalized trees add 69 species, 28 genera, and 3 families.

Eight Appendixes are: (1) Condensed Checklist—Alphabetical by Scientific Names; (2) Condensed Checklist—Alphabetical by Common Names; (3) New Scientific Names of United States Trees, 1951–1977; (4) Authors of Accepted Scientific Names; (5) Commercial Names for Lumber; (6) Guiding Principles for Common Names of United States Trees; (7) Botanical Index of Plant Families and Genera; and (8) Summary of Changed Specific Names. Index of Common Names includes both those approved and others in use.



OXFORD: 174, 181.1 (083.8, 73).
KEYWORDS: United States, trees, names, checklists, plant distribution.

# INTRODUCTION

This revised Checklist compiles the accepted scientific names and current synonyms, approved common names and others in use, and the geographic ranges of the native and naturalized trees of the United States of America (continental, including Alaska but not Hawaii). It is primarily a reference for foresters, botanists, students, and others interested in trees. One of its important objects is to encourage uniform usage of tree names. The fourth in a series, this Checklist is the official standard for tree names in the Forest Service. It supersedes the 1953 checklist (*55*)[1].

Much additional information about the taxonomy or dendrology of United States trees including names and ranges has become available through numerous researches by botanists and foresters during this 25-year interval. Examples are taxonomic monographs, regional and State floras, and guides for trees. Another compilation is needed to evaluate and make accessible the new material which is scattered in technical publications.

The Forest Service Tree and Range Plant Name Committee has sponsored this revision, as authorized by the Forest Service Manual (4083.4), and has approved the common names. Membership (1978), from staffs particularly interested in plant names, is listed on the back of title page.

The International Code of Botanical Nomenclature (*115*) has been amended slightly at International Botanical Congresses (Nomenclature Section) held at 5-year intervals. Additions to the list of conserved generic names (*nomina conservanda*) have been proposed.

Botanical exploration of the country has continued at a rapid rate, even into the most remote regions. Additional range extensions have been recorded. Many States now have published or unpublished maps of their tree species (or seed plants) showing occurrence by counties or localities.

Several new species of local range and additional varieties have been proposed among the native trees. Likewise, many minor varieties and a few species have been reduced to synonymy. Several species of large shrubs rarely reaching tree dimensions have been added, while a few doubtfully attaining tree size have been noted or omitted. With the passing of time, more introduced trees have escaped from cultivation and have become naturalized. Also a few species formerly listed as naturalized have been dropped (mentioned in notes) as not widely established though wild.

## PLAN OF THIS REVISION

This revision, including the Introduction, follows with minor changes the plan of the 1953 checklist by the same compiler. The main checklist consists of accepted species with related information arranged alphabetically by scientific names. There is an Index of Common Names.

1. APPENDIXES—Eight Appendixes, cited under Contents, contain special lists. Two condensed lists of accepted scientific names of species and varieties with their approved common names have been extracted for

[1]Italic numbers in parentheses refer to References, page 25.

convenient reference. Appendix 1, Condensed Checklist—Alphabetical by Scientific Names, has the scientific name first, as in the main Checklist. Appendix 2, Condensed Checklist—Alphabetical by Common Names, has the common name first, as in the Index of Common Names.

2. AREA COVERED—The area covered is the same, continental United States or the 48 contiguous (or conterminous) States and Alaska, which became the 49th State in 1959. Inclusion of Alaska merely adds 2 species of willow *(Salix)*, also 5 shrubby willows rarely reaching tree size and mentioned in notes. Incidentally, the trees of Canada, which borders both Alaska and the Lower 48, are listed too. Thus, the area is North America north of Mexico, the same as in Sargent's Silva of North America *(99)* and his Manual *(103)*. Hawaii, which became the 50th State in 1959, is omitted because its native tropical flora is unique or endemic and because its trees are listed in other references.[2]

3. SCOPE—This revision contains forest trees, both native and naturalized, the same as before. Genera, species, and important varieties are included. These groups are excluded: minor varieties, shrubby varieties, cultivated varieties (cultivars), and forms, also varieties of naturalized trees. Also excluded are: cultivated trees such as fruit, shade, and ornamental trees, and introduced species persisting or escaping from cultivation and spreading slightly.[3] Definitions of trees are on page 3.

4. ARRANGEMENT—The trees of continental United States (genera, species, and varieties) are listed in a single alphabetical order under accepted scientific name, as in the 1953 checklist. Thus, it is unnecessary to find the plant family or consult an index, as in botanical floras and manuals. Each generic name is followed by its family name in parentheses. The accepted scientific name and approved common name are in boldface type. Capitals and small capitals designate naturalized trees. Scientific names are discussed on page 7, common names on page 11.

5. SYNONYMY—Following the heading or line with the accepted name and approved common name and in smaller type is the condensed synonymy. The accepted scientific name and other scientific names (synonyms) are in chronological order, with abbreviated citation of place of publication. Transfers of the present name back to the original name (basionym), such as the specific name (epithet) originally in another genus or as a variety, are included to trace the name and show conformity with priority and other rules of the International Code of Botanical Nomenclature. Commonly used synonyms (but not all) are cited, and any names of the 1953 checklist no longer accepted have been accounted for.

New scientific names of trees of continental United States published since the 1953 checklist are presented here as Appendix 3. These names have not been repeated in the synonymy unless widely used or otherwise important in the nomenclature. Additional synonyms are cited in the 1953 checklist and lists by Sudworth *(121)* and Sargent *(99)*.

Older generic synonyms still in use and synonymous specific names in genera with 5 or more species are cross-indexed; however, generic names not currently used and varietal names are not.

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[2]The Indigenous Trees of the Hawaiian Islands by Joseph F. Rock *(94)* is the most detailed. (Only 2 species of this Checklist are native also in Hawaii.) The Forest Service is publishing a new handbook, Common Forest Trees of Hawaii *(70)*. The native and common introduced trees of the Commonwealth of Puerto Rico and the Virgin Islands are described and illustrated in a 2-volume handbook by the Forest Service *(71, 73)*, with Spanish translation *(72)*; the second volume to be published in Spanish also.

[3]A separate handbook describes 60 trees from foreign lands *(57)*. Cultivated trees including the many improved cultivated varieties (cultivars) are treated in horticultural publications *(4, 6, 7, 52, 90, 91,* etc.).

6. DERIVATION—The derivations of accepted scientific names were added to the 1953 checklist and have been revised slightly. They are partly from the original publications. However, many names were unexplained by their authors, and a few are of uncertain meaning. Some names were transferred to different plants.

7. OTHER COMMON NAMES—Other common names in use follow the scientific names, roughly in descending order with the most used first. Included are regional names and those used in tree publications and botanical references. Any Spanish common names of trees recorded from the Mexican border region usually are mentioned last, though a few have been adopted. Generic common names applied alone to species in informal usage have not been repeated.

8. RANGE—Geographic distribution, or natural range, of each species and variety is outlined in abbreviated form by States and Canadian Provinces. Ranges are discussed in detail on page 12.

9. REFERENCES—New references are added, and many older titles are omitted. Under genera the recent monographs, important taxonomic contributions, articles on nomenclature, and special publications such as keys are cited. References under species include notes on nomenclature, studies of varieties and hybrids, and records of rare or local species.

10. HYBRIDS—Natural interspecific hybrids are cited under both parent species, as discussed under Interspecific Hybrids, page 8.

11. NOTES—As before, notes on nomenclature include explanations of recently changed scientific names and of confused or misapplied names. Also mentioned are additions, such as shrubby species attaining tree size, and deletions, such as species united as synonyms or varieties of others. Changes in naturalized species, both additions and deletions, are explained.

## DEFINITIONS OF TREES

There is no uniform definition of a tree. The distinction between woody plants known as trees and those called shrubs is a gradual one. Obviously, the number of tree species in a region, or in a publication, depends somewhat upon the definition used and the kinds included. Older definitions were quoted in the 1953 checklist.

As defined here, trees are woody plants having one erect perennial stem or trunk at least 3 inches (7.5 centimeters) in diameter at breast height (4½ feet or 1.3 meters), a more or less definitely formed crown of foliage, and a height of at least 13 feet (4 meters). This definition is the same in the 1953 checklist, except that equivalents in the metric system have been inserted and the minimum height has been increased 1 foot (to agree with 4 meters). (Breast height is above average ground line.)

Large willows (*Salix*) with several trunks from the same root system are accepted here as trees. Also, shrubby species that rarely or in certain localities become small trees are included or mentioned in notes.

*Native* tree species (also called indigenous or pre-Columbian) are wild and grew naturally or spontaneously in the undisturbed forest vegetation before the arrival of Columbus and other Europeans.

*Introduced* tree species (foreign or exotic) have been brought into the United States by humans, either intentionally for planting as a cultivated tree or accidentally as a weed. A *cultivated* or planted tree species may be either native or introduced and may be grown for various purposes, such as wood, fruit, shade, or ornament. Individual trees of a species may persist after cultivation and perhaps abandonment. When it spreads slightly from planted trees, an introduced species may be designated as *escaped*. A *naturalized* tree species is an introduced species that has

become common and established as though wild, reproducing naturally and spreading.

## PREVIOUS LISTS OF UNITED STATES TREES

The number of publications attempting to list or describe the forest trees of the entire continental United States is not large. Earlier ones, which had smaller boundaries or vaguely covered North America, were reviewed by Sargent (*99*; 1: v–ix). The first noteworthy efforts were Arbustrum Americanum by Marshall (*76*) in 1785 and the illustrated German work on North American woody species by Wangenheim (*136*), a Hessian officer in the Revolutionary War.

More detailed were the North American Sylva by F. A. Michaux (*77*, *78*), a 3-volume work with colored plates but limited to Eastern North America, and the supplementary 3-volumes by Nuttall (*84*). A combined 5-volume work was published later (*79*). Browne (*18*) compiled a Sylva Americana.

Several lists of the trees of this country were issued by agencies of the United States Government at various times. About 1850 the Smithsonian Institution began an extensive work with text by Asa Gray (*36*) and colored plates by Isaac Sprague. The project was abandoned, but the 22 plates were published later.

Early Government publications on United States trees were by Cooper (*20*) in 1859, Vasey (*131*), and Sargent (*97*). A detailed catalog of the forest trees of the United States was prepared for the tenth census of 1880 by Sargent (*98*) with the aid of several field agents in different regions. It was an important work preliminary to his Silva and Manual.

Most elaborate of the references on forest trees of the United States was the 14-volume Silva of North America by Charles Sprague Sargent (*99*) in 1891–1902, which described and illustrated 585 native tree species. Some additions as well as new foreign trees appeared in two following volumes entitled Trees and Shrubs (*100*). Condensed from this Silva was his Manual of the Trees of North America (Exclusive of Mexico) (*101*), which had smaller drawings and some additional species, mostly of *Crataegus*. The second edition of that Manual (*102*) in 1922 was reprinted with corrections in 1926 (*103*) and afterwards without further revision, except for a table of changes in nomenclature (*104*). It remains the most detailed descriptive and illustrated manual of the native trees of the entire continental United States, but it omits introduced species.

Another one-volume, illustrated work covering the country was North American Trees by Britton and Shafer (*16*). The native trees also in cultivation, except the warmer regions, were included by Rehder in his Manual of Cultivated Trees and Shrubs (*90*) and in his Bibliography of Cultivated Trees and Shrubs (*91*).

Recent general references usually do not attempt to include all native species. Two field guides or handbooks that aim to cover most native North American trees north of Mexico are by Preston (*87*) and Brockman (*17*). Most native woody plants with their erosion-control and wildlife values were listed by Van Dersal (*130*).

Numerous handbooks and technical references now are available for identification of the trees of individual States and regions of the United States, such as eastern and western. A recent bibliography cites about 470 titles for both trees and shrubs, wild and cultivated, issued in the period 1950–75 (*69*).

Two national plant lists have been compiled in recent years. That by Leslie R. Albee of the U.S. Department of Agriculture, Soil Conservation Service (*128*) cited the 1953 checklist as its main source for tree names.

Shetler and Skog (*108*) have edited a provisional checklist of species for a proposed flora of North America.

The corresponding enumeration of the plants of Canada by Boivin (*11*) contains much information about species and varieties also in the United States. Included are new names and combinations (cited here in Appendix 3) and distribution records northward and in Alaska. The bibliography of that reference cites the recent monographs and related publications for many tree genera.

## HISTORY OF FOREST SERVICE TREE NOMENCLATURE

The Forest Service since its establishment in the U.S. Department of Agriculture in 1905 has exercised leadership in the nomenclature of the forest trees of the United States. Though a forestry agent was appointed as early as 1876, the Division of Forestry dates from 1881 and became the Bureau of Forestry in 1901. One of the first objectives of these predecessor agencies was to arrive at uniform, stable scientific names and vernacular names of trees.

George B. Sudworth (1864–1927) was the dendrologist, or tree identification specialist, in charge of the dendrology project in Washington, D.C., from 1886 until his death nearly 41 years later. His Nomenclature of the Arborescent Flora of the United States (*121*) in 1897 was the first reference to list the native trees of the entire United States and their accepted scientific and common names as well as synonyms and other common names. It was followed the next year by the Check List of Forest Trees of the United States, Their Names and Ranges (*122*). The latter was a condensed bulletin which omitted the synonymy but added ranges. A revision or second checklist with the same title was published shortly before the author's death in 1927 (*123*).

For several years afterwards, the dendrology project was less active. However, William A. Dayton, who was in charge of the Forest Service Herbarium, then in Washington, D.C., worked in this field. In 1939–40 the Forest Service Tree and Range Plant Name Committee revised the common names of the 1927 checklist. At that time the second edition of Standardized Plant Names (*52*) was being prepared. In an effort to reduce discrepancies, the Committee on Jan. 23, 1940 approved about 700 changes of common names. Additional changes in the 1927 checklist were cited in the 1953 revision (p. 7).

From 1942 to 1954 the dendrology project was in the Division of Dendrology and Range Forage Investigations, with William A. Dayton as chief and Elbert L. Little, Jr., who began work with the Forest Service in 1934, as dendrologist. In 1954, the dendrologist and dendrology project were transferred to the Timber Management Research staff. Little retired in 1975 and a few months later returned for a year under a temporary appointment. Then as a volunteer he continued through 1978, completing 45 years with the Forest Service, the last 37 as dendrologist.

Revision of nomenclature after consolidation in 1930 of the "American Code" with the International Code of Botanical Nomenclature necessitated compilation of another Forest Service checklist. Under sponsorship of the Committee, the work began in December 1940 and continued during parts of the next 3 years. Checklist of the Native and Naturalized Trees of the United States (*125*) was issued first in a preliminary mimeographed edition mainly for official use and review. After further revision, the 1953 checklist (*55*) was published and afterwards was reprinted twice.

Minor changes in scientific names of species were made as needed during the preparation of the 6-volume Atlas of United States Trees (*58, 61, 63, 65, 68, 134*). These changes were noted in those volumes under

Tree Names, and several shrubby tree species were added. For each native tree species, information on ranges was revised and a large distribution map was prepared.

## PREPARATION OF THIS CHECKLIST REVISION

The Forest Service Tree and Range Plant Name Committee has sponsored this revision of the 1953 checklist and has approved the common names, as previously mentioned. Three main parts are involved, scientific names, common names, and ranges. The recently completed 6-volume Atlas of United States Trees provided the ranges of native species.

Preparation by the compiler, from 1976 to 1978, followed the procedure for the 1953 checklist (p. 7–10). References verified previously were not reexamined. Much information had been noted and filed in the interval. The compiler's experience in field and herbarium work over the United States during a half century has provided a background.

The major task of bringing the scientific names of United States trees up to date involved a review of research on nomenclature and classification published in the interval of about a quarter century since the last checklist, roughly from 1951 to 1977. The principal source of citations of new names of genera, species, subspecies, varieties, and hybrids was the Gray Herbarium Card Index *(93, 107)*, which originated in the Library of the United States Department of Agriculture. These citations are listed as Appendix 3.

Index Nominum Genericorum (on cards and unpublished) was consulted for citations of accepted generic names. Its office at the Smithsonian Institution made available the latest printouts. Early generic names for the period 1753-74 were verified further in the index by Dandy (*25*). Specific names were checked also in Index Kewensis (*45*), Supplementa XI–XV, for 1940-70. Bibliography of Agriculture, prepared by the U.S. National Agricultural Library (*127*), was the chief source for titles of taxonomic monographs and other references.

The bibliographic work of the revision was done partly at the U.S. National Agriculture Library, Beltsville, Md. Formerly known as the Library of the United States Department of Agriculture, it was in Washington, D.C., until 1969. (The separate Forest Service Library was merged in 1941.) The National Agricultural Library is the best general collection on plant sciences in the New World and is one of the very few places in the Nation where a detailed check of the nomenclature of United States trees could have been made.

The Botany Library, Smithsonian Institution, Washington, D.C., was consulted frequently. A few rare books were examined at the Library of Congress and other Government libraries in Washington, D.C., and at specialized collections elsewhere.

Descriptive floras and manuals, both regional and State, were helpful in showing the scientific and common names in use and in summarizing geographic distribution. About 40 current titles are designated by section mark (§) under References (page 25). Likewise, numerous publications on tree identification in the bibliography (*69*) previously cited were examined.

The incomplete series of papers for a generic flora of the Southeastern United States by Wood (*142*) and others was very useful. These papers by several authors in the Journal of the Arnold Arboretum cover one or more plant families and have detailed lists of references. Many of these studies are cited here under genera.

No new names or new combinations are proposed in this revision. Four needed varietal transfers have been made elsewhere *(67)*.

## SCIENTIFIC NAMES

Botanical nomenclature, the science of naming plants, aims to establish uniform and stable scientific names for the many thousand different kinds of plants of the world. Nomenclature is a foundation tool of plant sciences. It is not an end in itself but a means toward progress in all other fields of knowledge about plants, including cultivation and commerce.

The scientific nomenclature of this Checklist follows conservative modern usage, with emphasis on names useful to foresters and other field workers, rather than on those based upon minute differences distinguished only by specialists in plant taxonomy.

INTERNATIONAL CODE OF BOTANICAL NOMENCLATURE—Scientific names of trees and other plants are governed by the International Code of Botanical Nomenclature (ICBN; *115*). This detailed set of rules has been adopted and revised by systematic botanists, or plant taxonomists, at international congresses. The Code (ICBN) was last revised at the Twelfth International Botanical Congress at Leningrad in 1975. Representing the democratic decisions of majorities, these rules are accepted around the world. However, the amendments, while contributing toward stabilization, have been a minor cause of name changes.

BINOMIAL NOMENCLATURE—The binomial system of nomenclature now in universal use dates from Carolus Linnaeus's Species Plantarum, published in 1753. Scientific names are in Latin, an international, dead language, and usually are taken from Latin or Greek but may be formed in an arbitrary manner. They have obvious advantages. In contrast, common names change from one language or area to another and may be applied to different kinds of plants in other localities or by different persons. Moreover, many kinds of wild plants have been given no individual common names to distinguish them from all others.

The scientific name of a species, or kind of plant, consists of two words, the name of the genus (plural genera) or generic name and the name of the species (specific epithet). In some technical publications the author (formerly called authority) or namer of the plant (usually a botanist or plant taxonomist), is added, abbreviated if long or common (see page 10 and Appendix 4). For example, all kinds of oaks belong to the genus *Quercus*. Live oak is *Quercus virginiana* or with the author Miller added, *Quercus virginiana* Mill.

If a variety, or minor variation, of a species is distinguished, the varietal name is added as a third word preceded by the abbreviation "var." (variety or Latin, *varietas*). Thus, the variety sand live oak is *Quercus virginiana* var. *geminata* (Small) Sarg.

Whenever the first variety of a species is named, another, the typical variety, is automatically created and bears the specific epithet repeated without author or citation. For example, the typical variety of live oak, or live oak (typical), is *Quercus virginiana* Mill. var. *virginiana*. However, in forestry practice typical varieties may be omitted, if the meaning is clear.

FAMILIES—No classification of plant families is followed in this Checklist, because the genera are alphabetical. Appendix 7, Botanical Index of Plant Families, retains the standard conservative classification of Dalla Torre and Harms (*24*).

GENERA—Similarly, an attempt has been made to retain the familiar, large conservative genera. They have advantages of stability and convenience over the smaller ones formed by division and over larger ones

formed by union. Changes in generic names are summarized in Table 3 (page 17).

SPECIES—A conservative course has been followed in recognition of species and varieties, especially those recently proposed and minor. Nearly all important variations of native trees of continental United States have already been discovered, though specialists may continue to name slighter and slighter differences. Further study leads to union of some groups and to fewer names. Thus, the nomenclature is approaching stability. Changes in specific names are summarized in Appendix 8.

Species of trees, being large plants, are defined mainly upon characters of form or gross morphology. Other characters used to distinguish lower ranks and unnamed races include microscopic anatomy, chromosome number, chemistry, physiology, crossability, etc.

VARIETIES—Variations below the rank of species are called varieties in Forest Service checklists. Historically, the rank variety has been widely adopted for names of United States trees. Some modern workers have substituted the rank subspecies for geographical variations, while others distinguish both ranks. Originally, the subspecies was an intermediate rank for optional use if needed, such as in a species with many varieties. The later usage of subspecies has confused the nomenclature and would require numerous name changes or transfers.

Only the more important varieties are accepted here. Names based on fine distinctions of leaf shape and size, hairiness, etc., have been reduced to synonymy. Each recognizable variation does not require a separate scientific name. Minor variations with the rank of form (Latin, *forma*) or also with rank of varieties have been omitted. However, the names cited as synonyms in checklists are still available for use if needed.

The history and usage of varieties and subspecies have been reviewed by various authors, for example, Boivin (*10*). Proposals to amend the Code on this subject were submitted to the Nomenclature Section of the last International Botanical Congress in 1975 by Raven (*89*). His solution was that "variety" be regarded as synonymous with "subspecies" and that "names published as varieties are to be regarded as subspecies without change of author's name." This proposal was defeated decisively in the preliminary mail vote and was not considered further.

INTERSPECIFIC HYBRIDS—Hybrids between tree species are mentioned less prominently than in previous checklists and without common names. Natural interspecific hybrids are cited under both parent species in a paragraph beginning "Hybridizes with" and followed by names of other parental species involved. If the hybrid has been named formally, the binomial is added in parentheses. The multiplication sign (×) preceding the second word, or specific epithet, denotes a hybrid. In several large genera, an alphabetical list of binomials of hybrids is inserted. Artificial hybrids and those appearing rarely among cultivated trees are omitted.

Use of binomials for hybrids generally is not necessary in forestry. It is much simpler and clearer to designate supposed hybrids merely by a formula, with specific epithets of the two parent species joined by the multiplication sign (*56, 95*). Sometimes binomials are shifted from one cross to another after progeny tests from the type tree reveal one parent was incorrectly named. Similarly, the common names of parent species can be joined together with the word hybrid or cross, to avoid new English names.

Citations and synonymy of binomials for interspecific hybrids are omitted in this revision but may be found in the 1953 checklist. Names published during the interval are cited in Appendix 3.

Many studies of natural interspecific hybrids have been cited as references under a parent species. An early list of hybrids in North American forest-tree genera was compiled by Johnson (*48*).

SPELLING OF SCIENTIFIC NAMES—Under the International Code, the original spelling of scientific names must be retained, except for the correction of typographic or orthographic errors. Where changed, the original spelling is quoted under the citation. In geographic names, the original spelling must be retained, even though the name of the place may have changed and the words lack uniformity. Examples are *Fraxinus pennsylvanica* and *Prunus pensylvanica*, both derived from the same locality honoring William Penn.

Specific and varietal names taken from persons usually have the Latin masculine genitive ending *-ii* or the feminine equivalent *-iae*. However, when the name of the person ends in a vowel or *-er*, the termination is shortened to *-i* or *-ae*. Inconsistencies or orthographic errors in the original publication are corrected here.

CAPITALIZATION OF SCIENTIFIC NAMES—Family names and generic names are always capitalized, but specific and varietal names (epithets) are not capitalized in Forest Service checklists or other publications of the United States Government. A Code recommendation that all specific and varietal names begin with small letters was adopted in 1950.

LATIN TERMS—Some citations are followed by Latin terms in italics which explain the status of the scientific names under the Code. *Nomen* or *nomen nudum* (*nom. nud.*), meaning bare name, is one without description and thus not validly published at the reference cited. Most *nomina nuda* are omitted here. An illegitimate name, *nomen illegitimum* (*nom. illeg.*), is one contrary to a rule and must be rejected. *Nomen conservandum* (*nom. cons.*), or conserved name, is a generic name in general use which has been approved officially as an exception to the rules, such as one not the oldest or one used before for a different genus (later homonym). A generic name rejected because another is conserved is called *nomen rejiciendum (nom. rejic.)*.

## PRONUNCIATION OF SCIENTIFIC NAMES

The pronunciation of accepted scientific names is indicated in this Checklist by accents, added from several sources. (Incidentally, these accents are not to be copied when the names are used elsewhere.) This method has been adopted in some botanical references (*31, 74, 83, 90,* etc.). Many generic names with derivation can be found in unabridged dictionaries also.

One of the most detailed sources is Bailey (*4*), which contains accents throughout, for synonyms as well as accepted names. His name-list, English Equivalents of Latin Names of Species (p. 148–159), shows pronunciation along with meanings. In a separate small volume, Bailey (*5*, p. 139–181) expanded his list of specific names with accents and meanings and added a list of generic names likely to be met in horticultural literature (p. 119–138). Origin and pronunciation of plant names may be found also in special compilations, for example, one for gardeners (*111*). The reference Botanical Latin by Stearn (*117*) contains additional information.

There are differences in pronunciation of some scientific names and many exceptions to the rules. Botanical Latin is highly specialized and differs from classical Latin in the incorporation of words from many modern languages and aboriginal dialects as well as from classical Greek. The easiest way to pronounce an unfamiliar scientific name is like an

English word and in the most pleasant way. However, there are no silent letters, and final vowels are sounded.

Latin rules for accents are simple. Words of two syllables are accented on the first syllable. Words of more than two syllables are accented on the second from last (penult) if that syllable is long (originally long in time); on the third from last (antepenult) if the second from last is short.

In this revision the pronunciation of a word is indicated by an accent mark over the syllable stressed. The grave accent (`) designates the long English sound of the vowel, and the acute accent (´) the short or otherwise modified sound (not long).

These sounds have been summarized by Bailey (*4*, p. xvi), as follows:

à as in *cane*.
á as in *can*.
è as in *mete*.
é as in *met*.
ì as in *pine*.
í as in *pin*.
ò as in *cone*.
ó as in *con*.
ù as in *jute*.
ú as in *jut*.
y is often used instead of i.

The accents indicate also the pronunciation in romance languages, such as Spanish and French, which have vowel sounds nearer to classical Latin. Thus, à as in *car*, è as in *prey;* ì as in *police*.

Gleason (*33*) has proposed additional general principles for pronunciation of botanical names. One simple rule is that names derived from a single classical root are pronounced like the related English word, as *rígida;* (rigid), *ovàta* (ovate). According to Gleason, names from two roots should be accented to preserve the sound of both where possible like the related English word, as *Rhododéndron macrophýllum*. Some names traditionally accented otherwise perhaps could be changed. Thus, *Zanthóxylum* to *Zanthoxỳlum*, *Gymnócladus* to *Gymnoclàdus*, and *Rhizóphora* to *Rhizophòra*. Also, *Quercus bícolor* to *Q. bìcolor*, *Liriodéndron tulipífera* to *L. tulipifèra*. An alternate pronunciation for several names is added here after the derivation.

Commemorative names of English origin, such as persons and places, are pronounced generally like the original word. However, by custom, some names are accented differently. *Halèsia* is spoken more readily than *Hàlesia*, *Washingtònia* than *Wáshingtonia*. *Cupréssus sargéntii* is easier than *C. sárgentii*. Names based on foreign words are usually pronounced as though English. *Quércus michaùxii* can be pronounced with *x* like *z* or *ks* or silent (simplest).

## CITATIONS AND AUTHORS

Citations of place of publication (or literature) of accepted scientific names and important synonyms are included in this revision as in the 1953 checklist. They were omitted from the 1898 and 1927 checklists but were given in full in the first compilation in 1897 (*121*). These citations for purposes of precision are useful in tracing names and in verifying their correctness under the International Code (ICBN).

Periodical title word abbreviations follow the Word-Abbreviation List by the National Clearinghouse for Periodical Title Word Abbreviations (*2*). Thus, there are slight changes from the 1953 checklist, which cited Whitlock (*140*), then the standard for publications of the United States Department of Agriculture. Also, the word order of some periodicals has been shifted slightly to agree with that on the title page.

Some years of publication have been revised from later sources. For example, Stafleu and Cowan (*114, 116*) have determined precise dates of numerous works published in parts as well as dates of serials.

Names of authors are abbreviated if long or common, as provided by the Code. Most abbreviations stop before the second vowel. Appendix 4, Authors of Accepted Scientific Names, prepared for this revision, contains brief biographical information.

Two authors sharing in the publication of a name are joined by the ampersand symbol &, meaning and (Latin, *et*). Double citation of authors refers also to two persons, the first in parentheses. Incidentally, many older works including Sargent *(99–103)* cited only a single author, where there were two authors, only the second.

Sand live oak, *Quercus virginiana* var. *geminata* (Small) Sarg., mentioned earlier, illustrates double citation. Small, the first author (in parentheses), named the oak *geminata* but in a different combination (as the species *Quercus geminata* Small). Sargent, the second author, transferred the oak to the combination used (as a variety).

Some scientific names given or proposed by one author were published by another. When an author who first validly published a name ascribes it to another person, the two names are joined (in this revision) by the connecting word *ex* (ICBN Rec. 46C). In the 1953 checklist only the first author appeared after the accepted name, following custom, though both names were listed in the citation below. However, the Code recommends that the *second* author be retained, if one is dropped. For example, *Pinus contorta* Dougl. ex Loud. or *Pinus contorta* Loud., lodgepole pine. David Douglas used this scientific name on specimens but not in print. Loudon validly published the name with description, ascribed to Douglas, after the latter's untimely death.

When a scientific name with a description by one author is published in a work by another, the word *in* is used to connect the names of the two authors (ICBN Rec. 46D). The Code further recommends that the *first* author be retained, if one is dropped. For example, *Pinus edulis* Engelm. in Wisliz. or *Pinus edulis* Engelm., pinyon. Engelmann gave the name and prepared the description for publication in the book by Wislizenus about his tour. In both the 1953 checklist and this revision, the first author appears after the accepted name, but both persons are listed in the citation below.

In most forestry publications, names of authors of scientific names may be dropped after the first mention or may be omitted. Also, authors need not be cited in titles or long lists. It is unnecessary to learn or remember these personal names.

## COMMON NAMES, OR ENGLISH PLANT NOMENCLATURE

The importance of uniform common names of United States trees was recognized early by the Forest Service and predecessor agencies in the checklists and other publications. However, Charles Sprague Sargent in his valuable works did not attempt to adopt distinctive English names.

Leadership in selection of common names of United States trees was accepted by the Forest Service Tree and Range Plant Name Committee. It was established more than 60 years ago as the Committee on Common Names of Trees and afterwards was expanded.

Principles for standardizing English tree names were proposed long ago by Bernhard F. Fernow, first chief of the Division of Forestry, in the introductions to the bulletin on nomenclature in 1897 and the first checklist in 1898 (*121, 122*). These principles were stated also in later checklists (*123*, p. 3–7, 237–239; *125*, p. 3–5; *55*, p. 14–16). Range plant names were treated similarly by Dayton (*27*). Prefaces of the two editions of Standardized Plant Names (*85, 52*) discussed the more important considerations also.

The Style Manual of the U.S. Government Printing Office (*126*; p. 227–284) contains information on compounding plant names as well as a long list. Rickett (*92*) has proposed guides for compounding.

Plant names are a good example of the natural tendency to unite short words when a special meaning is intended. However, some authors do not compound plant names. Technical writers have the responsibility for providing leadership. Otherwise, compounding will be left to compilers of dictionaries.

The present compiler has felt the need for a more detailed list of principles for common names of United States trees. The result is Appendix 6, Guiding Principles for Common Names of United States Trees. These general principles prepared for trees should be applicable on a broader scale to other plants. An important addition is that common sense should be exercised. Any new common name proposed for approval should have a reasonable chance of popular acceptance.

Cultivated varieties of native trees and their common names are outside the scope of this checklist, as previously noted. However, Sudworth's two editions contained lists of varieties distinguished in cultivation. Names of cultivated varieties (cultivars) of trees and other plants in English and other modern languages are governed by the International Code of Nomenclature of Cultivated Plants (Cultivated Code), prepared by the International Commission of the Nomenclature of Cultivated Plants (*32*). Appendix 7 has common names of plant families.

English common names of United States trees originated from various sources. Many were given by early settlers from the resemblance to species in England. However, others were invented as needed. Names of several native trees are of American Indian origin.

Along the Mexican border, from Texas to California, some accepted names are Spanish or Mexican Indian. Many Spanish names used in these border States are added under other common names. In this compilation of Spanish names, special credit is given to the Texas manual by Correll and Johnston (*21*) and to E. Shirley Bliss, late forester of the Forest Service, for his contribution to the 1953 checklist.

Northeastern trees have additional French Canadian names in the Province of Quebec, not cited. They may be found in Fernald (*31*) and in references on the trees of Canada (*14, 19, 42*).

## RANGES

The geographic distribution, or natural range, of each tree species native in continental United States has been compiled here from the recently completed Atlas of United States Trees. That reference discussed the history of tree distribution maps and their preparation. Early work and maps by George B. Sudworth, the first Forest Service dendrologist, were reviewed by Little (*54*).

Published maps in the 6-volume Atlas of United States Trees (*58, 61, 63, 65, 68, 134*) are cited here by volume and map numbers and may be consulted for further information. Contents of each volume are indicated by the titles cited. Together, the first 5 volumes contain large maps of 654 species showing the entire distribution within the country or, if beyond, also in North America (except for tropical species). Volume 6, Supplement, will contain additional small maps for the 35 accepted species of *Crataegus*, hawthorn, the text ranges omitted from Volumes 1 and 3, and an index to all maps. Additional references on tree ranges, for example by States, are cited in the Atlas.

Important Forest Trees of the United States (*66*) contains small maps of 180 species reduced from those of the Atlas and arranged concisely for

reference. Detailed distribution maps of the forest trees of California have been prepared by Griffin and Critchfield (37). Earlier, maps of the commercial forest trees of Virginia, North Carolina, South Carolina, and Mississippi were published by the forest survey of the Forest Service.

Ranges in this Checklist are given in outline and abbreviated form. States and Canadian Provinces along the borders, corners, and irregular limits of occurrence are named, generally from northeast to northwest, southwest, and southeast. However, ranges of species confined to the Coastal Plain of Southeastern United States are cited from northeast to southeast and southwest. Distribution of southwestern trees of the Mexican border region is indicated from southeast to northeast, northwest and southwest. Portions of large States are mentioned where the distribution within is not widespread. Oceans provide natural limits.

Distribution is more or less continuous in a line connecting the States named. For example, a species listed from Indiana and Missouri occurs also in Illinois, or another cited from Washington to California is found also in Oregon. A species ranging from Texas to Florida is found in all the States between, and one recorded from Maine westward to Minnesota, south to Texas, and then east to Florida is widely distributed through the States and northward along the Atlantic coast back to Maine. Isolated stations are omitted, though mapped in the Atlas. Counties or other geographical divisions are cited in a few instances, mostly for trees of local or restricted occurrence.

Entire ranges of species outside continental United States have been revised from additional records but are not given in detail. Maps of native trees of Canada have been published by Hosie (42) and others. For the trees extending southward, the Mexican States forming the outlines of distribution are cited where known. Likewise, occurrence in West Indies, Central America, and South America is noted. Special mention is made of trees also in Puerto Rico and the Virgin Islands.

Distribution of naturalized trees, often local and scattered, has been compiled but generally is not known in detail. The country or continent of origin is mentioned.

The Atlas maps will serve as a basis for revision and correction, perhaps by States. The distribution of certain species is still imperfectly known. Ranges of many naturalized species have not been recorded accurately and may be expected to expand.

Detailed local distribution of trees can be recorded best by competent local observers, especially foresters, botanists, and naturalists who from their field experience are familiar with the exact limits, irregularities, and disjunct stations. Such observers should be urged to publish their observations and make them available. The time for refinement of the original ranges will be limited because of the rapid destruction and disturbance of natural vegetation.

## SYMBOLS AND ABBREVIATIONS

Naturalized genera and species are designated in this Checklist by small capitals. Symbols and abbreviations are explained below.

ASTERISK—The asterisk (*) is used here as in the 1927 and 1953 checklists to designate nearly 200 important forest tree species commercially useful for lumber or other wood products or noteworthy for special values. For example, some trees serve for shade, ornament, and shelterbelts, while others bear edible fruits and nuts or yield chemicals such as oleoresins and drugs.

DAGGER—The dagger (†) indicates a scientific name or common name accepted in the 1927 checklist (the same symbol used in the 1953

checklist). For scientific names the dagger is placed in the synonymy, where the accepted name is repeated. A dagger after an approved common name confirms that no change has been made, while the same symbol after one of the other common names shows which one was formerly approved.

DOUBLE DAGGER—The double dagger (‡) indicates similarly a scientific name or common name accepted in the 1953 checklist. Thus, the dagger and double dagger symbols correlate the nomenclature.

TIMES SIGN—The times or multiplication sign (×) designates a hybrid, as discussed under interspecific hybrids on page 8.

SECTION MARK—The section mark (§) under References (page 25) designates descriptive floras and manuals.

ABBREVIATIONS OF PLACE NAMES—Under Range many abbreviations are used for a concise presentation. The usual direction signs are indicated by small letters: north (n.), east (e.), south (s.), west (w.), central (c.), northeast (ne.), etc.

States are abbreviated in the familiar form, except for these short names, Alaska, Hawaii, Idaho, Iowa, Maine, Ohio, and Utah. Also abbreviated are Puerto Rico (P.R.), the Virgin Islands (V.I.), Canada (Can.), Mexico (Mex.), the Provinces of Canada, and the States of Mexico (see lists below).

Abbreviations of Provinces of Canada

| | | | |
|---|---|---|---|
| Alta. | Alberta | Nfld. | Newfoundland |
| B.C. | British Columbia | Ont. | Ontario |
| Labr. | Labrador (to Nfld.) | P.E.I. | Prince Edward Island |
| Mack. | Mackenzie District | Que. | Quebec |
| Man. | Manitoba | Sask. | Saskatchewan |
| N.B. | New Brunswick | Yukon | Yukon Territory |
| N.S. | Nova Scotia | | |

Abbreviations of States of Mexico

| | | | |
|---|---|---|---|
| Ags. | Aguascalientes | Mor. | Morelos |
| B. Cal. | Baja California (Norte) | Nay. | Nayarit |
| B. Cal. Sur | Baja California Sur | N.L. | Nuevo León |
| Camp. | Campeche | Oax. | Oaxaca |
| Chih. | Chihuahua | Pue. | Puebla |
| Chis. | Chiapas | Q. Roo | Quintana Roo |
| Coah. | Coahuila | Qro. | Querétaro |
| Col. | Colima | S.L.P. | San Luis Potosí |
| D.F. | Distrito Federal | Sin. | Sinaloa |
| Dgo. | Durango | Son. | Sonora |
| Gro. | Guerrero | Tab. | Tabasco |
| Gto. | Guanajuato | Tamps. | Tamaulipas |
| Hgo. | Hidalgo | Tlax. | Tlaxcala |
| Jal. | Jalisco | Ver. | Veracruz |
| Méx. | México | Yuc. | Yucatán |
| Mich. | Michoacán | Zac. | Zacatecas |

## STATISTICAL SUMMARY

Statistical data on the kinds of native and naturalized trees of continental United States accepted in this and the three previous checklists are summarized in Table 1. These totals are high, as explained below. Numbers of genera and species both native and naturalized are arranged by families in Appendix 7.

TABLE 1—*Statistical summary of four checklists, including both native and naturalized trees*

| Year of checklist | Families | Genera | Species | Varieties | Total species and varieties |
|---|---|---|---|---|---|
| 1979 | 76 | 244 | 748 | 49 [a] | 797 [a] |
| 1953 | 77 | 252 | 865 | 61 [b] | 926 [b] |
| 1927 | 78 | 227 | 862 | 228 | 1,090 |
| 1898 | 60 | 167 | 504 | 80 | 584 |

[a] Not counting 35 typical varieties.
[b] Not counting 45 typical varieties.

TABLE 2—*Native and naturalized trees in 1953 and 1979 checklists*

| Year of checklist | Families | Genera | Species |
|---|---|---|---|
| 1979 | | | |
| Native trees | 73 | 216 | 679 |
| Naturalized trees | 3 | 28 [a] | 69 |
| Total | 76 | 244 | 748 |
| 1953 | | | |
| Native trees | 71 | 221 | 787 |
| Naturalized trees | 6 | 31 | 78 |
| Total | 77 | 252 | 865 |

[a]Including 4 genera with native shrubs and herbs.

Table 2, Native and naturalized trees, separates totals in this and the 1953 checklist. Native trees of continental United States accepted in this checklist total approximately 679 species in 216 genera and 73 plant families. Naturalized trees add 69 species, 28 genera, and 3 families. The combined total is approximately 748 species in 244 genera and 76 families. The number of varieties accepted is 48, not counting 35 typical varieties.

About 85 additional species are mentioned in notes. Almost two-thirds of these are introduced trees either not yet accepted as naturalized or trees formerly so classed. One-third are native shrubs which sometimes may reach tree size or which previously were so listed. A few were removed for other reasons.

Actually, the number of important native trees is somewhat less than 679 species. The genus *Crataegus*, hawthorn, has been reduced from 150 species to 35 in this revision. About 98 species are tropical trees confined in continental United States to southern and central Florida. About 10 others are subtropical trees of extreme southern Texas, and 10 more are subtropical at the southern border of Arizona.

The broad definition of a tree accepted here permits the inclusion of about 70 species usually shrubs but sometimes reaching tree size. Thus, the number of species of native trees, excluding tropical, subtropical, and shrubby species, could be reduced for study to fewer than 500.

Important forest tree species, designated here by an asterisk (*), number less than 200. The handbook cited, Important Forest Trees of the United States (*66*), describes, illustrates, and maps 180 species, more than one-fourth of the total.

FAMILIES—The 76 plant families of trees of continental United States (73 native and 3 introduced) are listed in Appendix 7. Changes from the 1953 checklist are minor. Four families of introduced trees are omitted

because their introduced genera and species are not now classed as naturalized. Those families and their species, which are mentioned in notes, are: Apocynaceae, dogbane family (represented also by native herbs and shrubs), *Nerium oleander*, oleander; Moringaceae, horseradish-tree family, *Moringa oleifera*, horseradish; Proteaceae, protea family, *Grevillea robusta*, silk-oak; and Punicaceae, pomegranate family, *Punica granatum*, pomegranate.

Three plant families have been added, though no additional species are involved. Scrophulariaceae, figwort family (represented also by native herbs and shrubs), has a naturalized tree species, *Paulownia tomentosa*, royal paulownia, sometimes placed in the closely related family Bignoniaceae. To agree with usage, 2 segregate families of Pinaceae, pine family, have been accepted: Cupressaceae, cypress family, and Taxodiaceae, redwood family. However, the latter has not been separated from the former in a recent study by Eckenwalder (*30*).

Further division of the basic, well-established plant families seems unnecessary. Several other segregate families accepted by some authors have been added in parentheses, both in the main checklist and in the Botanical Index.

Eight tropical families (and 2 introduced) are represented only in Florida. Six others with shrubs and herbs northward have their only native trees in that State.

The 8 plant families with greatest numbers of tree species native in continental United States are tabulated below from Appendix 7. Numbers of genera and species of native trees are shown for each family. Any naturalized trees are added in parentheses. These 8 families together contain more than one-half of all native tree species.

| Family | Number of genera | Number of species |
|---|---|---|
| Rosaceae, rose | 12 (1) | 77 (9) |
| Fagaceae, beech | 5 | 65 (1) |
| Pinaceae, pine | 6 | 61 (1) |
| Leguminosae, legume | 19 (2) | 44 (6) |
| Salicaceae, willow | 2 | 35 (5) |
| Cupressaceae, cypress | 5 | 26 (1) |
| Oleaceae, olive | 4 (1) | 22 (3) |
| Betulaceae, birch | 5 | 20 (1) |
| Total | 58 (4) | 350 (27) |

SMALLEST FAMILIES—Two species are so distinct that they are placed alone in separate families (monotypic): *Leitneria floridana*, corkwood (Leitneriaceae, corkwood family), confined to southeastern United States; *Koeberlinia spinosa*, allthorn (Koeberliniaceae, allthorn family), of southwestern United States, northern Mexico, and Bolivia. The second has been referred by some authors to the family Capparaceae.

A third species, *Canotia holacantha*, canotia, has been placed also in a distinct family, Canotiaceae, by Airy Shaw (*141*, p. 193). However, that species of Arizona, extreme southern Utah, and northern Sonora is retained here in the Celastraceae.

GENERA—The 242 genera of trees of continental United States (215 native and 27 introduced) are listed in Appendix 7 by families under the botanical classification. The slight reduction in number from the 1953 checklist involves several introduced trees formerly reported as

TABLE 3—*Generic names in 1979 checklist changed from those in 1953 checklist*

| Accepted name in 1979 checklist | Name in 1953 checklist | Number of tree species | Reason for change |
|---|---|---|---|
| *Acoelorrhaphe* H. Wendl. | *Paurotis* O. F. Cook | 1 | *Acoelorrhaphe* previously rejected as provisional name is now accepted. |
| *Amphitecna* Miers | *Enallagma* (Miers) Baill. | 1 | Older name. |
| *Caesalpinia* L. | *Poinciana* L. | 3 | Two genera united. |
| *Cereus* Mill. | *Cereus* Mill.<br>*Cephalocereus* Pfeiff. | 1 | Two genera united. |
| *Fremontodendron* Cov. | *Fremontia* Torr. | 2 | Proposal to conserve *Fremontia* (later homonym) was rejected. |
| *Guaiacum* L. | *Guaiacum* L.<br>*Porliera* Ruiz & Pav. | 1 | This species transferred back from *Porliera*, a South American genus. |
| *Guapira* Aubl. | *Torrubia* Vell. | 1 | Older name. Proposal to conserve *Torrubia* was rejected. |
| *Heteromeles* M. J. Roem. | *Photinia* Lindl. ex Edwards | 1 | Change back to divided or segregate genus, preferred in usage. |
| *Manilkara* Adans. | *Achras* L. | 2 | Proposal to conserve *Manilkara* was accepted. Proposal to conserve *Achras* was rejected. |
| *Mastichodendron* (Engl.) Lam | *Sideroxylon* L. | 1 | Segregate genus is preferred in usage. |
| *Eugenia* L.<br>*Myrcianthes* Berg | *Eugenia* L. | 1 | Segregate genus is also in usage. |
| *Sequoia* Endl.<br>*Sequoiadendron* Buchholz | *Sequoia* Endl. | 1 | Segregate genus is also in usage. |

naturalized but now merely mentioned in notes.

Additions include 2 genera of shrubs or small trees, *Arctostaphylos*, manzanita, and *Nemopanthus*, mountain-holly. Also, *Rhodomyrtus*, downy-myrtle, has been added as naturalized, and several others (mostly tropical in Florida) not well established are cited in notes.

Changes in generic names have been kept at a minimum of 12, involving only 16 species (Table 3). Proposals by the compiler to conserve 3 names in use were rejected. Changes in specific names, including these 16, are summarized in Appendix 8.

Thirty-nine generic names in this Checklist are *nomina conservanda*, or conserved names. They have been retained under the International Code of Botanical Nomenclature as exceptions to the rules of priority or homonyms because of established use and are designated in the citations by the abbreviation *nom. cons.*

The 13 genera with greatest numbers of tree species native in continental United States are tabulated below from Appendix 7. Any naturalized trees are added in parentheses. These 13 genera together contain about two-fifths of all native tree species and more than 100 additional shrub species.

| Genus | Number of tree species | Number of shrub species |
|---|---|---|
| *Quercus*, oak | 58 (1) | about 10 |
| *Pinus*, pine | 36 (1) | |
| *Crataegus*, hawthorn | 35 (1) | few |
| *Salix*, willow | 27 (4) | about 60 |
| *Prunus*, cherry, plum | 18 (5) | about 15 |
| *Fraxinus*, ash | 16 | |
| *Ilex*, holly | 13 | 1 |
| *Acer*, maple | 13 | |
| *Juniperus*, juniper | 13 | 1 |
| *Yucca*, yucca | 11 | about 15 |
| *Cornus*, dogwood | 11 | 3 (2 herbs) |
| *Carya*, hickory | 11 | |
| *Populus*, cottonwood, poplar | 8 (1) | |
| Total of 13 genera | 270 (13) | more than 100 |

SMALLEST GENERA—About 24 genera (monotypic) of native trees have only 1 species and no other representatives elsewhere. Two mentioned above have separate families. The remaining genera may be divided into 2 groups.

The following 12 single species of their genera are restricted (or endemic) to continental United States:

*Cliftonia monophylla*, buckwheat-tree
*Elliottia racemosa*, elliottia
*Franklinia alatamaha*, franklinia
*Lyonothamnus floribundus*, Lyontree
*Maclura pomifera*, Osage-orange
*Oxydendrum arboreum*, sourwood
*Pinckneya pubens*, pinckneya
*Planera aquatica*, water-elm
*Sequoia sempervirens*, redwood
*Sequoiadendron giganteum*, giant sequoia
*Serenoa repens*, saw-palmetto
*Umbellularia californica*, California-laurel

These 10 single species in their genera are not confined to continental United States but range into Mexico or the West Indies or beyond:

*Acoelorrhaphe wrightii*, paurotis-palm
*Canotia holacantha*, canotia
*Chilopsis linearis*, desert-willow
*Cyrilla racemiflora*, swamp cyrilla
*Heteromeles arbutifolia*, toyon
*Hypelate trifoliata*, hypelate
*Krugiodendron ferreum*, leadwood
*Olneya tesota*, tesota
*Suriana maritima*, baycedar (widespread)
*Ungnadia speciosa*, Mexican-buckeye

Several other temperate genera, mostly small, have only 1 native tree species in continental United States. These 10 temperate genera, with approximate number of species worldwide added in parentheses, are:

*Carpinus*, hornbeam (30)
*Cladrastis*, yellowwood (4)
*Fagus*, beech (10)
*Gymnocladus*, coffeetree (4)
*Libocedrus*, incense-cedar (10)
*Liquidambar*, sweetgum (3)
*Liriodendron*, yellow-poplar (2)
*Lithocarpus*, tanoak (100–200)
*Sassafras*, sassafras (3)
*Washingtonia*, washingtonia (2)

Thirteen other temperate genera have only 2 native species (1 may be shrubby). These genera, with worldwide totals added in parentheses, are:

*Castanopsis*, chinkapin (100)
*Catalpa*, catalpa (11)
*Cercis*, redbud (8)
*Corylus*, hazel (15)
*Gleditsia*, honeylocust (14)
*Hamamelis*, witch-hazel (6)
*Holacantha*, holacantha (2)
*Illicium*, anise-tree (40)
*Nemopanthus*, mountain-holly (2)
*Pseudotsuga*, Douglas-fir (7)
*Taxodium*, baldcypress (2)
*Thuja*, thuja (6)
*Torreya*, torreya (6)

GENERA ALMOST ENDEMIC—Several other genera have most species and their centers of distribution within continental United States and thus are almost endemic, However, they extend into Mexico or sometimes slightly beyond or into Canda. Twelve examples (3 with only 2 species, repeated), with number of native tree species and in parentheses the total, are:

*Asimina*, 3 species (1 also in Canada; also native shrubs, 5; total 8).

*Cercocarpus*, 5 species (also 1 shrub, and about 4 others in Mexico; total about 10).

*Cowania*, 1 species (also 1 shrub and 1 in Mexico; total 3).

*Fremontodendron*, 2 species (both in Mexico).

*Garrya*, 1 species (also native shrubs in sw. U.S., about 7, including 3 in Mexico); Mexico, additional, about 5, including 1 also in Central America; West Indies, 1; total, about 15).

*Holacantha*, 1 species (also 1 shrub, both in Mexico).

*Kalmia*, 1 species (also shrubs, 5; Cuba, 1; total about 7).

*Nemopanthus*, 2 species (1 also in Canada).

*Robinia*, 4 species (also native shrubs in se. U.S., 5 or fewer); Mexico, 1 additional; total, about 10.

*Shepherdia*, 1 species (native shrubs, 2; total 3, also in Canada and 1 in Alaska).

*Taxodium*, 2 species (1 also in Mexico and Guatemala).

*Vauquelinia*, 2 species (native shrubs, 1); Mexico, additional, about 5; total, sw. U.S. and Mexico, trees and shrubs, about 8.

TROPICAL GENERA—The native tropical trees of southern (or also central) Florida total about 98 species in 79 genera, 66 of which are not represented northward. Most of these tropical genera have only 1 or 2 native species, but 2 have 3 species each, and 1 genus has 4. A few tropical genera, partly different, extend north to southern Texas.

NUMBER OF VARIETIES—The number of varieties accepted in this revision is 49, not counting 35 typical varieties in the same species. Three varieties lack corresponding typical varieties, which are foreign. Thus, the total has been reduced from that in the 1953 checklist (61, not counting 45 typical varieties).

Most of these varieties are distinct and have been treated as separate species by some authors. Other varietal names accepted elsewhere are cited in the synonymy or in Appendix 3 and are available for optional use.

ALASKA TREES—The trees of the 49th State are treated here, as in the 1953 checklist. With about one-fifth the area of the Lower 48 States, Alaska has a relatively small number of tree species because of its far northern location. Totals are: 8 plant families, 17 genera, 32 tree species (also 1 naturalized), and 6 shrub species rarely reaching tree size (mentioned in notes). Lists, distribution maps, and further information are contained in three publications (*132*, *133*, *134*). Two tree species absent from contiguous United States are *Salix alaxensis* (Anderss.) Cov., feltleaf willow, and *Salix arbusculoides* Anderss., littletree willow.

CANADA TREES—The native trees of Canada are listed too, as previously noted. Additional information is available in publications of the Canadian government *(42, 14)*. From the Checklist of the Native Trees of Canada *(19*; p. xii-xvii), the following count, which omits naturalized trees, is taken: 24 families, 48 genera, 150 species, and 23 varieties.

## NATURALIZED SPECIES

Introduced tree species that have become established and grow as wild total 69 species (Table 2). Though some are in genera with native trees, these naturalized trees add 28 genera and 3 families, as designated by capitals and small capitals in the Botanical Index (Appendix 7).

Naturalized trees may be grouped climatically into temperate and tropical. The temperate trees are from Europe and Asia, especially China and Japan. Examples are familiar fruit trees such as apple, *Malus sylvestris*, and peach, *Prunus persica*. Others introduced for shade or ornament include ailanthus, *Ailanthus altissima;* royal paulownia, *Paulownia tomentosa;* and white mulberry, *Morus alba*. Few species introduced for forestry purposes, either in plantations or shelterbelts, have become wild afterwards. Examples are Scotch pine, *Pinus sylvestris;* European larch, *Larix decidua;* and Siberian elm, *Ulmus pumila*.

The trees naturalized from tropical regions of the world are established mainly in southern Florida. Among the tropical fruit trees are guava, *Psidium guajava;* papaya, *Carica papaya;* and mango, *Mangifera indica*. Shade and ornamental trees include casuarina, *Casuarina equisetifolia*, and cajeput-tree, *Melaleuca quinquenervia*. Fewer, more hardy species are found in southern Texas and along the Mexican border west to southern California.

The exact number of tropical tree species to be classed as naturalized in southern Florida is uncertain. Several listed by Small *(110)* and accepted in the 1953 checklist apparently are not now established and have been reduced to notes in this revision. Others added by Long and Lakela *(74)* as doubtful or apparently not widespread are also mentioned in notes. Among the few added in this revision as naturalized in southern Florida are Brazil peppertree, *Schinus terebinthifolia* (erroneously called "Florida-holly"), and downy-myrtle, *Rhodomyrtus tomentosus*.

Morton *(81)* in an article entitled Pestiferous Spread of Many Ornamental and Fruit Species in South Florida listed more than 200 alien species with "weed tendencies." Nearly one-third of them are trees, about 20 of them were accepted in the 1953 checklist. The great increase in the naturalized flora was attributed mainly to escaping from cultivation of trees and other plants deliberately imported as ornamentals or as sources of food, timber, fiber, or forage. She concluded: "We should try to discourage the planting of some undesirable species and warn of the need to control the spread of others, in order to reduce the maintenance load of cultivated grounds and the threat to undeveloped areas which are being overrun by vigorous alien vegetation." Thus, the number of naturalized tree species in South Florida apparently will increase. A similar spread of exotics has occurred in Hawaii.

## NUMBER OF SPECIES AND DISTRIBUTION

Under each genus of native trees is a summary of the approximate number of species in the world and their geographic distribution. These species totals include numbers of native and naturalized trees accepted in this Checklist and any native shrubs. Then follow estimates for other regions, such as Mexico or New World, Eurasia or Old World, and the world total. Thus, these figures show the approximate sizes of genera in

number of species and the portion within continental United States. Introduced genera with naturalized species, mostly 1 or 2 and from the Old World, are not tabulated.

Species ranging north to Alaska are noted *(134)*. Mentioned for comparison are the tropical species of Florida present also in Puerto Rico and the Virgin Islands as well as generic totals in those islands *(71, 73)*. Figures for several genera which have species native also in Hawaii are added *(94, 113)*. Two tree species of wide distribution are native in Hawaii, Florida, and Puerto Rico and the Virgin Islands: *Sapindus saponaria* and *Dodonaea viscosa* (usually shrubby).

Totals of foreign species have been compiled from various sources, particularly current taxonomic monographs. Published floras have been useful for New World distribution, for example, in the West Indies and Central America. The most comprehensive volume for worldwide generic totals is Airy Shaw *(141)*. Especially helpful are the papers for a generic flora of the southeastern United States by Wood *(142)* and others. Figures are cited in other references *(21, 74, 83, 90, etc.)*. The totals are often intermediate between available estimates. Where variation is great, low figures indicating a conservative count are given.

These figures are more than statistical summaries and may have useful applications. Several genera have only one or few species, restricted mostly to continental United States, as listed in the Statistical Summary. Many are New World only, while others are worldwide or almost cosmopolitan. Some are confined to the north temperate zone, such as North America and Eurasia. Their numbers diminish southward into tropical mountains of Mexico and Central America and in Asia. The genera represented only in southern Florida are mostly tropical and commonly have larger numbers in the tropics of America or also the Old World.

These patterns of generic distribution, when correlated with studies of the fossil record, or paleobotany, may suggest centers of probable origin and routes of migration. Scattered, or discontinuous, distribution generally indicates an old genus. A small area could suggest either a relatively young or a very old genus. Examples are plant genera confined to eastern United States and eastern Asia, particularly China and Japan. Some genera, such as *Sequoia*, redwood, have a greater geographic range known as fossils than as living trees.

Regional totals may have application in tree planting programs. Relatives of native species may be sought for testing for special purposes or products. Some of these foreign or exotic species may be superior or better adapted than the natives. Likewise, the summaries may be of interest in forest genetics or tree breeding programs, such as disease resistance. Sources of related species for hybridization or crossing may be indicated.

Local, or endemic, tree genera merit special attention. They may be more successful in other parts of the world, beyond the ranges of their own parasitic insects and disease organisms. These trees without close relatives also should be screened further for unique chemical compounds of possible value.

## RARE AND LOCAL TREES

Some species of native trees are of special interest because of their rare or local distribution. The Endangered Species Act of 1973 (U.S. Public Law 93–205) has led to a search for plant and animal species that are in danger of becoming extinct or are threatened.

Rare and local trees of the United States have been relatively well known for many years, because of previous studies. Trees are large,

conspicuous, and relatively few in number of native species, being less than one-twentieth of the seed plant species. The ranges of all species of native trees, rare as well as common, have been compiled and recorded in Forest Service checklists. Now, the 6-volume Atlas of United States Trees *(58, 61, 63, 65, 68, 134)* previously cited has published a distribution map of each rare or local tree species. Thus, a list of tree species of small or local distribution is readily extracted from this Checklist and the Atlas.

As authorized by the Endangered Species Act, the Smithsonian Institution *(112)* published a report containing a preliminary list of proposed endangered and threatened plants in continental United States. This list of more than 2,000 species and varieties has since been revised *(3)*. The Act provided that the Secretary of the U.S. Department of the Interior must study the preliminary lists and determine whether any species should be classified officially as endangered. To date, only a few plant species have been officially designated. However, a list of 1,700 vascular plant taxa (United States including Hawaii) proposed for endangered status has been published *(124)*.

From the Smithsonian report a list of trees for continental United States was extracted *(59)*. Trees proposed as endangered totaled 15 species and 3 varieties; those as threatened, 13 species and 9 varieties. Two were cited as extinct, but one was afterwards rediscovered and the other was extinct except in cultivation.

Lists of rare trees are somewhat broader and include many species neither endangered nor threatened with extinction. A *rare* species has small numbers of individuals throughout its range, which may be restricted or widespread. A *local* species has a relatively small range but is sufficiently common not to be called rare. Many common species are rare near the borders of their natural ranges and may be classed on some State lists as rare. Others rare along the borders of continental United States, such as tropical trees of South Florida, may be abundant beyond in nearby countries.

These reports on rare and local trees of the United States have been published *(60, 62, 64)*. Of the 96 species of conifers native in continental United States, about 35 may be classed as rare or local in distribution. About 80 species of temperate hardwoods may be cited similarly. In addition, approximately 60 of about 98 species of native tropical trees in southern and central Florida are classed as rare there, though present in greater numbers beyond in the West Indies.

Many of these rare and local tree species occur within National Forests, National Parks, similar public areas, and privately owned preserves. Thus, the trees have some protection and are accessible for study.

## ACKNOWLEDGMENTS

Grateful acknowledgment is due the Forest Service Tree and Range Plant Name Committee, which has sponsored this Checklist revision and has approved the common names. Membership (1978) is listed on the back of title page.

Other persons in the Forest Service have assisted in various ways. Two research foresters, William F. Johnston, North Central Forest Experiment Station, Grand Rapids, Minn., and Philip M. McDonald, Pacific Southwest Forest and Range Experiment Station, Redding, Calif., reviewed and updated the common names for vote by the Committee. Barbara H. Honkala, research botanist, assisted on several parts of the revision, especially in bibliographic searches, compiling citations, and

preparing the index of common names. Mary H. Devine aided in copying data.

Appendix 5, Common Names for Lumber, was revised by Robert L. Ethington and Harold E. Wahlgren, director and forest products specialist, respectively, of the Forest Products and Engineering Research staff.

Special mention is due the late William A. Dayton, director of the former Division of Dendrology and Range Forage Investigations, Forest Service, for his leadership, guidance, and valuable assistance during preparation of the 1953 checklist. As chairman of the Forest Service Tree and Range Plant Name Committee, he directed the thorough review and revision of common names in that edition. As a result, relatively few changes were needed in this revision. Also, his detailed notes on derivations of scientific names, particularly those from Greek, were a significant contribution.

Much credit is due the National Agricultural Library, of the U.S. Department of Agriculture, Beltsville, Md., and its staff, especially in the preparation of the 1953 checklist. Its Bibliography of Agriculture, published monthly, has been a valuable tool. Also, assistance was given by the Smithsonian Institution Library, including its Botany Library, in Washington, D.C. Index Nominum Genericorum was consulted for citations of accepted generic names. Its office at the Smithsonian Institution made available the latest printouts.

Various persons have contributed information on shrubby species sometimes attaining tree size and on introduced species that may be naturalized.

Ranges were copied, with slight revision, from the 6-volume Atlas of United States Trees. Thus, credit is due numerous persons for their contributions to that reference, especially curators of herbaria and authors of publications with distribution information.

Finally, because the Checklist is a compilation, grateful acknowledgment is due the authors of numerous publications on trees and other seed plants of the United States for the information assembled here. Many of these publications are mentioned under References and citations.

## SUMMARY

The revised Checklist compiles the accepted scientific names and current synonyms, approved common names and others in use, and the geographic ranges of the native and naturalized trees of the United States of America (continental, including Alaska but not Hawaii). The fourth in a series, this Checklist is the official standard for tree names in the Forest Service. The Forest Service Tree and Range Plant Name Committee has sponsored this revision.

Native trees of continental United States accepted in this Checklist total approximately 679 species in 216 genera and 73 plant families. Naturalized trees add 69 species, 28 genera, and 3 families. The combined total is approximately 748 species in 244 genera and 76 plant families. Actually, the number of important native trees is somewhat less. The genus *Crataegus* hawthorn, has been reduced from 150 species to 35 in this revision. About 98 species are tropical trees confined in the United States to southern and central Florida. Shrubby species sometimes reaching tree size are also included. The number of varieties accepted is 49, not counting 35 typical varieties.

About 35 species of conifers native in continental United States and 80 of temperate hardwoods are rare or local in distribution. Approximately 60 of about 98 species of tropical trees in southern and central Florida are classed as rare, though present in greater numbers beyond in the West Indies.

This revision follows the plan of the 1953 checklist by the same compiler, with minor changes. Genera, species, and important varieties are listed alphabetically by accepted scientific name. Natural interspecific hybrids are indicated by names of parent species, with binomials added in parentheses. Pronunciation of accepted scientific names is indicated by accents. Citations are given for accepted names and commonly used synonyms. Under each genus of native trees is a summary of the approximate number of species in the world and their geographic distribution.

The range of each species has been compiled from the recently completed 6-volume Atlas of United States Trees.

Eight Appendixes are: 1, Condensed Checklist—Alphabetical by Scientific Names; 2, Condensed Checklist—Alphabetical by Common Names; 3, New Scientific Names of United States Trees, 1951–1977; 4, Authors of Accepted Scientific Names; 5, Commercial Names for Lumber; 6, Guiding Principles for Common Names of United States Trees; 7, Botanical Index of Plant Families and Genera; and (8) Summary of Changed Specific Names. Index of Common Names includes both those approved and others in use.

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The North American sylva: or, a description of the forest trees of the United States, Canada, and Nova Scotia, not described in the work of F. Andrew Michaux. 3 v., illus. Smith and Wistar, Philadelphia. 1842–49.
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(86) §Peck, Morton Eaton.
A manual of the higher plants of Oregon. ed. 2, 936 p. Binfords and Mort, Portland, Oreg. 1961. (*Crataegus*, 3 spp., p. 445.)
(87) Preston, Richard Joseph, Jr.
North American trees (exclusive of Mexico and tropical United States. ed. 3, 399 p., illus. (maps). Iowa State Univ. Press, Ames. 1976. (Ed. 1, 1948.)
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Manual of cultivated trees and shrubs hardy in North America exclusive of the subtropical and warmer temperate regions. ed. 2. 996 p., map. Macmillan Co., New York. 1940. (*Crataegus*, 42 spp., p. 359–372.) (Ed. 1, 1927.)
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Bibliography of cultivated trees and shrubs hardy in the cooler temperate regions of the northern hemisphere. 825 p. Arnold Arboretum of Harvard Univ., Jamaica Plain, Mass. 1949. (*Crataegus*, 78 spp., including 10 doubtfully of hybrid origin, p. 241–252.)
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The naming of hybrids: A reply to Dr. E. L. Little, Jr. Taxon 10: 211–212. 1961.
(96) §Rydberg, Per Axel.
Flora of the prairies and plains of central North America. 969 p., illus. 1932. (*Crataegus*, 17 spp., adapted from W. W. Eggleston's publications, p. 440–443.)
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A catalogue of the forest trees of North America. U.S. Census, 10th, 1880, Forestry, 93 p. 1880.
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Report on the forests of North America (exclusive of Mexico). U.S. Census, 10th, 1880, v. 9, 612 p., illus. (Also folio v. of maps.) 1884.
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The silva of North America: a description of the trees which grow naturally in North America exclusive of Mexico. 14 v., illus. (folio). Houghton, Mifflin and Co., Boston and New York. 1891–1902.

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Trees and shrubs; illustrations of new or little known plants. 2 v., illus. Houghton, Mifflin and Co., Boston and New York. 1902–13.
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Manual of the trees of North America (exclusive of Mexico). 826 p., illus. Houghton, Mifflin and Co., Boston and New York. 1905.
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Manual of the trees of North America (exclusive of Mexico). ed. 2, 910 p., illus. Houghton, Mifflin Co., Boston and New York. 1922.
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Manual of the trees of North America (exclusive of Mexico). ed. 2, reprinted with corrections. 910 p., illus. Houghton, Mifflin Co., Boston and New York. 1926. (Reprinted 1933.) (*Crataegus*, 153 spp., p. 397–549, illus.)
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(106) §Seymour, Frank Conkling.
The flora of Vermont: a manual for the identification of ferns and flowering plants growing without cultivation in Vermont. Vt. Univ. Agric. Exp. Stn. Bull. 660, 393 p., illus. 1969. (*Crataegus*, 30 spp., p. 212–224, illus.)
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A provisional checklist of species for Flora North America (revised). Mo. Bot. Gard. Monogr. Syst. Bot. 1, 199 p. 1978.
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Flora of southeastern United States. ed. 2, 1394 p. Published by the author, New York. 1913. (*Crataegus*, 185 spp., by C. D. Beadle, p. 532–569.)
(110) §Small, John Kunkel.
Manual of the southeastern flora. 1554 p., illus. Published by the author, New York. 1933. (*Crataegus*, 33 spp., by Ivar Tidestrom, p. 637–646.)
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(111a) §Smith, Edwin B.
An atlas and annotated list of the vascular plants of Arkansas. 592 p., illus. (maps). Univ. Ark., Fayetteville, Ark. 1978.
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Report on endangered and threatened plant species of the United States presented to the Congress of the United States of America by the Secretary, Smithsonian Institution. U.S. 94th Congr. 1st Sess., House Doc. No. 94–51, Ser. No. 94–A, 200 p. 1975.
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List and summary of the flowering plants in the Hawaiian Islands. Pac. Trop. Bot. Gard. Mem. 1, 519 p. 1973.
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International Code of Botanical Nomenclature adopted by the Eleventh International Botanical Congress, Seattle, August 1969. Prepared and edited by F. A. Stafleu, Chairman, C. E. B. Bonner, R. McVaugh, R. D. Meikle, R. C. Rollins, R. Ross, J. M. Schopf, G. M. Schulze, R. de Vilmorin, members, E. G. Voss, Secretary of the Editorial Committee. International Association for Plant Taxonomy. Regnum Vegetabile 82, 426 p. Utrecht, Netherlands. 1972.
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Taxonomic Literature: A selective guide to botanical publications and collections with dates, commentaries and types. ed. 2. Volume 1: A–G. 1136 p. Bohn, Scheltema and Holkema, Utrecht. 1976.

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Handbook of North Dakota plants. 324 p., illus. (maps). N. Dak. Agric. Coll., Fargo, N. Dak. 1950. (*Crataegus*, 2 spp., p. 175.)
(119) §Steyermark, Julian A.
Flora of Missouri. 1728 p., illus. (maps). Iowa State Univ. Press, Ames, Iowa. 1963. (*Crataegus*, 50 spp., by Ernest J. Palmer, p. 802–822, illus., maps.)
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Flora of West Virginia. 4 parts, 1085 p., illus. W. Va. Univ. Bull. 1952–64. (*Crataegus*, 25 spp., p. 470–479, illus.)
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Nomenclature of the arborescent flora of the United States. U.S. Dep. Agric., Div. Forestry Bull. 14, 419 p. 1897. (Introduction, B. E. Fernow, p. iii–viii.)
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Check list of the forest trees of the United States, their names and ranges. U.S. Dep. Agric., Div. Forestry Bull. 17, 144 p. 1898. (Introduction, B. E. Fernow, p. 7–8.)
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Check list of the forest trees of the United States, their names and ranges. U.S. Dep. Agric. Misc. Circ. 92, 295 p. 1927. (Common names of trees, p. 3–7. Forest Service policy in selecting standard names for trees and woods. Standard names of lumber and of the corresponding trees recommended by the Forest Service, p. 237–242.)
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Endangered and threatened wildlife and plants. Proposed endangered status for some 1700 U.S. vascular plant taxa. Federal Register v. 41, no. 117 (June 16, 1976): 24524–24572. 1976.
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Native woody plants of the United States: their erosion-control and wildlife values. U.S. Dep. Agric. Misc. Publ. 303, 362 p., illus. (maps). 1938.
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Forest trees of the United States. U.S. [Dep. Agric.] Comm. Agric. Rep. 1875: 151–186. 1876. (Reprinted as: A catalogue of the forest trees of the United States which usually attain a height of sixteen feet or more. [U.S. Dep. Agric. Rep. 11] 38 p. 1876.)
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Alaska trees and shrubs. U.S. Dep. Agric., Agric. Handb. 410, 265 p., illus. (maps). 1972.
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Guide to Alaska trees. U.S. Dep. Agric., Agric. Handb. 472, 98 p., illus. (maps). 1974.
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Atlas of United States trees, volume 2, Alaska trees and common shrubs. U.S. Dep. Agric. Misc. Publ. 1293, 19 p., illus. (105 maps). 1975.
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Beytrag zur Teutschen Holzgerechten Forstwissenschaft, die Anpflanzung Nordamericanischer Holzarten, mit Anwendung auf Teutsche Forste. 124 p., illus. Göttingen. 1787.

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Rocky Mountain flora. ed. 5, rev. 479 p., illus. Colorado Associated Univ. Press, Boulder. 1976. (*Crataegus*, 2 spp., p. 292.)
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Anderson's Flora of Alaska and adjacent parts of Canada. 124 p., illus. Brigham University Press, Provo, Utah. 1974.
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Utah plants: tracheophyta. ed. 3, 474 p., illus. Brigham Young Univ. Press, Provo, Utah. 1973.
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Abbreviations used in the Department of Agriculture for titles of publications. U.S Dep. Agric. Misc. Publ. 337, 278 p. 1939.
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A dictionary of the flowering plants and ferns. ed. 7, rev. by H. K. Airy Shaw. 1214 p. University Press, Cambridge. 1966.
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The genera of the woody Ranales in the southeastern United States. J. Arnold Arbor. 39: 296–346, illus. 1958. (First paper in the series for a generic flora of the southeastern United States.)

# CHECKLIST OF UNITED STATES TREES (NATIVE AND NATURALIZED)[4]

**Àbies** Mill. (Family Pinaceae) **fir**

‡†*Abies* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

DERIVATION—The classic Latin name of silver fir, *Abies alba* Mill., of Europe.

REFERENCES—Franco, João do Amaral. Abetos. Inst. Super. Agron. (Lisboa) v. 17, 260 p., illus. 1950.

Fulling, Edmund H. Identification, by leaf structure, of the species of Abies cultivated in the United States. Bull. Torrey Bot. Club 61: 497-524, illus. 1934.

Liu, Tang-Shui. A monograph of the genus Abies. 608 p., illus. Natl. Taiwan Univ., Taipei, Taiwan, China. 1971 [1972].

Wyman, Donald. A simple foliage key to the firs. Arnoldia 3: 65-71, illus. 1943.

NUMBER OF SPECIES: Native trees, 9, including 2 n. to Alaska and 1 s. to Mex.; Mex., mts., 5 additional, incl. 2 also in Guatemala; n. Africa, 2, incl. 1 also in Europe; Eurasia, about 25; total, n. temperate, about 40.

***Àbies amabilis** Dougl. ex Forbes **Pacific silver fir‡**

*Pinus amabilis* Dougl., Comp. Bot. Mag. 2: 93. 1836; *nom. nud.*

*Picea amabilis* Dougl. ex Loudl, Arb. Frut. Brit. 4: 2342, figs. 2247-2248. 1838; in part.

‡†*Abies amabilis* Dougl. ex Forbes, Pinet. Woburn. 125, pl. 44. 1839.

DERIVATION—Lovely.

OTHER COMMON NAMES—lovely fir, silver fir†, amabilis fir, red fir, Cascades fir, white fir.

RANGE—Pacific Coast region from extreme se. Alaska s. through w. B.C. to mts. of w. Wash. and w. Oreg. Local in nw. Calif. (Siskiyou Co.). Atlas vol. 1, map 1-W, 1-N; vol. 2, map 9.

REFERENCES—See **Abies grandis**

***Àbies balsàmea** (L.) Mill. **balsam fir‡†**

*Pinus balsamea* L., Sp. Pl. 1002. 1753.

‡†*Abies balsamea* (L.) Mill., Gard. Dict. ed. 8, *Abies* No. 3. 1768.

‡*Abies balsamea* var. *phanerolepis* Fern., Rhodora 11: 203. 1909.

*Abies* ×*phanerolepis* (Fern.) Liu, Monogr. Gen. Abies 316. 1972; as *Abies balsamea* × *fraseri*.

DERIVATION—Ancient word for balsam tree, referring to the resinous pockets or blisters in the bark.

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[4] Naturalized genera and species are designated by capitals and small capitals.

See Symbols and Abbreviations, pages 13-14, for lists of Provinces of Canada and States of Mexico. The 4 symbols for tree names are:

Asterisk (*), important forest tree species commercially useful for lumber or other wood products or noteworthy for special values.

Dagger (†), scientific name or common name accepted in the 1927 checklist.

Double dagger (‡), scientific name or common name accepted in the 1953 checklist.

Times or multiplication sign (×), a hybrid, inserted between names (specific epithets) of the two parent species or before the second word (specific epithet) of a binomial without a space.

OTHER COMMON NAMES—balsam, Canada balsam, eastern fir, bracted balsam fir‡.

RANGE—Nfld. and Labr., w. to ne. Alta., s. and e. to s. Man., Minn., ne. Iowa, c. Wis., c. Mich., s. Ont., N.Y., c. Pa., Conn., and Maine. Also local in mts. of W. Va. and Va. Atlas vol. 1, map 2-N, 2-E.

REFERENCES—Boivin, Bernard. Abies balsamea (Linné) Miller et ses variations. Nat. Can. 86: 219-223. 1959.

Myers, Oval, Jr., and F. H. Borman. Phenotypic variation in Abies balsamea in response to altitudinal and geographic gradients. Ecology 44: 429-436, illus. 1963.

The trees of Va. and W. Va. may be intermediate between *Abies balsamea* and *A. fraseri*.

**Àbies bracteàta** D. Don ex Poiteau **bristlecone fir‡†**

*Pinus bracteata* D. Don, Trans. Linn. Soc. Lond. 17: 442. 1836 (before July).
*Pinus venusta* Dougl., Comp. Bot. Mag. 2: 152. 1936 (Dec. 1).
‡*Abies bracteata* D. Don ex Poiteau, Rev. Hort., Ser. 2, 4: 7. 1845.
†*Abies venusta* (Dougl.) K. Koch, Dendrol. 2(2): 210. 1873.

DERIVATION—With bracts, referring to the very long bristle-like tips of the cone bracts.

OTHER COMMON NAMES—Santa Lucia fir, silver fir.

RANGE—Santa Lucia Mts., Calif. (Monterey and extreme nw. San Luis Obispo Cos.). Atlas vol. 1, map 3-W.

REFERENCE—Dayton, William A. Rhodora 54: 74-76. 1952.

***Àbies cóncolor** (Gord. & Glend.) Lindl. ex Hildebr. **white fir‡†**

*Abies concolor* Lindl. & Gord., J. Hort. Soc. Lond. 5: 210. 1850; *nom. nud.*
*Pinus concolor* Gord. & Glend., Pinetum 155. 1858.
‡†*Abies concolor* (Gord. & Glend.) Lindl. ex Hildebr., Verbr. Conif. 261. 1861.

DERIVATION—Of uniform color, referring to the needles, which are pale blue green on both surfaces.

OTHER COMMON NAMES—concolor fir, silver fir, white balsam, balsam fir, Colorado fir, pino real blanco (Spanish).

RANGE—Mts. from c. Colo. w. to se. Idaho and sw. Oreg., s. to s. Calif., and e. to s. Ariz. and s. N. Mex. Also local in nw. Mex. (B.Cal. Norte and Son.). Atlas vol. 1, map 5-W.

**Àbies cóncolor** (Gord. & Glend.) Lindl. ex Hildebr. var. **cóncolor** **white fir (typical)**

OTHER COMMON NAME—Rocky Mountain white fir.

RANGE—Mts. from c. Colo. w. to se. Idaho and e. Nev., s. to e. Calif., s. Ariz., and s. N. Mex. Also local in n. Son., Mex.

**Àbies cóncolor** var. **lowiàna** (Gord.) Lemm. **California white fir**

*Picea lowiana* Gord., Pinetum Suppl. 53. 1862.
*Abies lowiana* (Gord.) A. Murr., Proc. R. Hort. Soc. 3: 317. 1863.
†*Abies concolor* var. *lowiana* (Gord.) Lemm., Handb. W.-Am. Cone-Bearers. ed. 3, 64. 1895.

DERIVATION—Messrs. Low, of the Clapton Nursery, who first introduced it to England.

OTHER COMMON NAMES—Pacific white fir, Lows fir.

RANGE—Mts. from sw. Oreg. s. to s. Calif. and w. Nev. Also local in n. B. Cal. Norte, Mex.

*Abies excelsior*, see **A. grandis**

***Àbies fràseri** (Pursh) Poir. **Fraser fir‡**

*Pinus fraseri* Pursh, Fl. Am. Sept. 2: 639. 1814
‡†*Abies fraseri* (Pursh) Poir. in Lam., Encycl. Méth. Bot. Suppl. 5: 35. 1817.

DERIVATION—Named for its discoverer, John Fraser (1750-1811), a

Scotchman who traveled extensively in North America and introduced it and many other plants to Europe.

OTHER COMMON NAMES—balsam fir, eastern fir, Fraser balsam fir, southern balsam fir†, balsam, southern fir, she-balsam.

RANGE—S. Appalachian Mts. at high altitudes in sw. Va., w. N.C., and e. Tenn. Atlas vol. 1, map 4-E.

REFERENCE—Thor, E. Taxonomy of Abies in southern Appalachians; variation in balsam monoterpenes and wood properties. For. Sci. 20: 32-40. 1974.

***Abies grándis** (Dougl. ex D. Don) Lindl. **grand fir‡**

*Pinus grandis* Dougl. ex D. Don in Lamb., Descr. Genus Pinus. ed. 3 (8⁰), v. 2, unnumbered extra p. between p. 144 and p. 145. 1832.

‡†*Abies grandis* (Dougl. ex D. Don) Lindl., Penny Cycl. 1: 30. 1833.

*Abies excelsior* Franco, Bol. Soc. Broter. (Coimbra), Sér. 2, 23: 162. 1949.

DERIVATION—Large.

OTHER COMMON NAMES—lowland white fir†, lowland fir, balsam fir, white fir, silver fir, yellow fir, giant fir.

RANGE—Northern Rocky Mt. region from se. B.C. s. to w. Mont., c. Idaho, and ne. from sw. B. C. and w. Wash. to nw. Calif. Atlas vol. 1, map 6-W.

REFERENCES—Franco, João do Amaral. Bol. Soc. Broter. (Coimbra), Sér. 2, 23: 159-162. 1949.

Little, Elbert L., Jr. Am. J. Bot. 31: 591-592. 1944.

Melville, R. Kew Bull. 13: 531-533. 1958.

Melville (1958) has clarified the uncertainty about the names *Abies grandis* and *A. amabilis* and concluded that they are correctly used. He explained that the original description of *Pinus grandis* (1832) may have applied to a mixture and that Lindley (1833) in his combination *Abies grandis* made the correct choice in selecting one element. This subject was noted long ago by Engelmann (Trans. St. Louis Acad. Sci. 3: 599. 1978) and by Andrew Murray (Proc. R. Hort. Soc. 3:308-313. 1863).

HYBRIDIZES WITH: *Abies concolor.*

*Abies intermedia*, see **A. balsamea**

***Àbies lasiocárpa** (Hook.) Nutt. **subalpine fir‡**

*Pinus lasiocarpa* Hook., Fl. Bor. Am. 2: 163. 1839.

*Abies lasiocarpa* (Hook.) Hook. ex Endl., Synops. Conif. 325. 1847; in index, as synonym.

‡†*Abies lasiocarpa* (Hook.) Nutt., No. Am. Sylva 3: 138. 1849.

*Abies subalpina* Engelm., Am. Nat. 10: 555. 1876.

*Abies balsamea* ssp. *lasiocarpa* (Hook.) Boivin, Nat. Can. 86: 222. 1959.

*Abies balsamea* var. *fallax* (Engelm.) Boivin, Nat. Can. 93: 272. 1966.

DERIVATION—Hairy-fruit.

OTHER COMMON NAMES—alpine fir†, balsam, white balsam, balsam fir, white fir, Rocky Mountain fir, western balsam fir, pino real blanco (Spanish).

RANGE—Mts. chiefly, from c. Yukon and ne. and se. ends of se. Alaska, s. through w. Alta. and B.C., and from Wash., Oreg., Idaho, and w. Mont., s. to c. Colo., s. N. Mex., and se. Ariz. Also local in ne. Nev. and nw. Calif. Atlas vol. 1, maps 7-W, 7-N; vol. 2, map 10.

**Àbies lasiocárpa** (Hook.) Nutt. var. **lasiocárpa** **subalpine fir (typical)‡**

RANGE—Almost same as sp. Not in c. and se. Ariz. and w. N. Mex.

**Àbies lasiocárpa** var. **arizónica** (Merriam) Lemm. **corkbark fir‡†**

†*Abies arizonica* Merriam, Proc. Biol. Soc. Wash. 10: 116, fig. 24-25. 1896.

‡*Abies lasiocarpa* var. *arizonica* (Merriam) Lemm., Bull. Sierra Club 2: 167. 1898; Lemm. ex Masters, Gard. Chron., Ser. 3, 29: 86, 134, fig. 52-53. 1901.

DERIVATION—Of Arizona, where it was discovered.
RANGE—C. Colo. to sw. N. Mex. and se. and c. Ariz.

***Àbies magnífica** A. Murr. **California red fir‡†**
‡†*Abies magnifica* A. Murr., Proc. R. Hort. Soc. 3: 318, fig. 25-33. 1863.
‡†*Abies magnifica* var. *shastensis* Lemm., Calif. State Bd. For. Bien. Rep. 3: 145. 1890.
*Abies shastensis* (Lemm.) Lemm., Gard. and For. 10: 184. 1891.
DERIVATION—Magnificent, referring to the cone.
OTHER COMMON NAMES —red fir, silvertip, golden fir, white fir, Shasta fir, Shasta red fir‡†.
RANGE—Sw. Oreg. (Cascade Mts.) s. to n. Coast Ranges of Calif. and through Sierra Nev. to c. Calif. and extreme w. Nev. Atlas vol. 1, map 8-W.
‡†*Abies magnifica* var. *shastensis* Lemm., Shasta red fir‡†, not distinguished here, has been regarded also as a hybrid, *A.* ×*shastensis* (Lemm.) Lemm. *(A. magnifica* × *procera)*, by Liu (Monogr. Gen. Abies 319. 1972). Range—Lassen Peak, Calif., to Crater Lake, Oreg.
HYBRIDIZES WITH: *Abies procera.*

*Abies nobilis,* see **A. procera**

***Àbies procèra** Rehd. **noble fir‡†**
*Pinus nobilis* Dougl. ex. D. Don in Lamb., Descr. Genus Pinus. ed. 3 (8⁰), v. 2, unnumbered extra p. between p. 144 and p. 145, illus. 1832.
†*Abies nobilis* (Dougl.) Lindl., Penny Cycl. 1: 30. 1833. Non *A. nobilis* A. Dietr., Fl. Berlin 793. 1824.
‡*Abies procera* Rehd., Rhodora 42: 522. 1940.
DERIVATION—Tall.
OTHER COMMON NAMES—red fir, white fir.
RANGE—Cascade Mts. and high peaks of Coast Range from w. Wash. through w. Oreg. to nw. Calif. Atlas vol. 1, map 9-W.
HYBRIDIZES WITH: *Abies magnifica.*

*Abies shastensis,* see **A. magnifica**
*Abies venusta,* see **A. bracteata**

**Acàcia** Mill. (Family Leguminosae) **acacia**
††*Acacia* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.
*Vachellia* Wight & Arn., Prodr. Fl. Ind. Orient. 272. 1834.
*Poponax* Raf., Sylva Tellur. 118. 1838.
*Senegalia* Raf., Sylva Tellur. 119. 1838.
*Acaciopsis* Britton & Rose, No. Am. Fl. 23: 93. 1928.
DERIVATION—The classical Greek name of a thorny tree of Egypt, thought to be of this genus, from the Greek word for thorn.
REFERENCES—Elias, Thomas S. The genera of Mimosoideae (Leguminosae) in the southeastern United States. J. Arnold Arbor. 55: 67-118, illus. 1974. (*Acacia*, p. 99-106, illus.)
Isely, Duane. Legumes of the United States: I. Native Acacia. Sida 3: 365-386. 1969.
Isely, Duane. Leguminosae of the United States: I. Subfamily Mimosoideae. Mem. N.Y. Bot. Gard. 25 (1): 1–152, illus. 1973. (*Acacia*, p. 10–74, 131–138.)
Turner, B. L. The legumes of Texas. 284 p., illus. 1959.
Number of species: native trees, 9; native shrubs, about 5; Hawaii, 3; P.R. and V.I., 4; total, tropical and subtropical, many in Australia, 600-800. Many species have been introduced as ornamentals in subtropical U.S., especially Calif.

*Acacia amentacea,* see note under **A. rigidula**

**Acàcia berlandiéri** Benth. **guajillo**

*Acacia berlandieri* Benth., Lond. J. Bot. 1: 522. 1842.
*Senegalia berlandieri* (Benth.) Britton & Rose, No. Am. Fl. 23: 109. 1928.

DERIVATION—Jean Louis Berlandier (1805-1851), native of Belgium, afterwards botanical collector and druggist in northeastern Mexico and Texas.

OTHER COMMON NAME—Berlandier acacia.

RANGE—S. and Trans-Pecos Tex. and ne. Mex. (Chih., Coah., N.L., Tamps., S.L.P., Qro., and Hgo.). Atlas vol. 3, maps 1-N, 1-SW.

A shrub or small tree to 16 ft (5 m). This name replaces ‡†*Acacia emoryana* Benth., Emory acacia‡, now regarded as the hybrid *A. berlandieri* × *greggii*.

HYBRIDIZES WITH: *Acacia greggii* (‡†*A.* ×*emoryana* Benth.).

**Acàcia choriophýlla** Benth. **cinnecord**

*Acacia choriophylla* Benth., Hook. Lond. J. Bot. 1: 495. 1842.

DERIVATION—With separated leaves.

OTHER COMMON NAME—Florida acacia.

RANGE—Very rare on n. Key Largo in Upper Fla. Keys, not on Fla. mainland. One tree found in 1967 may have been destroyed by a fire in 1975. Another was located in 1977. Bahamas and Cuba. Atlas vol. 5, map 159.

REFERENCE—Alexander, Taylor R. Acacia choriophylla, a tree new to Florida. Q. J. Fla. Acad. Sci. 31: 197-198. 1968 (1969).

*Acacia emoryana*, see note under **A. berlandieri**

**Acàcia farnesiàna** (L.) Willd. **huisache†**

*Mimosa farnesiana* L., Sp. Pl. 521. 1753.
‡†*Acacia farnesiana* (L.) Willd., Sp. Pl. ed. 4, 4: 1083. 1806.
*Vachellia farnesiana* (L.) Wight & Arn., Prodr. Fl. Ind. Orient. 1: 272. 1834.
*Vachellia densiflora* E. J. Alexander in Small, Man. Southeast. Fl. 655, 1505. 1933.
*Acacia smallii* Isely, Sida 3: 384. 1969.

DERIVATION—Cardinal Odoardo Farnese (1573–1626), of Rome. This species was first introduced to Europe in his gardens (Hortus Farnesianus) in 1611.

OTHER COMMON NAMES—Texas huisache, sweet acacia‡, cassie.

RANGE—S. Tex. and rare and local in s. Ariz. and s. Calif. (San Diego Co., probably introduced). Also in Mex., C. Am., West Indies (incl. P.R. and V.I.), and S. Am. to Chile and Argentina. Widely cultivated and naturalized from Fla. to La. and c. and w. Tex. Naturalized through tropics in New and Old Worlds. Atlas vol. 3, map 2.

**Acàcia gréggii** Gray **Gregg catclaw**

‡†*Acacia greggii* Gray, Pl. Wright. 1: 65. 1852.
*Senegalia greggii* (Gray) Britton & Rose, No. Am. Fl. 23: 110. 1928.
*Acacia greggii* var. *arizonica* Isely, Sida 3: 377. 1969.

DERIVATION—Josiah Gregg (1806-50), early American explorer, who collected plants in the Southwest and northern Mexico.

OTHER COMMON NAMES—catclaw†, catclaw acacia‡, Texas catclaw, devilsclaw, uña de gato (Spanish).

RANGE—S., c., and Trans-Pecos Tex., w. to s. N. Mex., Ariz., extreme sw. Utah, s. Nev., and se. Calif., s. to n. Mex. (B. Cal., Son., Chih., Coah., N.L. and Tamps.). Atlas vol. 3, map 3.

HYBRIDIZES WITH: *Acacia berlandieri* (‡†*A.* ×*emoryana* Benth.).

**Acàcia macracántha** Humb. & Bonpl. ex Willd. **long-spine acacia**

*Acacia macracantha* Humb. & Bonpl. ex Willd., Sp. Pl. 4: 1080. 1806.
*Acacia macracanthoides* Bert. ex DC., Prodr. 2: 463. 1825.
*Poponax macracanthoides* (Bert.) Britton & Rose, No. Am. Fl. 23: 89. 1928.
*Poponax macracantha* (Humb. & Bonpl. ex Willd.) Killip in Little, Caribb. For. 9: 248. 1948.

DERIVATION—Long-spine.

RANGE—Very rare on Ramrod Key (near Big Pine Key), Lower Fla. Keys, not on Fla. mainland. Fifteen plants found in 1963, apparently native. Also introduced in s. Fla. and escaping. From Bahamas through West Indies including P.R. and V.I. Also n. S. Am. from Colombia and Venezuela to Ecuador and Peru. (A related sp. possibly not distinct, n. in C. Am. to Mex.) Atlas vol. 5, map 160.

REFERENCE—Ward, Daniel B. Acacia macracantha, a tree new to Florida and the United States. Brittonia 19: 283-284. 1967.

**Acàcia rigídula** Benth. **blackbrush acacia‡**

*Acacia rigidula* Benth., Hook. Lond. J. Bot. 1: 504. 1842.
*Acaciopsis rigidula* (Benth.) Britton & Rose, No. Am. Fl. 23: 94. 1928.

DERIVATION—Somewhat rigid, referring to the branches.

OTHER COMMON NAMES—blackbrush, chaparro prieto (Spanish).

RANGE—S. and Trans-Pecos Tex. and nw. Mex. (Coah., N.L., Tamps., and n. S.L.P.). Atlas vol. 3, map 4.

Added here as a shrub or sometimes small tree (Turner, B. L. Legumes Tex. 34. 1969). Mentioned in a note in the 1953 checklist as ‡*Acacia amentacea* DC., a related species of sw. Mex.

**Acàcia roemeriàna** Scheele **Roemer catclaw**

*Acacia roemeriana* Scheele, Linnaea 21: 456. 1848.
*Senegalia roemeriana* (Scheele) Britton & Rose, No. Am. Fl. 23: 110. 1928.

DERIVATION—Karl Ferdinand Roemer (1818-91), of Germany, who made a plant collection in Texas in 1846-47.

OTHER COMMON NAMES—catclaw, Roemer acacia.

RANGE—C., sw., and Trans-Pecos Tex., se. N. Mex., and ne. Mex. (Chih., Coah., and N.L.). Atlas vol. 3, map 5.

Added here as a shrub or sometimes small tree (Turner, B. L. Legumes Tex. 41. 1959).

*Acacia schaffneri*, see **A. tortuosa**
*Acacia smallii*, see **A. farnesiana**

**Acàcia tortuòsa** (L.) Willd. **huisachillo**

*Mimosa tortuosa* L., Syst. Nat. ed. 10, 1312. 1759.
‡†*Acacia tortuosa* (L.) Willd., Sp. Pl. 1083. 1806.
*Poponax tortuosa* (L.) Raf., Sylva Tellur. 118. 1838.
*Pithecellobium schaffneri* Wats., Proc. Am. Acad. Arts Sci. 17: 352. 1882; "*Pithecolobium*."
*Poponax schaffneri* (Wats.) Britton & Rose, No. Am. Fl. 23: 89. 1928.
*Acacia schaffneri* (Wats.) F. J. Hermann, J. Wash. Acad. Sci. 38: 236. 1948.
*Acacia schaffneri* var. *bravoensis* Isely, Sida 3: 383. 1969.

DERIVATION—Twisted, referring to the branches.

OTHER COMMON NAMES—catclaw†, twisted acacia‡, Rio Grande acacia.

RANGE—S. Tex. s. to s. Mex. and Guatemala. S. Fla., apparently introduced. Widely distributed in W.I. (incl. P.R. and V.I.). Also n. S. Am. from Venezuela to Colombia, Ecuador, and Galápagos Is. Atlas vol. 3, maps 6-N, 6-SW.

REFERENCE—Ward, Daniel B. Acacia tortuosa (Leguminosae) new to Florida. Sida 3: 279-280. 1968.

**Acàcia wrìghtii** Benth. **Wright catclaw**

‡†*Acacia wrightii* Benth. in Gray, Pl. Wright. 1: 64. 1852.
*Senegalia wrightii* (Benth.) Britton & Rose, No. Am. Fl. 23: 110. 1928.
*Acacia greggii* var. *wrightii* (Benth.) Isely, Sida 3: 383. 1969.

DERIVATION—Charles Wright (1811-85), botanical collector, who obtained the type in western Texas.

OTHER COMMON NAMES—Texas catclaw, catclaw†, Wright acacia‡†, uña de gato (Spanish).

RANGE—C., s., and Trans-Pecos Texas and ne. Mex. (Coah., N.L., and Tamps.). Atlas vol. 3, map 7.

*Acaciopsis*, see **Acacia**
*Achras*, see **Manilkara**

**Àcer** L. (Family Aceraceae) **maple**

‡†*Acer* L., Sp. Pl. 1054. 1753; Gen. Pl. ed. 5, 474. 1754.
*Negundo* Boehm. in Ludw., Defin. Gen. Pl., ed. Boehm. 508. 1760.
*Rulac* Adans., Fam. Pl. 2: 383, 599. 1763.
*Acer* subg. *Sacharodendron* Raf., New Fl. No. Am. 1: 47. 1836.
*Saccharodendron* (Raf.) Nieuwl., Am. Midl. Nat. 3: 182. 1914
*Argentacer* Small, Man. Southeast. Fl. 825, 1505. 1933.
*Rufacer* Small, Man. Southeast. Fl. 825, 1505. 1933.

DERIVATION—The classic Latin name of maple.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 44: 480-494, illus. 1963.

Mulligan, Brian O. Maples cultivated in the United States and Canada. 56 p., illus. Am. Assoc. Bot. Gard. Arbor. 1958.

Murray, A. Edward, Jr. A monograph of the Aceraceae: Athesis in horticulture. 337 p. Ph. D. thesis, Pa. State Univ. 1970.

Murray, Edward. North American maples. Key to native North American species of maple (the genus Acer). Kalmia 7, 20 p. 1975.

Ogata, Ken. A systematic study of genus. Acer. Tokyo Univ. For. Bull. 63: 89–206, illus. 1967.

Additional cultivated species of *Acer* have been recorded as escaping and becoming established locally in eastern United States. In time they may become naturalized. These include *Acer platanoides* L., Norway maple, native of Europe, and *A. pseudoplatanus* L., planetree maple (sycamore maple), of Europe and western Asia.

NUMBER OF SPECIES: Native trees, 13 (including 1 n. to Alaska, 2 s. to Mex. and 1 of these also to Guatemala); Mex. and Guatemala, 1 additional; New World, 14; the others Eurasia, especially China and Japan, s. to Malaysia and n. Africa; total, n. temperate zone and tropical mts., about 120.

**Àcer barbàtum** Michx. **Florida maple‡**

‡*Acer barbatum* Michx., Fl. Bor.-Am. 2: 252. 1803; in part, flowers but excluding leaves and fruit.
*Acer saccharinum* Wangenh. var. *floridanum* Chapm., Fl. South. U.S. 81. 1860.
†*Acer floridanum* (Chapm.) Pax, Bot. Jahrb. 7: 243. 1886.
*Acer saccharum* var. *floridanum* (Chapm.) Small & Heller, Mem. Torrey Bot. Club 3: 24. 1892.
*Acer saccharum* ssp. *floridanum* (Chapm.) Desmarais, Brittonia 7: 382. 1952.

DERIVATION—Bearded.

OTHER COMMON NAMES—southern sugar maple†, sugar maple, hammock maple.

RANGE—Coastal Plain and Piedmont from se. Va. sw. to c. Fla., e. Tex., and n. in Miss. Valley to n. Ark. and e. Okla. Atlas vol. 4, map 1; vol. 5, map 14.

REFERENCE—Fernald, M. L. The identity of Michaux's Acer barbatum. Rhodora 47: 156-160. 1945.

Long known as *Acer floridanum*. *A. barbatum* was applied also to the sugar maple by a few authors (Sarg., Silva No. Am. 2: 97, pl. 90. 1891). Others have rejected the name as based upon a mixture.

*Acer brachypterum*, see **A. grandidentatum**

**Àcer circinàtum** Pursh **vine maple‡†**

‡†*Acer circinatum* Pursh, Fl. Am. Sept. 1: 267. 1814.

DERIVATION—Rounded or circular, from the general shape of the leaves.

RANGE—Pacific Coast region from sw. B.C. s. to w. Wash., w. Oreg., and n. Calif. Atlas vol. 3, map 8.

*Acer douglasii*, see **A. glabrum**
*Acer drummondii*, see **A. rubrum**
*Acer floridanum*, see **A. barbatum**

**Acer glàbrum** Torr. **Rocky Mountain maple‡**

‡†*Acer glabrum* Torr., Ann. Lyc. Nat. Hist. N.Y. 2: 172. 1828.
*Acer tripartitum* Nutt. in Torr. & Gray, Fl. No. Am. 1: 247. 1840.
*Acer douglasii* Hook., Lond. J. Bot. 6: 77, pl. 6. 1847.
*Acer glabrum* var. *tripartitum* (Nutt.) Pax, Bot. Jahrb. 7: 218. 1886.
*Acer glabrum* ssp. *douglasii* (Hook.) Wesmael, Bull. Soc. R. Bot. Belg. 29: 46. 1890.
‡†*Acer glabrum* b *douglasii* (Hook.) Dipp., Handb. Laubholzk. 2: 438. 1892.
*Acer diffusum* Greene, Pittonia 5: 2. 1902.
*Acer neo-mexicanum* Greene, Pittonia 5: 3. 1902.
*Acer torreyi* Greene, Pittonia 5: 2. 1902.
*Acer glabrum* var. *diffusum* (Greene) Smiley, Univ. Calif. Publ. Bot. 9: 261. 1921.
*Acer glabrum* var. *torreyi* (Greene) Smiley, Univ. Calif. Publ. Bot. 9: 261. 1921.
*Acer glabrum* var. *neomexicanum* (Greene) Kearney & Peebles, J. Wash. Acad. Sci. 29: 486. 1939.
*Acer glabrum* var. *greenei* Keller, Am. Midl. Nat. 27: 500. 1942.
*Acer glabrum* ssp. *neo-mexicanum* (Greene) E. Murray, Kalmia 2:1. 1970.
*Acer glabrum* ssp. *diffusum* (Greene) E. Murray, Kalmia 3: 14. 1971.
*Acer glabrum* ssp. *torreyi* (Greene) E. Murray, Kalmia 3: 14. 1971.

DERIVATION—Glabrous, or hairless, referring to the foliage.

OTHER COMMON NAMES—dwarf maple†, mountain maple, Sierra maple, Douglas maple†, California mountain maple, New Mexico maple.

RANGE—Se. Alaska, B.C., and sw. Alta., s. through w. U.S. from w. Wash. to s. Calif., e. to s. N. Mex., nw. Nebr., and Mont. Atlas vol. 2, map 59; vol. 3, maps 9-N, 9-W.

REFERENCE—Keller, Allan C. Acer glabrum and its varieties. Am. Midl. Nat. 27: 491-500, illus. 1942.

The northernmost New World maple, n. to se. Alaska. Several geographic varieties have been named.

**Acer grandidentàtum** Nutt. **canyon maple**

‡†*Acer grandidentatum* Nutt. in Torr. & Gray, Fl. No. Am. 1: 247. 1838.
*Acer saccharum* var. *grandidentatum* (Nutt.) Sudw., U.S. Dep. Agr., Rep. Secr. Agric. 1892: 323. 1893.
*Acer sinuosum* Rehd. in Sarg., Trees and Shrubs 2: 255, pl. 195. 1913.
*Acer brachypterum* Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 146. 1913.
†*Acer saccharum* var. *sinuosum* (Rehd.) Sarg., Bot. Gaz. 67: 234. 1919.
*Acer grandidentatum* var. *brachypterum* (Woot. & Standl.) Palmer, J. Arnold Arbor. 10: 40. 1929.
‡*Acer grandidentatum* var. *sinuosum* (Rehd.) Little, Rhodora 46: 449. 1944.
*Acer saccharum* ssp. *grandidentatum* (Nutt. in Torr. & Gray) Desmarais, Brittonia 7: 383. 1952.
*Acer saccharum* ssp. *brachypterum* (Woot. & Standl.) E. Murray, Kalmia 7: 15. 1975.

DERIVATION—Large-toothed, referring to the leaves.

OTHER COMMON NAMES—bigtooth maple‡†, sugar maple†, Uvalde bigtooth maple†.

RANGE—Mts. from s.c. Mont., se. Idaho, and w. Wyo., s. to Utah, w. Colo., se. Ariz., s. N. Mex., and Trans-Pecos Tex. Local in sw. Okla. (Wichita Mts.) and Edwards Plateau of s.c. Tex. Also n. Mex. (ne. Son., Chih., Coah., and N.L.). Atlas vol. 3, map 10.

**Àcer leucodérme** Small **chalk maple†**

*Acer floridanum* var. *acuminatum* Trel., Sugar Maples 12, pl. 11. 1894. Mo. Bot. Gard. Ann. Rep. 5: 99, pl. 11. 1894.
‡†*Acer leucoderme* Small, Bull. Torrey Bot. Club 22: 367. 1895.
*Acer saccharum* var. *leucoderme* (Small) Sarg., Silva No. Am. 13: 7, pl. 624. 1902.
*Saccharodendron leucoderme* (Small) Nieuwl., Am. Midl. Nat. 3: 182. 1913.
*Acer saccharum* ssp. *leucoderme* (Small) Desmarais, Brittonia 7: 384. 1952.

DERIVATION—White-skin, referring to the whitish bark.

OTHER COMMON NAME—white-bark maple.

RANGE—Rare and local from N.C. and e. Tenn. s. to nw. Fla. and w. to La., e. Tex., sw. Ark., and se. Okla. Atlas vol. 4, map 2; vol. 5, map 15.

HYBRIDIZES WITH: *Acer saccharum* (*A.* ×*senecaense* Slavin).

***Acer macrophyllum** Pursh **bigleaf maple**‡†

‡†*Acer macrophyllum* Pursh, Fl. Am. Sept. 1: 267. 1814.

DERIVATION—Large-leaf (literally long-leaf).

OTHER COMMON NAMES—broadleaf maple, Oregon maple.

RANGE—Pacific Coast region from sw. B.C. incl. Vancouver Is. s. to w. Wash., w. Oreg., and in Coast ranges and Sierra Nev. to s. Calif. Atlas vol. 1, maps 95-W, 95-N.

***Acer negundo** L. **boxelder**‡†

‡†*Acer negundo* L., Sp. Pl. 1056. 1753.
*Negundo aceroides* Moench, Meth. Pl. 334. 1794.
*Negundo mexicanum* DC., Prodr. 1: 596. 1824.
*Negundo californicum* Torr. & Gray, Fl. No. Am. 1: 250. 1838.
*Acer californicum* (Torr. & Gray) D. Dietr., Synops. Pl. 2: 1283. 1840.
*Negundo aceroides* var. *violaceum* Kirchn. in Petzold & Kirchn., Arbor. Muscav. 190. 1864.
*Acer negundo* var. *texanum* Pax, Bot. Jahrb. 7: 212. 1886.
*Acer negundo* var. *violaceum* Jaeg. & Beissn., Ziergehölze Gärt. Park. ed. 3, 6. 1889.
*Acer negundo* var. *latifolium* Pax., Bot. Jahrb. 11: 75. 1890.
*Acer negundo* ssp. *californicum* (Torr. & Gray) Wesmael, Bull. Soc. R. Bot. Belg. 29: 43. 1890.
*Acer negundo* ssp. *mexicanum* (DC.) Wesmael, Bull. Soc. R. Bot. Belg. 29: 43. 1890.
*Acer negundo* var. *mexicanum* (DC.) Kuntze, Rev. Gen. Pl. 1: 146. 1891.
*Acer negundo* var. *californicum* (Torr. & Gray) Sarg., Gard. and Forest 4: 148. 1891; Silva No. Am. 2: 112, pl. 97. 1891.
*Acer negundo* ssp. *latifolium* (Pax) Schwer., Gartenfl. 42: 205. 1893.
*Acer negundo* var. *violaceum* (Kirchn.) Schwer., Gartenflora 42: 204, 711. 1893.
*Rulac negundo* (L.) Hitchc., Key Spring Fl. Manhattan 25. 1894.
*Rulac texana* (Pax) Small, Fl. Southeast. U.S. 743, 1334. 1903.
*Acer interius* Britton in Britton & Shafer, No. Am. Trees 655, fig. 608. 1908; "*interior*."
*Acer negundo* var. *arizonicum* Sarg., Bot. Gaz. 67: 240. 1919.
*Acer negundo* var. *interius* (Britton) Sarg., Bot. Gaz. 67: 239. 1919; "*interior*."
*Acer negundo* ssp. *interius* (Britton) A. &. D. Löve, Bull. Torrey Bot. Club 81: 33. 1954.

DERIVATION—From the Malayan common name of *Vitex negundo* L., negundo chastetree, later applied to this species.

OTHER COMMON NAMES—ashleaf maple, boxelder maple, Manitoba maple, California boxelder†, western boxelder.

RANGE—Very widespread through most of contiguous U.S. (except nw.), from N.J. and c. N.Y. w. to extreme s. Ont., c. Mich., n. Minn., c. Man., c. Sask., and s. Alta., s. to c. Mont., e. Wyo., Utah, and Calif., and e. to s. Tex. and c. Fla. Also local in N.H., Vt., Mass., Conn., Idaho, and Nev. Naturalized ne. to Maine, s. Que., N.B., N.S., and P.E.I. and in se. Wash. and e. Oreg. Also var. in mts. of Mex. (N.L. and S.L.P. s. to Chis.) and Guatemala. Atlas vol. 1, maps 96-W, 96-E, 96-N; vol. 5, map 16.

REFERENCE—Boivin, Bernard. Les variations d'Acer Negundo au Canada. Nat. Can. 93: 959–962. 1966.

Several intergrading geographical varieties have been named in this species of broad distribution.

*Acer neo-mexicanum*, see **A. glabrum**

***Acer nigrum** Michx. f. **black maple**‡†

‡†*Acer nigrum* Michx. f., Hist. Arbr. For. Am. Sept. 2: 238, pl. 16. 1812.
*Acer saccharinum* var. *viride* Schmidt, Anleit. Erzieh. Vermehr. Ahornart. t. 9. 1812.
*Acer saccharum* var. *nigrum* (Michx. f.) Britton, Trans. N.Y. Acad. Sci. 9: 10. 1889.

*Saccharodendron nigrum* (Michx. f.) Small, Man. Southeast. Fl. 824, 1505. 1933.
*Acer saccharum* ssp. *nigrum* (Michx. f.) Desmarais, Brittonia 7: 382. 1952.

DERIVATION—Black, from the common name, probably referring to the dark green foliage and dark bark of mature trees.

OTHER COMMON NAMES—black sugar maple, hard maple, rock maple, sugar maple.

RANGE—Vt., N.Y., and extreme s. Que., w. to s. Ont., c. Mich., n. Wis., and s. Minn., s. to Iowa, extreme ne. Kans., and Mo., and e. to Tenn., W. Va., Pa., and N.J. Also local in N.H., Mass., Conn., w. N.C., nw. Ark., and extinct in n. Del. Atlas vol. 1, map 97-E.

**Acer pensylvánicum** L. **striped maple**‡†

‡†*Acer pensylvanicum* L., Sp. Pl. 1055. 1753.

DERIVATION—Of Pennsylvania.

OTHER COMMON NAME—moosewood.

RANGE—N.S. and Gaspé Peninsula of Que., w. to s. Ont., Mich., and e. Minn., s. to ne. Ohio, Pa., and N.J., and in mts. to n. Ga. Atlas vol. 4, maps 3-N, 3-NE.

***Acer rùbrum** L. **red maple**‡†

‡†*Acer rubrum* L., Sp. Pl. 1055. 1753.
*Acer carolinianum* Walt., Fl. Carol. 251. 1788.
*Acer rubrum* δ *trilobum* Torr. & Gray ex K. Koch. Hort. Dendrol. 80. 1853.
†*Acer rubrum* β *tridens* Wood, Class-book Bot., "1860" ed., 286. 1861.
*Acer drummondii* Hook., J. Bot. 1: 200. 1834; *nom. provisor.*
*Acer drummondii* Hook. & Arn. ex Nutt., No. Am. Sylva 2: 83, pl. 70. 1846.
‡†*Acer rubrum* var. *drummondii* (Hook. & Arn.) Sarg., U.S. Census 10th, v. 9 (Rep. Forests No. Am.): 50. 1884.
*Rufacer carolinianum* (Walt.) Small, Man. Southeast. Fl. 826, 1505. 1933.
*Rufacer drummondii* (Hook. & Arn.) Small, Man. Southeast. Fl. 826, 1505. 1933.
*Rufacer rubrum* (L.) Small, Man. Southeast. Fl. 826, 1505. 1933.
*Acer rubrum* ssp. *drummondii* (Nutt.) E. Murray, Kalmia 1: 29. 1969.

DERIVATION—Red, appropriate as the color of the flowers, petioles, and autumnal foliage.

OTHER COMMON NAMES—scarlet maple, swamp maple, soft maple, Carolina red maple, Drummond red maple‡, water maple.

RANGE—S. Nfld., N.S., and s. Que., w. to s. and sw. Ont., extreme se. Man., and n. Minn., s. to Wis., Ill., Mo., e. Okla., and e. Tex., and e. to s. Fla. Atlas vol. 1, maps 98-N, 98-E; vol. 5, map 17.

A closely related species in Japan (*Acer pycnanthum* K. Koch) formerly was treated also as a variety.

HYBRIDIZES WITH: *Acer saccharinum* (*A.* ×*freemanii* E. Murray).

***Acer saccharìnum** L. **silver maple**‡†

‡†*Acer saccharinum* L., Sp. Pl. 1055. 1753.
*Argentacer saccharinum* (L.) Small, Man. Southeast. Fl. 825, 1505. 1933.

DERIVATION—Sweet, or sugary, referring to the sap.

OTHER COMMON NAMES—soft maple, river maple, silverleaf maple, swamp maple, water maple, white maple.

RANGE—N.B., Maine, and extreme s. Que., w. to se. Ont., n. Mich., and n. Minn., s. to se. N. Dak., e. Nebr., and e. Okla., and e. to Ark., La., nw. Fla., and c. Ga. Atlas vol. 1, map 101-E; vol. 5, map 18.

HYBRIDIZES WITH: *Acer rubrum* (*A.* ×*freemanii* E. Murray).

*Acer saccharophorum*, see **A. saccharum**

***Acer sáccharum** Marsh. **sugar maple**‡†

‡†*Acer saccharum* Marsh., Arbustr. Am. 4. 1785; perhaps misspelling or orthographical error of *A. saccharinum*.
*Acer saccharinum* Wangenh., Beytr. Teutsch. Holzger. Forstwiss. Anpflanz. Nordam. Holz. 26, pl. 11, fig. 26. 1787. Non *A. saccharinum* L., Sp. Pl. 1055. 1753.
*Acer saccharinum* var. *glaucum* Schmidt, Anleit. Erzieh. Vermehr. Ahornart. t. 8. 1812.

*Acer saccharophorum* K. Koch, Hort. Dendrol. 80. 1853.
*Acer saccharinum* var. *glaucum* Pax, Bot. Jahrb. 7: 242. 1886.
*Acer rugelii* Pax, Bot. Jahrb. 7: 243. 1886.
†*Acer saccharum* var. *schneckii* Rehd. in Sarg., Trees and Shrubs 2: 256. 1913.
†*Acer saccharum* var. *glaucum* (Pax) Sarg., Bot. Gaz. 77: 233. 1919.
*Saccharodendron saccharum* (Marsh.) Moldenke, Rev. Sudam. Bot. 5:2. 1937.
*Acer saccharophorum* var. *schneckii* (Rehd.) Rousseau, Nat. Can. 67: 220. 1940.
*Acer saccharum* ssp. *schneckii* (Rehd.) Desmarais, Brittonia 7: 384. 1952.
*Acer nigrum* var. *glaucum* (Schmidt) Fosberg, Castanea 19: 27. 1954.

DERIVATION—Sugar, referring to the sweetish sap, from which maple sugar is made.

OTHER COMMON NAMES—hard maple, rock maple.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., Gaspé Pen. of Que., and Maine, w. to s. and w. Ont. and extreme se. Man., s. to Minn., e. Iowa, Mo., and e. Kans., and e. to Tenn., N.C., w. and n. Va., n. Del., and n. N.J. Also local in nw. S.C., n. Ga., and ne. S. Dak. Atlas vol. 1, maps 99-N, 99-E.

REFERENCES—Anderson, Edgar, and Leslie Hubricht. The American sugar maples. I. Phylogenetic relationships, as deduced from a study of leaf variation. Bot. Gaz. 100: 312-323, illus. 1938.

Dansereau, Pierre, and Yves Desmarais. Introgession in sugar maples—II. Am. Midl. Nat. 37: 146–161, illus. 1947.

Desmarais, Yves. Dynamics of leaf variation in the sugar maples. Brittonia 7: 347-387, illus. 1952.

Fosberg, F. R. Castanea 19: 26-28. 1954.

Gleason, H. A. The preservation of well known binomials. Phytologia 2: 201-212. 1947.

Kriebel, Howard B. Patterns of genetic variation in sugar maple. Ohio Agric. Exp. Stn. Res. Bull. 791, 55 p., illus. 1957.

Little, Elbert L., Jr. Phytologia 2: 460-463. 1948.

Mackenzie, Kenneth K. Technical name of sugar maple. Rhodora 28: 233-234. 1926.

Marie-Victorin, Frère, and Jacques Rousseau. Univ. Montréal Inst. Bot. Contrib. 36: 36-37. 1940.

Rousseau, Jacques. L'historie de la nomenclature de l'Acer saccharophorum Koch (A. saccharum Marsh.) depuis 1753. Nat. Can. 67: 161-200, 201-224, illus. 1940.

Sprague, T. A. The botanical name of the sugar maple. Kew R. Bot. Gard. Bull. Misc. Inform. 1929: 81-82. 1929.

The references cited review the controversial nomenclature and taxonomy. Three closely related eastern species, *Acer barbatum*, *A. leucoderme*, and *A. nigrum*, are regarded also as varieties of this species and intergrade or hybridize. Another variation mostly intermediate in form and range between *Acer saccharum* and *A. barbatum* has been designated as *A. saccharum* var. *schneckii* Rehd. (ssp. *schneckii* (Rehd.) Desmarais) but apparently not as a separate species.

*Acer skutchii* Rehd. of mts. of Guatemala and Mex. (Chis. and Tamps.) is another close relative. It has been treated also as a subspecies (ssp. *skutchii* (Rehd.) E. Murray).

HYBRIDIZES WITH: *Acer leucoderme* (*A.* ×*senecaense* Slavin).

*Acer sinuosum*, see **A. grandidentatum**

**Acer spicàtum** Lam. **mountain maple**‡†

‡†*Acer spicatum* Lam., Encyl. Méth. Bot. 2: 381. 1788.

DERIVATION—Spiked, referring to the elongated spikelike inflorescence.

OTHER COMMON NAME—moose maple.

RANGE—Nfld., s. Labr., and c. Que., w. to c. Ont. and e. Sask., s. to Minn. and ne. Iowa, and e. to s. Wis., Ohio, Pa., and New Engl. Also s. in mts. to n. Ga. Atlas vol. 4, maps 4-N, 4-NE.

*Achras*, see **Manilkara**

**Acoelorrhàphe** H. Wendl. (Family Palmae) **paurotis-palm**

†*Acoelorrphaphe* H. Wendl., Bot. Ztg. 37: 148. 1879; "*Acoelorraphe*." Corr. Hook. f. in Benth. & Hook. f., Gen. Pl. 3: 883. 1883.

‡*Paurotis* O. F. Cook in Northrop, Mem. Torrey Bot. Club 12: 21. 1902.

DERIVATION—From Greek, without a hollow seam or raphe.

OTHER COMMON NAME—paurotis‡.

REFERENCES—Bailey, L. H. Acoelorraphe vs. Paurotis—Silver-saw palm. Gentes Herbarum 4: 361-365, illus. 1940.

Moore, Harold E., Jr. Gentes Herbarum 8: 209-215. 1951.

Moore, Harold E., Jr. Gentes Herbarum 9: 245-246. 1963.

†*Acoelorrhaphe* H. Wendl. has been restored as the generic name, having been published in a key with brief description.

NUMBER OF SPECIES: 1.

**Acoelorrhàphe wrìghtii** (Griseb. & H. Wendl.) H. Wendl. ex Becc. **paurotis-palm**

*Copernicia wrightii* Griseb. & H. Wendl. in Griseb., Cat. Pl. Cub. 220. 1866.

†*Acoelorrhaphe wrightii* (Griseb. & H. Wendl.) H. Wendl. ex Becc., Webbia 2: 109. 1907; "*Acoelorhaphe*."

‡*Paurotis wrightii* (Griseb. & H. Wendl.) Britton, Torreya 8: 239. 1908; Britton in Britton & Shafer, No. Am. Trees 141, fig. 107. 1908.

DERIVATION—Charles Wright (1811–86), American botanical collector, who discovered it in Cuba, while making extensive plant collections there.

OTHER COMMON NAMES—paurotis‡, saw-cabbage-palm, silver-saw-palmetto, Everglades-palm.

RANGE—Local in s. Fla. (Dade, Monroe, and Collier Cos.). Bahamas, Cuba, and Atlantic Coast from se. Mex. and Belize to Nicaragua. Atlas vol. 5, map 161.

*Acrodiclidium*, see **Licaria**

**Adenóstoma** Hook. & Arn. (Family Rosaceae) **chamise**

*Adenostoma* Hook. & Arn., Bot. Beechey Voy. 139, pl. 30. 1832.

DERIVATION—From Greek gland and mouth, referring to the glands at mouth of floral-tube.

NUMBER OF SPECIES: Native shrubs (1 rarely a tree), 2 (also in B. Cal., Mex.); total, 2.

**Adenóstoma sparsifòlium** Torr. **redshank**

*Adenostoma sparsifolium* Torr. in Emory, Notes Mil. Reconn. 140. 1848; "*sparsifolia*."

DERIVATION—With sparse or scattered leaves.

OTHER COMMON NAMES—ribbonbush, ribbonwood, redshank chamise, yerba del pasmo (Spanish).

RANGE—Mts. of s. Calif. and n. B. Cal., Mex.

Added here as rarely a small tree to 23 ft (7 m) tall in s. Calif. Generally a shrub 6–16 ft (2–5 m) but cited also as a tree to 33 ft (10 m) in Mex. In the original publication (1848), recorded as a tree 30 ft (9 m) high, though seldom reported so large afterwards.

**Aésculus** L. (Family Hippocastanaceae) **buckeye**

‡†*Aesculus* L., Sp. Pl. 344. 1753; Gen. Pl. ed. 5, 161 ("*Esculus*"), 500. 1754.

DERIVATION—Ancient Latin name of a European oak or other mast-bearing tree.

OTHER COMMON NAME—horsechestnut.

REFERENCES—Hardin, James W. A revision of the American Hippocastanaceae. Brittonia 9: 145–171, 173–195, illus. 1957.

Hardin, James W. Studies in the Hippocastanaceae, IV. Hybridization in Aesculus. Rhodora 59: 185–203, illus. 1957.

NUMBER OF SPECIES: Native trees, 6; Mex. (B. Cal. Norte), 1; Eurasia (se. Europe, India to China, and Japan), 6; total, 13.

BINOMIALS OF NATURAL INTERSPECIFIC HYBRIDS:

*Aésculus* ×*arnoldiàna* Sarg. *(Ae. glabra* × *(octandra* × *pavia))*
*Aésculus* ×*búshii* Schneid. *(Ae. glabra* × *pavia)*
*Aésculus* ×*dupóntii* Sarg., see *Ae.* ×*woerlitzensis*
*Aésculus* ×*glaucéscens* Sarg., see *Ae.* ×*neglecta*
*Aésculus* ×*harbisónii* Sar., see *Ae.* ×*mutabilis*
*Aésculus* ×*marylándica* Booth ex Dippel *(Ae. glabra* × *octandra)*
*Aésculus* ×*mississippiénsis* Sarg., see *Ae.* ×*bushii*
*Aésculus* ×*mutábilis* (Spach) Schelle *(Ae. pavia* × *sylvatica)*
*Aésculus* ×*neglécta* Lindl. *(Ae. octandra* × *sylvatica)*
*Aésculus* ×*woerlitzénsis* Koehne *(Ae. octandra* × *(pavia* × *sylvatica))*

*Aesculus arguta*, see **Ae. glabra** var. **arguta**
*Aesculus austrina*, see **Ae. pavia**
*Aesculus buckleyi*, see **Ae. glabra** var. **arguta**

**Aésculus califórnica** (Spach) Nutt. **California buckeye**‡††
*Calothyrsus californica* Spach, Ann. Sci. Nat., Bot., Sér. 2, 2: 62. 1834.
‡†*Aesculus californica* (Spach) Nutt. in Torr. & Gray, Fl. No. Am. 1: 251. 1838.

DERIVATION—Of California.

RANGE—N. to s. Calif. in Coast Ranges and Sierra Nev. foothills. Atlas vol. 3, map 11.

REFERENCE—Benseler, Rolf W. Floral biology of California buckeye. Madroño 23: 41-53, illus. 1975.

*Aesculus discolor*, see **Ae. pavia**
*Aesculus georgiana*, see **Ae. sylvatica**

***Aésculus glàbra** Willd. **Ohio buckeye**‡††
‡†*Aesculus glabra* Willd., Enum. Pl. Hort. Berol. 1: 405. 1809.

DERIVATION—Glabrous, or hairless, referring to the foliage.

OTHER COMMON NAMES—fetid buckeye, stinking buckeye, American horsechestnut.

RANGE—W. Pa., Ohio, and s. Mich., w. to Ill., c. Iowa, and extreme se. Nebr., s. to e. Kans., sw. Okla., and c. Tex., and e. to w. Ark., Tenn., and c. Ala. Also local in e. Miss. Atlas vol. 1, map 102-E.

HYBRIDIZES WITH: *Aesculus octandra* (*Ae.* ×*marylandica* Booth ex Dippel), *Ae. pavia* (‡†*Ae.* ×*bushii* Schneid., *Ae.* ×*mississippiensis* Sarg.), *Ae. octandra* ×*pavia* (*Ae.* × *arnoldiana* Sarg.).

**Aésculus glàbra** Willd. var. **glàbra** **Ohio buckeye (typical)**

RANGE—W. Pa., Ohio, and s. Mich., w. to Ill. and c. Iowa, s. to w. Ark. and se. Okla., and e. to Tenn. and c. Ala. Also local in e. Miss. Atlas vol. 1, map 102.

**Aésculus glàbra** var. **argùta** (Buckl.) Robins. **Texas buckeye**‡
‡*Aesculus arguta* Buckl., Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 443. 1860.
*Aesculus glabra* var. *arguta* (Buckl.) Robins. in Gray, Synopt. Fl. No. Am. 1 (1): 447. 1897.
†*Aesculus glabra* var. *buckleyi* Sarg. Silva No. Am. 14: 99. 1902.
*Aesculus glabra* var. *sargentii* Rehd., J. Arnold Arbor. 7: 241. 1926.
*Aesculus buckleyi* (Sarg.) Bush, Am. Midl. Nat. 12: 24. 1930.

DERIVATION—Sharp-tooth, referring to the leaflets.

OTHER COMMON NAME—white buckeye.

RANGE—Extreme se. Nebr. s. to w. Mo., e. Kans., sw. Okla., and c. Tex. Atlas vol. 1, map 102-E.

‡†AÉSCULUS HIPPOCÁSTANUM L., horsechestnut‡†, has been widely planted across the U.S. and has escaped from cultivation in various places in the Northeast. As noted in previous checklists, it apparently is not naturalized. Native in Balkan Penninsula of se. Europe.

***Aésculus octándra** Marsh. **yellow buckeye‡†**

‡†*Aesculus octandra* Marsh., Arbustr. Am. 4. 1785.

?*Aesculus flava* Soland. ex[Hope], Cat. Hort. Edinb. 1778:3. 1778; *nom. illegit.*

DERIVATION—With 8 stamens.

OTHER COMMON NAMES—sweet buckeye, big buckeye.

RANGE—Sw. Pa., s. Ohio., s. Ind., and extreme s. Ill., s. to Ky., c. Tenn., and n. Ala., e. to n. Ga., and extreme nw. S.C., and n. to w. Va., and W. Va. Atlas vol. 1, map 103.

REFERENCE—Bean, W. J. Trees Shrubs Hardy Brit. Isl. ed. 8, 1: 254-255. 1970.

HYBRIDIZES WITH: *Aesculus glabra* (*Ae.* ×*marylandica* Booth ex Dippel). *Ae. sylvatica* (*Ae.* ×*neglecta* Lindl., *Ae.* ×*glaucescens* Sarg.), *Ae. pavia* × *sylvatica* (*Ae.* ×*woerlitzensis* Koehne, *Ae.* ×*dupontii* Sarg.).

**Aésculus parviflòra** Walt. **bottlebrush buckeye**

*Aesculus parviflora* Walt., Fl. Carol. 128. 1788.

DERIVATION—Small-flower.

RANGE—Local in Ala. and sw. Ga. Atlas vol. 4, map 5.

Usually shrubby but added as a shrub or small tree to 16 ft (5 m) tall (Hardin, Brittonia 9: 183. 1957).

**Aésculus pàvia** L. **red buckeye‡†**

‡†*Aesculus pavia* L., Sp. Pl. 344. 1753.

†*Aesculus discolor* Pursh, Fl. Am. Sept. 1: 255. 1814.

*Aesculus austrina* Small, Bull. Torrey Bot. Club 28: 359. 1901.

*Aesculus discolor* var. *flavescens* Sarg., Trees and Shrubs 2: 267. 1913.

*Aesculus pavia* var. *flavescens* (Sarg.) Correll, Wrightia 3: 132. 1965.

DERIVATION—Old generic name of buckeye honoring Peter Paaw, Latinized as Petrus Pavius (1564-1617), of Leiden, Netherlands.

OTHER COMMON NAMES—scarlet buckeye†, woolly buckeye†, firecracker-plant.

RANGE—Coastal Plain from se. N.C. sw. to n. Fla. and w. to e. and c. Tex. to Edwards Plateau, and n. in Miss. Valley to se. Okla., se. Mo., and s. Ill. Atlas vol. 4, map 6; vol. 5, map 19.

HYBRIDIZES WITH: *Aesculus glabra* (‡*Ae.* ×*bushii* Schneid., *Ae.* ×*mississippiensis* Sarg.), *Ae. sylvatica* (*Ae.* ×*mutabilis* (Spach) Schelle, *Ae.* ×*harbisonii* Sarg.).

**Aésculus sylvática** Bartr. **painted buckeye‡**

‡*Aesculus sylvatica* Bartr., Trav. No. So. Car. Ga. Fla. 476. 1791.

*Aesculus georgiana* Sarg., Trees and Shrubs 2: 259, pl. 197. 1013.

DERIVATION—Of the woods.

OTHER COMMON NAMES—dwarf buckeye, Georgia buckeye†.

RANGE—Coastal Plain and outer Piedmont from se. Va. se. to c. Ga. and ne. Ala., and n. to e. Tenn. Atlas vol. 4, map 7.

REFERENCE—Hardin, James W. The status of Lindley's Aesculus neglecta. Rhodora 62: 127-129. 1960.

Formerly referred to †*Aesculus neglecta* Lindl., which is now accepted and cited below as the hybrid with *Ae. octandra*.

HYBRIDIZES WITH: *Aesculus octandra* (*Ae.* ×*neglecta* Lindl., *Ae.* ×*glaucescens* Sarg.), *Ae. pavia* (*Ae.* ×*mutabilis* (Spach) Schelle, *Ae.* ×*harbisonii* Sarg.).

AILÀNTHUS Desf. (Family (Simaroubaceae) AILANTHUS

‡†*Ailanthus* Desf., Mém. Acad. Sci. Paris Math. Phys. 1786: 265, pl. 8. 1788; *nom. cons.*

DERIVATION—From the Moluccan name *aylanto*, meaning tree-of-heaven and referring to the height of the tree.

The gender assigned by the author of this genus is feminine.

AILÁNTHUS ALTÍSSIMA (Mill.) Swingle AILANTHUS‡†

*Toxicodendron altissimum* Mill., Gard. Dict. ed. 8, *Toxicodendron* No. 10. 1768.

*Ailanthus glandulosa* Desf., Acad. Sci. Paris Mém. Math. Phys. 1786: 265, pl. 8. 1788.

‡†*Ailanthus altissima* (Mill.) Swingle, J. Wash. Acad. Sci. 6: 495. 1916.

DERIVATION—Very tall.

OTHER COMMON NAMES—tree-of-heaven, Chinese tree-of-heaven, copal-tree.

RANGE—Cultivated and widely naturalized as a "weed" tree across continental U.S. from Mass. w. to s. Ont., Iowa, s. to Tex. and e. to n. Fla., also from N. Mex. w. to Calif., and n. to Wash. Native of China but widely naturalized in temperate regions.

ALBÍZIA Durazzini (Family Leguminosae) ALBIZIA

‡†*Albizia* Durazzini, Mag. Tosc. 3 (4): 10, 13, pl. 1772.

DERIVATION—Cavalier Filippo degl' Albizzi, of an old and noble Italian family, who introduced this genus into Europe in 1749.

REFERENCES—Elias, Thomas S. J. Arnold Arbor. 55: 109-114, illus. 1974.

Isely, Duane. Castanea 35: 245-248. 1970.

Isely, Duane. Mem. N.Y. Bot. Gard. 25(1): 74-77, 139, illus. 1973.

ALBÍZIA JULIBRÍSSIN Durazzini SILKTREE‡†

‡†*Albizia julibrissin* Durazzini, Mag. Tosc. 3 (4): 10, 11, 13, pl. 1772; "*iulibrissin*" except on pl.

DERIVATION—From the native name in Iran.

OTHER COMMON NAMES—mimosa-tree, "mimosa," powderpuff-tree.

RANGE—Widely planted for ornament; escaped and naturalized from Md. to Ky. and Ind., s. to e. Tex., and e. to s. Fla. Native from Iran to China.

ALBÍZIA LÉBBECK (L.) Benth. LEBBEK‡

*Mimosa lebbeck* L., Sp. Pl. 516. 1753.

*Acacia lebbeck* (L.) Willd., Sp. Pl. 4: 1066. 1806.

‡*Albizia lebbeck* (Willd.) Benth., Hook. Lond. J. Bot. 3: 87. 1844; "*Albizzia lebbek*."

DERIVATION—The Arabic common name.

OTHER COMMON NAMES—siris-tree, womans-tongue.

RANGE—Planted, escaped, and naturalized in s. Fla. incl. Fla. Keys. Also Hawaii, P.R., and V.I. Native probably of tropical Asia incl. India and Burma but now widely planted and naturalized through tropics.

ALEURÌTES FÓRDII Hemsl. (in Hook., Icon. Pl. 29: pl. 2801–2802. 1906; Family Euphorbiaceae), tung-oil-tree (tungtree), is grown in plantations near the Gulf Coast from s. Ga. and n. Fla. w. to La. and Tex. and has escaped. Perhaps naturalized locally (Godfrey and Kurz, Trees North. Fla. 188–190, fig. 123. 1962; Long and Lakela, Fl. Trop. Fla. 536. 1971; Webster, Grady L., J. Arnold Arbor. 48: 342-345. 1967). Planted also in Hawaii. Native of China and cultivated elsewhere in subtropical regions for the commercial oil in the seeds.

*Alnaster*, see **Alnus**

**Álnus** Mill. (Family Betulaceae) **alder**

‡*Alnus* B. Ehrh., Oecon. Pflanzenhist. 2: 21. 1953; rejected.

†*Alnus* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

*Alnaster* Spach, Ann. Sci. Nat. Bot. Sér. 2, 15: 200. 1841.

DERIVATION—The classical Latin name of alder.

REFERENCES—Czerepanov, S. Systema generis Alnus Mill. s. str. generumque affinium. Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 90-105. 1955.

Johnson, Frederic D. Taxonomy and distribution of northwestern alders. P. 9-22, illus. *In* Trappe, J. M., et al. Biology of alder. 292 p., illus. USDA For. Serv., Pac. Northwest For. Range Exp. Stn. 1968.

Murai, Saburo. Phytotaxonomical and geobotanical studies on gen. Alnus in Japan. III. Taxonomy of whole world species and distribution of each sect. Japan Govt. For. Exp. Stn. Bull. 171: 1-107, illus. 1964.

NUMBER OF SPECIES: Native trees, 8 (incl. 3 n. to Alaska and 1 also in Mex.; native shrubs, 2 (incl. 1 n. to Alaska); naturalized trees, 1; tropical Am. (mts. from Mex. to Andes of S. Am.), about 5; Old World (Eurasia and Algeria), about 15; total, about 30.

*Alnus crispa*, see note under **A. sinuata**

ÁLNUS GLUTINÒSA (L.) Gaertn. EUROPEAN ALDER‡

*Betula alnus* α *glutinosa* L., Sp. Pl. 983. 1753.
*Betula glutinosa* L., Syst. Nat. ed. 10, 2: 1265. 1759.
‡†*Alnus glutinosa* (L.) Gaertn., Fruct. Sem. Pl. 2: 54, pl. 90, fig. 2. 1791.

DERIVATION—Gummy, or gluey, referring to the young twigs and young leaves.

OTHER COMMON NAMES—black alder, European black alder†.

RANGE—Planted, escaped, and naturalized locally from Nfld. and Que. sw. to Pa., Del., and Ill. Native of Europe, n. Africa, and Asia.

*Alnus incana*, see **A. rugosa** and **A. tenuifolia**

**Álnus marítima** Muhl. ex Nutt. **seaside alder‡†**

*Betula-alnus maritima* Marsh., Arbustr. Am. 20. 1785.
‡†*Alnus maritima* Muhl. ex Nutt., No. Am. Sylva 1: 34, pl. 10 (bis). 1842.
*Alnus metoporina* Furlow, Ann. Mo. Bot. Gard. 63: 381. 1976.

DERIVATION—Maritime, or seaside, from the occurrence near (but not on) the coast.

RANGE—Local in s. Del. and e. shore of Md. and in s. Okla. (Johnston and Pontotoc Cos.). Atlas vol. 4, map 8.

**Álnus oblongifòlia** Torr **Arizona alder‡**

‡†*Alnus oblongifolia* Torr., U.S. Mex. Bound. Surv. Bot. 204. 1859; "*oblongifolius.*"

DERIVATION—Oblong-leaf.

OTHER COMMON NAMES—New Mexican alder, Mexican alder†.

RANGE—Mts. of sw. N. Mex. (local in n. N. Mex.) and Ariz. Also in n. Mex. (Son., Chih., and Dgo.). Atlas vol. 3, map 12.

*Alnus oregona*, see **A. rubra**

***Álnus rhombifòlia** Nutt. **white alder‡†**

‡†*Alnus rhombifòlia* Nutt., No. Am. Sylva 1: 33. 1842.

DERIVATION—Rhombic-leaf.

OTHER COMMON NAME—Sierra alder.

RANGE—W. Idaho, Wash., and Oreg., and s. in mts. to w. Nev. and s. Calif. Atlas vol. 3, map 13.

***Álnus rùbra** Bong. **red alder‡†**

‡†*Alnus rubra* Bong., Acad. St. Pétersb. Mém., Sér. 6, Sci. Math. Phys. Nat. 2: 162. 1832. Non *Betula-Alnus rubra* Marsh., Arbustr. Am. 20. 1785.
*Alnus oregona* Nutt., No. Am. Sylva 1: 28, pl. 9. 1842.

DERIVATION—Red, the wood turning reddish brown.

OTHER COMMON NAMES—Oregon alder, western alder, Pacific coast alder.

RANGE—Pacific Coast region from n. end of se. Alaska se. to w. B.C.,

w. Wash., w. Oreg., and c. Calif. (nw. San Luis Obispo Co.). Also local in mts. of n. Idaho. Atlas vol. 1, map 104; vol. 2. map 39.

**Álnus rugòsa** (Du Roi) Spreng. **speckled alder**‡

*Betula alnus* (*rugosa*) Du Roi, Obs. Bot. 32. 1771.
*Betula rugosa* (Du Roi) Ehrh., Beitr. Naturk. 3: 21. 1788.
‡*Alnus rugosa* (Du Roi) Spreng., Syst. Veget. 3: 848. 1826.
*Alnus incana* ß *americana* Reg., Mém. Soc. Imp. Nat. Moscou Nouv. 13: 155. 1861. (Monog. Betul. 97.)
*Alnus rugosa* var. *americana* (Reg.) Fern., Rhodora 47: 350, pl. 980-981. 1945.
*Alnus incana* (L.) Moench subsp. *rugosa* (Du Roi) R. T. Clausen, [N.Y.] Cornell Univ. Agric. Exp. Stn. Mem. 291: 8. 1949.
*Alnus americana* (Reg.) Czerep., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 103. 1955.

DERIVATION—Wrinkled.

OTHER COMMON NAMES—tag alder, gray alder, hoary alder, hazel alder.

RANGE—Nfld. and Labr. w. to Hudson Bay, Mack., and Yukon, s. to c. B.C., and e. to ne. N. Dak., Minn., ne. Iowa, ne. Ill., and n. N.J., and s. in mts. to W. Va. Atlas vol. 4, maps 9-N, 9-NE.

REFERENCES—Fernald, M. L. Eastern North American representatives of *Alnus incana*. Rhodora 47: 333-361, illus. 1945.

Steele, Frederic L. Introgression of Alnus serrulata and Alnus rugosa. Rhodora 63: 297-304, illus. 1961.

HYBRIDIZES WITH: *Alnus serrulata*.

**Álnus serrulàta** (Ait.) Willd. **hazel alder**‡

*Betula serrulata* Ait., Hort. Kew. 3: 338. 1789.
‡*Alnus serrulata* (Ait.) Willd., Sp. Pl. 4 (1): 336. 1805.
*Alnus serrulata* var. *subelliptica* Fern., Rhodora 47: 358, pl. 986. 1945.
*Alnus incana* var. *serrulata* (Ait.) Boivin, Phytologia 15: 419. 1967.

DERIVATION—Finely saw-toothed, referring to the leaves.

OTHER COMMON NAMES—common alder, smooth alder, tag alder, black alder.

RANGE—Sw. N.S., s. N.B., and c. Maine, w. to N.Y., Ohio, Ind., Mo., and extreme se. Kans., s. to e. Okla. and e. Tex., and e. to n. Fla. Atlas vol. 4, maps 10-NE, 10-SE, 10-N; vol. 5, map 20.

REFERENCES—See **Alnus rugosa**

HYBRIDIZES WITH: *Alnus rugosa*.

**Álnus sinuàta** (Regel) Rydb. **Sitka alder**‡†

*Alnus viridis* ß *sibirica* lusus b *sitchensis* Regel, Soc. Nat. Moscou Nouv. Mém. 13 (2): 138. 1861. (Monog. Betul. 80.)
*Alnus viridis* δ *sinuata* Regel, Bull. Soc. Imp. Nat. Moscou 38(2): 422. 1865.
‡†*Alnus sinuata* (Reg.) Rydb., Bull. Torrey Bot. Club 24: 190. 1897.
*Alnus sitchensis* (Reg.) Sarg., Silva No. Am. 14: 61, pl. 727. 1902.
*Alnus fruticosa* Rupr. var. *sinuata* (Regel) Regel ex Hultén, Fl. Aleutian Is. 153. 1937.
*Alnus crispa* (Ait.) Pursh ssp. *sinuata* (Regel) Hultén, Fl. Alaska Yukon, Lunds Univ. Årssk. N.F. Avd. 2, 40 (1): 587. 1944.
*Alnaster sinuatus* (Rydb.) Czerep., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 97. 1955.
*Alnus crispa* var. *sinuata* (Regel in DC.) Breitung, Can. Field-Nat. 71: 51. 1957.
*Alnus viridis* ssp. *sinuata* (Regel) A. & D. Löve, Univ. Colo. Stud., Biol. Ser. 17: 20. 1965.

DERIVATION—Sinuate, referring to the wavy-margined leaves.

OTHER COMMON NAMES—mountain alder, wavyleaf alder.

RANGE—Sw., c., and s. Alaska and Yukon, se. to B.C. and w. Alta. and from Wash. to nw. Calif., and e. to Idaho and c. Mont. Also in ne. Asia. Atlas vol. 2, map 38; vol. 3, maps 14-N, 14-W.

This species intergrades with the shrubby species *Alnus crispa* (Ait.) Pursh, American green alder, in Alaska and has been included under that species by some authors. The latter has been recorded as rarely a small tree in Alaska (Viereck and Little, Guide to Alaska Trees. U.S. Dep.

Agric., Agric. Handb. 472: 80. 1974). However, these trees perhaps should be regarded as intermediates in size. Intermediates have been designated also as natural hybrids: *A. crispa* ssp. ×*hutteni* Murai (in Trappe, J. M. et al., Biology of alder. p. 35. USDA For. Serv. 1968).

*Alnus sitchensis*, see **A. sinuata**

**Álnus tenuifòlia** Nutt. **mountain alder**†

‡†*Alnus tenuifolia* Nutt., No. Am. Sylva 1: 32, pl. 10. 1842.
*Alnus incana* ssp. *tenuifolia* (Nutt.) Breitung, Am. Midl. Nat. 58: 25. 1937.
*Alnus incana* ssp. *rugosa* var. *occidentalis* (Dippel) C. L. Hitchc., Vasc. Pl. Pac. Northwest 2: 72. 1964.

DERIVATION—Thinleaf.

OTHER COMMON NAMES—thinleaf alder‡, river alder.

RANGE—C. Alaska, Yukon, and Mack., se. to w. Sask. (local in sw. Man.) and B.C., and s. in mts. from w. Mont. to N. Mex. and c. Calif. Atlas vol. 2, map 40; vol. 3, maps 15-N, 15-W.

Regarded by some authors as a variety or synonym of *Álnus incàna* (L.) Moench, white alder, of Eurasia, which has been introduced in ne. U.S.

**Alvaradòa** Liebm. (Family Simaroubaceae) **alvaradoa**

‡†*Alvaradoa* Liebm., Vidensk. Meddel. Naturhist. For. Kjöbenhavn 1853: 100. 1854.

DERIVATION—Pedro de Alvarado, an explorer with Hernando Cortez in the conquest of Mexico.

REFERENCE—Cronquist, Arthur. Studies in the Simaroubaceae—IV. Resume of the American genera. Brittonia 5: 128–147. 1944.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; total, tropical Am., about 5.

**Alvaradòa amorphòides** Liebm. **Mexican alvaradoa**‡

‡*Alvaradoa amorphoides* Liebm., Vidensk. Meddel. Naturhist. For. Kjöbenhavn 1853: 101. 1854.

DERIVATION—Like *Amorpha*, from the resemblance of the leaves.

RANGE—Local in several hammocks of s. Fla. (s. Dade Co.). Reported from Key Largo. Cuba, Bahamas, and from n. Mex. (Son., Chih., and s.) to Costa Rica. Atlas vol. 5, map 162.

*Amarolea*, see **Osmanthus**

**Amelánchier** Medic. (family Rosaceae) **serviceberry**

‡†*Amelanchier* Medic., Phil. Bot. 1: 135, 155. 1789.

DERIVATION—From the French common name *amelanche* of European serviceberry, *Amelanchier ovalis* Medic.

OTHER COMMON NAMES—shadbush, juneberry, shadblow, sarvisberry, sarvis.

REFERENCES—Cinq-Mars, Lionel. Le genre Amélanchier au Québec. Nat. Can. 98: 329-346, illus. 1971. [Reprinted in Ludoviciana 9.]

Cruise, J. E. Studies of natural hybrids in Amelanchier. Can. J. Bot. 42: 651-663. 1964.

Jones, George Neville. American species of Amelanchier. Ill. Biol. Monogr. 20 (2), 126 p., illus. 1946.

Landry, Pierre. Le concept d'espèce et la taxinomie du genre Amelanchier (Rosacées). Bull. Soc. Bot. France 122: 243-251. 1975.

Nielsen, Etlar L. A taxonomic study of the genus Amelanchier in Minnesota. Am. Midl. Nat. 22: 160-206, illus. 1939.

Robertson, Kenneth R. J. Arnold Arbor. 55: 633-640. 1974.

Schroeder, F. G. Zur Nomenklatur in der Gattung Amelanchier (Rosaceae). Taxon 17: 633-634. 1968.

Weaver, Richard E., Jr. The shadbushes. Arnoldia 34: 22-31, illus. 1974.

The number of tree species of *Amelanchier* accepted here is 4, reduced from 7 in the 1953 checklist. Two others have been united as varieties, but varieties have not been distinguished here. About 5 additional species of ne. U.S. and adjacent Can. are shrubs, and 2 of these may also become small trees. Many plants are intermediate or hybrids. One recent concept of the genus (Landry 1975) accepts only 2 tree species and 2 shrub species, with varieties and hybrids, and 2 others in Eurasia.

NUMBER OF SPECIES: Native trees (also Can. and 1 to Alaska), 4; native shrubs, about 5 (1 s. to Guatemala); Mex., shrubs, about 2; Eurasia and n. Africa, about 4; total, about 16.

**Amelánchier alnifòlia** (Nutt.) Nutt. **western serviceberry**†

*Aronia alnifolia* Nutt., Gen. No. Am. Pl. 1: 306. 1818.
‡†*Amelanchier florida* Lindl., Edwards' Bot. Reg. 19: No. 1589, pl. 1589. 1833.
*Amelanchier alnifolia* (Nutt.) Nutt., J. Acad. Nat. Sci. Phila. 7: 22. 1834; *nom. nud.*
‡*Amelanchier alnifolia* (Nutt.) Nutt. ex. M. J. Roem., Fam. Nat. Reg. Veg. Syn. Mon. 3: 147. 1847.
*Amelanchier alnifolia* var. *florida* Schneid., Illus. Handb. Laubh. 1: 739, fig. 411o. 1906; Repert. Sp. Nov. Reg. Veg. 3: 182. 1906.
*Amelanchier florida* var. *humptulipensis* G. N. Jones, Wash. Univ. Publ. Biol. 5: 181. 1936.
*Amelanchier alnifolia* var. *humptulipensis* (G. N. Jones) C. L. Hitchc., Vasc. Pl. Pac. Northwest 3: 94. 1961.
*Amelanchier alnifolia* var. *semiintegrifolia* (Hook.) C. L. Hitchc., Vasc. Pl. Pac. Northwest 3: 94. 1961.
*Amelanchier alnifolia* ssp. *florida* (Lindl.) Hult., Bot. Notiser 126: 496. 1973.
*Amelanchier sanguinea* var. *alnifolia* (Nutt.) Landry, Bull. Soc. Bot. France 122: 249. 1975.

DERIVATION—With leaves like *Alnus*, or alder-leaf.

OTHER COMMON NAMES—Pacific serviceberry‡, saskatoon serviceberry‡, saskatoon, western shadbush, juneberry.

RANGE—C., s., and se. Alaska, Yukon, and Mack., s. to n. Calif., and e. to Colo., Nebr., nw. Iowa, w. Minn., and Man., local e. in s. Ont. and se. Que. Atlas vol. 2, map 48; vol. 3, maps 16-N, 16-NW; vol. 4, maps 12-N, 12-NE.

REFERENCE—Nielsen, Etlar. A note concerning the identity of Amelanchier florida Lindley and A. alnifolia Nuttall. Am. Midl. Nat. 22: 207-208. 1939.

HYBRIDIZES WITH: *Sorbus scopulina* (×*Amelasorbus jackii* Rehd., a shrub).

‡†*Amelanchier florida* Lindl., Pacific serviceberry‡, has been united with this species as a synonym, variety, or subspecies by several recent authors including C. L. Hitchcock (Vasc. Pl. Pac. Northwest 3: 94. 1961), Hultén (Bot. Notiser 126: 496. 1973), Viereck and Little (U.S. Dep. Agric. Misc. Publ. 1293: 13. 1975), and Landry (Bull. Soc. Bot. France 122: 249. 1975).

*Amelanchier amabilis*, see **A. sanguinea**

**Amelánchier arbòrea** (Michx. f.) Fern. **downy serviceberry**‡

*Mespilus arborea* Michx. f., Hist. Arbr. For. Am. Sept. 3: 68, pl. 11. 1813.
‡*Amelanchier laevis* Wieg., Rhodora 14: 123, 154, pl. 96, fig. 7. 1912.
*Amelanchier laevis* var. *cordifolia* Ashe, J. Elisha Mitchell Sci. Soc. 34: 130. 1918.
*Amelanchier austromontana* Ashe, J. Elisha Mitchell Sci. Soc. 34: 138. 1918.
‡*Amelanchier* ×*grandiflora* Rehd., J. Arnold Arbor. 2: 45. 1920 (Sept. 6); *A. canadensis* [*arborea*] × *laevis*.
‡*Amelanchier arborea* (Michx. f.) Fern., Rhodora 43: 563, pl. 672, fig. 2. 1941.
*Amelanchier arborea* var. *austromontana* (Ashe) Ahles, J. Elisha Mitchell Sci. Soc. 80: 172. 1964.

*Amelanchier arborea* var. *laevis* (Wieg.) Ahles, J. Elisha Mitchell Sci. Soc. 80: 172. 1964.
*Amelanchier arborea* var. *cordifolia* (Ashe) Boivin, Nat. Can. 93: 432. 1966.
*Amelanchier arborea* ssp. *laevis* (Wieg.) S. McKay ex Landry, Bull. Soc. France 122: 247. 1975.

DERIVATION—Tree-like.

OTHER COMMON NAMES—Allegheny serviceberry‡, serviceberry†, shadblow, apple shadbush.

RANGE—S. Nfld., N.S., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., and e. Minn., s. to extreme se. Nebr., e. Kans., e. Okla., and La., and e. to n. Fla. Atlas vol. 4, maps 11-N, 11-NE, 11-SE; vol. 5, map 21.

‡*Amelanchier laevis* Wieg. has been united as a variety or subspecies by several recent authors as indicated by the combinations cited above.

HYBRIDIZES WITH: *Amelanchier bartramiana* (*A.* ×*quinti-martii* Lalonde), *A. canadensis* (*A.* ×*intermedia* Spach), *A. sanguinea* (*A.* ×*wiegandii* Nielsen). These hybrids apparently are shrubs.

*Amelanchier australis*, see **A. utahensis**
*Amelanchier bakeri*, see **A. utahensis**

‡†*Amelánchier bartramiàna* (Tausch) M. J. Roem. (Fam. Nat. Reg. Veg. Syn. 3: 145. 1847), Bartram serviceberry‡, is a several-stemmed shrub less than 10 ft (3 m) high in ne. U.S. but becomes a small tree in N.S., according to A. E. Roland. Range—Labr., Nfld., and Que., w. to Maine, N.Y., Ont., ne. Pa., n. Mich., and ne. Minn.

*Amelánchier canadénsis* (L.) Medic. (Gesch. Bot. 79. 1793; *A. oblongifolia* (Torr. & Gray) M J. Roem.), thicket serviceberry, is a thicket-forming shrub, seldom treelike, to 25 ft (7.6 m) tall. Coastal Plain mostly, from Maine and sw. Que., s. to Ga. and Ala.

*Amelanchier florida*, see **A. alnifolia**
*Amelanchier* ×*grandiflora*, see **A. arborea**
*Amelanchier huronensis*, see **A. sanguinea**

‡*Amelánchier intèrior* Nielsen (Am. Midl. Nat. 22: 185, pl. 13. 1939), inland serviceberry‡, is intermediate between *Amelanchier arborea* and *A. sanguinea* and perhaps better regarded as a hybrid.

RANGE—N. Mich., Wis., Minn., e. Iowa, and n. Ill. Atlas vol. 4, map 13.

*Amelanchier laevis*, see **A. arborea**
*Amelanchier mormonica*, see **A. utahensis**
*Amelanchier oreophila*, see **A. utahensis**
*Amelanchier pallida*, see **A. utahensis**

**Amelánchier sanguínea** (Pursh) DC. **roundleaf serviceberry** ‡
*Pyrus sanguinea* Pursh, Fl. Am. Sept. 1: 340. 1814.
‡*Amelanchier sanguinea* (Pursh) DC., Prodr. 2: 633. 1825.
*Amelanchier huronensis* Wieg., Rhodora 22: 150. 1920.
*Amelanchier amabilis* Wieg., Rhodora 23: 48. 1921.

DERIVATION—Blood red, from the red twigs.

OTHER COMMON NAMES—roundleaf juneberry, shore shadbush, Huron serviceberry.

RANGE—Maine and sw. Que. w. to s. Ont., Mich., and n. Minn., s. to n. Iowa, Ohio, Pa., n. N.J., and Mass. Also s. in mts. to w. N.C., and e. Tenn. Atlas vol. 4, map 14.

HYBRIDIZES WITH: *Amelanchier arborea* (*A.* ×*wiegandii* Nielsen); *A. bartramiana*.

**Amelánchier utahénsis** Koehne **Utah serviceberry ‡**

‡*Amelanchier utahensis* Koehne, Gatt. Pomac., Wissensch. Progr. Falk-Realgymnasiums Berlin 95: 25, pl. 2, fig. 20e. 1890.
*Amelanchier pallida* Greene, Fl. Franc. 53. 1891.
*Amelanchier pallida* var. *arguta* Greene, Erythea 1: 221. 1893.
*Amelanchier alnifolia* var. *utahensis* (Koehne) M. E. Jones, Proc. Calif. Acad. Sci., Ser. 2, 5: 679. 1895.
*Amelanchier bakeri* Greene, Pittonia 4: 128. 1900.
*Amelanchier oreophila* A. Nels., Bot. Gaz. 40: 65. 1905.
*Amelanchier mormonica* Schneid., Illus. Handb. Laubholzk. 1: 740, fig. 414, n-o. 1906; Repert. Spec. Nov. Regni Veg. 3: 182. 1906.
*Amelanchier australis* Standl., Proc. Biol. Soc. Wash. 26: 116. 1913.
*Amelanchier sanguinea* var. *arguta* (Greene) Landry, Bull. Soc. Bot. France 122: 249. 1975.

DERIVATION—Of Utah, where it was first distinguished.

RANGE—Mts. of w. U.S. from s. Oreg. s. to s. Calif. and n. B. Cal., Mex., e. to Trans-Pecos Tex., s. N. Mex., se. Wyo., and s. Mont. Atlas vol. 3, map 17.

Many shrubby variations of this widespread species have been named as separate species.

×*Amelasorbus*, see **Amelanchier alnifolia** and **Sorbus scopulina**

**Amphitécna** Miers **black-calabash**

*Dendrosicus* Raf., Sylva Tell. 78. 1838; *nom. rejic.*
*Crescentia* sect. *Enallagma* Miers, Trans. Linn. Soc. Lond. 26: 165, 174. 1868.
*Amphitecna* Miers, Trans. Linn. Soc. Lond. 26: 163. 1868.
‡†*Enallagma* (Miers) Baill., Hist. Pl. 10: 54. 1888; *nom. cons.*

DERIVATION—From Greek both (or around) and skill.

REFERENCES—Gentry, Alwyn H. Studies in Bignoniaceae VII. Dendrosicus, Enallagma, and Amphitecna. Taxon 22: 637-640. 1973.

Gentry, Alwyn H. Amphitecna—Enallagma—Dendrosicus revisited. Taxon 25: 108. 1976.

Gentry, Alwin H. Rhodora 79: 438-439. 1977.

Williams, Louis O. Amphitecna and Enallagma. Fieldiana Bot. 36: 21-27. 1973.

NUMBER OF SPECIES: Native trees (s. Fla., also in P.R. and V.I.), 1; total, tropical Am., about 5.

**Amphitécna latifòlia** (Mill.) A. H. Gentry **black-calabash‡**

*Crescentia latifolia* Mill., Gard. Dict. ed. 8, *Crescentia* No. 2. 1768.
*Crescentia cucurbitina* L., Mant. Pl. 250. 1771.
*Crescentia obovata* Benth., Bot. Voy. Sulph. 130, pl. 46. 1845.
*Enallagma cucurbitina* (L.) Baill. ex K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4 (3b): 247, fig. 93 D. 1894.
‡†*Enallagma latifolia* (Mill.) Small, Fl. Miami 171, 200. 1913.
*Dendrosicus latifolius* (Mill.) A. H. Gentry, Taxon 22: 638. 1973.
*Amphitecna latifolia* (Mill.) A. H. Gentry, Taxon 25: 108. 1976.
*Amphitecna obovata* (Benth.) L. O. Williams, Fieldiana: Bot. 36: 25. 1973.

DERIVATION—Broad-leaf.

OTHER COMMON NAME—black calabash-tree†.

RANGE—Very rare in s. Fla. (Biscayne Bay incl. Brickell Hammock, Dade Co.). Widespread in tropical Am. in West Indies incl. P.R. and V.I., and from s. Mex. s. to Ecuador and Venezuela. Atlas vol. 5, map 163.

*Amygdalus*, see **Prunus**

**Ámyris** P. Br. (Family Rutaceae) **torchwood**

‡†*Amyris* P. Br., Civ. Nat. Hist. Jam. 208. 1756.

DERIVATION—Apparently from Greek, with myrrh or resin; or possibly not myrrh, that is, different from Old World myrrh.

OTHER COMMON NAME—amyris‡.

REFERENCES—See also **Citrus**

Brizicky, George K. J. Arnold Arbor. 43: 11-12. 1962.

NUMBER OF SPECIES: Native trees (Fla.), 2, also to P.R. (1 to V.I.); native shrubs (s. Tex.), 2; tropical Am. from West Indies and Mex. to Peru, about 20; total, trees and shrubs, about 25.

**Amyris balsamifera** L. **balsam torchwood**†

‡†*Amyris balsamifera* L., Syst. Nat. ed. 10, 2: 1000. 1759; "*balsamif.*" L., Sp. Pl. ed. 2, 496. 1762; "*balsamifera.*"

DERIVATION—Balsam-bearing.

OTHER COMMON NAME—balsam amyris‡.

RANGE—S. Fla. (Matteson Hammock, Dade Co.), apparently rare and local. Cuba, Jamaica, Hispaniola, P.R., Honduras, and nw. S. Am. in Colombia, Venezuela, and Ecuador. Atlas vol. 5, map 164.

**Amyris elemifera** L. **torchwood**†

‡†*Amyris elemifera* L., Syst. Nat. ed. 10, 2: 100. 1759; "*elemifer.*"
*Amyris maritima* Jacq., Enum. Pl. Carib. 23. 1760.

DERIVATION—Bearing *elemi*, a fragrant resin or balsam.

OTHER COMMON NAMES—candlewood, sea amyris‡, palo de tea.

RANGE—S. and e. Fla. from Lower Fla. Keys n. along Atlantic Coast to Volusia Co. (also Nassau Co.). From Bahamas through West Indies incl. P.R. and V.I. C. Am. in Guatemala, Belize, Honduras, and El Salvador. Atlas v. 5, map 165.

*Anamomis*, see **Myrcianthes**

‡*Andira inermis* (W. Wright) DC. (Prodr. 2: 475. 1825, Family Leguminosae), cabbage angelin‡, is excluded as not native or naturalized. Found once on Bahia Honda Key near Key West, Fla., possibly from an accidental migration. Occasionally cultivated in s. Fla. Range—Through West Indies incl. P.R. and V.I. and from c. Mex. to Peru, Bolivia, and Brazil. Reference—Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 5. 1976.

**Annona** L. (Family Annonaceae) **annona**

‡†*Annona* L., Sp. Pl. 536. 1753; Gen. Pl. ed. 5, 241. 1754.

DERIVATION—From the American Indian name *anon* in Hispaniola, changed to Latin *annona*, a year's harvest.

REFERENCE—Wood, Carroll E., Jr. J. Arnold Arbor. 39: 313-315. 1958.

NUMBER OF SPECIES: Native trees, 1 (also in P.R. and V.I.); naturalized trees, 1; P.R. and V.I., 2; total (tropical trees, nearly all in Am. except about 10 in Africa), about 110.

**Annona glabra** L. **pond-apple**‡†

‡†*Annona glabra* L., Sp. Pl. 537. 1753.

DERIVATION—Glabrous, or hairless.

OTHER COMMON NAME—alligator-apple.

RANGE—S. Fla. incl. Fla. Keys. Widely distributed in tropical Am. from Bahamas through West Indies incl. P.R. and V.I. S. Mex. s. along Atlantic Coast to Brazil, and s. along Pacific Coast to Ecuador incl. Galápagos Is. Also coast of w. Africa. Atlas vol. 5, map 166.

ANNONA SQUAMOSA L. SUGAR-APPLE‡

‡*Annona squamosa* L., Sp. Pl. 537. 1753.

DERIVATION—Covered with scales.

OTHER COMMON NAME—sweetsop.

RANGE—A tropical fruit tree naturalized on Fla. Keys, according to Small (Man. Southeast. Fl. 533. 1933), and mentioned in a note in the

1927 checklist. Also planted in Hawaii, P.R., and V.I. Native of tropical Am., the original home uncertain. Widely cultivated for its fruit and naturalized in tropical regions.

**Aràlia** L. (Family Araliaceae) **aralia**

‡†*Aralia* L., Sp. Pl. 273. 1753; Gen. Pl. ed. 5, 134. 1754.

DERIVATION—From the American Indian name in Quebec.

REFERENCES–Smith, Albert C. Araliaceae. No. Am. Fl. 28B: 3–41. 1944.

Graham, Shirley A. The genera of Araliaceae in the southeastern United States. J. Arnold Arbor. 47: 126-136. 1966.

NUMBER OF SPECIES: Native trees, 1; native shrubs, 1 (also s. to Honduras); native herbs, 4; Mex., shrubs and trees, 3 additional; e. Asia and Malesia, about 20; total, about 30.

**Aràlia spinòsa** L. **devils-walkingstick‡†**

‡†*Aralia spinosa* L., Sp. Pl. 273. 1753.

DERIVATION—Spiny.

OTHER COMMON NAMES—Hercules-club, prickly-ash, angelica-tree.

RANGE—N.J. and c. and w. N.Y., w. to s. Ohio, s. Ill., and se. Mo., s. to se. Okla. and e. Tex., and e. to c. Fla. Also escaping from cult. from s. New. Engl. to s. Ont., Mich., and Wis. and naturalized locally in Conn. and perhaps elsewhere. Atlas vol. 4, map 15; vol. 5, map 22.

**Arbùtus** L. (Family Ericaceae) **madrone**

‡†*Arbutus* L., Sp. Pl. 395. 1753; Gen. Pl. ed. 5, 187, 1754.

DERIVATION—The classical Latin name of *Arbutus unędo* L., strawberry madrone, of southern Europe. Other pronunciation—*Arbutus*.

OTHER COMMON NAMES—madroño, madroña (Spanish).

NUMBER OF SPECIES: Native trees, w. U.S., 3 (incl. 2 also in Mex.); Mex. 5 or fewer additional (incl. 1 south to Nicaragua); Europe to western Asia, about 10; total, about 15.

**Arbùtus arizónica** (Gray) Sarg. **Arizona madrone‡**

*Arbutus xalapensis* H.B.K. var. *arizonica* Gray, Synopt. Fl. No. Am. Ed. 2, Suppl., 2 (1): 396. 1886.

‡†*Arbutus arizonica* (Gray) Sarg., Gard. and Forest 4: 317, fig. 54. 1891.

DERIVATION—Of Arizona, where it was discovered.

OTHER COMMON NAMES—Arizona madroño†, madroña.

RANGE—Mts. of se. Ariz., extreme sw. N. Mex., and nw. Mex. (e. Son., w. Chih., Dgo., Oax., and Jal.). Atlas vol. 3, map 18.

***Arbùtus menzièsii** Pursh **Pacific madrone‡**

‡†*Arbutus menziesii* Pursh, Fl. Bor. Am. 1: 282. 1814.

DERIVATION—Named for its discoverer, Archibald Menzies (1754-1842), Scotch physician and naturalist who accompanied Captain George Vancouver on his voyage of discovery in the Northwest.

OTHER COMMON NAMES—madrone, madroño, madroña.

RANGE—Pacific Coast region from sw. B.C. incl. Vancouver Is. s. to w. Wash., w. Oreg., and in Coast Ranges to s. Calif. Also in Sierra Nev. of c. Calif. and Santa Cruz Is. Atlas vol. 1, map 100.

The northernmost tree species of its family in the New World.

**Arbùtus texàna** Buckl. **Texas madrone‡**

‡†*Arbutus texana* Buckl., Proc. Acad. Nat. Sci. Phila. 1861 [v. 13]: 460. 1862.

*Arbutus xalapensis* H.B.K. var. *texana* (Buckl.) Gray, Synopt. Fl. No. Am. ed. 2, Suppl., 2 (1): 397. 1886.

DERIVATION—Of Texas.

OTHER COMMON NAMES—Texas madroño†, madroña.

RANGE—C. Tex. (Edwards Plateau) to Trans-Pecos Tex., se. N. Mex.

(Guadalupe Mts.), and ne. Mex. (Coah., Dgo., N.L., S.L.P., and Tamps.). Atlas vol. 3, map 19.

Regarded also as a variety or synonym of *Arbutus xalapensis* H.B.K., Mexican madrone, of Mex. and Guatemala.

**Arctostáphylos** Adans. (Family Ericaceae) **manzanita**

‡†*Arctostaphylos* Adans., Fam. Pl. 2: 165, 520. 1763; *nom. cons.*

DERIVATION—From Greek bear and bunch of grapes, translated from the common name of the type species.

OTHER COMMON NAME—bearberry.

This genus of shrubs centering in California contains a few species that rarely produce small trees. Sargent (Man. Trees No. Am. ed. 2, corr. 1926) omitted the genus. However, it was mentioned in notes in Forest Service checklists. Certainly some individuals of *Arctostaphylos* reach larger size than do several shrubby species accepted here as trees. However, the trunks generally are short and branch near the ground, thus not meeting the definition of a tree. Further information including photographs would be helpful for confirmation. Three species listed below and *A. manzanita* Parry, big manzanita, of California rarely qualify as small trees.

REFERENCE—Adams, J. E. A systematic study of the genus Arctostaphylos. J. Elisha Mitchell Sci. Soc. 56: 1-62. 1940.

NUMBER OF SPECIES: Native trees, 3; native shrubs in w. U.S. centering in Calif., about 40 (incl. about 5 also in Mex.); Mex., mostly shrubs, about 10 additional; C. Am. (Guatemala to Panama), mostly shrubs, 4 (incl. 3 also in Mex.); low arctic circumpolar shrubs, 3 (incl. Alaska, 2 also in contiguous U.S. and 1 of these with var. in Guatemala); total, mostly shrubs, about 60.

**Arctostáphylos glaùca** Lindl. **bigberry manzanita**

*Arctostaphylos glauca* Lindl., Bot. Reg. 21: pl. 1791. 1836.

DERIVATION—Glaucous, or covered with a bloom, referring to the leaves and young twigs.

RANGE—Mts., Coast Ranges mostly, of c. and s. Calif. Also in n. B. Cal., Mex.

Added here as rarely a small tree 13-33 ft (4-10 m) high in Calif. and Mex.

**Arctostáphylos prınglei** Parry **Pringle manzanita**

*Arctostaphylos pringlei* Parry, Bull. Calif. Acad. Sci. 2: 494. 1887.
*Arctostaphylos pringlei* var. *drupacea* Parry, Bull. Calif. Acad. Sci. 2: 495. 1887.

DERIVATION—Cyrus Guernsey Pringle (1838–1911), botanical collector and horticulturist of the United States, who made large collections also in Mexico.

OTHER COMMON NAME—pink-bracted manzanita.

RANGE—Ariz., s. Calif., and n. B. Cal., Mex. Atlas vol. 3, map 20.

Added here as rarely a small tree 16 ft (5 m) high in c. Ariz.

**Arctostáphylos víscida** Parry **whiteleaf manzanita**

*Arctostaphylos viscida* Parry, Bull. Calif. Acad. Sci. 2: 492. 1897.
*Arctostaphylos pulchella* Howell, Fl. Nw. Am. 1: 146. 1901.
*Arctostaphylos mariposa* Dudley, Publ. Sierra Club 27:52. 1902.
*Arctostaphylos viscida* ssp. *pulchella* (Howell) P. V. Wells, Madroño 19: 204. 1968.
*Arctostaphylos viscida* ssp. *mariposa* (Dudley) P. V. Wells, Madroño 19: 204. 1968.

DERIVATION—Viscid or sticky, the twigs and fruits often with gland hairs.

RANGE—Foothills of sw. Oreg. and s. in Coast Ranges and Sierra Nev. to c. Calif.

Added here as rarely a small tree to 24 ft (7 m) high in sw. Oreg.

**Ardísia** Sw. (Family Myrsinaceae) **ardisia**

†*Icacorea* Aubl., Hist. Pl. Guiane Franç. v. 2, Suppl. 1, pl. 368. 1775; *nom. rejic.*

‡*Ardisia* Sw., Nov. Gen. Pl. Prodr. 3, 48. 1788; *nom. cons.*

DERIVATION—From Greek *ardis* (arrow-point), referring to the arrow-shaped anthers.

REFERENCE—Channell, R. B., and C. E. Wood, Jr. J. Arnold Arbor. 40: 271-273. 1959.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R., 3 (1 also in V.I.); total, shrubs and trees, mostly tropical, 300-400.

**Ardísia escallonioìdes** Schiede & Deppe ex Schlecht. & Cham. **marlberry†**

*Cyrilla paniculata* Nutt., Am. J. Sci. Arts 5: 290. 1822.

‡*Ardisia escallonioides* Schiede & Deppe ex Schlecht. & Cham., Linnaea 6: 393. 1831.

†*Icacorea paniculata* (Nutt.) Sudw., Gard. and Forest 6: 324. 1893.

*Ardisia paniculata* (Nutt.) Sarg. Man Trees No. Am. ed. 2, 806. 1922. Non *Ardisia paniculata* Roxb., Fl. Indica 2: 270. 1824. Non *Ardisia paniculata* (Roxb.) A. DC., Prodr. 8: 139. 1844.

DERIVATION—Like *Escallonia* Mutis, a genus of South American trees and shrubs with leathery leaves and showy flowers named for Antonio Escallón, Colombian botanist who collected in 1777.

OTHER COMMON NAME—marbleberry‡.

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to Volusia and Flagler Cos. and on w. coast to Pinellas Co. Bahamas, Cuba, Hispaniola, and from ne. Mex. (Tamps. and S.L.P.) s. to Guatemala. Atlas vol. 5, map 167.

ARDÍSIA SOLÀNACEA Roxb. (Pl. Coast Coromandel 1:27, pl. 27. 1795), shoebutton ardisia, a shrub or small tree native of se. Asia, has been introduced in s. Fla. and has escaped locally. Naturalized in hammocks, disturbed sites, according to Long and Lakela (Fl. Trop. Fla. 674. 1971).

*Argentacer*, see **Acer**

**Artemísia** L. (Family Compositae) **sagebrush**

‡†*Artemisia* L., Sp. Pl. 845. 1753; Gen. Pl. ed. 5, 367. 1754.

DERIVATION—From the classical Greek and Latin name of mugwort, an Old World species. The name of that species, in turn, derives (some say) from the Greek goddess Artemis (Roman, Diana) or, according to others, Artemisia, wife of Mausolus, King of Caria.

OTHER COMMON NAME—wormwood.

REFERENCES—Beetle, Alan A. New names within the section Tridentatae of Artemisia. Rhodora 61: 82-85. 1959.

Beetle, Alan A. A study of sagebrush. The section Tridentatae of Artemisia. Wyo. Agric. Exp. Stn. Bull. 368, 83 p., illus. 1960.

Beetle, Alan A., and Alvin Young. A third subspecies in the Artemisia tridentata complex. Rhodora 67: 405-406. 1965.

Winward, A. H., and E. W. Tisdale. Taxonomy of the Artemisia tridentata complex in Idaho. Univ. Idaho, Coll. For. Wildl. Range Sci. Bull. 19, 15 p., illus. 1977.

NUMBER OF SPECIES: Native herbs and shrubs, about 40, incl. 1 rarely a small tree; total, n. hemisphere, S. Am., and s. Africa, 100-400.

**Artemísia tridentàta** Nutt. **big sagebrush‡**

‡*Artemisia tridentata* Nutt., Trans. Am. Phil. Soc., Ser. 2, 7: 398. 1841.

DERIVATION—Three-toothed, referring to the leaf apex.

OTHER COMMON NAMES—sage, sagebrush, common sagebrush, basin sagebrush, black sage, blue sage.

RANGE—W. N. Dak. and Mont. w. to extreme sw. Alta., s. B.C., and c. Wash., s. to s. Calif. and n. B. Cal., Mex., e. to N. Mex., and n. to w. S. Dak. Atlas vol. 3, maps 21-NW, 21-SW.

This widespread species, probably the most abundant shrub in w. contiguous U.S., rarely becomes a small tree. Several variations, mostly shrubby, have been named as subspecies and forms.

**Asímina** Adans. (Family Annonaceae) **pawpaw**

‡†*Asimina* Adans., Fam. Pl. 2: 365, 521. 1763.

DERIVATION—From the American Indian name through French.

REFERENCE—Kral, Robert. A revision of Asimina and Deeringothamnus (Annonaceae). Brittonia 12:233-278, illus. 1960.

NUMBER OF SPECIES: Native trees, 3; native shrubs, 5; total (all in se. U.S., 1 also in ne. U.S. and extreme s. Ont.), 8.

**Asímina obovàta** (Willd.) Nash **bigflower pawpaw**

*Anona obovata* Willd., Sp. Pl. ed. 4, 2: 1269. 1799.
*Asimina obovata* (Willd.) Nash, Bull. Torrey Bot. Club 23: 240. 1896.
*Pityothamnus obovatus* (Willd.) Small, Man. Southeast. Fl. 531, 1504. 1933.

DERIVATION—Obovate, referring to the leaves.

RANGE—Ne. to n.c. and se. Fla.

Added here as a shrub or occasionally small tree to 15 ft (4.5 m) tall, according to Kral (Brittonia 12: 253-254. 1960).

HYBRIDIZES WITH: *Asimina pygmaea* (Bartr.) Dunal; *A. reticulata* Shuttlew. ex Chapm.

**Asímina parviflòra** (Michx.) Dunal **smallflower pawpaw**

*Orchidocarpum parviflorum* Michx., Fl. Bor. Am. 1: 329. 1803.
*Asimina parviflora* (Michx.) Dunal, Monogr. Anonac. 82, pl. 9. 1817.

DERIVATION—Smallflower.

OTHER COMMON NAMES—smallfruit pawpaw, dwarf pawpaw.

RANGE—Se. Va. s. to c. Fla., w. to e. Tex., and n. to extreme s. Ark. Atlas vol. 5, map 158.5.

Added here as a shrub or low tree to 20 ft (6 m) tall, according to Kral (Brittonia 12: 244. 1960).

HYBRIDIZES WITH: *Asimina triloba*.

**Asímina trilòba** (L.) Dunal **pawpaw‡**

*Annona triloba* L., Sp. Pl. 537. 1753.
‡†*Asimina triloba* (L.) Dunal, Monog. Anon. 83. 1817.

DERIVATION—Three-lobed; referring to the 3 sepals and 2 rows of 3 petals each.

OTHER COMMON NAMES—common pawpaw, papaw†, pawpaw-apple, false-banana.

RANGE—Pa. and w. N.Y., w. to extreme s. Ont., s. Mich., n. Ill., s. Iowa, and se. Nebr., s. to e. Kans. and e. Tex., and e. to s. La., nw. Fla., and Ga. Also extinct in N.J., sw. Wis., and ne. Iowa. Atlas vol. 4, map 16; vol. 5, map 23.

The northernmost New World representative of its chiefly tropical family.

HYBRIDIZES WITH: *Asimina parviflora*.

*Ateramnus* see **Gymnanthes**

**Avicénnia** L. (Family Verbenaceae; Avicenniaceae) **black-mangrove**

‡†*Avicennia* L., Sp. Pl. 110. 1753; Gen. Pl. 5. 49. 1754.

DERIVATION—In honor of Abu Sina, Latinized as Avicenna (980-1036), of Bokhara, Arab physician and philosopher.

OTHER COMMON NAME—blackwood†.

NUMBER OF SPECIES: Native trees, 1 (also in P.R. and V.I.); total, on tropical and subtropical shores, about 10.

**Avicénnia gérminans** (L.) L. **black-mangrove‡**

*Bontia germinans* L., Syst. Nat. ed. 10, 2: 1122. 1759.
‡†*Avicennia nitida* Jacq., Enum. Pl. Carib. 25. 1760.
*Avicennia germinans* (L.) L., Sp. Pl. ed. 3, 891. 1764.

DERIVATION—Germinating, referring to the seed which often sprouts on the tree before shedding.

OTHER COMMON NAMES—blackwood†, mangle blanco (Spanish).

RANGE—Silt shores of coasts and islands of n. to s. Fla. incl. Fla. Keys, n. locally to St. Johns Co. on e. coast and to s. Miss., s. La., and s. Tex. Also widely distributed on coasts of tropical Am. from Bermuda and Bahamas through West Indies incl. P.R. and V.I. From n. Mex. (Tamps., Son., and B. Cal. Norte) s. on Atlantic Coast to Brazil and on Pacific Coast to Ecuador incl. Galápagos Is. and nw. Peru. The same or a very closely related sp. on coasts of w. Africa. Atlas vol. 4, maps 17-N, 17-SE; vol. 5, map 168.

REFERENCES—Compère, P. The correct name of the Afro-American black mangrove. Taxon 12: 150-152. 1963.

Little, Elbert L., Jr. Avicennia nitida (nomenclature). Phytologia 8: 49-57. 1961.

Moldenke, Harold N. Materials toward a monograph of the genus Avicennia, I, II, III. Phytologia 7: 123-168, 179-232, 259-293. 1960.

Steam, William T. A key to West Indian mangroves. Kew Bull. 1958: 33-37, illus. 1958.

**Báccharis** L. (Family Compositae) **baccharis**

‡†*Baccharis* L., Sp. Pl. 860. 1753; Gen. Pl. ed. 5, 370. 1754.

DERIVATION—Ancient Greek name of a plant with a fragrant root, from the god Bacchus.

NUMBER OF SPECIES: Native shrubs and herbs, about 20, incl. 1 also a small tree; total, New World, mainly S. Am., 300-400.

‡†*Báccharis glomeruliflòra* Pers. (Synops. Pl. 2: 423. 1807), southern baccharis (groundsel-tree), is omitted as a shrub apparently not reaching tree size. Range along coast from N.C. to s. Fla. and in West Indies.

**Báccharis halimifòlia** L. **eastern baccharis‡**

‡†*Baccharis halimifolia* L., Sp. Pl. 860. 1753.

DERIVATION—With leaves of *Halimus*, an old synonym of salt-bush, *Atriplex*.

OTHER COMMON NAMES—groundsel-tree†, saltbrush, sea-myrtle, silverling.

RANGE—Coastal Plain generally near coast, from Mass. s. to s. Fla. incl. Fla. Keys, w. to s. Tex., and n. in Miss. Valley to se. Okla., Ark., and n. Miss. Also Bahamas and a var. in Cuba. Atlas vol. 4, maps 18-NE, 18-SE; vol. 5, map 24.

This species apparently is extending its natural range northward in Mississippi Valley.

*Batodendron*, see **Vaccinium**

**Bétula** L. (Family Betulaceae) **birch**

‡†*Betula* L., Sp. Pl. 982. 1753; Gen. Pl. ed. 5, 422. 1754.

DERIVATION—The classical Latin name of birch.

REFERENCES—Boivin, Bernard. Notes sur les Betula. Nat. Can. 94: 229-231. 1967.

Brittain, W. H., and W. F. Grant. Observations on Canadian birch (Betula) collections at the Morgan Arboretum. I, II, IV, V, VIII. Can. Field-Nat. 79: 189-197, 253-257, illus. 1965; 81: 116-127, 251-262, illus. 1967; 83: 361-383, illus. 1969.

Dugle, Janet R. A taxonomic study of western Canadian species in the genus Betula. Can. J. Bot. 44: 929-1007, illus. 1966.

Fernard, M. L. Some North American Corylaceae (Betulaceae). I. Notes on Betula in eastern North America. Rhodora 47: 303-329, illus. 1945.

Fontaine, F. J. Het geslacht Betula (bijdrage toteen monografie). Belmontia IV, fasc. 13: 99-180. 1970.

Hardin, James W. Studies of the southeastern United States flora. I. Betulaceae. J. Elisha Mitchell Sci. Soc. 87: 39-41. 1971.

NUMBER OF SPECIES: Native trees, 7 (incl. 1 n. to Alaska); native shrubs, about 5 (incl. 2 n. to Alaska); Eurasia, about 40; total, trees and shrubs of n. temperate and arctic zones, about 50.

BINOMIALS OF NATURAL INTERSPECIFIC HYBRIDS:

*Bétula* ×*andrewsii* A. Nels., see *B.* ×*piperi*
*Bétula* ×*beeniàna* A. Nels., see *B.* ×*hornei*
*Bétula* ×*caerùlea* Blanchard (*B. papyrifera* × *populifolia*)
*Bétula* ×*caerùlea-grándis* Blanchard, see *B.* ×*caerulea*
*Bétula* ×*commíxta* Sarg., see *B.* ×*eastwoodiae* Sarg.
*Bétula* ×*eastwoódiae* Sarg. (*B. glandulosa* × *papyrifera*)
*Bétula* ×*hórnei* Butler (*B. nana* × *papyrifera*)
*Bétula* ×*pìperi* Britton (*B. occidentalis* × *papyrifera*)
*Bétula* ×*purpúsii* Schneid. (*B. alleghaniensis* × *pumila* var. *glandulifera*)
*Bétula* ×*raymúndii* Lepage (*B. populifolia* × *pumila* var. *glandulifera*)
*Bétula* ×*sandbérgii* Britton (*B. papyrifera* × *pumila* var. *glandulifera*)
*Bétula* ×*uliginòsa* Dugle, see *B.* ×*sandbergii*
*Bétula* ×*utahénsis* Britton, see *B.* ×*piperi*

*Betula alaskana*, see **B. papyrifera** var. **neoalaskana**

***Bétula alleghaniénsis** Britton — **yellow birch**‡†

†*Betula lutea* Michx. f., Hist. Arbr. For. Am. Sept. 2: 152, pl. 5. 1812; *nom. illegit.*
‡*Betula alleghaniensis* Britton, Bull. Torrey Bot. Club 31: 166. 1904.
*Betula alleghaniensis* var. *macrolepis* (Fern.) Brayshaw, Can. Field-Nat. 80: 161. 1966.
*Betula alleghaniensis* var. *fallax* (Fassett) Brayshaw, Can. Field-Nat. 80: 161. 1966.

OTHER COMMON NAMES—gray birch, silver birch, swamp birch.

RANGE—S. Nfld., Cape Breton Is., N.S., N.B., Anticosti Is., and Gaspé Pen. of Que., and Maine, w. to s. and sw. Ont. and extreme se. Man., s. to Minn. and ne. Iowa, e. to n. Ill., Ind., Ohio, Pa., and n. N.J., and s. in mts. to w. N.C., extreme nw. S.C., extreme ne. Ga., and e. Tenn. Atlas vol. 1, maps 105-N, 105-E.

REFERENCES—Brayshaw, T. C. The names of yellow birch and two of its varieties. Can. Field-Nat. 80: 161. 1966.

Dansereau, Pierre, and Gérard Pageau. Distribution géographique et écologique du Betula alleghaniensis. Mém. Jard. Bot. Montréal 58, 56 p., illus. 1966.

HYBRIDIZES WITH: *Betula pumila* L. var. *glandulifera* Reg., low birch (*B.* ×*purpusii* Schneid.).

*Betula caerulea-grandis*, see note under **B. populifolia**
*Betula cordifolia*, see **B. papyrifera** var. **cordifolia**
*Betula fontinalis*, see **B. occidentalis**
*Betula kenaica*, see **B. papyrifera** var. **kenaica**

***Bétula lénta** L. — **sweet birch**‡†

‡†*Betula lenta* L., Sp. Pl. 983. 1753.

DERIVATION—Flexible or tough, referring to the twigs.

OTHER COMMON NAMES—black birch, cherry birch.

RANGE—S. Maine w. to N.Y., N.J., Pa., and e. Ohio, s. mostly in mts. to w. N.C., extreme nw. S.C., n. Ga., n. Ala., and e. Tenn. Also local in extreme s. Que. and se. Ont. Atlas vol. 1, map 106-E.

HYBRIDIZES WITH: *Betula papyrifera*.

*Betula neoalaskana*, see **B. papyrifera** var. **neoalaskana**

***Bétula nìgra** L. **river birch‡†**

‡†*Betula nigra* L., Sp. Pl. 982. 1753.

DERIVATION—Black.

OTHER COMMON NAMES—red birch, black birch, water birch.

RANGE—Sw. Conn. and se. N.Y., w. to n. Ohio, n. Ind., c. Wis., and se. Minn., s. to e. Iowa, se. Kans., e. Okla., and e. Tex., and e. to n. Fla. and Ga. Also local in Mass, and s. N.H. The southernmost New World birch. Atlas vol. 1, map 110-E; vol. 5, map 25.

HYBRIDIZES WITH: *Betula papyrifera*.

**Bétula occidentàlis** Hook. **water birch‡**

‡*Betula occidentalis* Hook., Fl. Bor.-Am. 2: 155. 1839.
†*Betula fontinalis* Sarg., Bot. Gaz. 31: 239. 1901.
*Betula papryifera* var. *occidentalis* (Hook.) Sarg., J. Arnold Arbor. 1: 63. 1919.
*Betula fontinalis* var. *inopina* (Jeps.) Jeps., Man. Fl. Pl. Calif. 270. 1923.
*Betula papyrifera* subsp. *occidentalis* (Hook.) Hultén, Fl. Alaska Yukon, Lunds Univ. Arssk. N.F. Avd. 2, 40 (1): 582. 1944.
‡*Betula occidentalis* var. *fecunda* Fern., Rhodora 47: 317, pl. 966. 1945.
*Betula occidentalis* var. *inopina* (Jeps.) C. L. Hitchc., Vasc. Pl. Pacif. Northwest 2: 78. 1964.

DERIVATION—Western.

OTHER COMMON NAMES—red birch, black birch, spring birch.

RANGE—Sw. Can. from s. Man. w. to ne. B. C., s. to Wash., Oreg., and in Sierra Nev. to c. Calif., e. in mts. to n. N. Mex., and n. to N. Dak. Atlas vol. 3, maps 22-N, 22-NW.

REFERENCE—Froiland, Sven G. The biological status of Betula andrewsii A. Nels. Evolution 6: 268-282, illus. 1952.

HYBRIDIZES WITH: *Betula papyrifera* (*B.* ×*piperi* Britton, *B.* ×*utahensis* Britton; *B.* ×*andrewsii* A. Nels.).

***Bétula papyrífera** Marsh. **paper birch‡†**

‡†*Betula papyrifera* Marsh., Arbustr. Am. 19. 1785.
*Betula alba* ϵ *papyrifera* (Marsh.) Spach, Ann. Sci. Nat., Bot., Sér. 2, 15: 188. 1841.

DERIVATION—Paper-bearing, referring to the whitish papery bark.

OTHER COMMON NAMES—canoe birch, white birch, silver birch.

RANGE—Widely distributed across N. Am. near n. limit of trees from Nfld., Labr., and n. Que., w. to nw. Mack. and nw. Alaska, s. to sw. Alaska incl. Kodiak Is., se. to se. Alaska (ne. and se. ends), B. C., and Wash., e. in mts. to ne. Oreg. and w. Mont. and e. from Minn. and ne. Iowa to c. Mich., s. Ont., Pa., N.Y., and New Engl.; also local s. to n. Colo., Black Hills of S. Dak. and Wyo., n. Nebr., n. Ill., nw. Ind., nw. Ohio, and s. in mts. of W. Va., Va., and w. N.C. Atlas vol. 1, maps 107-N, 107-W, 107-E; vol. 2, map 36.

REFERENCES—See also **Betula occidentalis** and **B. populifolia**

Clausen, Knud E. Characteristics of a hybrid birch and its parent species. Can. J. Bot. 41: 441-458, illus. 1963.

Jansson, Carl-Axel. Some species and varieties of Betula ser. Verrucosae Suk. in East Asia and N.W. America. Act. Hort. Gotoburg. 25: 103-156, illus. 1962.

This very widespread variable species may be divided, if desired, into several intergrading geographical varieties. A few have been regarded also as species. The same 6 varieties of the 1953 checklist are repeated

here for reference and optional use. One of these, var. *cordifolia* (Regel) Fern., is suspected to be a fertile hybrid with *B. alleghaniensis*.

Several interspecific hybrids have been named, as summarized below, and a few have been studied in detail. One binomial is sufficient to include hybrids between any varieties of two parental species. Binomials given to additional intermediates among the varieties of this species have been omitted.

HYBRIDIZES WITH: *Betula glandulosa* Michx., resin birch *(B. ×eastwoodiae* Sarg.); *B. lenta; B. nana* L. *(B. ×hornei* Butler, *B. ×beeniana* A. Nels.); *B. nigra; B. occidentalis* *(B. ×piperi* Britton, *B. ×utahensis* Britton, *B. ×andrewsii A. Nels.); B. pumila L. var. glandulifera* Regal, low birch *(B. ×sandbergii* Britton, *?B. ×uliginosa* Dugle).

**Bétula papyrífera** Marsh. var. **papyrífera** **paper birch (typical)**‡

RANGE—Near n. limit of trees from Nfld. and Labr. w. to Man., s. to N. Dak., Minn., and ne. Iowa, and e. to n. Ill., n. Ind., Pa., N.Y., and New Engl. Local s. to n. Colo., Black Hills of S. Dak. and ne. Wyo., n. Nebr., n. Ill., n. Ind., nw. Ohio, and s. in mts. of W. Va. and Va.

**Bétula papyrífera** var. **commutàta** (Regel) Fern. **western paper birch**‡†

*Betula occidentalis* Hook., Fl. Bor.-Am. 2: 155. 1839; in part.

*Betula alba* L. subsp. *occidentalis* (Hook.) Regel *β communtata* Reg., Bull. Soc. Nat. Moscou 38 (2): 401, pl. 7, fig. 6-10. 1865.

†*Betula papyrifera* var. *occidentalis* (Hook.) Sarg., J. Arnold Arbor. 1: 63. 1919; in part.

‡*Betula papyrifera* var. *commutata* (Regel) Fern., Rhodora 47: 312, pl. 965. 1945.

DERIVATION—Changeable.

RANGE—In Northeast from Labr. w. to sw. Que., s. to n. N.Y., Mass., and N.S. In Northwest from Sask. w. to w. Mack., s. Yukon, and se. Alaska (ne. and se. ends), s. to Wash., n. Idaho, and w. Mont.

**Bétula papyrífera** var. **cordifòlia** (Regel) Fern. **mountain paper birch**‡

*Betula cordifolia* Reg., Nouv. Mém. Soc. Imp. Nat. Moscou 13: 86, pl. 12, fig. 29-36. 1861.

*Betula alba* subsp. *β cordifolia* (Regel) Regel, Bull. Soc. Imp. Nat. Moscou 38(2): 401. 1865.

‡†*Betula papyrifera* var. *cordifolia* (Regel) Fern., Rhodora 3: 173. 1901; without basonym; validated by Gray Herbarium Card-Index. Fern. ex Sarg., Silva No. Am. 14: 55, pl. 724. 1902.

DERIVATION—Heartleaf.

OTHER COMMON NAME—mountain white birch.

RANGE—Nfld. and Labr., w. to Que. and c. Ont., s. to n. Iowa, and e. to Wis., Mich., n. N.Y., and New Engl. Also local in mts. of w. N.C.

Regarded by Gleason (New Britton Brown Illus. Fl. Northeast. U.S. 2: 33-34. 1952) as a sp. and suspected to be a fertile hybrid *Betula alleghaniensis (lutea) × papyrifera.*

**Bétula papyrífera** var. **kenaìca** (W. H. Evans) Henry **Kenai birch**‡†

†*Betula kenaica* W. H. Evans, Bot. Gaz. 27: 481. 1899.

‡*Betula papyrifera* var. *kenaica* (W. H. Evans) Henry in Elwes & Henry, Trees Great Br. Irel. 4: 984. 1909.

*Betula kamtschatica* var. *kenaica* (W. H. Evans) Jansson, Act. Hort. Gotoburg. 25: 137, fig. 20. 1962.

*Betula neoalaskana* var. *kenaica* (W. H. Evans) Boivin, Nat. Can. 94: 230. 1967.

DERIVATION—Kenai Peninsula in southern Alaska.

OTHER COMMON NAMES—Kenai paper birch, black birch, red birch.

RANGE—S. interior Alaska n. of Kenai Pen. w. to Kodiak Is. and base of Alaska Pen.

**Bétula papyrífera** var. **neoalaskàna** (Sarg.) Raup **Alaska paper birch**‡

*Betula alaskana* Sarg., Bot. Gaz. 31: 236. 1901. Non *B. alaskana* Lesq., U.S. Natl.

Mus. Proc. 5: 446, pl. 6, fig. 14. 1883 (fossil, Miocene, Alaska).
†*Betula neoalaskana* Sarg., J. Arnold Arbor. 3: 206. 1922.
*Betula papyrifera* var. *neoalaskana* (Sarg.) Raup, Contrib. Arnold Arbor. 6: 152. 1934.

DERIVATION—A new name for *Betula alaskana* Sarg., which was a later homonym of a fossil birch from Alaska.

OTHER COMMON NAMES—Alaska birch, Alaska white birch†.

RANGE—Near n. limit of trees from nw. Mack. and Yukon w. to nw. Alaska, s. to s. (but not se.) Alaska and B.C., and e. to Sask.

REFERENCE—Boivin, Bernard. Nat. Can. 94: 229-230. 1967.

‡*Betula papyrifera* var. *humilis* (Regel) Fern. & Raup (Rhodora 47: 321, pl. 971–972. 1945), accepted in the 1953 checklist, was rejected by Boivin (1967) as illegitimate.

**Bétula papyrífera** var. **subcordàta** (Rydb.) Sarg. **northwestern paper birch‡**

*Betula subcordata* Rydb. ex Butler, Bull. Torrey Bot. Club 36: 436, fig. 15. 1909.
‡†*Betula papyrifera* var. *subcordata* (Rydb.) Sarg., J. Arnold Arbor. 1: 63. 1919.

DERIVATION—Slightly heart-shaped, referring to the leaves.

RANGE—Alta. and B.C., and in mts. from e. Wash. and ne. Oreg. e. to n. Idaho and w. Mont.

***Bétula populifòlia** Marsh. **gray birch‡†**

‡†*Betula populifolia* Marsh., Arbustr. Am. 19. 1785.

DERIVATION—Poplar-leaf.

OTHER COMMON NAMES—white birch, wire birch, fire birch, oldfield birch.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., and Maine, w. to s. Que. and s. Ont., s. to N.Y., c. Pa., and N.J. Also local in n. Ohio, nw. Ind., n. Va., and w. N.C., and extinct in Del. Atlas vol. 1, maps 108-N, 108-E.

REFERENCES—Brayshaw, T. C. What are the blue birches? Can. Field-Nat. 80: 187-194. 1966.

Brittain, W. H., and W. F. Grant. Observations on the Betula caerulea complex. Nat. Can. 98: 49-58, illus. 1971.

Fernald, M. L. Rhodora 24: 171-173. 1922.

Glashan Guerriero, Alexandra, W. F. Grant, and W. H. Brittain. Interspecific hybridization between Betula cordifolia and B. populifolia at Valcartier, Quebec. Can. J. Bot. 48: 2241-2247, illus. 1970.

‡*Betula caerulea-grandis* Blanchard, blueleaf birch‡ (blue birch), has been reduced to a hybrid of this species.

HYBRIDIZES WITH: *Betula papyrifera* (*B.* ×*caerulea* Blanchard, *B.* ×*caerulea-grandis* Blanchard); *B. pumila* L. var. *glandulifera* Regel, low birch (*B.* ×*raymundii* Lepage).

*Betula subcordata*, see **B. papyrifera** var. **subcordata**

**Bétula ùber** (Ashe) Fern. **Virginia roundleaf birch**

‡*Betula lenta* var. *uber* Ashe, Rhodora 20: 64. 1918.
*Betula uber* (Ashe) Fern., Rhodora 47: 325, pl. 974, fig. 1-5. 1945.

DERIVATION—Fruitful.

OTHER COMMON NAME—Ashe birch, Virginia birch.

RANGE—Very rare and local in sw. Va. (Smyth Co.), classed as extinct until rediscovered in 1975. Altas vol. 4, map 19.

REFERENCES—Johnson, A. G. Betula lenta var. uber Ashe. Rhodora 56: 129-131. 1954.

Mazzeo, Peter M. Betula uber–What is it and where is it? Castanea 39: 273–278, illus. 1974.

Ogle, Douglas W. Betula uber found. Castanea 40: 365. 1975.

Ogle, Douglas W., and Peter M. Mazzeo. Betula uber, the Virginia

round-leaf birch, rediscovered in southwest Virginia. Castanea 41: 248-256, illus. 1976.

Reed, Clyde F. Betula uber (Ashe) Fernald rediscovered in Virginia. Phytologia 32: 302-311, illus. 1975.

This rare birch is the first tree of the United States to be classed officially as endangered (April 26, 1978). A variety in the 1953 checklist, it had been considered extinct until rediscovered in 1975. About 15 trees, also seedlings, were found on private land along a stream near a house. Two others were located later on the adjacent Jefferson National Forest. Reed (1975) suggested that the trees might have been planted and that they may be artificial hybrids between *Betula lenta* [or *B. alleghaniensis*?] and the more northern shrub, low birch, *Betula pumila* L. var. *glandulifera* Regal. If a hybrid, this birch should be removed from the checklist. The National Arboretum is making further studies.

*Biota*, see **Thuja**

**Bourrèria** P. Br. (Family Boraginaceae) **strongback**

‡†*Bourreria* P. Br., Civ. Nat. Hist. Jam. 168, pl. 15, fig. 2. 1756 ("*Beureria*" in index, p. 492); *nom. cons.* Non *Beureria* Ehret, Pl. Papil. Rar. pl. 13. 1755; *nom. rejic.*

DERIVATION—Johann Ambrosius Beurer (1716-1754), apothecary at Nürnberg, Germany.

OTHER COMMON NAME—strongbark.

REFERENCE—Ward, Daniel B., and Paul R. Fantz. Phytologia 36: 309-312. 1977.

NUMBER OS SPECIES: Native trees (s. Fla.), 2; native shrubs (s. Fla.), 1; P.R., 2 (1 also in V.I.); total, tropical Am. (many in West Indies), about 30.

**Bourrèria ovàta** Miers **Bahama strongback**

‡†*Bourreria ovata* Miers, Ann. Mag. Nat. Hist., Ser. 4, 3: 203. 1869.

DERIVATION—Ovate, perhaps referring to the leaves.

OTHER COMMON NAMES—Bahama strongbark‡, strongback†.

RANGE—Fla. Keys and s. Fla. mainland (s. Monroe Co.). Bahamas, Cuba, and Hispaniola. Atlas vol. 5, map 169.

**Bourrèria rádula** (Poir.) G. Don **rough strongback**

*Ehretia radula* Poir. in Lam., Encycl. Méth. Bot. Suppl. 2: 2. 1811.
*Bourreria radula* (Poir.) G. Don, Gen. Hist. Dichl. Pl. 4: 390. 1837.

DERIVATION—From Latin rasp or scraper, referring to the rough leaves.

OTHER COMMON NAME—rough strongbark‡.

RANGE—Rare at Key West and adjacent Lower Florida Keys, not on s. Fla. mainland. Also e. to Hispaniola. Atlas vol. 5, map 170.

In the 1953 checklist referred to ‡*Bourreria revoluta* H.B.K. of Mexico.

BROUSSONÈTIA L'Hér. ex Vent. (Family (Moraceae) PAPER-MULBERRY

†*Papyrius* Lam., Tabl. Encycl. Méth. Bot. (Ill. Gen.) pl. 762. 1797; *nom. rejic.*
‡*Broussonetia* L'Hér. ex Vent., Tabl. Règne Végét. 3: 547. 1799; *nom. cons.* Non *Broussonetia* Gómez Ortega, Nov. Rar. Pl. Hort. Matr. Dec. 61, pl. 7. 1798; *nom. rejic.*

DERIVATION—Named for Auguste Broussonet (1761-1807), physician and naturalist of Montpellier, France.

BROUSSONÈTIA PAPYRÍFERA (L.) Vent. PAPER-MULBERRY‡†

*Morus papyrifera* L., Sp. Pl. 986. 1753.
‡*Broussonetia papyrifera* (L.) Vent., Tabl. Règne Végét. 3: 547. 1799.
†*Papyrius papyrifera* (L.) Kuntze, Rev. Gen. Pl. 629. 1891.

DERIVATION—Paper-bearing, referring to the use of the inner bark in making paper.

RANGE—Planted for ornament and shade in e. U.S. from s. New Engl. and N.Y., w. to Mo., s. to Tex., and e. to Fla. Persistent, escaped, and naturalized locally (female trees and seed apparently rare). Native of e. Asia including China.

‡†*Bùcida bucèras* L. (Syst. Nat. ed. 10: 1025. 1759; Family Combretaceae), bucida (black-olive), of Fla., is excluded as not native or naturalized. Collected twice near a house on Elliott Key (1886 and 1895). Also commonly planted for shade and ornament in s. Fla. Range—Bahamas through West Indies incl. P.R. and V.I. and from s. Mex. to Guianas. Reference—Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 5. 1976.

**Bumèlia** Sw. (Family Sapotaceae) **bumelia**

‡†*Bumelia* Sw., Nov. Gen. Sp. Pl. Prodr. 3, 49. 1788; *nom. cons.*

DERIVATION—From an ancient Greek name for the European ash.

OTHER COMMON NAME—"ironwood."

REFERENCES—Clark, Robert Brown. A revision of the genus Bumelia in the United States. Mo. Bot. Gard. Ann. 29: 155-182, illus. 1942.

Cronquist, Arthur. Studies in the Sapotaceae, III. Dipholis and Bumelia. J. Arnold Arbor. 26: 435-471. 1945.

Stearn, William T. Jamaican and other species of Bumelia (Sapotaceae). J. Arnold Arbor. 49: 280-289, illus. 1968.

Two additional species are shrubs: *Bumelia reclinata* (Michx.) Vent., dwarf bumelia, of Fla. and s. Ga., and *Bumelia thornei* Cronq., Thorne bumelia, of sw. Ga.

NUMBER OF SPECIES: Native trees, 4; native shrubs, 2; P.R., 2 (1 also in V.I.); total, New World, mostly tropical, 25-50.

*Bumelia angustifolia*, see **B. celastrina**
*Bumelia anomala*, see **B. tenax**

**Bumèlia celastrìna** H.B.K. **saffron-plum**‡†

‡*Bumelia celastrina* H.B.K., Nov. Gen. Sp. 7: 212. 1825.
*Bumelia spiniflora* DC. ex A. DC. in DC., Prodr. 8: 191. 1844.
†*Bumelia angustifolia* Nutt., No. Am. Sylva 3: 38, pl. 93. 1849.
*Bumelia celastrina* var. *angustifolia* (Nutt.) R. W. Long, Rhodora 72: 26. 1970.

DERIVATION—From the ancient Greek name of an evergreen tree.

OTHER COMMON NAMES—milk buckthorn, ants-wood, tropical buckthorn, downward-plum, coma (Spanish).

RANGE—C. and s. Fla., Fla. Keys, and s. Tex. Also Bahamas and Cuba, Mex. (Tamps. to Sin., s. to Chis)., C. Am., and n. S. Am. to Colombia and Venezuela. Atlas vol. 3, map 23-N, 23-SW; vol. 5, map 171.

*Bumelia lacuum*, see **B. tenax**

**Bumèlia lanuginòsa** (Michx.) Pers. **gum bumelia**‡

*Sideroxylon lanuginosum* Michx., Fl. Bor.-Am. 1: 122. 1803.
‡†*Bumelia lanuginosa* (Michx.) Pers., Synops. Pl. 1: 237. 1805.
*Bumelia oblongifolia* Nutt., Gen. No. Am. Pl. 1: 135. 1818.
‡†*Bumelia lanuginosa* var. *albicans* Sarg., J. Arnold Arbor. 2: 168. 1921.
*Bumelia lanuginosa* var. *oblongifolia* (Nutt.) Clark, Mo. Bot. Gard. Ann. 29: 165. 1942.
*Bumelia lanuginosa* ssp. *oblongifolia* (Nutt.) Cronq., J. Arnold Arbor. 26: 453. 1945.
†*Bumelia monticola* Buckl., Bull. Torrey Bot. Club 10: 90. 1883.
*Bumelia texana* Buckl, Bull. Torrey Bot. Club 10: 91. 1883.
‡†*Bumelia lanuginosa* var. *rigida* Gray, Synopt. Fl. No. Am. Ed. 2, 2 (1): 68. 1886.
*Bumelia rigida* (Gray) Small, Bull. N.Y. Bot. Gard. 1: 444. 1900.
*Bumelia riograndis* Lundell, Contrib. Univ. Mich. Herb. 8: 77. 1942.
*Bumelia lanuginosa* ssp. *rigida* (Gray) Cronq., J. Arnold Arbor. 26: 453. 1945.
*Bumelia lanuginosa* ssp. *rigida* var. *texana* (Buckl.) Cronq., J. Arnold Arbor. 26: 454. 1945.

DERIVATION—Woolly, referring to the young leaves.

OTHER COMMON NAMES—woolly buckthorn, stifftwig-gum, gum elastic†, chittamwood, buckthorn†, Texas bumelia, Brazos bumelia, coma (Spanish).

RANGE—C. Fla. and Ga., w. to s. Miss., La., and in Miss. Valley to s. Ill., c. Mo., e. and s. Kans., and w. and s. Tex., and s. to ne. Mex. (Coah., N.L., and Tamps.). Also var. in extreme sw. N. Mex., se. Ariz., and ne. Son. Atlas vol. 3, map 24; vol. 4, map 20; vol. 5, map 26.

Five geographical varieties have been distinguished, 3 of which were accepted in the 1953 checklist (‡). The others, also listed above, are: var. *oblongifolia* (Nutt.) Clark and var. *texana* (Buckl.) Cronq. The last has been cited as a species, †*B. monticola* Buckl.

**Bumèlia lycioìdes** (L.) Pers. **buckthorn bumelia‡**

*Sideroxylon lycioides* L., Sp. Pl. ed. 2, 279. 1762.
‡†*Bumelia lyciodies* (L.) Pers., Synops. Pl. 1: 237. 1805.
*Bumelia lycioides* var. *virginiana* Fern., Rhodora 38: 439. 1936.
*Bumelia lycioides var. ellipsoidalis* Clark, Mo. Bot. Gard. Ann. 29: 172. 1942.
*Bumelia smallii* Clark, Mo. Bot. Gard. Ann. 29: 172. 1942.

DERIVATION—Like *Lycium*, wolfberry, a genus of spiny shrubs of similar appearance.

OTHER COMMON NAMES—buckthorn †, smooth bumelia, "ironwood."

RANGE—Coastal Plain mostly, from se. Va. s. to n. Fla., w. to se. Tex., and n. in Miss. Valley to se. Mo., s. Ill., s. Ind., c. Ky., and e. Tenn. Atlas vol. 4, map 21; vol. 5, map 27.

*Bumelia megacocca*, see **B. tenax**
*Bumelia monticola*, see **B. lanuginosa**
*Bumelia oblongifolia*, see **B. lanuginosa**
*Bumelia rigida*, see **B. lanuginosa**
*Bumelia riograndis*, see **B. lanuginosa**
*Bumelia smallii*, see **B. lycioides**
*Bumelia spiniflora*, see **B. celastrina**

**Bumèlia tènax** (L.) Willd. **tough bumelia‡**

*Siderosylon tenax* L., Mant. Pl. 48. 1767.
‡†*Bumelia tenax* (L.) Willd.. Sp. Pl. 1: 1085. 1798.
*Bumelia megacocca* Small, Bull. N.Y. Bot. Gard. 1: 441. 1900.
*Bumelia lanuginosa* var. *anomala* Sarg., J. Arnold Arbor. 2: 168. 1921.
*Bumelia lacuum* Small, Man. Southeast. Fl. 1034, 1507. 1933.
*Bumelia anomala* (Sarg.) Clark, Mo. Bot. Gard. Ann. 29: 169. 1942.

DERIVATION—Holding, or tough, referring to the flexible young branches.

OTHER COMMON NAMES—narrowleaf bumelia, tough buckthorn†, "ironwood."

RANGE—Coastal Plain of S.C., mostly near coast, se. and s. Ga., s. to s. Fla. Atlas vol. 4, map 22; vol. 5, map 28.

*Bumelia texana*, see **B. lanuginosa**

**Búrsera** Jacq. (Family Burseraceae) **bursera**

*Elaphrium* Jacq., Enum. Syst. Pl. Carib. 3, 19. 1760; *nom. rejic.*
‡†*Bursera* Jacq. ex L., Sp. Pl. ed. 2, 471. 1762; Gen. Pl. ed. 6, 174. 1764; *nom. cons. Bursera* Jacq., Select. Stirp. Am. Hist. 94, pl. 65. 1763. Non *Burseria* Loefl., Iter Hispan. 194. 1758.

DERIVATION—Joachim Burser (1593-1639), German botanist and physician. Other pronunciation—*Bursèra*.

REFERENCES—McVaugh, Rogers, and Jerzy Rzedowski. Synopsis of the genus Bursera L. in western Mexico, with notes on the material of Bursera collected by Sessé & Mociño. Kew Bull. 18: 317-382, illus. 1965.

Porter, Duncan M. The Burseraceae in North America north of Mexico. Madroño 22: 273-276. 1974.

NUMBER OF SPECIES: Native trees, 3 (1 in s. Fla., 1 in Ariz., and 1 in both Ariz. and Calif.); total, tropical Am., 50-80.

**Búrsera fagaroìdes** (H.B.K.) Engler **fragrant bursera‡**

*Elaphrium fagaroides* H.B.K., Nov. Gen. Sp. 7: 27, pl. 611. 1824.
‡*Bursera fagaroides* (H.B.K.) Engler in DC., Monog. Phaner. 4: 48. 1883.
*Bursera odorata* T. S. Brandegee, Proc. Calif. Acad. Sci., Ser. 2, 2: 138. 1889.
*Elaphrium odoratum* (T.S. Brandegee) Rose, No. Am. Fl. 25: 250. 1911.
*Bursera fagaroides* var. *elongata* McVaugh & Rzed., Kew Bull. 18: 371. 1965.

DERIVATION—Like *Fagara*, here regarded as a synonym of *Zanthoxylum*, prickly-ash.

RANGE—S. Ariz. (Baboquivari Mts., Pima Co., the only locality in U.S.). Also Mex. (Son. and B. Cal. Sur, se. to Gro., Ver., and Oax). Atlas vol. 3, maps 26-N, 26-SW.

Referred also to *Bursera confusa* (Rose) Engler (in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 19a: 426. 1931), of w. Mex.

**Búrsera microphýlla** Gray **elephant-tree‡**

‡†*Bursera microphylla* Gray, Proc. Am. Acad. Arts Sci. 5: 155. 1861.
*Elaphrium microphylla* (Gray) Rose, No. Am. Fl. 25: 250. 1911.

DERIVATION—Small-leaf, referring to the minute leaves and leaflets.

OTHER COMMON NAMES—elephant bursera, small-leaf elephant-tree; copal, torote (Spanish).

RANGE—Desert mts. of sw. Ariz. and extreme s. Calif. Also in nw. Mex. (B. Cal. and Son.). Atlas vol. 3, map 25.

**Búrsera simarùba** (L.) Sarg. **gumbo-limbo‡†**

*Pistacia simaruba* L., Sp. Pl. 1026. 1753.
‡†*Bursera simaruba* (L.) Sarg., Gard. and Forest 3: 260. 1890.
*Elaphrium simaruba* (L.) Rose, No. Am. Fl. 25: 246. 1911.

DERIVATION—*Simarouba*, the Carib Indian name of another tree and also used as a generic name.

OTHER COMMON NAMES—West-Indian-birch, gum-elemi.

RANGE—S. Fla. incl. Fla. Keys, n. near coasts to c. Fla. From Bahamas through West Indies incl. P.R. and V.I. Also from n. Mex. (Tamps. to Sin.) s. to Colombia, Venezuela, and Guyana. Atlas vol. 5, map 172.

**Byrsonìma** Rich. ex H.B.K. **byrsonima**

‡†*Byrsonima* Rich. ex H.B.K., Nov. Gen. Sp. 5: 147. 1822.

DERIVATION—From Greek hide and name (or Latin very much), referring to the use of the bark in tanning leather. Other pronunciation—*Byrsónima*.

REFERENCE—Robertson, Kenneth R. J. Arnold Arbor. 53: 109-112, illus. 1972.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R. and V.I.; P.R., 2 additional (1 in V.I.); total, tropical Am., about 100.

**Byrsonìma lùcida** DC. **key byrsonima**

*Malpighia lucida* Mill., Gard. Dict. ed. 8, *Malpighia* No. 9. 1768; excluding notes.
*Malpighia lucida* Sw., Nov. Gen. Sp. Pl. Prodr. 74. 1788.
‡†*Byrsonima lucida* DC., Prodr. 1: 580. 1824.
*Malpighia cuneata* Turcz., Bull. Soc. Imp. Nat. Moscou 31 (2): 390. 1858.
*Byrsonima cuneata* (Turcz.) P. Wils., Bull. N.Y. Bot. Gard. 8: 394. 1917.

DERIVATION—Bright or shining, referring to the leathery leaves.

OTHER COMMON NAMES—locust-berry, Long Key byrsonima‡.

RANGE—S. Fla. incl. Fla. Keys (Dade and Monroe Cos.). Bahamas, Cuba, Hispaniola, P.R. and V.I., and Lesser Antilles. Atlas vol. 5, map 173.

**Caesalpìnia** L. (Family Leguminosae) **caesalpinia**

‡†*Poinciana* L., Sp. Pl. 380. 1753; Gen. Pl. ed. 5, 178. 1754.
*Caesalpinia* L., Sp. Pl. 380. 1753; Gen. Pl. ed. 5, 178. 1754.
*Poincianella* Britton & Rose, No. Am. Fl. 23: 327. 1930.

DERIVATION—Andrea Cesalpino (Caesalpini) (1519-1603), Italian physician and botanist.

OTHER COMMON NAME—poinciana‡.

REFERENCES—Isely, Duane. Leguminosae of the United States: II. Subfamily Caesalpinioideae. Mem. N.Y. Bot. Gar. 25 (2), 228 p., illus. 1975.

Robertson, Kenneth R., and Yin-Tse Lee. The genera of Caesalpinioideae (Leguminosae) in the southeastern United States. J. Arnold Arbor. 57: 1-53, illus. 1976.

*Caesalpinia* includes the genus ‡*Poinciana*, which was accepted in the 1953 checklist.

NUMBER OF SPECIES: Native shrubby trees, 1; naturalized shrubby trees, 2; native shrubs, herbs, and vines (s. Tex. and s. Fla.), about 10; P.R. and V.I., about 7; total, widespread in tropical and subtropical regions, 100-200.

CAESALPÌNIA GÍLLIESII (Hook.) Dietr. PARADISE CAESALPINIA

‡*Poinciana gilliesii* Hook., Bot. Misc. 1: 129, pl. 34. 1829.
*Caesalpinia gilliesii* Wall. ex Hook., Bot. Misc. 1: 129, pl. 34. 1829; as synonym.
*Caesalpinia gilliesii* (Hook.) Dietr., Syn. Pl. 2: 1495. 1840.

DERIVATION—Named for its discoverer, John Gillies (1747-1836), Scotch physician, who collected plants in Chile.

OTHER COMMON NAMES—bird-of-paradise, paradise poinciana‡.

RANGE—Escaped from cultivation and naturalized locally from s. and c. Tex. w. to s. N. Mex., w. Ariz., and Calif. Native of Argentina and Chile but widely planted and naturalized in New World tropics.

**Caesalpìnia mexicàna** Gray **Mexican caesalpinia**

*Caesalpinia mexicana* Gray, Proc. Am. Acad. Arts Sci. 5: 157. 1861.
‡*Poinciana mexicana* (Gray) Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 13: 303. 1911.
*Poincianella mexicana* (Gray) Britton & Rose, No. Am. Fl. 23: 330. 1930.

OTHER COMMON NAME—Mexican poinciana‡.

DERIVATION—Of Mexico.

RANGE—Extreme s. Tex. and ne. Mex. (Tamps., N.L., S.L.P., and n. Ver.), also in w. Mex. (Sin., Nay., and Jal.). Atlas vol. 3, maps 27-N, 27-SW.

CAESALPÌNIA PULCHÉRRIMA (L.) Sw. FLOWERFENCE‡†

‡†*Poinciana pulcherrima* L., Sp. Pl. 380. 1753.
*Caesalpinia pulcherrima* (L.) Sw., Obs. Bot. 166. 1791.

DERIVATION—Very beautiful.

OTHER COMMON NAMES—dwarf poinciana, poinciana, bird-of-paradise, Barbados-pride.

RANGE—Escaped from cultivation and naturalized locally in s. Fla. incl. Fla. Keys and extreme s. Tex. Also planted and escaped in Hawaii, P.R., and V.I. Widely planted and naturalized through the tropics. Original range uncertain, perhaps Mex. and C. Am.

This shrub or small tree may not reach tree size as naturalized in continental U.S.

CALLÍTRIS HUGÈLII (Carr.) Franco (An. Inst. Super. Agron. Lisboa 19: 11. 1952), blue cypress-pine‡ (‡*C. glauca* R. Br., white cypress-pine; Family Cupressaceae), was cited in the 1953 checklist as naturalized locally in middle e. coast of Fla. (Brevard and Indian River Cos.). However, it is not common, either planted or naturalized. Native of Australia.

*Calocedrus*, see **Libocedrus**

**Calyptránthes** Sw. (Family Myrtaceae) **lidflower**

‡†*Calyptranthes* Sw., Nov. Gen. Sp. Pl. Prodr. 5, 79. 1788; *nom. cons.*

DERIVATION—Lid-flower, referring to the lidlike cover formed by the calyx in the bud.

OTHER COMMON NAME—spicewood.

REFERENCES—See also **Eugenia**

McVaugh, Rogers. Tropical American Myrtaceae, II. 1. Calyptranthes Sw. The genus in continental North America. Fieldiana: Bot. 29: 397-412. 1963.

NUMBER OF SPECIES: Native trees (s. Fla., also in P.R., 1 in V.I.), 2; P.R., additional, 3; West Indies, about 100; total, tropical Am., about 120.

**Calyptránthes pállens** Griseb., **pale lidflower**‡

?*Eugenia pallens* Poir. in Lam., Encycl. Méth. Bot. Suppl. 3: 122. 1813.

*Calyptranthes chytraculia* δ *pauciflora* Berg, Linnaea 27: 27. 1855.

‡†*Calyptranthes pallens*, Griseb., Abh. K. Ges. Wiss. Gött. (Syst. Unters. Veg. Karaiben) 7: 67. 1857.

DERIVATION—Pale.

OTHER COMMON NAMES—spicewood, white spicewood†.

RANGE—S. Fla. incl. Fla. Keys (Dade and Monroe Cos., also local in Hendry Co.). Bahamas, Greater Antilles incl. P.R. and V.I., Cayman Is., and Guadeloupe. Also vars. in Mex. and Guatemala. Atlas vol. 5, map 174.

REFERENCE—McVaugh, Rogers. J. Arnold Arbor. 54: 309. 1973.

**Calyptránthes zuzýgium** (L.) Sw. **myrtle-of-the-river**‡

*Myrtus zuzygium* L., Syst. Nat. ed. 10, 2: 1056. 1759; "*zuzygium*."

‡†*Calyptranthes zuzygium* (L.) Sw., Nov. Gen. Sp. Pl. Prodr. 79. 1788.

DERIVATION—*Zuzygium*, now spelled *Syzygium*, the name of a related genus, from Greek, paired or yoked together.

OTHER COMMON NAME—spicewood†.

RANGE—S. Fla., local on Key Largo and s. Dade Co. Also Bahamas and Greater Antilles incl. P.R. Atlas vol. 5, map 175.

**Canélla** P. Br. (Family Canellaceae) **canella**

‡†*Canella* P. Br., Civ. Nat. Hist. Jam. 275, pl. 27, fig. 2, 3. 1756; (*nom. cons.*).

DERIVATION—From the Latin word meaning small cane or reed, first applied to the bark of an Old World tree which formed a roll upon drying; afterwards, cinnamon.

REFERENCE—Wood, Carroll E., Jr. J. Arnold Arbor. 39: 320-332. 1958.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also P.R. and V.I.; total, West Indies to n. S. Am., 1 or 2.

**Canélla winteràna** (L.) Gaertn. **canella**‡

*Laurus winterana* L., Sp. Pl. 371. 1753.

*Canella alba* Murray in L., Syst. Veg. ed. 14, 4: 443. 1784.

‡†*Canella winterana* (L.) Gaertn., Fruct. Sem. Pl. 1: 373, pl. 77, fig. 2. 1788.

DERIVATION—From *Winterana* L., an old, rejected Linnaean name for *Canella*; *Winterana* in turn, commemorated Capt. John Winter, who introduced the medicinal "Winter's bark" (*Drimys winteri*) from South America into England in 1579.

OTHER COMMON NAMES—cinnamonbark†, wild-cinnamon.

RANGE—S. Fla. incl. Fla. Keys (Dade, Monroe, and s. Collier Cos.). From Bahamas through West Indies incl. P.R. and V.I. Atlas vol. 5, map 176.

**Canòtia** Torr. (Family Celastraceae) **canotia**

‡†*Canotia* Torr., U.S Rep. Expl. Surv. Miss. Pacif. 4 (5): 68. 1857; "*anotia*"; "*Canotia*" in index, p. 171.

DERIVATION—The Mexican name.

An anomalous genus of 1 species, placed also in a distinct family, Canotiaceae Airy Shaw.

REFERENCES—Airy Shaw, H. K. Kew Bull. 18: 255-256. 1965.

Airy Shaw, H. K., in Willis, J. C. Dict. Fl. Pl. Ferns, 7th ed. 193. 1966.

**Canòtia holacántha** Torr. **canotia**‡†

‡†*Canotia holacantha* Torr., U.S. Rep. Expl. Surv. Miss. Pacif. 4 (5): 68. 1857; "*anotia*"; "*Canotia*" in index, p. 171.

DERIVATION—From Greek wholly and thorn, referring to the spiny leafless branches.

OTHER COMMON NAME—crucifixion-thorn.

RANGE—Ariz. and extreme s. Utah (Rainbow Bridge Canyon). Also local in n. Son., Mex. Atlas vol. 3, map 28.

**Cápparis** L. (Family Capparaceae) **caper**

‡†*Capparis* L., Sp. Pl. 503. 1753; Gen. Pl. ed. 5, 222. 1754.

DERIVATION—The classical Latin and Greek name of *Capparis spinosa* L., common caper, of the Mediterranean region and Asia, the greenish flower buds of which are eaten pickled in vinegar.

NUMBER OF SPECIES: Native trees (s. Fla., also P.R. and V.I.), 2; P.R. and V.I., 3 additional; total, tropical, 250.

**Cápparis cynophallóphora** L. **Jamaica caper**‡

‡*Capparis cynophallophora* L., Sp. Pl. 504. 1753. Non *Capparis cynophallophora* L., Syst. Nat. ed. 10, 2: 1071. 1759.

†*Capparis jamaicensis* Jacq., Enum. Pl. Carib. 23. 1760.

DERIVATION—Dog phallus, alluding to the shape of the fruit.

OTHER COMMON NAMES—capertree †, Jamaica capertree.

RANGE—Coasts of c. and s. Fla. incl. Fla. Keys. From Bahamas through West Indies incl. P.R. and V.I. Also from s. Mex. to Panama and n. S. Am. to Brazil. Atlas vol. 5, map 177.

**Cápparis flexuòsa** (L.) L. **limber caper**‡

†*Capparis cynophallophora* L., Syst. Nat. ed. 10, 2: 1071. 1759. Non *C. cynophallophora* L., Sp. Pl. 504. 1753.

*Morisonia flexuosa* L. in L. & Elmgren, Pug. Jamaic. Pl. 1759; Amoen. Acad. 5: 398. 1760.

‡*Capparis flexuosa* (L.) L., Sp. Pl. ed. 2, 722. 1763.

DERIVATION—Limber, the stems slender and often vinelike.

OTHER COMMON NAMES—bayleaf caper, bayleaf capertree.

RANGE—Coasts of s. Fla. (n. on e. coast to Cape Canaveral) incl. Fla. Keys. From Bahamas through West Indies incl. P.R. and V.I. Also from n. Mex. to Brazil, Argentina, and Peru. Atlas vol. 5, map 178.

CÁRICA L. (Family Caricaceae) PAPAYA

‡†*Carica* L., Sp. Pl. 1036. 1753; Gen. Pl. ed. 5, 458. 1754.

DERIVATION—From the Latin word for a dried fig (from Carya in Asia Minor, the reputed ancestral home of the cultivated fig), perhaps from the fancied resemblance of the fruit.

REFERENCE—Badillo, Victor M. Monografía de la familia Caricaceae. 211 p., illus. Univ. Central de Venezuela, Maracay. 1971.

CÁRICA PAPÁYA L. PAPAYA‡†

‡†*Carica papaya* L., Sp. Pl. 1036. 1753.

DERIVATION—Thought to be from the Carib Indian name *ababai*.

OTHER COMMON NAME—pawpaw.

RANGE—Cultivated fruit tree naturalized in s. Fla., also Hawaii, P.R., and V.I. Native in tropical Am., the original home unknown. Widely planted and naturalized through tropics.

**Carpìnus** L. (Family Betulaceae) **hornbeam**
‡†*Carpinus* L., Sp. Pl. 998. 1753; Gen. Pl. ed. 5, 432. 1754.
DERIVATION—The classical Latin name.
NUMBER OF SPECIES: Native trees, 1 (the only New World species, also s. in mts. to C. Am.); Eurasia (mostly e. Asia), about 30.

***Carpìnus caroliniàna** Walt. **American hornbeam‡**
*Carpinus betulus virginiana* Marsh., Arbustr. Am. 25. 1785.
‡†*Carpinus caroliniana* Walt., Fl. Carol. 236. 1788.
*Carpinus caroliniana* var. *tropicalis* Donn. Smith, Bot. Gaz. 15: 28. 1890.
*Carpinus caroliniana* var. *virginiana* (Marsh.) Fern., Rhodora 37: 425, pl. 395. 1935.
DERIVATION—Of Carolina.
OTHER COMMON NAMES—blue-beech†, water-beech, "ironwood," lechillo (Spanish).
RANGE—C. Maine w. to sw. Que., se. Ont., n. Mich., and n. Minn., s. to c. Iowa, Mo., e. Okla., and e. Tex., and e. to c. Fla. Also mts. in ne. Mex. (Tamps.) and from s. Mex. to Guatemala and Honduras. Atlas vol. 1, maps 109-N, 109-E; vol. 5, map 29.

**Cárya** Nutt. (Family Juglandaceae) **hickory**
†*Hicoria* Raf., Fl. Ludov. 109. 1817; "*Hicorius;*" *nom. rejic.*
‡*Carya* Nutt., Gen. No. Am. Pl. 2: 220. 1818; *nom. cons.*
DERIVATION—From the Greek name used for nut. Other pronunciation—*Càrya.*
OTHER COMMON NAME—pecan.
REFERENCES—Elias, Thomas S. The genera of Juglandaceae in the southeastern United States. J. Arnold Arbor. 53: 26-51, illus. 1972.
Little, Elbert L., Jr. Notes on the nomenclature of Carya Nutt. Am. Midl. Nat. 29: 493-508. 1943.
Little, Elbert L., Jr. Two varietal transfers in Carya (hickory). Phytologia 19: 186-190. 1969.
Manning, Wayne E. The genus Carya in Mexico. J. Arnold Arbor. 30: 425-432. 1949.
Manning, Wayne E. A key to the hickories north of Virginia with notes on the two pignuts, Carya glabra and C. ovalis. Rhodora 52: 188-199. 1950.
Manning, Wayne E. Additional notes on Juglans and Carya in Mexico and Central America. Bull. Torrey Bot. Club 89: 110-113. 1962.
Manning, Wayne E. The northern limits of the distribution of hickories in New England. Rhodora 75: 34-51, illus. 1973.
Murrill, William A. Florida hickories. J. Fla. Acad. Sci. 9: 115-122, illus. 1947.
Stone, Donald E. Ploidal level and stomatal size in the American hickories. Brittonia 13: 293-302, illus. 1961.
Stone, Donald E. Pollen size in hickories (Carya). Brittonia 15: 208-214, illus. 1963.
Stone, Donald E., George A. Adrouny, and Robert H. Flake. New World Juglandaceae. II. Hickory nut oils phenetic similarities, and evolutionary implications in the genus Carya. Am. J. Bot. 56: 928-935, illus. 1969.
In this difficult genus, numerous names have been given to minor intergrading variations in shape and size of fruits and in hairiness and other characters of foliage. It seems unnecessary to recognize most varietal names, though 2 (also 2 typical varieties) are listed here.
NUMBER OF SPECIES: Native trees (e. U.S.), 11; Mex. (mts.) incl. 3 also in U.S.), 4; se. Asia, 4; total, 16.

BINOMIALS OF NATURAL INTERSPECIFIC HYBRIDS:
*Cárya ×brównii* Sarg. (*C. cordiformis* × *illinoensis*)
*Cárya ×collìna* Laughlin (*C. texana* × *tomentosa*)
*Cárya ×demareèi* Palmer *C. cordiformis* × *glabra*)
*Cárya ×dunbárii* Sarg. (*C. laciniosa* × *ovata*)
*Cárya ×làneyi* Sarg. (*C. cordiformis* × *ovata*)
*Cárya ×lecóntei* Little (*C. aquatica* × *illinoensis*)
*Cárya ×ludoviciàna* (Ashe) Little (*C. aquatica* × *texana*)
*Cárya ×nussbaúmeri* Sarg. (*C. illinoensis* × *laciniosa*)
*Cárya ×schnéckii* Sarg. (*C. illinoensis* × *tomentosa*)

*Carya alba*, see **C. tomentosa**

***Cárya aquática** (Michx. f.) Nutt. **water hickory**‡†
*Juglans aquatica* Michx. f., Hist. Arbr. For. Am. Sept. 1: 182, pl. 5. 1810.
*Carya aquatica* Nutt., Gen. No. Am. Pl. 2: 222. 1818; *nom. nud.*
‡*Carya aquatica* (Michx. f.) Nutt. ex Ell., Sketch Bot. S.-Car. Ga. 2: 627. 1824.
*Hicoria aquatica* Raf., Alsogr. Amer. 66. 1838; *nomen* and perhaps irregular new combination.
†*Hicoria aquatica* (Michx. f.) Britton, Bull. Torrey Bot. Club 15: 284. 1888.

DERIVATION—Aquatic, from its habitat in river bottoms and swamps.

OTHER COMMON NAMES—bitter pecan, swamp hickory, bitter water hickory, wild pecan.

RANGE—Coastal Plain from se. Va. and e. N.C. s. to s. Fla. and w. to e. Tex., n. in Miss. Valley to extreme se. Okla., se. Mo., extreme s. Ill., and extreme w. Ky. Also extinct in extreme sw. Ind. Atlas vol. 1, map 111-E; vol. 5, map 30.

HYBRIDIZES WITH: *Carya illinoensis* (*C. ×lecontei* Little); *C. texana* (*C. ×ludoviciana* (Ashe) Little).

*Carya austrina*, see **C. glabra**
*Carya buckleyi*, see **C. texana**
*Carya carolinae-septentrionalis*, see **C. ovata var. australis**

***Cárya cordifórmis** (Wangenh.) K. Koch **bitternut hickory**‡†
*Juglans alba minima* Marsh., Arbustr. Am. 68. 1785.
*Juglans cordiformis* Wangenh., Beytr. Teutsch. Holzger. Forstwiss. Nordam. Holz. 25, pl. 10, fig. 25. 1787; "*Iuglans.*"
‡*Carya cordiformis* (Wangenh.) K. Koch, Dendrol. 1: 597. 1869.
*Hicoria minima* (Marsh.) Britton, Bull. Torrey Bot. Club. 15: 284. 1888.
†*Hicoria cordiformis* (Wangenh.) Britton in Britton & Shafer, No. Am. Trees 228, fig. 186. 1908.

DERIVATION—Heart-shaped, perhaps referring to the fruit.

OTHER COMMON NAMES—bitternut, swamp hickory, pignut, pignut hickory.

RANGE—Sw. N. H., Vt., and extreme s. Que., w. to s. Ont., c. Mich., and n. Minn., s. to e. Nebr., c. Okla., and e. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, map 112-E; vol. 5, map 31.

HYBRIDIZES WITH: *Carya glabra* (*C. ×demareei* Palmer); *C. illinoensis* (*C. ×brownii* Sarg.); *C. ovata* (*C. ×laneyi* Sarg.).

**Cárya floridàna** Sarg. **scrub hickory**‡
‡*Carya floridana* Sarg., Trees and Shrubs 2: 193, pl. 177. 1913.
†*Hicoria floridana* (Sarg.) Sudw., U.S. Dep. Agric. Misc. Circ. 92: 59. 1927.

DERIVATION—Of Florida.

OTHER COMMON NAME—Florida hickory.

RANGE—Local in c. Fla. (Volusia and Marion Cos., s. to Charlotte and Palm Beach Cos.). Atlas vol. 4, map 23; vol. 5, map 32.

***Cárya glàbra** (Mill.) Sweet **pignut hickory**‡†
*Juglans glabra* Mill., Gard. Dict. ed. 8, *Juglans* No. 5. 1768.
‡*Carya glabra* [Mill.] Sweet, Hort. Brit. 97. 1827.

†*Hicoria glabra* (Mill.) Britton, Bull. Torrey Bot. Club 15: 284. 1888.
*Carya megacarpa* Sarg., Trees and Shrubs 2: 201, pl. 180. 1913.
‡*Carya glabra* var. *megacarpa* (Sarg.) Sarg., Bot. Gaz. 66: 244. 1918.
‡*Carya leiodermis* Sarg., Bot. Gaz. 66: 239. 1918.
*Hicoria austrina* Small, Man. Southeast. Fl. 406, 1504. 1933.
*Carya austrina* (Small) Murrill, J. Fla. Acad. Sci. 9: 119. 1947.
*Carya magnifloridana* Murrill, Fla. Acad. Sci. Jour. 9: 119, fig. 4, 7, 8, 10. 1947.

DERIVATION—Smooth, or hairless, referring to the foliage.

OTHER COMMON NAMES—pignut, sweet pignut, coast pignut hickory‡, smoothbark hickory, swamp hickory‡, broom hickory.

RANGE—Mass. and sw. N.H., w. to N.Y., extreme s. Ont., c. Mich., n. Ill., and extreme se. Iowa, s. to extreme se. Kans., Ark., and e. Tex., and e. to c. Fla. Atlas vol. 1, map 113-E; vol. 5, map 33.

‡*Carya leiodermis* Sarg., swamp hickory‡, was united as a synonym of *Carya glabra* (Mill.) Sweet by Stone, Adrouny, and Flake (Am. J. Bot. 56: 930. 1969). This reduction was accepted by Little (Phytologia 19: 187. 1969).

HYBRIDIZES WITH: *Carya cordiformis* (*C.* ×*demareei* Palmer).

**Cárya glàbra** (Mill.) Sweet var. **glàbra** **pignut hickory (typical)‡**

RANGE—Almost same as sp. but w. to se. Mo., and s. to La.

**Cárya glàbra** var. **odoràta** (Marsh.) Little **red hickory**
*Juglans alba odorata* Marsh., Arbustr. Am. 68. 1785.
*Juglans ovalis* Wangenh., Beytr. Teutsch. Holzger. Forstwiss. Nordam. Holz. 24, pl. 10, fig. 23. 1787; "*Iuglans oualis.*"
*Juglans alba* γ *odorata* (Marsh.) Castiglioni, Viag. Negl. Stati Uniti 2: 262. 1790.
*Carya microcarpa* Nutt., Gen. No. Am. Pl. 2: 221. 1818.
*Hicoria glabra* var. *odorata* (Marsh.) Sarg., Silva No. Am. 7: 167, pl. 354. 1895.
*Carya ovalis* (Wangenh.) Sarg., Trees and Shrubs 2: 207. 1913.
*Carya ovalis* var. *odorata* (Marsh.) Sarg., Trees and Shrubs 2: 208. 1913.
†*Hicoria ovalis* (Wangenh.) Ashe, J. Elisha Mitchell Sci. Soc. 34: 133. 1918.
†*Hicoria ovalis odorata* (Marsh.) Ashe, J. Elisha Mitchell Sci. Soc. 34: 134. 1918.
*Carya glabra* var. *odorata* (Marsh.) Little, Phytologia 19: 189. 1969.

DERIVATION—Fragrant.

OTHER COMMON NAMES—sweet pignut hickory, sweet pignut, oval pignut hickory, pignut hickory, pignut, false shagbark.

RANGE—Almost same as sp. but w. to se. Mo., and s. to La.

The taxonomic position of red hickory is controversial. The binomial *Carya ovalis* (Wangenh.) Sarg. was published in 1913 for a segregate of *C. glabra*. It was reduced to a synonym of *C. glabra* in the 1953 ckecklist. Red hickory is accepted here as a variety. The principal difference is in the husk of the fruit, opening late and partly or remaining closed in *C. glabra* but promptly splitting to the base in *C. ovalis*. However, many trees have intermediate fruits, and the recorded ranges are almost the same. Wayne E. Manning (1950), while accepting both species, stated that the two could be distinguished with certainty only in November. Later, when charting the distribution in New England, Manning (1973) mapped both together as the *Carya glabra-ovalis* complex, noting that the ranges seem to overlap.

*Carya ovalis* has been treated also as an interspecific hybrid between *C. glabra* and *C. ovata*, for example, by Boivin (Nat. Can. 93: 432-433. 1966). Gleason (New Britton Brown Illus. Fl. NE. U.S. 2: 30. 1952) accepted *C. ovalis* as a polymorphic species especially variable in the size and shape of its nuts and possibly a hybrid. The relationships may be more complex after a long and reticulate phylogeny, according to the detailed chemical analyses of hickory nut oils by Stone, Adrouny, and Flake (1969).

***Cárya illinoénsis** (Wangenh.) K. Koch **pecan‡†**
*Juglans pecan* Marsh., Arbustr. Am. 69. 1785; *nom. subnud.*

*Juglans illinoinensis* Wangenh., Beytr. Teutsch. Holzger. Forstwiss. Nordam. Holz. 54, pl. 18, fig. 43. 1787; excl. fruit.
*Juglans olivaeformis* Michx., Fl. Bor.-Am. 2: 192. 1803.
*Carya olivaeformis* [Michx.] Nutt., Gen. No. Am. Pl. 2: 221. 1818.
‡*Carya illinoensis* (Wangenh.) K. Koch, Dendrol. 1: 593. 1869.
*Carya pecan* (Marsh.) Engl. & Graebn. in Engl., Berlin K. Bot. Gart. Mus. Notizbl. App. 9: 19. 1902. Non *Carya pecan* (Walt.) Nutt., No. Am. Sylva 1: 41. 1842.
†*Hicoria pecan* (Marsh.) Britton, Bull. Torrey Bot. Club 15: 282. 1888.

DERIVATION—Of Illinois.

OTHER COMMON NAMES—sweet pecan; nogal morado, nuez encarcelada (Spanish).

RANGE—Miss. Valley from s. and w. Ind. and n. Ky., w. to nw. Ill., extreme e. Iowa, Mo., and e. Kans., s. to w. Okla., c. and s. Tex., e. to se. La., n. to nw. Miss., and w. Tenn. Also local in extreme se. Ohio, Ala., and Trans-Pecos Tex. Also mts. of ne. to s. Mex. (Tamps. to Coah., s. to Jal., Hgo., and Oax.). Range perhaps extended by Indians in ne. and se. U.S. and in Mex. Atlas vol. 1, maps 114-W, 114-E, 114-N.

REFERENCES—Fernald, M. L. The inadequate basis of the name Carya pecan. Rhodora 49: 194–196. 1947.
Rehder, Alfred. J. Arnold Arbor. 22: 571–572. 1941.
Sargent, Charles Sprague. Silva No. Am. 7:137-140, pl. 338-339 1895.
Thieret, J. W. The specific epithet of the pecan. Rhodora 63: 296. 1961.

HYBRIDIZES WITH: *Carya aquatica* (*C.* ×*lecontei* Little); *C. cordiformis* (*C.* × *brownii* Sarg.); *C. laciniosa* (*C.* ×*nussbaumeri* Sarg.); *C. ovata*; *C. tomentosa* (*C.* ×*schneckii* Sarg.).

***Cárya laciniòsa** (Michx. f.) Loud. **shellbark hickory**‡
*Juglans laciniosa* Michx. f., Hist. Arbr. For. Am. Sept. 1: 199, pl. 8. 1810.
‡*Carya laciniosa* (Michx. f.) Loud., Hort. Brit. 384. 1830.
†*Hicoria laciniosa* (Michx. f.) Sarg., Mem. Torrey Bot. Club 5: 354. 1894.

DERIVATION—With flaps or folds, referring to the plates of shaggy bark.

OTHER COMMON NAMES—big shagbark hickory, bigleaf shagbark hickory†, kingnut, big shellbark, bottom shellbark, thick shellbark, western shellbark.

RANGE—Ohio and Miss. Valleys mostly, from w. N.Y., extreme s. Ont., and s. Mich., w. to se. Iowa, s. to Mo., e. Kans., and ne. Okla., e. to ne. Ark. and Tenn., and n. to W. Va. and Pa. Also local in Del., w. Va., N.C., n. Ga., Ala., and Miss. Atlas vol. 1, map 115-E.

HYBRIDIZES WITH: *Carya illinoensis* (*C.* ×*nussbaumeri* Sarg.); *C. ovata* (*C.* ×*dunbarii* Sarg.).

*Carya leiodermis*, see **C. glabra**
*Carya magnifloridana*, see **C. glabra**
*Carya mexicana*, see **C. ovata**

***Cárya myristiciformis** (Michx. f.) Nutt. **nutmeg hickory**†
*Juglans myristiciformis* Michx. f., Hist. Arbr. For. Am. Sept. 1: 211, pl. 10. 1810; "*myristicaeformis.*"
‡*Carya myristiciformis* Nutt., Gen. No. Am. Pl. 2: 222. 1818; "*myristicaeformis*"; *nom. nud.*
*Carya myristiciformis* (Michx. f.) Nutt. ex Ell., Sketch Bot. S.-Car. Ga. 2: 628. 1824; "*myristicaeformis.*"
†*Hicoria myristiciformis* (Michx. f.) Britton, Bull. Torrey Bot. Club 15: 284. 1888; "*myristicaeformis.*"

DERIVATION—With the shape of *Myristica*, nutmeg, referring to the fruit.

OTHER COMMON NAMES—swamp hickory, bitter water hickory.

RANGE—Local in Coastal Plain in S.C., Ala., Miss., La., and e. anc c. Tex., n. to se. Okla. and c. Ark. Also mts. of ne. Mex. (N.L.). Atlas vol. 1, map 116-E.

*Carya ovalis*, see **C. glabra** var. **odorata**

***Cárya ovàta** (Mill.) K. Koch **shagbark hickory‡†**

*Juglans alba* L., Sp. Pl. 997. 1753; in part; *nom. ambig.*
*Juglans ovata* Mill., Gard. Dict. ed. 8, *Juglans* No. 6. 1768.
‡*Carya ovata* (Mill.) K. Koch, Dendrol. 1: 598. 1869.
*Carya mexicana* Englelm. ex Hemsl., Biol. Cent. Am. Bot. 3: 162. 1883.
†*Hicoria ovata* (Mill.) Britton, Bull. Torrey Bot. Club 15: 283. 1888.
*Hicoria borealis* Ashe, Notes on Hickories 1. 1896.
*Carya ovalis* var. *borealis* (Ashe) Sarg., Trees and Shrubs 2: 209. 1913; *nom. provisor.* Sarg., Bot. Gaz. 66: 246. 1918.
*Carya ovata* var. *borealis* (Ashe) Manning, Rhodora 51: 89. 1949.
*Carya ovata* var. *mexicana* (Engelm.) Manning, J. Arnold Arbor. 30: 431. 1949.

DERIVATION—Ovate, or egg-shape, referring to the fruit.

OTHER COMMON NAMES—shellbark hickory, scalybark hickory, shagbark, upland hickory.

RANGE—Sw. Maine w. to N.Y., extreme s. Que., s. Ont., c. Mich., c. Wis., and se. Minn., s. to Iowa, ne. Nebr., e. Kans., e. Okla., and e. Tex., e. to c. Ga., and n. to Md., Del., and N.J. Also var. in mts. of ne. Mex. (Tamps., N.L., S.L.P., Qro., Hgo., and Pue.). Atlas vol. 1, maps 118-N, 118-E.

REFERENCE—See **Carya tomentosa**

HYBRIDIZES WITH: *Carya cordiformis* (*C.* ×*laneyi* Sarg.); *C. illinoensis*; *C. laciniosa* (*C.* ×*dunbarii* Sarg.).

**Cárya ovàta** (Mill.) K. Koch var. **ovàta** **shagbark hickory (typical)**

RANGE—Almost same as sp., excl. Mex.

**Cárya ovàta** var. **austràlis** (Ashe) Little **Carolina hickory**

†*Hicoria carolinae-septentrionalis* Ashe, Notes on Hickories 1. 1896.
*Carya carolinae-septentrionalis* (Ashe) Engl. & Graebn. in Engl., Berlin K. Bot. Gart. Mus. Notizbl., App. 9: 19. 1902.
*Carya australis* Ashe, Bull. Charleston Mus. 14: 12. 1918.
†*Hicoria carolinae-septentrionalis* var. *australis* (Ashe) Ashe, J. Elisha Mitchell Sci. Soc. 40: 46. 1924.
*Carya ovata* var. *australis* (Ashe) Little, Phytologia 19: 188. 1969.

DERIVATION—Southern.

OTHER COMMON NAME—southern shagbark hickory†.

RANGE—Piedmont and mts. from N.C. s. and w. to S.C., Ga., Ala., Miss., and Tenn.

This southeastern variety has been known also as a species, *Carya carolinae-septentrionalis* (Ashe) Engl. & Graebn. That name was mentioned in a note in the 1953 checklist.

***Cárya pállida** (Ashe) Engl. & Graebn. **sand hickory‡**

†*Hicoria pallida* Ashe, Notes on Hickories 1. 1896; Gard. and For. 10: 304-306, illus. 1897.
‡*Carya pallida* (Ashe) Engl. & Graebn. in Engl., Berlin K. Bot. Gart. Mus. Notizbl., App. 9: 19. 1902.

DERIVATION—Pale, referring to the leaflets.

OTHER COMMON NAMES—pale hickory, pallid hickory, pignut hickory†.

RANGE—Coastal Plain from s. N.J. and Del. s. to Ga., w. to nw. Fla. and se. La., and n. in Miss. Valley to Tenn., se. Ky., s. Ill., and sw. Ind. Also recorded from Conn. Atlas vol. 4, map 24; vol. 5, map 34.

*Carya pecan*, see **C. illinoensis**

***Cárya texàna** Buckl. **black hickory‡**

‡*Carya texana* Buckl, Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 444. 1860. Non *C. texana* C. DC., Ann. Sci. Nat., Bot., Ser. 4, 18: 33. 1862. Nec *Hickorea texana* Le Conte, Acad. Proc. Nat. Sci. Phila. 6: 402, illus. 1853.
*Carya buckleyi* Durand, Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 547. 1861.
*Hicoria glabra* var. *villosa* Sarg., Silva No. Am. 7: 167, pl. 355. 1895.

†*Hicoria villosa* (Sarg.) Ashe, Bull. Torrey Bot. Club 24: 481. 1897.
*Carya villosa* [Sarg.] Schneid., Illus. Handb. Laubholzk. 1: 803. 1906.
*Carya glabra* var. *villosa* (Sarg.) Robinson, Rhodora 10: 32. 1908.
*Carya arkansana* Sarg., Trees and Shrubs 2: 203, pl. 181. 1913.
†*Hicoria buckleyi* (Durand) Ashe, J. Elisha Mitchell Sci. Soc. 34: 131. 1918.
*Carya buckleyi* var. *arkansana* (Sarg.) Sarg., Bot. Gaz. 66: 249. 1918.
*Carya buckleyi* var. *villosa* (Sarg.) Sarg., Bot. Gaz. 66: 251. 1918.
*Carya texana* var. *arkansana* (Sarg.) Little, Am. Midl. Nat. 29: 502. 1943.
*Carya texana* var. *villosa* (Sarg.) Little, Am. Midl. Nat. 29: 503. 1943.

DERIVATION—Of Texas.

OTHER COMMON NAMES—Buckley hickory, pignut hickory†.

RANGE—Sw. Ind., c. Ill., Mo., and se. Kans., s. to c. Okla., Edwards Plateau and s. Tex., and La. Atlas vol. 4, map 25.

When transferred to *Carya* under the International Code, *Hicoria buckleyi* (Durand) Ashe was replaced by the older specific name *C. texana* Buckl., not the later name formerly used, *C. buckleyi* Durand.

HYBRIDIZES WITH: *Carya aquatica* (*C.* ×*ludoviciana* (Ashe) Little); *C. tomentosa* (*C.* × *collina* Laughlin).

***Cárya tomentòsa** (Poir.) Nutt. **mockernut hickory‡†**

*Juglans alba* L., Sp. Pl. 997. 1753; in part; *nom ambig.*
*Juglans tomentosa* Poir. in Lam., Encycl. Méth. Bot. 4: 504. 1798.
*Juglans tomentosa* Michx., Fl. Bor.-Am. 2: 192. 1803.
‡*Carya tomentosa* Nutt., Gen. No. Am. Pl. 2: 221. 1818.
*Carya alba* (Mill.) K. Koch, Dendrol. 1: 596. 1869. Non *Carya alba* (L.) Nutt. ex Ell., Sketch Bot. S.-Car. Ga. 2: 624. 1824.
†*Hicoria alba* (L.) Britton, Bull. Torrey Bot. Club 15: 283. 1888.
*Carya alba* ssp. *tomentosa* (Lam.) Schwerin, Mitt. Dtsch. Dendrol. Ges. 44: 378. 1932.

DERIVATION—Tomentose, or densely hairy with short matted wool, referring to the leaflets.

OTHER COMMON NAMES—mockernut, white hickory, whiteheart hickory, hognut, bullnut.

RANGE—Mass. and N.Y., w. to extreme s. Ont., s. Mich., n. Ill., se. Iowa, Mo., and e. Kans., s. to e. Tex., and e. to n. Fla. Atlas vol. 1, map 117-E; vol. 5, map 35. Not N.H. or Vt., as mapped, according to Manning (1973).

REFERENCE—Rehder, Alfred. Carya alba proposed as nomen ambiguum. J. Arnold Arbor. 26: 482-483. 1945.

This species formerly was known as *Carya alba*. However, Rehder (1945) rejected the basonym *Juglans alba* L. as a *nomen ambiguum*, or ambiguous name. The latter included 2 species and when transferred as *C. alba* was applied through the years by some authors for *C. tomentosa* and by others for *C. ovata* with obvious confusion.

HYBRIDIZES WITH: *Carya illinoensis* (*C.* ×*schneckii* Sarg.); *C. ovata* (C. ×*collina* Laughlin).

**Castànea** Mill. (Family Fagaceae) **chestnut; chinkapin**

‡†*Castanea* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

DERIVATION—The classical Greek and Latin name of chestnut. The common name chinkapin, of American Indian origin, is spelled also chinquapin and formerly, chincapin and chincopin. John Smith (1612) in first record used the spelling *chechinquamins.*

REFERENCES—Camus, A. Les chataigniers. Monographie des genres Castanea et Castanopsis. 604 p., illus. 1929. (*In* Encyclopédie Economique de Sylviculture, v. 3.)

Elias, Thomas S. J. Arnold Arbor. 52: 173-179, illus. 1971.

NUMBER OF SPECIES: Native trees, 4; the others from s. Europe, n. Africa, and Asia to China, Korea, and Japan; total, n. temperate, about 12.

**Castànea alnifòlia** Nutt. **Florida chinkapin‡**

*Castanea alnifolia* Nutt., Gen. No. Am. Pl. 2: 217. 1818.
‡†*Castanea alnifolia* var. *floridana* Sarg., Bot. Gaz. 67: 242. 1919.
*Castanea floridana* (Sarg.) Ashe, Bull. Torrey Bot. Club 49: 266. 1919.

DERIVATION—With leaves like *Alnus*, or alder-leaf.

OTHER COMMON NAMES—trailing chinkapin, running chinkapin, downy chinkapin.

RANGE—Coastal Plain from N.C. to n. Fla. and se. La. Atlas vol. 4, map 26; vol. 5, map 36.

The typical variation is a low shrub, but another (var. ‡†*floridana* Sarg.) is a small tree.

HYBRIDIZES WITH: *Castanea dentata* (*C.* ×*albamensis* Ashe).

***Castànea dentàta** (Marsh.) Borkh. **American chestnut‡**

*Fagus-Castanea dentata* Marsh., Arbustr. Am. 46. 1785.
‡†*Castanea dentata* (Marsh.) Borkh., Handb. Forst. Bot. 1: 741. 1800.

DERIVATION—Toothed, referring to the leaf margins.

OTHER COMMON NAME—chestnut†.

RANGE—S. Maine w. to N.Y., extreme s. Ont., se. Mich., Ohio, s. Ind., and extreme s. Ill., s. to s. Miss. and sw. Ga. Formerly also nw. Fla. Atlas vol. 4, maps 27-NE, 27-SE; vol. 5, map 37.

Almost exterminated nearly half century ago by chestnut blight, caused by the ascomycete fungus *Endothia parasitica* (Murr.) Anders. & Anders. However, stump sprouts persist.

HYBRIDIZES WITH: *Castanea alnifolia* (*C.* ×*alabamensis* Ashe); *C. pumila* (*C.* ×*neglecta* Dode.)

**Castànea ozarkénsis** Ashe **Ozark chinkapin‡**

‡†*Castanea ozarkensis* Ashe, Bull. Torrey Bot. Club 50: 360. 1923.
*Castanea arkansana* Ashe, Bull. Torrey Bot. Club 50: 361. 1923.
*Castanea ozarkensis* var. *arkansana* (Ashe) Ashe, J. Elisha Mitchell Sci. Soc. 40: 45. 1924.
*Castanea pumila* var. *ozarkensis* (Ashe) G. E. Tucker, Ark. Acad. Sci. Proc. 29: 68, fig. 2. 1975.

DERIVATION—Of the Ozarks.

OTHER COMMON NAME—Ozark chestnut.

RANGE—Local in Ozark Plateau and mts. of s. Mo., Ark., and e. Okla. Atlas vol. 4, map 28.

**Castànea pùmila** Mill. **Allegheny chinkapin‡**

*Fagus pumila* L., Sp. Pl. 998. 1753.
‡†*Castanea pumila* Mill. Gard. Dict. ed. 8, *Castanea* No. 2. 1768.
‡*Castanea pumila ashei* Sudw., Am. Forestry 28: 301, fig. 1922.
†*Castanea ashei* (Sudw.) Sudw. ex Ashe, Bull. Torrey Bot. Club 49: 267. 1922.

RANGE—N.J. and s. Pa., sw. to extreme e. Ky., Tenn., Ark., and se. Okla., s. to e. Tex., and e. to c. Fla. Also local in s. Ohio. Atlas vol. 4, map 29; vol. 5, map 38.

HYBRIDIZES WITH: *Castanea dentata* (*C.* ×*neglecta* Dode).

**Castanópsis** (D. Don) Spach (Family Fagaceae) **chinkapin**

*Quercus* [sect.?] *Castanopsis* D. Don, Prodr. Fl. Nepal. 56. 1825.
‡†*Castanopsis* (D. Don) Spach, Hist. Nat. Vég. Phanér. 11: 142, 185. 1842; *nom. cons.*
*Chrysolepis* Hjelmqvist, Bot. Not. Suppl. 2 (1): 117, fig. 27 B-E. 1948.

DERIVATION—Resembling *Castanea*, chestnut, a related genus.

OTHER COMMON—evergreen-chinkapin.

REFERENCES—Forman, L. L. Generic delimitation in the Castaneoideae (Fagaceae). Kew Bull. 18: 421-426. 1966.

Hjelmqvist, Hakon. Studies on the floral morphology and phylogeny of the Amentiferae. Bot. Not. Suppl. 2(1), 171 p., illus. 1948.

The second native species is a low shrub of Calif. and s. Oreg.,

*Castanópsis sempervìrens* (Kell.) Dudl., Sierra chinkapin (bush chinkapin). Both have been placed alone in the segregate genus *Chrysolepis* Hjelmqvist.

NUMBER OF SPECIES: Native trees, 1; native shrubs, 1; total, the others in tropical and subtropical Asia, about 100.

***Castanópsis chrysophýlla** (Dougl.) A. DC. **giant chinkapin**

*Castanea chrysophylla* Dougl., Comp. Bot. Mag. 2: 126. 1836; *nom. subnud.*
*Castanea chrysophylla* Dougl. ex Hook., Fl. Bor.-Am. 2: 159. 1839.
*Castanea chrysophylla* var. *minor* Benth., Pl. Hartw. 337. 1857.
‡†*Castanopsis chrysophylla* (Dougl.) A. DC. in Hance, J. Bot. [London] 1: 182. 1863.
*Castanopsis chrysophylla* ß *minor* (Benth.) A. DC., Prodr. 16 (2): 110. 1864.
*Chrysolepsis chrysophylla* (Hook.) Hjelmqvist, Bot. Not. Suppl. 2 (1): 117. 1948.
*Chrysolepis chrysophylla* var. *minor* (Benth.) Munz, Suppl. Calif. Fl. 120. 1968.

DERIVATION—Golden leaf, referring to the golden yellow scales coating the under surface of young leaves.

OTHER COMMON NAMES—golden chinkapin‡†, giant evergreen-chinkapin, chinkapin, goldenleaf chestnut.

RANGE—Pacific Coast region from sw. Wash. s. to w. Oreg. and in Coast Ranges to c. Calif. Also local in Sierra Nev. of c. Calif. Atlas vol. 1, map 119-W.

*Castela*, see **Holacantha**

CASUARÌNA L. ex Adans (Family Casuarenaceae) CASUARINA

‡*Casuarina* L. in L. & Stickman, Herb. Amboin. 1754; "*Casaarina*"; Amoen. Acad. 4: 143. 1759; *nom. subnud.*
†*Casuarina* L. ex Adans., Fam. Pl. 2: 481, 534. 1763.

DERIVATION—From the Malay word *kasuari*, cassowary, because of the fancied resemblance of the twigs to the plumage of that bird.

OTHER COMMON NAMES—beefwood, "Australian-pine."

REFERENCES—Bullock, A. A. Kew Bull. 14: 40. 1960.
Dandy, J. E. Regnum Veg. 51: 37. 1967.
Fosberg, F. Raymond, and Marie-Hélène Sachet. Smithson. Contrib. Bot. 24: 1-2. 1975.
Merrill, E. D. Phillipp. Bur. Sci. Publ. 9: 179-180. 1917.

CASUARÌNA EQUISETIFÒLIA L. ex J. R. & G. Forst. HORSETAIL CASUARINA‡

*Casuarina litorea* L. in L. & Stickman, Herb. Amboin. 12. 1754; "*Casaarina*"; *nom. subnud.*
‡*Casuarina equisefolia* L. in L. & Stickman, Herb. Amboin. 1754; Amoen. Acad. 4: 143. 1759; *nom. subnud.*
†*Casuarina equisetifolia* L. ex J. R. & G. Forst., Char. Gen. Pl. 104, t. 52. 1776.

DERIVATION—With leaves like *Equisetum*, horsetail.

OTHER COMMON NAMES—beefwood†, "Australian-pine," horsetail-tree; common "ironwood," she-oak, toa (Hawaii).

RANGE—Naturalized and common especially along coasts in s. Fla. incl. Fla. Keys. Also Hawaii, P.R., and V.I. Native of tropical Asia and Australasia but widely planted and naturalized in tropical and subtropical regions.

CASUARÌNA CRISTÀTA Miq. (Rev. Crit. Casuar. 70, pl. 10. 1848; *C. lepidophloia* F. Muell.), scalybark casuarina (scalybark beefwood, swamp-oak), is widely planted in s. Fla. and Hawaii and spreads from root sprouts. However, it apparently does not fruit in s. Fla. and is not classed as naturalized.

**Catálpa** Scop. (Family Bignoniaceae) **catalpa**

‡†*Catalpa* Scop., Introd. Hist. Nat. 170. 1777.

DERIVATION—The American Indian name.

REFERENCE—Paclt, Jirí. Synopsis of the genus Catalpa (Bignoniaceae) III. Candollea 13: 241–295, illus. 1952.

NUMBER OF SPECIES: Native trees, 2; West Indies, 5; temperate Asia (China to Tibet), 4; total, 11.

***Catálpa bignonioìdes** Walt. **southern catalpa‡**

*Bignonia catalpa* L., Sp. Pl. 622. 1753.

‡†*Catalpa bignonioides* Walt., Fl. Carol. 64. 1788.

DERIVATION—Like *Bignonia*, a vine of the same family.

OTHER COMMON NAMES—common catalpa†, catawba, Indian-bean, cigar-tree, Indian cigartree.

RANGE—Native probably in sw. Ga., nw. Fla., Ala., and Miss., the original distribution uncertain. Widely naturalized from s. New Engl. and N.Y. w. to Ohio., s. Mich., Mo., and Okla., and s. to e. Tex. and Fla. Atlas vol. 4, map 30; vol. 5, map 39.

***Catálpa speciòsa** Warder ex Engelm. **northern catalpa‡**

*Catalpa bignonioides* var. *speciosa* Warder ex Barney, Additional Facts Inform. Catalpa bignonioides Its Var. 18, 21. 1879.

‡†*Catalpa speciosa* Warder ex Engelm., Bot. Gaz. 5: 1. 1880.

DERIVATION—Showy, from the clusters of large flowers.

OTHER COMMON NAMES—hardy catalpa†, western catalpa, western catawba, catawba, Indian-bean, cigartree, Indian cigartree.

RANGE—Native apparently in Miss. Valley region in sw. Ind., s. Ill., se. Mo., ne. Ark., w. Tenn., and w. Ky, the original distribution uncertain and possibly s. to La. Widely naturalized beyond in se. U.S. Atlas vol. 1, map 120-E.

**Ceanòthus** L. (Family Rhamnaceae) **ceanothus**

‡†*Ceanothus* L., Sp. Pl. 195. 1753; Gen. Pl. ed. 5, 90. 1754.

DERIVATION—The classical Greek name of a different spiny plant.

REFERNECES—McMinn, Howard E. An illustrated manual of California shrubs. 689 p., illus. 1939. *Ceanothus*, p. 278-320, illus.

McMinn, Howard E. A systematic study of the genus Ceanothus. *In* Van Rensselaer, Maunsell, and Howard E. McMinn. Ceanothus, p. 131-308, illus. 1942.

NUMBER OF SPECIES: Native shrubs, centering in Calif., about 50, incl. 3 also small trees (3 also in Mex.); Mex., about 10 additional, incl. 1 also in Guatemala); total, about 60.

**Ceanòthus arbòreus** Greene **feltleaf ceanothus‡**

‡†*Ceanothus arboreus* Greene, Bull. Calif. Acad. Sci. 2: 144. 1886.

*Ceanothus velutinus* Dougl. var. *arboreus* (Greene) Sarg., Gard. and Forest. 2: 364. 1889.

DERIVATION—Treelike; one of the species reaching largest size.

OTHER COMMON NAMES—Catalina ceanothus, island-myrtle†.

RANGE—Santa Rosa, Santa Cruz, and Santa Catalina Is. of Calif. only. Atlas vol. 3, map 29.

**Ceanòthus spinòsus** Nutt. **greenbark ceanothus**

‡†*Ceanothus spinosus* Nutt. in Torr. & Gray, Fl. No. Am. 1: 267. 1838.

DERIVATION—Spiny, the twigs ending in spines.

OTHER COMMON NAMES—redheart ceanothus, California-lilac, spiny ceanothus‡, redheart, spiny-myrtle†.

RANGE—Pacific Coast Ranges of sw. Calif. (San Luis Obispo Co. to San Diego Co.) and nw. B. Cal., Mex. Atlas vol. 3, map 30.

**Ceanòthus thyrsiflòrus** Eschsch. **blueblossom‡**

‡†*Ceanothus thyrsiflorus* Eschsch., Acad. Imp. Sci. St. Pétersb. Mém., Sér. 5, 10: 285. 1826; "*thyrsiflora*."

*Ceanothus thyriflorus* var. *chandleri* Jeps., Man. Fl. Pl. Calif. 619. 1925.

DERIVATION—Thyrse-flower, the flowers in a compact branched cluster.

OTHER COMMON NAMES—blueblossom ceanothus, blue-myrtle†, blue-brush, California-lilac.

RANGE—Outer Pacific Coast Range from sw. Oreg. s. to s. Calif. (Santa Barbara Co.). Atlas vol. 3, map 31.

‡*Ceanòthus velùtinus* Dougl., snowbrush‡, generally a spreading shrub, includes a treelike variety, *Ceanothus velutinus* var. *laevigatus* (Hook.) Torr. & Gray, which has a maximum height of 20 ft (6 m). Range of var.—Vancouver Is., B.C., and w. Wash. s. to nw. Calif.

**Céltis** L. (Family Ulmaceae) **hackberry**

‡†*Celtis* L., Sp. Pl. 1043. 1753; Gen. Pl. ed. 5, 467. 1754.

DERIVATION—The classical Latin name of a species of lotus.

REFERENCE—Boivin, Bernard. Les Celtis du Canada. Nat. Can. 94: 621-624. 1967.

NUMBER OF SPECIES: Native trees, 5; native shrubs, 2; Mex. and C. Am., 9 (incl. 5 also in U.S. and 1 also in P.R. and V.I.); total, mostly trees, of broad distribution in n. temperate and tropical zones and s. Africa, about 75.

*Celtis canina*, see **C. occidentalis**
*Celtis crassifolia*, see **C. occidentalis**
*Celtis douglasii*, see **C. reticulata**
*Celtis georgiana*, see **C. tenuifolia**

***Céltis laevigàta** Willd. **sugarberry‡†**

‡†*Celtis laevigata* Willd., Berl. Baumz. ed. 2, 81. 1811.
*Celtis mississippiensis* Spach, Ann. Sci. Nat., Bot., Sér. 2, 16: 42. 1841.
*Celtis texana* Scheele, Linnaea 22: 146. 1849.
*Celtis smallii* Beadle in Small, Fl. Southeast. U.S. 365, 1329. 1903.
†*Celtis laevigata* var. *smallii* (Beadle) Sarg., Bot. Gaz. 67: 223. 1919.
†*Celtis laevigata* var. *texana* (Scheele) Sarg., Bot. Gaz. 67: 223. 1919.

DERIVATION—Smooth, referring to the leaves.

OTHER COMMON NAMES—sugar hackberry, hackberry, Texas sugarberry, southern hackberry, lowland hackberry, palo blanco (Spanish).

RANGE—S. Md. and se. Va. s. in Coastal Plain and Piedmont to s. Fla., w. to sw. Tex., and n. in Miss. Valley to w. Okla., s. Kans., n. Mo., c. Ill., s. Ind., and c. Ky. Also ne. Mex. (Tamps. to Coah.). Atlas vol. 1, maps 122-W, 122-E, 122-N; vol. 5, map 40.

**Céltis lindhèimeri** Engelm. ex K. Koch **Lindheimer hackberry‡**

‡†*Celtis lindheimeri* Engelm. ex K. Koch, Dendrol. 2 (1): 434. 1872.

DERIVATION—Named for its discoverer, Ferdinand Lindheimer (1801-1879), German-born botanical collector and newspaper editor of New Braunfels, Tex.

OTHER COMMON NAME—palo blanco† (Spanish).

RANGE—Local in c. Tex. (Bexar Co.) and in ne. Mex. (Coah.). Atlas vol. 3, map 32.

*Celtis mississippiensis*, see **C. laevigata**

***Céltis occidentàlis** L. **hackberry‡†**

‡†*Celtis occidentalis* L., Sp. Pl. 1044. 1753.
*Celtis crassifolia* Lam., Encycl. Méth. Bot. 4: 138. 1797.
*Celtis pumila* Pursh, Fl. Am. Sept. 1: 200. 1814.
*Celtis canina* Raf., Am. Mon. Mag. Crit. Rev. 2:43. 1817.
*Celtis occidentalis* var. *pumila* (Pursh) Gray, Man. Bot. North. U.S ed. 2, 397. 1856.
†*Celtis occidentalis* var. *crassifolia* (Lam.) Gray, Man. Bot. North. U.S. ed. 2, 397. 1856.
*Celtis occidentalis* var. *canina* (Raf.) Sarg., Bot. Gaz. 67:127. 1919.

DERIVATION—Western; that is, of the western hemisphere.

OTHER COMMON NAMES—common hackberry, sugarberry, nettletree, beaverwood, northern hackberry, American hackberry.

RANGE—R. I., Mass., and sw. N. H., w. to N.Y., extreme s. Ont., c. Mich., c. Wis., Minn., and N. Dak., s. to sw. S. Dak., w. Nebr., ne. Colo., w. Kans., w. Okla., and nw. Tex., and e. to n. Ark., Tenn., N.C., and Va. Also local in extreme s. Que., w. Ont., s. Man., se. Wyo., and n. Ga. Atlas vol. 1, maps 121-W, 121-E.

REFERENCE—Fernald, M. L., and Bernice G. Schubert. The type of Celtis occidentalis L. Rhodora 50: 155-162, pl. 1097, 1098. 1948.

*Celtis pumila*, see **C. occidentalis** and **C. tenuifolia**

***Céltis reticulàta** Torr. **netleaf hackberry**‡

‡†*Celtis reticulata* Torr., Ann. Lyc. Nat. Hist. N.Y. 2: 247. 1828.
†*Celtis douglasii* Planch., Ann. Sci. Nat., Bot., Sér. 3, 10: 293. 1848.
*Celtis occidentalis* L. var. *reticulata* (Torr.) Sarg., Cat. For. Trees No. Am. 126. 1884.
*Celtis mississippiensis* var. *reticulata* (Torr.) Sarg., Silva No. Am. 7: 72, pl. 319. 1895.
*Celtis rugulosa* Rydb., Fl. Rocky Mts. Plains 207, 1061. 1917.
†*Celtis laevigata* var. *brevipes* (Wats.) Sarg., Bot. Gaz. 67: 226. 1919.
*Celtis laevigata* Willd. var. *reticulata* (Torr.) L. Benson, Am. J. Bot. 30: 235. 1943.

DERIVATION—Reticulate, or netted, referring to the prominent leaf veins.

OTHER COMMON NAMES—western hackberry, hackberry†, sugarberry, palo blanco† (Spanish).

RANGE—C. Kans. and Colo., nw. to Idaho, e. Wash., and Oreg., s. to s. Calif., and e. to Tex. Also in n. and c. Mex. (s. to B. Cal. Sur, Mich., and Mor.). Atlas vol. 3, maps 33-N, 33-NW, 33-SW.

**Céltis tenuifòlia** Nutt. **Georgia hackberry**‡

‡*Celtis tenuifolia* Nutt., Gen. No. Am. Pl. 1: 202. 1818.
*Celtis georgiana* Small, Bull. Torrey Bot. Club 24: 439. 1897.
†*Celtis pumila* Pursh var. *georgiana* (Small) Sarg., Bot. Gaz. 67: 227. 1919.
*Celtis tenuifolia* var. *georgiana* (Small) Fern. & Schubert, Rhodora 50: 160. 1948.
*Celtis occidentalis* var. *georgiana* (Small) Ahles, J. Elisha Mitchell Sci. Soc. 80: 172. 1964.
*Celtis tenuifolia* var. *soperi* Boivin, Nat. Can. 94: 623. 1967.

DERIVATION—Thin-leaf.

OTHER COMMON NAMES—dwarf hackberry, upland hackberry, hackberry†.

RANGE—S. Pa. and Md., w. to s. Ind., Ill., Mo., and se. Kans., s. to e. Tex., and e. to n. Fla. Also local n. to extreme s. Ont., n. Ohio, se. Mich., n. Ind., and Del. Atlas vol. 4, map 31; vol. 5, map 41.

REFERENCES—See also **Celtis occidentalis**

Wagner, W. H., Jr. Dwarf hackberry (Ulmaceae: Celtis tenuifolia) in the Great Lakes region. Mich. Bot. 13: 73-99, illus. 1974.

**Cephalánthus** L. (Family Rubiaceae) **buttonbush**

‡†*Cephalanthus* L., Sp. Pl. 95. 1753; Gen. Pl. ed. 5, 42. 1754.

DERIVATION—From Greek head and flower, in reference to the dense ball-like flower clusters.

REFERENCE—Ridsdale, C. A. A revision of the Tribe Cephalantheae (Rubiaceae). Blumea 23: 177-188. 1976.

NUMBER OF SPECIES: Native shrubs or small trees, 2 (also s. to C. Am.), S. Am., 1; Asia 2; Africa, 1; total, mostly tropical, 6.

**Cephalánthus occidentàlis** L. **buttonbush**†

‡†*Cephalanthus occidentalis* L., Sp. Pl. 95. 1753.
†*Cephalanthus occidentalis* var. *pubescens* Raf., Med. Fl. 1: 101. 1828.
*Cephalanthus occidentalis* var.? *californicus* Benth., Pl. Hartw. 314. 1849.

DERIVATION—Western, referring to the western hemisphere.

OTHER COMMON NAMES—common buttonbush‡, honey-balls, globe-flowers.

RANGE—Sw. N.S., s. N.B., and Maine, w. to s. Que., s. Ont., and se. Minn., s. to w. Kans. and Trans-Pecos and s. Tex., and e. to s. Fla., and in Ariz. and Calif. Also s. in Mex. and C. Am. to Honduras and in Cuba. Atlas vol. 3, maps 34-NW, 34-SW, 34-N; vol. 4, maps 32-NE, 32-SE, 32-N; vol. 5, map 42.

*Cephalánthus salicifólius* Humb. & Bonpl. (P. Aequin. 2: 63, pl. 97 [98]. 1809), willowleaf buttonbush, has been recorded as a shrub or small tree (size not stated) from extreme s. Tex. (Hidalgo Co.) by Correll and Johnston (Man. Vasc. Pl. Tex. 1491. 1970). Range—Extreme s. Tex. s. to s. Mex. and in Honduras.

*Cephalocereus*, see **Cereus**
*Cerasus*, see **Prunus**

**Cercídium** Tulasne (Family Leguminosae) **paloverde**
*Parkinsonia* L., Sp. Pl. 375. 1753; Gen. Pl. ed. 5, 177. 1754; in part.
‡†*Cercidium* Tulasne, Arch. Mus. Paris 4: 133. 1844.
*Cercidiopsis* Britton & Rose, No. Am. Fl. 23: 306. 1930.

DERIVATION—Latinized from Greek *kerkidion*, a weaver's comb, from a fancied resemblance to the pod.

REFERENCES—Benson, Lyman. Taxonomic contributions. I. The native palo verdes of Arizona. Am. J. Bot. 27: 186-187, illus. 1940.

Brenan, J. P. M. Notes on African Caesalpinioideae. Kew Bull. 17: 197-214, illus. 1963.

Britton, Nathaniel Lord, and Joseph Nelson Rose. Parkinsonia. Cercidiopsis. Cercidium. No. Am. Fl. 23: 305-309. 1930.

Carter, Annetta M. The genus Cercidium (Leguminosae: Caesalpinioideae) in the Sonoran Desert of Mexico and the United States. Proc. Calif. Acad. Sci. Ser. 4, 40 (2): 17-57, illus. 1974.

Isely, Duane. Mem. N.Y. Bot. Gard. 25 (2): 169-176, 210, 217-218, illus. 1975.

Johnston, Ivan M. Taxonomic records concerning American spermatophytes. I. Parkinsonia and Cercidium. Harvard Univ., Contrib. Gray Herb., New Ser. 70: 61-68. 1924.

NUMBER OF SPECIES: Native trees, also in Mex., 3; total, about 7, including 3 in Mex. and 1 in Venezuela.

**Cercídium flóridum** Benth. ex Gray **blue paloverde‡**
‡†*Cercidium floridum* Benth. ex Gray, Pl. Wright. 1: 58. 1852.
*Parkinsonia florida* (Benth.) Wats., Proc. Am. Acad. Arts Sci. 11: 135. 1876.
*Parkinsonia torreyana* Wats., Proc. Am. Acad. Arts Sci. 11: 135. 1876.
†*Cercidium torreyanum* (Wats.) Sarg., Gard. and Forest 2: 388. 1889.
*Cercidium peninsulare* Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 8: 301. 1905.
*Cercidium floridum* ssp. *penisulare* (Rose) Carter, Proc. Calif. Acad. Sci. Ser. 4, 40(2): 17. 1974.

DERIVATION—Full of flowers from the abundant showy yellow flowers.

OTHER COMMON NAMES—paloverde†, paloverde azul (Spanish).

RANGE—C. and s. Ariz., sw. Calif., and nw. Mex. (Son., nw. Sin., and B. Cal. Sur). Atlas vol. 3, map 35.

HYBRIDIZES WITH: *Cercidium microphyllum*.

***Cercídium microphýllum** (Torr.) Rose & Johnst. **yellow paloverde‡**
*Parkinsonia microphylla* Torr., U.S. Rep. Explor. Surv. Miss. Pacif. 4 (5): 82. 1857; *nom. subnud.*
†*Parkinsonia microphylla* Torr., U.S. Mex. Bound. Surv. Bot. 59. 1859.
‡*Cercidium microphyllum* (Torr.) Rose & Johnst. in I.M. Johnst., Harvard Univ., Contrib. Gray Herb., New Ser. 70: 66. 1924.
*Cercidiopsis microphylla* (Torr.) Britton & Rose, No. Am. Fl. 23: 306. 1930.

DERIVATION—Littleleaf, describing the minute leaflets.

OTHER COMMON NAMES—foothill paloverde, littleleaf paloverde, littleleaf horsebean†, paloverde.

RANGE—Ariz., se. Calif. (Whipple Mts.), and nw. Mex. (Son., B. Cal., B. Cal. Sur). Atlas vol. 3, map 37.

REFERENCE—Carter, Annetta M. Evidence for the hybrid origin of Cercidium sonorae (Leguminosae: Caesalpinioideae) of northwestern Mexico. Madroño 22: 266-272, illus. 1974.

HYBRIDIZES WITH: *Cercidium floridum*; *C. praecox* (Ruiz & Pav.) Harms (*C.* ×*sonorae* Rose & Johnst.) in Mex.

**Cercídium texànum** Gray **Texas paloverde†**

*Cercidium texanum* Gray, Pl. Wright. 1: 58. 1852.
*Parkinsonia texana* (Gray) Wats., Proc. Am. Acad. Sci. Arts 11: 136. 1876.
‡*Cercidium macrum* Johnst., Harvard Univ., Contrib. New Ser. 70: 64. 1924.
*Parkinsonia texana* var. *macra* (I. M. Johnst.) Isely, Mem. N.Y. Bot. Gard 25 (2): 176, 218, 288. 1975.

DERIVATION—Of Texas.

OTHER COMMON NAMES—border paloverde‡, retama china (Spanish).

RANGE—S. Tex. and ne. Mex. (N.L. and Tamps). Atlas vol. 3, map 36 (as *Cercidium macrum*).

‡*Cercidium macrum* I. M. Johnst. has been united with *C. texanum* Gray, a shrubby species with overlapping range.

**Cércis** L. (Family Leguminosae) **redbud**

‡†*Cercis* L., Sp. Pl. 374. 1753; Gen. Pl. ed. 5, 176. 1754.

DERIVATION—The classical Greek name of *Cercis siliquastrum* L., Judas-tree, of southern Europe and western Asia; from Greek, weaver's shuttle, perhaps referring to the fruit.

REFERENCES—Hopkins, Milton. Cercis in North America. Rhodora 44: 193-211, illus. 1942.

Isely, Duane. Mem. N.Y. Bot. Gard. 25 (2): 134-150, 210-211, illus. 1975.

Robertson, Kenneth R., and Yin-Tse Lee. J. Arnold Arbor. 57: 48-53, illus. 1976.

NUMBER OF SPECIES: native trees 2; total, 8, incl. 1 in s. and e. Europe and 5 in China.

***Cércis canadénsis** L. **eastern redbud‡**

‡†*Cercis canadensis* L., Sp. Pl. 374. 1753.

DERIVATION—Of Canada, when French Canada extended down Mississippi Valley.

OTHER COMMON NAMES—redbud†, Judas-tree.

RANGE—N.J. and Pa., w. to s. Mich. and se. Nebr., s. to Trans-Pecos and s. Tex., and e. to c. Fla. Also n. Mex. (e. Chih. and Coah., e. to Tamps., and s. to S.L.P. and Hgo.). Extinct at 1 locality in extreme s. Ont. Atlas vol. 3, maps 38-N, 38-SW; vol. 4, maps 33-N, 33-NE, 33-SE; vol. 5, map 43.

**Cércis canadénsis** L. var. **canadénsis** **eastern redbud (typical)‡**

RANGE—N.J. and Pa., w. to s. Mich. and se. Nebr., s. to e. Tex., and e. to c. Fla. Extinct at 1 locality in extreme s. Ont.

**Cércis canadénsis** var. **texénsis** (Wats.) Hopkins **Texas redbud‡†**

*Cercis reniformis* Engelm. ex Scheele in Roemer, Texas 428. 1849; *nom. nud.*
*Cercis occidentalis* var. *texensis* Wats., Bibl. Index No. Am. Bot. 209. 1878.
†*Cercis reniformis* Engelm. ex. Wats., Proc. Am. Acad. Arts Sci. 17: 348. 1882.
*Cercis texensis* (Wats.) Sarg., Gard. and Forest 4: 448. 1891.
*Cercis mexicana* Rose in Britton & Rose, No. Am. Fl. 23: 202. 1930.
*Cercis canadensis* var. *mexicana* (Rose) Hopkins, Rhodora 44: 208. 1942.

‡*Cercis canadensis* var. *texensis* (Wats.) Hopkins, Rhodora 44: 203. 1942.

DERIVATION—Of Texas.

OTHER COMMON NAME—Mexican redbud.

RANGE—S. Okla. (Arbuckle Mts.) s. to e., s., and Trans-Pecos Tex. and extreme se. N. Mex. Also n. Mex. (e. Chih. and Coah., e. to Tamps., and s. to S.L.P. and Hgo.).

**Cércis occidentàlis** Torr. ex Gray **California redbud‡**

‡†*Cercis occidentalis* Torr. ex Gray, Boston J. Nat. Hist. 6: 177. 1850.

DERIVATION—Western.

OTHER COMMON NAMES—Arizona redbud, western redbud.

RANGE—S. Utah w. to s. Nev. (Charleston Mts.) and n. Calif., s. to mts. of s. Calif. and s. Ariz. Atlas vol. 3, map 39.

**Cercocárpus** H.B.K. (Family Rosaceae) **cercocarpus**

‡†*Cercocarpus* H.B.K., Nov. Gen. Sp. 6: 232, pl. 559. 1823.

DERIVATION—From tail and fruit, referring to the long-tail hairy fruit.

OTHER COMMON NAME—mountain-mahogany.

REFERENCES—Dunkle, M. D. A revision of the Channel Islands forms of Cercocarpus. Bull. South. Calif. Acad. Sci. 39: 1-2. 1940.

Little, Elbert L., Jr. Phytologia 4: 307-308. 1953.

Martin, Floyd L. A revision of Cercocarpus. Brittonia 7: 91-111, illus. 1950.

Usage of the common name mountain-mahogany for *Cercocarpus* is not recommended. This genus is unrelated to mahogany, genus *Swietenia* (Family Meliaceae), the source of the valuable cabinetwood. The common name mahogany has been misapplied to unrelated woods with different properties.

NUMBER OF SPECIES: Native shrubs also small trees, 5 (2 also in Mex.); native shrubs, 1; Mex., about 4 additional; total, about 10.

**Cercocárpus betuloìdes** Nutt. **birchleaf cercocarpus‡**

‡†*Cercocarpus betuloides* Nutt. in Torr. & Gray, Fl. No. Am. 1: 427. 1840.

*Cercocarpus betulaefolius* var. *blancheae* Schneid., Mitt. Dtsch. Dendrol. Ges. 14: 127. 1905.

†*Cercocarpus alnifolius* Rydb., No. Am. Fl. 22: 421. 1913.

*Cercocarpus macrourus* Rydb., No. Am. Fl. 22: 420. 1913.

‡*Cercocarpus betuloides* var. *macrourus* (Rydb.) Jeps., Man. Fl. Pl. Calif. 503. 1925.

*Cercocarpus betuloides* var. *multiflorus* Jeps., Man. Fl. Pl. Calif. 503. 1925.

‡*Cercocarpus betuloides* var. *blancheae* (Schneid.) Little, Phytologia 4: 308. 1953.

DERIVATION—Like *Betula*, birch, from the resemblance of the leaves to those of dwarf birches.

OTHER COMMON NAMES—birchleaf mountain-mahogany†, alderleaf cercocarpus‡, alderleaf mountain-mahogany†, hardtack, plume-tree.

RANGE—Sw. Oreg. s. through Calif. to n. B. Cal., Mex., and e. in mts. of Ariz. A var. on Santa Rosa, Santa Cruz, and Santa Catalina Is. off coast of s. Calif. Atlas vol. 3, map 40.

Three varieties (‡) were distinguished in the 1953 checklist. Another is now regarded as a species, *Cercocarpus traskiae* Eastw.

HYBRIDIZES WITH: *Cercocarpus ledifolius*.

**Cercocarpus breviflòrus** Gray **hairy cercocarpus‡**

‡*Cercocarpus breviflorus* Gray, Smithson. Contrib. Knowl. 5(6) (Pl. Wright. Pt. 2): 54. 1853.

*Cercocarpus parvifolius* var. *paucidentatus* Wats., Proc. Am. Acad. Arts Sci. 17: 353. 1882.

*Cercocarpus parvifolius* var. *breviflorus* (Gray) M. E. Jones, Zoë 2: 245. 1891.

†*Cercocarpus paucidentatus* (Wats.) Britton, Trans. N.Y. Acad. Sci. 14: 31. 1894.

*Cercocarpus montanus* Raf. var. *paucidentatus* F. L. Martin, Brittonia 7: 104. 1950.

DERIVATION—Short-flower.

OTHER COMMON NAMES—Wright mountain-mahogany, hairy mountain-mahogany†.

RANGE—Mts. from Trans-Pecos Tex. w. to n. N. Mex. and Ariz. Also in n. Mex. (ne. Son. to Coah., Zac., and N.L.). Atlas vol. 3, map 41.

**Cercocárpus ledifòlius** Nutt. **curlleaf cercocarpus‡**

‡†*Cercocarpus ledifolius* Nutt. in Torr. & Gray, Fl. No. Am. 1: 427. 1840.

*Cercocarpus ledifolius* var. *intercedens* Schneid., Mitt. Dtsch. Dendrol. Ges. 14: 128. 1905.

*Cercocarpus hypoleucus* Rydb., No. Am. Fl. 22: 424. 1913.

*Cercocarpus ledifolius* var. *hypoleucus* (Rydb.) M. E. Peck, Man. Pl. Oreg. 407. 1941; Madroño 6: 134. 1941.

DERIVATION—With leaves like *Ledum*, Labrador-tea, a shrub having similar shaped leathery leaves with margins rolled under and lower surface densely hairy.

OTHER COMMON NAME—curlleaf mountain-mahogany†, desert cercocarpus, desert mountain-mahogany.

RANGE—Mts. from s. and w. Mont. w. to extreme se. Wash. and se. Oreg., s. in mts. to s. Calif., e. to n. Ariz., and n. to w. Colo. and Wyo. Atlas vol. 3, map 42.

HYBRIDIZES WITH: *Cercocarpus betuloides*; *C. montanus*.

**Cercocárpus montànus** Raf. **alderleaf cercocarpus**

*Cercocarpus montanus* Raf., Atl. J. 146. 1832.

DERIVATION—Of mountains.

OTHER COMMON NAME—true mountain-mahogany.

RANGE—Sw. S. Dak. w. to Mont., s. to Nev. and Ariz., e. to n. Mex., and n. to extreme nw. Okla. and Colo.

This widespread shrub is added here as rarely becoming a small tree to 20 ft (6 m) high in Utah.

REFERENCES—Bauer, A. Clyde, A. Perry Plumer, E. Durant McArthur, Richard Stevens, and Bruce C. Giunta. Characteristics and hybridization of important Intermountain shrubs. I. Rose family. USDA For. Serv. Res. Pap. INT-169, 36 p., illus. 1975.

Erdman, Kimball S. Distribution of the native trees of Utah. Brigham Young Univ. Sci. Bull. Biol. Ser. 11(3), 34 pl, illus. 1970.

HYBRIDIZES WITH: *Cercocarpus ledifolius*.

**Cercocárpus tráskiae** Eastw. **Catalina cercocarpus‡**

†*Cercocarpus traskiae* Eastw., Proc. Calif. Acad. Sci. Bot., Ser. 3, 1: 136, pl. 11, fig. 7. 1898.

‡*Cercocarpus betuloides* Raf. [var.] *traskiae* (Eastw.) Dunkle, Bull. South Calif. Acad. Sci. 39: 2. 1940.

*Cercocarpus montanus* Raf. var. *traskiae* (Eastw.) F. L. Martin, Brittonia 7: 103. 1950.

DERIVATION—Named for its discoverer, Luella Blanche Engle Trask (1865-1916), who lived on Santa Catalina Island several years.

OTHER COMMON NAMES—Catalina mountain-mahogany, bigleaf mountain-mahogany†.

RANGE—Santa Catalina Is. of Calif. only. Very rare and very local. Atlas vol. 3, map 43.

**Cèreus** Mill. (Family Cactaceae) **cereus**

‡*Cereus* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

‡†*Cephalocereus* Pfeiff., Allg. Gartenz. 6: 142. 1838 (May 5).

*Pilocereus* Lem., Cact. Gen. Nov. Sp. Hort. Monvill. 6. 1839.

*Cereus* subg. *Lophocereus* Berger, Mo. Bot. Gard. Ann. Rep. 16: 62. 1905.

†*Carnegiea* Britton & Rose, J. N.Y. Bot. Gard. 9: 187, pl. 48-52, fig. 32. 1908.

*Lemaireocereus* Britton & Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 12: 424. 1909.

*Lophocereus* Britton & Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 12: 426. 1909.

*Pilosocereus* Byles & Rowl., Cact. Succ. J. G. B. 19: 66. 1957.

DERIVATION—Perhaps from Latin, wax candle, from the resemblance of the stems of some species.

REFERENCES—Benson, Lyman. The cacti of Arizona. ed. 3, 218 p., illus. 1969. (*Cereus*, p. 107-119, illus.)

Byles, R. S., and G. D. Rowley. What is to become of the Pilocereus? Cact. Succ. J. G. B. 17: 32. 1955.

Byles, R. S., and G. D. Rowley. Pilosocereus Byl. & Rowl. nom. gen. nov. (Cactaceae). Cact. Succ. J. G. B. 19: 66-67, 69. 1957.

Vaupel, F. *Cereus*. *In* Engler, A., and K. Prantl, Nat. Pflanzenfam. ed. 2, 21: 633-642, illus. 1925.

NUMBER OF SPECIES: Native stem succulents, trees, 2, and shrubs about 10; P.R. and V.I., trees, 2, and shrubs, about 10; total including Mex. to S. Am. and in West Indies, shrubs and trees, about 200 or more (50 in narrow sense).

Two species of treelike cacti of s. Ariz. and adjacent n. Mex. may be mentioned here though technically not trees because they lack a single trunk. Instead, from or near the ground they have many erect columnar branches 15-20 ft (4.5-6 m) high and 4-8 in (10-20 cm) in diameter and are unbranched above unless injured. They are: ‡*Cereus schottii* Engelm. (*Lophocereus schotii* (Engelm.) Britton & Rose), senita‡, and ‡*Cereus thurberi* Engelm. (*Lemaireocereus thurberi* (Engelm.) Britton & Rose), organpipe cactus‡ or pitahaya. A few other species, often placed in segregate genera, are shrubs.

***Cèreus giganteus** Engelm. **saguaro‡**

‡*Cereus giganteus* Engelm. in Emory, Notes Mil. Reconn. Ft. Leav. Calif. 158, pl. 1848; "*gigantens*"; "*giganteus*" on pl. opposite p. 72.

†*Carnegiea gigantea* (Engelm.) Britton & Rose, J. N.Y. Bot. Gard. 9: 188, pl. 48-52, fig. 32. 1908.

DERIVATION—Giant.

OTHER COMMON NAMES—giant cactus†, pitahaya.

RANGE—C., s., and sw. Ariz., extreme se. Calif. (local near Colo. R. in Whipple Mts. and near Laguna Dam), and nw. Mex. (Son.). Atlas vol. 3, map 44.

**Cèreus robínii** (Lem.) L. Benson **key tree-cactus**

*Pilocereus robinii* Lem., Illustr. Hort. 11, Misc. 74. 1864.

‡*Cephalocereus keyensis* Britton & Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 12: 416. 1909.

*Cereus keyensis* (Britton & Rose) Vaupel, Monatsschr. Kakteenkunde 23: 23. 1913.

*Cephalocereus robinii* (Lem.) Britton & Rose, Cactaceae 2: 39, fig. 52-54. 1920.

*Pilocereus keyensis* (Britton & Rose) F. M. Knuth in Backeberg & Knuth, Kaktus-ABC 331. 1935.

*Pilosocereus robinii* (Lem.) Byles & Rowl., Cact. Succ. J. G. B. 19: 67. 1957.

*Pilosocereus keyensis* (Britton & Rose) Byles & Rowl., Cact. Succ. J. G. B. 19: 67. 1957.

*Cereus robinii* (Lem.) L. Benson, Cact. Succ. J. Am. 41: 126. 1969.

DERIVATION—Charles Philippe Robin (1821-1885), of France.

OTHER COMMON NAMES—tree-cactus, Key West cephalocereus‡.

RANGE—Very rare on Fla. Keys (Big Pine, and Lower and Upper Matecumbe Keys; extinct on Key West and Key Largo), not on s. Fla. mainland. Also Cuba. Atlas vol. 5, map 179.

REFERENCES—Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 4, 6. 1976.

Long, Robert W., and Olga Lakela. A flora of tropical Florida 630.631. 1971. (Varietal names reversed.)

**Cèreus robínii** (Lem.) L. Benson var. **robínii** **key tree-cactus (typical)**

OTHER COMMON NAME—Key West cephalocereus‡.

RANGE—Very rare on Lower Fla. Keys n. to Big Pine Key (extinct on Key West). Also Cuba.

**Cèreus robínii** var. **deèringii** (Small) L. Benson **Deering tree-cactus**
‡†*Cephalocereus deeringii* Small, J. N.Y. Bot. Gard. 18: 201, pl. 206. 1917.
*Pilocereus deeringii* (Small) F. M. Knuth in Backeberg & Kunth, Kaktus-ABC 330. 1935.
*Pilosocereus deeringii* (Small) Byles & Rowl., Cact. Succ. J. G. B. 19: 66. 1957.
*Cereus robinii* var. *deeringii* (Small) L. Benson, Cactus Succ. J. Am. 41: 126. 1969.

DERIVATION—Charles Deering, who was deeply interested in the botanical exploration of Florida and in the preservation of its hammocks and rare plants.

OTHER COMMON NAMES—Deering cephalocereus‡, tree-cactus.

RANGE—Very rare on Lower and Upper Matecumbe Keys in Upper Fla. Keys (extinct on Key Largo), not on s. Fla. mainland.

**Chamaecýparis** Spach (Family Cupressaceae) **white-cedar**
‡†*Chamaecyparis* Spach, Hist. Nat. Vég. Phanér. 11: 329. 1842.

DERIVATION—From the Greek name of lavender-cotton, or ground-cypress (*Santolina chamaecyparrisus* L.), a dwarf shrubby Old World composite, which resembles a dwarf cypress.

OTHER COMMON NAME—false-cypress.

NUMBER OF SPECIES: Native trees, 3 (including 2 n. to Alaska); Japan and Taiwan, 4; total, 7.

***Chamaecýparis lawsoniàna** (A Murr.) Parl. **Port-Orford-cedar‡†**
*Cupressus lawsoniana* A. Murr., Edinb. New Phil. J., New Ser. 1: 292, pl. 10. 1855.
‡†*Chamaecyparis lawsoniana* (A. Murr.) Parl. in A. DC., Prodr. 16(2): 464. 1868.

DERIVATION—Named in honor of Peter Lawson and Sons, nurserymen of Edinburgh, who introduced this species into cultivation. The seeds were purchased from William Murray, who collected them in California in 1854 and whose brother named the species. Charles Lawson (1794-1873), son of the founder, was a leader in Scottish agriculture.

OTHER COMMON NAMES—Port-Orford white-cedar, Oregon-cedar, Lawson cypress.

RANGE—Narrow zone near Pacific Coast from sw. Oreg. (Lane Co. and Coos Bay) s. to nw. Calif. (Mad R. and local in Mt. Shasta area). Atlas vol. 1, map 10-W.

***Chamaecýparis nootkaténsis** (D. Don) Spach **Alaska-cedar‡†**
*Cupressus nootkatensis* D. Don in Lamb., Descr. Genus Pinus 2: [18]. 1824.
‡†*Chamaecyparis nootkatensis* (D. Don) Spach, Hist. Nat. Vég. Phanér. 11: 333. 1842; "*nutkatensis*."

DERIVATION—Nootka Sound, on Vancouver Island, B. C., where it was discovered.

OTHER COMMON NAMES—Alaska yellow-cedar, yellow-cedar, Nootka cypress, Sitka cypress, yellow cypress.

RANGE—Pacific Coast region from s. and se. Alaska se. in w. B.C. and in mts. of w. Wash. and w. Oreg. Also local in se. B.C., ne. Oreg. (Blue Mts.), se. Oreg., and extreme nw. Calif. (Siskiyou Mts.). Atlas vol. 1, maps 12-W, 12-N; vol. 2, map 12.

***Chamaecýparis thyoìdes** (L.) B.S.P. **Atlantic white-cedar‡**
*Cupressus thyoides* L., Sp. Pl. 1003. 1753.
‡†*Chamaecyparis thyoides* (L.) B.S.P., Prel. Cat. Anth. Pter. N.Y. 71. 1888.
*Chamaecyparis henryae* Li, Bull. Morris Arbor. 13: 43, fig. 34-38. 1962.
*Chamaecyparis thyoides* var. *henryae* (Li) Little, Madroño 18: 165. 1966.

DERIVATION—Like *Thuja*, a related genus containing northern white-cedar.

OTHER COMMON NAMES—southern white-cedar†, white-cedar, swamp-cedar.

RANGE—Coastal Plain from c. Maine s. to n. Fla. and w. to s. Miss. Atlas vol. 1, map 11-E; vol. 5, map 1.

**Chilópsis** D. Don (Family Bignoniaceae) **desert-willow**

‡†*Chilopsis* D. Don, Edinb. Phil. J. 9: 261. 1823.

DERIVATION—With the appearance of a lip, referring to the corolla.

NUMBER OF SPECIES: 1.

**Chilópsis linearis** (Cav.) Sweet **desert-willow**‡†

*Bignonia linearis* Cav., Icon. Descr. Pl. 3: 35, pl. 269. 1794.
*Chilopsis saligna* D. Don, Edinb. Phil. J. 9: 262. 1823.
‡†*Chilopsis linearis* (Cav.) Sweet. Hort. Brit. 283. 1827.
*Chilopsis glutinosa* Engelm. in Wisliz., Mem. Tour North. Mex. 94. 1848; *nom. provisor.*
*Chilopsis linearis* var. *arcuata* Fosberg, Madroño 3: 366. 1936.
*Chilopsis linearis* var. *glutinosa* (Engelm.) Fosberg, Madroño 3: 365. 1936.

DERIVATION—Linear, referring to the very narrow leaves.

OTHER COMMON NAMES—desert-catalpa, mimbre (Spanish).

RANGE—Sw. and Trans-Pecos Tex. and N. Mex., w. to extreme sw. Utah, s. Nev., and s. Calif. Also in n. Mex. (n. B. Cal. and n. Son., se. to Dgo., Zac., S.L.P., and Tamps.). Atlas vol. 3, map 49.

REFERENCE—Fosberg, F. Raymond. Varieties of the desert willow, Chilopsis linearis. Madroño 3: 363-366. 1936.

**Chionánthus** L. (Family Oleaceae) **fringetree**

‡†*Chionanthus* L., Sp. Pl. 8. 1753; Gen. Pl. ed. 5, 9. 1754.

DERIVATION—From Greek, snow and flower, in reference to the white flower clusters.

REFERENCES—Hardin, James W. Sida 5: 280-281. 1974.

Stearn, William T. Union of Chionanthus and Linociera. Ann. Mo. Bot. Gard. 63: 355-357. 1976.

NUMBER OF SPECIES: Native trees, 1; native shrubs (c. Fla.), 1; east Asia (China, Korea, and Japan), 1; total, 3. The related genus *Linociera* Sw. ex Schreb., if united, would add 80-100 species, mostly tropical and subtropical, incl. 5 in P.R. and V.I.

**Chionánthus virgínicus** L. **fringetree**‡†

‡†*Chionanthus virginicus* L., Sp. Pl. 8. 1753; "*virginica*."
?*Chionanthus henryae* Li, Morris Arbor. Bull. 17: 63. 1966.

DERIVATION—Of Virginia.

OTHER COMMON NAME—old-mans-beard.

RANGE—S. N.J. and s. Pa., w. to s. Ohio, e. Ky., and s. Mo., s. to se. Okla. and e. Tex., and e. to c. Fla. Atlas vol. 4, map 34; vol. 5, map 44.

**Chrysobálanus** L. (Family Rosaceae; Chrysobalanceae) **cocoplum**

‡†*Chrysobalanus* L., Sp. Pl. 513. 1753; Gen. Pl. ed. 5, 229. 1754.

DERIVATION—From Greek, golden acorn, apparently in allusion to the variation of the type species (*C. icaco*) with yellow fruit.

REFERENCE—Prance, Ghillean T. Chrysobalanaceae. Fl. Neotropica Monogr. 9, 410 p., illus. 1972.

NUMBER OF SPECIES: Native trees (s. Fla., also P.R. and V.I.), 1; native shrubs, 2; total, tropical Am. and Africa, about 10.

**Chrysobálanus icàco** L. **cocoplum**†

‡†*Chrysobalanus icaco* L., Sp. Pl. 513. 1753.
*Chrysobalanus pellocarpus* G. F. W. Mey., Prin. Fl. Esseq. 193. 1818.
‡†*Chrysobalanus icaco* β *pellocarpus* (G. F. W. Mey.) DC., Prodr. 2: 525. 1825.
*Chrysobalanus interior* Small, Man. Southeast. Fl. 645. 1933.

DERIVATION—The native or Spanish name of the fruit.

OTHER COMMON NAMES—icaco cocoplum‡, smallfruit cocoplum‡, Everglades cocoplum, cocoa-plum, icaco.

RANGE—S. Fla. mostly along coasts (n. on e. coast to Cape Canaveral) incl. Fla. Keys. From Bahamas through West Indies incl. P.R. and V.I. Also from Mex. to Panama and s. on Atlantic Coast from Colombia to s. Brazil. Also coasts of w. Africa. Atlas vol. 5, map 180.

*Chrysolepis*, see **Castanopsis**

**Chrysophýllum** L. (Family Sapotaceae) **goldenleaf**
‡†*Chrysophyllum* L., Sp. Pl. 192. 1753; Gen. Pl. ed. 5, 888. 1754.
*Cynodendron* Baehne, Arch. Sci. Genève 17: 78. 1964.

DERIVATION—Golden-leaf, from the color of the hairs on the lower leaf surface.

OTHER COMMON NAME—star-apple.

REFERENCE—Cronquist, Arthur. Studies in the Sapotaceae—I. The North American species of Chrysophyllum. Bull. Torrey Bot. Club 72: 192-205. 1945.

NUMBER OF SPECIES: Native trees (s. Fla., also P.R.), 1; P.R. and V.I., 3 additional; total, tropical and subtropical, 100-150.

**Chrysophýllum olivifórme** L. **satinleaf**‡†
‡†*Chrysophyllum oliviforme* L., Syst. Nat. ed. 10, 937. 1759: "*olivifor.*"
*Chrysophyllum mexicanum* T. S. Brandeg. in Standl., Contrib. U.S. Natl. Herb. 23: 114. 1924
*Cynodendron oliviforme* (L.) Baehne, Arch. Sci. Genève 17: 78. 1964.

DERIVATION—Olive-form, referring to the fruit.

RANGE—S. Fla. incl. Fla. Keys. Also Bahamas and Greater Antilles to P.R. S. Mex. and Belize to Nicaragua. Atlas vol. 5, map 181.

CINNAMÒMUM Schaeffer (Family Lauraceae) CINNAMON
*Camphora* Fabricius, Enum. Meth. Pl. Helmst. 218. 1759; *nom. rejic.*
‡†*Cinnamomum* Schaeffer, Isag. Bot. Exped. 74. 1759; *nom. cons.*

DERIVATION—The ancient name, coming into Latin through Hebrew and Greek.

CINNAMÒMUM CAMPHÒRA (L.) J. S. Presl CAMPHOR-TREE‡
*Laurus camphora* L., Sp. Pl. 369. 1753.
‡†*Cinnamomum camphora* (L.) J. S. Presl in Berchtold & J. S. Presl, Priroz. Rostl. 2: 36, 47-56, pl. 8. 1825.

DERIVATION—Camphor, the ancient name.

RANGE—Escaped from cultivation from Fla. to La. and s. Tex. and recorded as naturalized in Fla. and s. Tex. Planted also in Calif., Hawaii, P.R., and V.I. Native of tropical Asia from e. China to Vietnam, Taiwan, and Japan and widely planted in tropical and subtropical regions.

**Citharéxylum** L. (Family Verbenaceae) **fiddlewood**
‡†*Citharexylum* L., Sp. Pl. 625. 1753; "*Citharexylum*"; Gen. Pl. ed. 5, 273. 1754; "*Citharexylon.*"

DERIVATION—A translation of the English West Indian name fiddlewood and the French equivalent, referring to the use of the very hard, heavy, strong wood for musical instruments. Other pronunciation—*Citharexỳlum.*

NUMBER OF SPECIES: Native trees, 2 (s. Fla., 1;s. Tex., 1); native shrubs, 2 (s. Tex.); P.R. and V.I., 3 (including 1 also in s. Fla.); total, tropical Am., from extreme s. U.S. and Mex. to Argentina and in West Indies and Bermuda, about 100.

**Citharéxylum berlandiéri** Robins. **Berlandier fiddlewood**
*Citharexylum berlandieri* Robins., Proc. Am. Acad. Sci. 20: 174. 1891.

DERIVATION—Jean Louis Berlandier (1805-51), native of Belgium, who resided in Mexico and made large plant collections in northeastern Mexico and Texas.

OTHER COMMON NAMES—negrito, orcajuela (Spanish).

RANGE—Extreme s. Tex. and ne. Mex. (Tamps. to Hgo. and Mex.). Atlas. vol. 3, maps 45-N, 45-SW.

Added here as a shrub or tree to 20 ft (6 m) tall, according to Harold N. Moldenke (in Lundell, Fl. Tex. 3: 72-74. 1942) and Correll and Johnston (Man. Vasc. Pl. Tex. 1337. 1970). Mentioned in a note in 1953 checklist.

**Citharéxylum fruticòsum** L. **Florida fiddlewood‡**

‡†*Citharexylum fruticosum* L., Syst. Nat. ed. 10: 1115. 1759, "*fruticos.*"

DERIVATION—Shrubby.

OTHER COMMON NAME—fiddlewood†.

RANGE—Local in s. Fla. incl. Fla. Keys, n. on e. coast to Cape Canaveral. From Bahamas through West Indies incl. P.R. and V.I. Also Venezuela to Surinam. Atlas vol. 5, map 182.

*Citrus*, see also **Poncirus**

CÍTRUS L. (Family Rutaceae) CITRUS

*Citrus* L., Sp. Pl. 782. 1753; Gen. Pl. ed. 5, 341. 1754.

DERIVATION—From Greek *citron*, originally applied to the wood of African Sandarac tree. Pliny the Elder (23-79 A. D.), Roman naturalist, also used *citrus* for the citron tree (*Citrus medica* L.).

REFERENCES—Brizicky, George K. The genera of Rutaceae in the southeastern United States. J. Arnold Arbor. 43: 1–22, illus. 1962.

Swingle, Walter T. The botany of Citrus and its wild relatives of the orange subfamily (family Rutaceae, subfamily Aurantioideae). P. 129-474, illus. *In* Webber, Herbert John, and Batchelor, Leon Dexter, eds. The citrus industry. V.1, 1028 p., illus. Univ. Calif. Press. 1943 [1944].

Three of the 5 species cited in the 1927 and 1953 checklists as naturalized are retained here. Small (Fl. Southeast. U.S. 678. 1903; Man. Southeast. Fl. 760-761. 1933) recorded all as spontaneous or naturalized in s. Fla., having been introduced at an early date by the Spanish. Long and Lakela (Fl. Trop. Fla. 510-152. 1971) listed the 5 as naturalized and 2 others doubtfully so. The last, mentioned in a note in the 1953 checklist, are *Citrus paradisi* Macf., grapefruit, and *Citrus reticulata* Blanco, mandarin orange or tangerine. There are no records of these species growing as wild in other States.

‡†*Cítrus límon* (L.) Burm. f., lemon‡† (rough lemon), and ‡†*Cítrus médica* L., citron‡† (usually shrubby), are omitted here as apparently not naturalized in Fla.

CÍTRUS AURANTIFÓLIA (Christmann in L.) Swingle LIME‡†

*Limonia aurantifolia* [Christmann in] L., Pfanzensyst. nach 13 Lat. Ausg. Holl. Houttuyn. 1: 618. 1777.

‡†*Citrus aurantifolia* (Christmann) Swingle, J. Wash. Acad. Sci. 3: 365. 1913.

DERIVATION—Orange-leaf.

OTHER COMMON NAME—key lime.

RANGE—Persistent and naturalized in s. Fla. incl. Fla. Keys. Widely cultivated in tropical and subtropical regions. Native of East Indian Archipelago.

CÍTRUS AURÁNTIUM L. SOUR ORANGE‡

‡†*Citrus aurantium* L., Sp. Pl. 782. 1753.

*Citrus vulgaris* Risso, Paris Mus. Hist. Nat. Ann. 20: 190. 1813.

DERIVATION—Orange.

OTHER COMMON NAMES—Seville orange†, bittersweet orange.

RANGE—Naturalized in Fla. and Ga. Widely cultivated and naturalized in tropical and subtropical regions. Native of se. Asia.

**Cítrus sinénsis** Osbeck — ORANGE†

*Citrus aurantium* β *sinensis* L., Sp. Pl. 783. 1753.
‡†*Citrus sinensis* Osbeck, Reise Ostind. China 250. 1765.

DERIVATION—Of China.

OTHER COMMON NAME—sweet orange‡.

RANGE—Persistent and naturalized in Fla. incl. Fla. Keys. Widely cultivated in tropical and subtropical regions. Probably native of se. Asia, such as s. China and Vietnam, but no longer known as truly wild.

**Cladrástis** Raf. (Family Leguminosae) — **yellowwood**

‡†*Cladrastis* Raf., Cincinnati Lit. Gaz. 1: 60. 1824.

DERIVATION—From Greek, branch and brittle.

NUMBER OF SPECIES: Native trees, 1; total, 4, including 2 in China and 1 in Japan.

**Cladrástis kentúkea** (Dum.-Cours.) Rudd — **yellowwood‡†**

*Sophora kentukea* Dum.-Cours., Bot. Cult. ed. 2, 6: 56 (and errata). 1811.
*Virgilia lutea* Michx. f., Hist. Arbr. For. Am. Sept 3: 266, pl. 3. 1813.
‡†*Cladrastis lutea* (Michx. f.) K. Koch, Dendrol. 1: 6. 1869.
*Cladrastis kentukea* (Dum.-Cours.) Rudd, Phytologia 21: 327. 1971; "*kentuckea.*"

DERIVATION—Kentucky.

OTHER COMMON NAMES—virgilia, American yellowwood.

RANGE—Rare and local in extreme se. Va., Ky., s. Ind., s. Ill., sw. Mo., and e. Okla., and e. in Ark., Tenn., Miss., Ala., extreme n. Ga., and w. N.C. Atlas vol. 4, map 35.

REFERENCE—Rudd, Velva E. Studies in the Sophoreae (Leguminosae) I. Phytologia 21: 327. 1971.

This distinct species has been universally known as *Cladrastis lutea*. However, a slightly older, obscure specific epithet was the basis of a new combination, *C. kentukea*. The earlier name was cited as a doubtful synonym by Sargent (Sylva No. Am. 14: 100. 1902).

**Cléthra** L. (Family Clethraceae) — **clethra**

*Clethra* L., Sp. Pl. 396. 1753; Gen. Pl. ed. 5. 188. 1754.

DERIVATION—From the classical Greek name of alder, later applied to this genus perhaps because of the resemblance of the foliage. Other pronunciation—*Clèthra.*

OTHER COMMON NAMES—sweet pepperbush, white-alder.

This family of 1 genus is sometimes included in Ericaceae.

NUMBER OF SPECIES: Native shrubs, 3 (incl. 1 also small tree); total, N. to S. Am., e. Asia, and Madeira, about 100.

**Cléthra acuminàta** Michx. — **cinnamon clethra‡**

‡*Clethra acuminata* Michx., Fl. Bor.-Am. 1: 260. 1803.

DERIVATION—Acuminate, or taper-pointed, referring to the leaves.

OTHER COMMON NAMES—sweet pepperbush, white-alder, summer-sweet.

RANGE—Mts. of W. Va., w. Va., e. Ky., e. Tenn., w. N.C., extreme nw. S.C., and extreme n. Ga. Atlas vol. 4, map 36.

**Cliftònia** Banks ex Gaertn. f. (Family Cyrillaceae) — **buckwheat-tree**

‡†*Cliftonia* Banks ex Gaertn. f., Suppl. Fruct. Sem. Pl. 3: 246, pl. 225, fig. 5. 1807.

DERIVATION—Named in 1807 in memory of William Clifton, chief justice of West Florida, who collected specimens of this species about 1764.

REFERENCE—See **Cyrilla**

NUMBER OF SPECIES: 1.

**Cliftònia monophýlla** (Lam.) Britton ex Sarg. — **buckwheat-tree‡**

*Ptelea monophylla* Lam., Tabl. Encycl. Méth. Bot. 1: 336. 1792.
*Cliftonia nitida* Gaertn. f., Suppl. Fruct. Sem. Pl. 3: 247, pl. 225, fig. 5. 1807.
‡†*Cliftonia monophylla* (Lam.) Britton ex Sarg., Silva No. Am. 2: 7, pl. 52. 1891.

DERIVATION—Oneleaf, or simple leaf; this species originally placed in *Ptelea* L., hoptree, a genus with trifoliolate leaves.

OTHER COMMON NAMES—titi†, black titi, "ironwood."

RANGE—Coastal Plain from se. Ga. and n. Fla., w. to se. La. Atlas vol. 4, map 37; vol. 5, map 45.

**Clùsia** L. (Family Guttiferae) **clusia**

‡*Clusia* L., Sp. Pl. 509. 1753; Gen. Pl. ed. 5, 226. 1754.

DERIVATION—Carolus Clusius (Charles de l'Écluse; 1526-1609), French physician, botanist, and zoologist, who made drawings of West Indian plants and animals.

REFERENCES—Howard, Richard A. Some Guttiferae of the Lesser Antilles. J. Arnold Arbor. 43: 389-399, illus. 1962.

Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 5-8. 1976.

Wood, Carroll E., Jr., and Preston Adams. J. Arnold Arbor. 57: 74-81, illus. 1976.

NUMBER OF SPECIES: Native trees (Fla. Keys), 1, also in P.R. and V.I.; P.R., 2 additional, also 1 woody vine; total, trees and woody vines, tropical Am., about 200.

‡*Clùsia flàva* Jacq. (Enum. Pl. Carib. 34. 1760), mentioned in a note in the 1953 checklist, is excluded as based upon misidentification of incomplete material of the following species (Howard 1962). Recorded by Nuttall (No. Am. Sylva 2: 111-113, pl. 77. 1846) from a collection at Key West, Fla., by John Loomis Blodgett in 1839 or 1840, but not found by others (Small, Man. Southeast. Fl. 865. 1933). The range is Jamaica, Grand Cayman, and Belize.

**Clùsia ròsea** Jacq. **Florida clusia**

‡*Clusia rosea* Jacq., Enum. Pl. Carib. 34. 1760; "*Glusia*" corr. in index to "*Clusia*."

DERIVATION—Rose, from the rose-tinted whitish flowers.

OTHER COMMON NAMES—balsam-apple, copey clusia‡.

RANGE—Very rare and local on Lower Fla. Keys, not on s. Fla. mainland, possibly introduced and persistent. Recorded partly near old habitations from these keys: Sugarloaf, Cudjoe, Little Torch, Bahia Honda, No Name, and Big Pine (possibly extinct). From Bahamas through West Indies incl. P.R. and V.I. The same or a closely related species also from s. Mex. (Chis.) to Colombia, Venezuela, and French Guiana. Atlas vol. 5, map 183.

This species was discovered by Blodgett in 1839 or 1840 on the Lower Fla. Keys and then lost. It was rediscovered at Bg Pine Key in 1938 by Roy O. Woodbury and John Waldeck.

**Coccolòba** P. Br. (Family Polygonaceae) **seagrape**

†*Coccolobis* P. Br., Civ. Nat. Hist. Jam. 209, pl. 14, fig. 3. 1756; *nom. rejic.*

‡*Coccoloba* P. Br. corr. L., Syst. Nat. ed. 10, 997, 1007, 1367. 1759; *nom. cons.*

DERIVATION—Lobed berry, referring to the lobed calyx around grapelike fruits. Other pronunciation—*Coccóloba*.

REFERENCE—Howard, Richard A. Studies in the genus Coccoloba, IV. The species from Puerto Rico and the Virgin Islands and from the Bahama Islands. J. Arnold Arbor. 38: 211-242. 1957.

NUMBER OF SPECIES: Native trees (s. Fla., also P.R. and V.I.), 2; P.R., additional, 10 (including 4 also in V.I.); total, tropical and subtropical Am., 100-150.

**Coccolòba diversifòlia** Jacq. **pigeon-plum†**

‡*Coccoloba diversifolia* Jacq., Enum. Pl. Carib. 19. 1760; Select. Stirp. Am. 114, pl. 76. 1763.

DERIVATION—Variable-leaf.

OTHER COMMON NAMES—doveplum‡, tie-tongue.

RANGE—S. Fla. mostly near coasts, incl. Fla. Keys, n. on e. coast to Cape Canaveral. From Bahamas through West Indies incl. P.R. and St. Croix. Atlas vol. 5, map 184.

REFERENCE—Dayton, William A. Rhodora 54: 77-79. 1952.

HYBRIDIZES WITH: *Coccoloba uvifera*.

Formerly referred to †*Coccoloba laurifolia* Jacq., a species described from Venezuela.

**Coccolòba uvífera** (L.) L. **seagrape‡†**

*Polygonum uvifera* L., Sp. Pl. 365. 1753.

‡†*Coccoloba uvifera* (L.) L., Syst. Nat. ed. 10, 1007. 1759.

DERIVATION—Bearing grapes, from the resemblance of the fruit clusters to grapes.

OTHER COMMON NAME—grape-tree.

RANGE—Shores of c. and s. Fla. incl. Fla. Keys. Also Bermuda and from Bahamas through West Indies incl. P.R. and V.I. Atlantic Coast from n. Mex. to Colombia, Venezuela, and Guianas. Introduced in Hawaii. Atlas vol. 5, map 185.

HYBRIDIZES WITH: *Coccoloba diversifolia*.

**Coccothrìnax** Sarg. (Family Palmae) **silverpalm**

‡†*Cocothrinax* Sarg., Bot. Gaz. 27: 87. 1899.

DERIVATION—From berry and *Thrinax*, thatchpalm, in reference to the berrylike fruit and relationship with that genus.

OTHER COMMON NAME—seamberry-palm.

REFERENCE—Bailey, L. H. Coccothrinax of Florida. Gentes Herbarum 4: 220-225, illus. 1939.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R. and V.I., 1; total, tropical Am. mostly West Indies, about 20.

**Coccothrìnax argentàta** (Jacq.) Bailey **Florida silverpalm‡**

*Palma argentata* Jacq., Fragm. Bot. 38, pl. 43, fig. 1. 1803.

†*Coccothrinax jucunda* Sarg., Bot. Gaz. 27: 89. 1899.

‡*Coccothrinax argentata* (Jacq.) Bailey, Gentes Herbarum 4: 223, fig. 140-143. 1939.

DERIVATION—Silvery, from the silvery white lower leaf surfaces.

OTHER COMMON NAMES—Biscayne-palm, brittle thatch, thatchpalm†.

RANGE—S. Fla. n. on e. coast to se. Palm Beach Co. and incl. Fla. Keys w. to Marquesas Key. Also Bahamas and Cuba. Atlas vol. 5, map 186.

Còcos L. (Family Palmae) COCONUT

‡†*Cocos* L., Sp. Pl. 1188. 1753; Gen. Pl. ed. 5, 495. 1754.

DERIVATION—From Portuguese *coco*, commonly used for coconut in European literature. The name refers to the resemblance to an ape's face, according to Furtado.

REFERENCES—Furtado, C. X. On the etymology of the word cocos. Principes 8: 107-112. 1964.

Furtado, C. X. The origin of the word "Cocos." Gard. Bull. Singapore 20: 295-312. 1964.

Còcos nucífera L. COCONUT‡†

‡†*Cocos nucifera* L., Sp. Pl. 1188. 1753.

DERIVATION—Nut-bearing.

RANGE—Shores of s. Fla. incl. Fla. Keys, growing naturally and in cultivation. Also, Hawaii, P.R., and V.I. Native land unknown but apparrently in Malayan or Indo-Pacific region. Now thoroughly naturalized on tropical shores of the world. Reports that this species was native or pre-Columbian in the New World, such as on the Pacific Coast of sw. Costa Rica and nw. Panama, have been rejected.

REFERENCE—Allen, Paul H. Oviedo on "Cocos." Principes 9: 62-66. 1965.

Many trees in s. Fla. are being killed by a lethal yellowing disease caused by a mycoplasm. A Malay dwarf variety that is resistant or tolerant has been introduced.

**Colubrina** Rich. ex Brongn. (Family Rhamnaceae) **colubrina**

‡†*Colubrina* Rich. ex Brongn., Mem. Fam. Rhamn. 61. 1826; Ann. Sci. Nat. 10: 368, pl. 15, fig. 3. 1827; *(nom. cons.)*.

DERIVATION—Apparently from *bois couleuvre*, snakewood or serpent tree, the French name of the type species, translated into Latin as *Arbor colubrina* (Brizicky 1964).

REFERENCES—Brizicky, George K. J. Arnold Arbor. 45: 455-457. 1964.

Johnston, Marshall C. Revision of Colubrina (Rhamnaceae). Brittonia 23: 2-53, illus. 1971.

NUMBER OF SPECIES: Native trees (s. Fla.), 3, including 2 also in P.R. and V.I.; native shrubs (Tex.), 3; naturalized shrubs (s. Fla.), 1, also native in Hawaii and widespread; Hawaii, native trees, 1; P.R., additional native shrubs and trees, 2; New World tropics, 21; total, tropics, about 30.

**Colubrina arborescens** (Mill.) Sarg. **coffee colubrina‡**

*Rhamnus colubrinus* Jacq., Enum. Pl. Carib. 16. 1760.
*Ceanothus arborescens* Mill., Gard. Dict. ed. 8, *Ceanothus* No. 3. 1768.
*Colubrina ferruginosa* Brongn., Ann. Sci. Nat. 10: 369. pl. 15, fig. 3. 1827.
‡†*Colubrina arborescens* (Mill.) Sarg., Trees and Shrubs 2: 167, pl. 168. 1911.

DERIVATION—Becoming a tree; originally placed in a genus of shrubs.

OTHER COMMON NAMES—nakedwood†, wild-coffee.

RANGE—S. Fla. incl. Fla. Keys (Dade and Monroe Cos.). Also Bahamas, Greater Antilles incl. P.R. and V.I., to Antigua and in Barbados. Also s. Mex., Guatemala, Honduras, and Nicaragua. Atlas vol. 5, map 187.

**Colubrina cubensis** (Jacq.) Brongn. **Cuba colubrina‡**

*Rhamnus cubensis* Jacq., Enum. Pl. Carib. 16. 1760.
‡†*Colubrina cubensis* (Jacq.) Brongn., Mem. Fam. Rhamn. 62. 1826; Ann. Sci. Nat. 10: 369. 1827.
*Colubrina cubensis* var. *floridana* M. C. Johnst., Wrightia 3: 96. 1963.

DERIVATION—Of Cuba.

OTHER COMMON NAME—nakedwood†.

RANGE—Local in hammocks of s. Fla. (s. Dade Co., incl. Long Pine Key in Everglades National Park). Also Bahamas, Cuba, and Hispaniola. Atlas vol. 5, map 188.

Plants of s. Fla. and Andros of the Bahamas have been designated as var. *floridana* M. C. Johnst. The typical var. and another var. are found in Cuba.

**Colubrina elliptica** (Sw.) Briz. & Stern **soldierwood‡†**

*Rhamnus ellipticus* Sw., Nov. Gen. Sp. Pl. Ind. Occ. 50. 1788 (Sept. or Oct.).
*Ceanothus reclinatus* L'Hér., Sert. Angl. 6. 1789 (early Jan.).
‡†*Colubrina reclinata* (L'Hér.) Brongn., Mem. Fam. Rhamn. 62. 1826; Ann. Sci. Nat. 10: 369. 1827.
*Colubrina elliptica* (Sw.) Briz. & Stern, Trop. Woods 109: 95. 1958.

DERIVATION—Elliptic, describing the leaves.

OTHER COMMON NAME—nakedwood.

RANGE—Upper Fla. Keys (Key Largo and Upper Matecumbe Key), absent from Fla. mainland. From Bahamas through West Indies incl. P.R. and V.I. Also s. Mex. (Ver. and Yuc.) and Guatemala. Atlas vol. 5, map 189.

**Condàlia** Cav. (Family Rhamnaceae) **condalia**

‡†*Condalia* Cav., An. Hist. Nat. [Madrid] 1: 39, pl. 4. 1799; *nom. cons.* Non *Condalia* Ruiz & Pav., Fl. Peruv. Chil. Prodr. 11. pl. 2. 1794.

*Condalia* subgen. *Condaliopsis* Weberb. in Engler & Prantl, Nat. Pflanzenfam. 3(5): 404. 1895.

*Condaliopsis* (Weberb.) Suessenguth in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 20d: 134. 1953.

DERIVATION—Antonio Condal, Spanish physician who accompanied the Swedish botanist Peter Loefling on a scientific trip to the Orinoco in Venezuela in 1754.

REFERENCE—Johnston, Marshall C. Revision of Condalia including Microrhamnus (Rhamnaceae). Brittonia 14: 332-368. 1962.

NUMBER OF SPECIES: Native shrubs, including 2 sometimes small trees, 5 (also in Mex.); total, warm temperate and tropical Am., 18.

**Condàlia globòsa** I. M. Johnst. **bitter condalia‡**

‡*Condalia globosa* I. M. Johnst., Proc. Calif. Acad. Sci., Ser. 4, 12: 1086. 1924.

*Condalia globosa* var. *pubescens* I. M. Johnst., Proc. Calif. Acad. Sci., Ser. 4, 12: 1087. 1924.

DERIVATION—Globose, referring to the rounded fruits.

OTHER COMMON NAMES—spiny abrojo, crucillo.

RANGE—Desert mts. of sw. Ariz. and se. Calif. Also in nw. Mex. (B. Cal., B. Cal. Sur, Son., and Sin.).

Two vars. have been distinguished, the typical var. confined to nw. Mex. and var. *pubescens* I. M. Johnst. of sw. Ariz., s. Calif. and nw. Mex. Atlas vol. 3, map 46.

**Condàlia hoókeri** M. C. Johnst. **bluewood‡†**

‡†*Condalia obovata* Hook., Icon. Pl. 3: pl. 287. 1840. Non *Condalia obovata* Ruiz & Pav., Fl. Peruv. Chil. 1: 54. 1798 (Rubiaceae).

*Condalia hookeri* M. C. Johnst., Brittonia 14: 362. 1962.

DERIVATION—William Jackson Hooker (1785-1865), British botanist, who first named and illustrated this species.

OTHER COMMON NAMES—capul negro, brasil (Spanish).

RANGE—C. and s. Tex. and ne. Mex. (ne. Coah. to Tamps. and S. L. P.). Atlas vol. 3, map 47.

Two vars. have been distinguished, the typical widespread var. and a shrub (var. *edwardsiana* (Cory) M. C. Johnst.), very rare and local in c. Tex. (Edwards Co.).

A new name was needed because *Condalia obovata* was given earlier to an unrelated species in a different family. In the Checklist, this apparently is the only double homonym; that is, both generic name and specific epithet were used before.

**Conocárpus** L. (Family Combretaceae) **button-mangrove**

‡†*Conocarpus* L., Sp. Pl. 176. 1753; Gen. Pl. ed. 5, 81. 1754.

DERIVATION—Cone fruit, in reference to the conelike rounded fruits.

NUMBER OF SPECIES: Native trees (s. Fla., also P.R. and V.I.), 1; total, shores of tropical Am. and Africa, 2.

**Conocárpus eréctus** L. **button-mangrove‡**

‡†*Conocarpus erectus* L., Sp. Pl. 176. 1753; "*erecta*."

*Conocarpus erectus* γ *sericeus* Forst. ex DC., Prodr. 3: 16. 1828; "*erecta* γ *sericea*."

*Conocarpus sericeus* (DC.) G. Don, Gen. Syst. Gard. Bot. 2: 662. 1832; "*sericea*."

DERIVATION—Erect, or upright.

OTHER COMMON NAMES—buttonwood†, silver buttonwood.

RANGE—Shores of c. and s. Fla. incl. Fla. Keys, w. to Marquesas Key and Dry Tortugas. Also widely distributed on coasts of tropical Am. from Bermuda and Bahamas through West Indies incl. P.R. and V.I. From n. Mex. (Tamps., Sin., and B. Cal. Sur) s. on Atlantic Coast to Brazil and on Pacific Coast to Ecuador incl. Galápagos Is. Also on coasts of w. Africa. Atlas vol. 5, map 190.

**Córdia** L. (Family Boraginaceae) **cordia**

‡†*Cordia* L., Sp. Pl. 190. 1753; Gen. Pl. ed. 5, 87. 1754.
*Sebesten* Adans., Fam. Pl. 2: 177, 603. 1763.

DERIVATION—In commemoration of Euricius Cordus (1486-1535) and his son Valerius Cordus (1515-1544), German physicians and botanists.

NUMBER OF SPECIES: Native trees (s. Tex.), 1; trees apparently naturalized (s. Fla. and P.R.), 1; native shrubs (s. Fla. and s. Tex.), 2; P.R., 7 additional, including 6 also in V.I.; total, mostly tropical and New World, about 250.

**Córdia boissiéri** A. DC. **anacahuite**

‡†*Cordia boissieri* A. DC. in DC., Prodr. 9: 478. 1845.

DERIVATION—Pierre-Edmond Boissier (1810-1875), Swiss botanist.

OTHER COMMON NAMES—anacahuita‡†, wild-olive, Mexican-olive.

RANGE—Extreme s. Tex. and ne. Mex. (Tamps., N.L., and se. Coah., s. to S.L.P., Hgo., and n. Ver.). Atlas vol. 3, map 48-N, 48-SW.

CÓRDIA SEBESTÈNA L. GEIGER-TREE‡†

‡†*Cordia sebestena* L., Sp. Pl. 190. 1753.
*Sebesten sebestena* (L.) Britton ex Small, Fl. Miami 158, 200. 1913.

DERIVATION—From the Arabic name *sibistan* for the congeneric sebesten-plum, *Cordia myxa* L., of southern Asia, East Indies, and Australia. The English common name honors John Geiger, ship pilot of the early 19th century, who first planted this tree at Key West. According to legend, the name was given by John James Audubon.

RANGE—S. Fla. incl. Fla. Keys (s. Dade and s. Monroe Cos.), apparently introduced and naturalized. From Bahamas through West Indies incl. P.R. and V.I. Also from s. Mex. (Yuc.) to Colombia and Venezuela, the range extended through cultivation. Atlas vol. 5, map 191.

**Córnus** L. (Family Cornaceae) **dogwood**

‡†*Cornus* L., Sp. Pl. 117. 1753; Gen. Pl. ed. 5, 54. 1754.
*Cornus* sect. *Thelycrania* Dumort., Florula Belg. 83. 1827.
*Cornus* sect. *Cynoxylon* Raf., Med. Fl. 1: 132. 1828.
*Cynoxylon* Raf., Alsogr. Am. 59. 1838; as subg. of g. (?).
*Swida* Opiz in Bercht. & Opiz, Oekon-tech. Fl. Böhmens 2: 174. 1838; "*Swjda.*"
*Benthamidia* Spach, Hist. Nat. Vég. Phanér. 8: 106. 1839.
*Thelycrania* (Dumort.) Fourreau, Ann. Soc. Linn. Lyon, n. sér., 16: 394. 1868.
*Cynoxylon* Raf. ex Small, Fl. Southeast. U.S. 854. 1903.

DERIVATION—Latin name of the type species *Cornus mas* L., Cornelian-cherry of Europe, from the word for horn, referring to the hardness of the wood.

OTHER COMMON NAMES—cornel, bunchberry.

REFERENCES—Ferguson, I. K. Notes on the nomenclature of Cornus. J. Arnold Arbor. 47: 100-105. 1966.

Ferguson, I. K. The Cornaceae in the southeastern United States. J. Arnold Arbor. 47: 106–116, illus. 1966.

Hara, Hiroshi. The nomenclature of the flowering dogwood and its allies. J. Arnold Arbor. 29: 111-115. 1948.

Pojarkova, A. De systemate generis Linneani Cornus L. Notul. Syst. Inst. Bot. Komarov Acad. Sci. URSS 12: 164-180, illus. 1950.

Rickett, Harold William. Cornaceae. No. Am. Fl. 28B: 299-311. 1945.

Rickett, H. W. Cornus in Mexico, with notes on the evolution of the genus. Anal. Inst. Biol. Méx. 21: 83-94. 1950.

Wilson, James S. Variation of three taxonomic complexes of the genus Cornus in eastern United States. Trans. Kans. Acad. Sci. 67: 747-817, illus. 1965.

NUMBER OF SPECIES: Native trees or shrubs sometimes becoming trees,

11 (incl. 1 n. to Alaska and 2 also in Mex.); native shrubs, 3; native herbs (n. to Alaska), 2; a few species south in mts. to Peru; total, mostly n. temperate, about 40.

**Córnus alternifòlia** L. f. **alternate-leaf dogwood‡**

‡†*Cornus alternifolia* L. f., Suppl. Pl. 125. 1781.
*Svida alternifolia* (L. f.) Small, Fl. Southeast. U.S. 853, 1335. 1903.

DERIVATION—Alternate-leaf, distinctive in genus characterized by opposite leaves.

OTHER COMMON NAMES—pagoda dogwood, blue dogwood†, green-osier, pagoda-cornel.

RANGE—Nfld. and se. Que. w. to Maine, s. Ont., Minn., and s. Man., s. to Mo., n. Ark., Miss., nw. Fla., and Ga. Atlas vol. 4, maps 38-NE, 38-SE, 38-N; vol. 5, map 46.

HYBRIDIZES WITH: *Cornus stolonifera* (*C.* ×*acadiensis* Fern.).

*Cornus asperifolia*, see note under **C. drummondii**
*Cornus baileyi*, see **C. stolonifera**
*Cornus circinata*, see **C. rugosa**

**Córnus drummóndii** C. A. Meyer **roughleaf dogwood‡†**

‡*Cornus drummondii* C. A. Meyer, Acad. Imp. Sci. St. Pétersb. Bull., Phys.-Math. 3: 372. 1845. Acad. Sci. St. Pétersb. Mem., Sér. 6, Sci. Nat. Bot. 5: 210. 1846. (Preprinted as Ueber Einige Cornus-Arten 20. 1845.)
*Cornus priceae* Small, Torreya 1: 54. 1901.
*Svida priceae* (Small) Small, Fl. Southeast. U.S. 854, 1336. 1903.

DERIVATION—Named for its discoverer, Thomas Drummond (1780-1835), Scotch botanical explorer.

RANGE—Extreme s. Ont., Ohio, and s. Mich., w. to Iowa, se. S. Dak., and c. Nebr., s. to c. and se. Tex., and e. to s. La. and Miss. Atlas vol. 4, map 39.

REFERENCE—Rickett, H. W. Cornus asperifolia and its relatives. Am. Midl. Nat. 27: 259-261. 1942.

Formerly, and in the 1927 checklist, known as †*Cornus asperifolia*. Rickett (1942) showed that the name *C. asperifolia* Michx. (Fl. Bor.-Am. 1: 93. 1803) had been misapplied to this species and is the proper name for the shrubby species formerly called *C. microcarpa* Nash. It rarely reaches tree size and ranges in the Coastal Plain from s. N.C. to c. Fla. and w. to s. Ala.

HYBRIDIZES WITH: *Cornus amomum* Mill.; *C. racemosa*; *C. stricta*.

***Córnus flórida** L. **flowering dogwood‡**

‡†*Cornus florida* L., Sp. Pl. 117. 1753.
*Cynoxylon floridum* Raf., Alsogr. Am. 59. 1838.
*Benthamidia florida* (L.) Spach, Hist. Nat. Vég. Phanér. 8: 107. 1839.
*Cynoxylon floridum* (L.) Raf. ex Small, Fl. Southeast. U.S. 854. 1903.
*Cornus urbiniana* Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 8: 53. 1903.
*Cornus florida urbiniana* Wang. in Engler, Pflanzenreich IV. 229: 87. 1910.
*Cornus florida* ssp. *urbiniana* (Rose) Rickett, Bull. Torrey Club 72: 223. 1945.

DERIVATION—Flowering, referring to the showy petallike bracts.

OTHER COMMON NAMES—dogwood†, cornel, boxwood.

RANGE—Extreme sw. Maine w. to N.Y., extreme s. Ont., c. Mich., c. Ill., and c. Mo., s. to extreme se. Kans., e. Okla., and e. Tex., and e. to n. Fla. Also var. in mts. of ne. Mex. (N.L. and Ver.). Atlas vol. 1, maps 124-N, 124-E; vol. 5, map 47.

*Cornus foemina*, see **C. racemosa** and note under **C. stricta**

**Córnus glabràta** Benth. **smooth dogwood**

*Cornus glabrata* Benth., Bot. Voy. Sulphur 18. 1844.

DERIVATION—Glabrate, becoming hairless or nearly so.

OTHER COMMON NAME—brown dogwood.

RANGE—Mts. from sw. Oreg. to s. Calif. Atlas vol. 3, map 50.

Added here as a shrub or small tree to 20 ft (6 m) tall (Munz, Calif. Fl. 1034. 1959).

*Cornus instoloneus*, see **C. stolonifera**
*Cornus interior*, see **C. stolonifera**

***Córnus núttallii** Audubon — **Pacific dogwood‡†**

*Cornus nuttallii* Audubon, Birds Am. v. 4, pl. 367. 1837; "*nuttalli*"; *nom. nud.*
‡†*Cornus nuttallii* Audubon, Ornith. Biogr. 4: 482. 1838; "*nuttalli.*"
*Cynoxylon nuttallii* Shafer in Britton & Shafer, No. Am. Trees 746, fig. 684. 1908.

DERIVATION—John James Audubon first illustrated this species in his famous work Birds of America ("elephant folio") and named it for its collector, Thomas Nuttall (1786-1859), British-American botanist and ornithologist.

OTHER COMMON NAMES—flowering dogwood, western flowering dogwood, mountain dogwood.

RANGE—Sw. B.C., w. Wash., and w. Oreg., and s. in mts. to s. Calif. Also local in w. c. Idaho. Atlas vol. 3, maps 51-NW, 51-SW.

**Córnus occidentàlis** (Torr. & Gray) Cov. — **western dogwood‡**

*Cornus sericea* β *? occidentalis* Torr. & Gray, Fl. No. Am. 1: 652. 1840.
*Cornus pubescens* Nutt., No. Am. Sylva 3: 54. 1849. Non *C. pubescens* Willd. in Roem. & Schult., Syst. Mant. 3: 252. 1827.
‡*Cornus occidentalis* (Torr. & Gray) Cov., U.S. Dep. Agric., Contrib. U.S. Natl. Herbar. 4: 117. 1893.
*Cornus sericea* subsp. *occidentalis* (Torr. & Gray) Fosberg, Bull. Torrey Bot. Club 69: 589. 1942.
*Cornus stolonifera var. occidentalis* (Torr. & Gray) C. L. Hitchc., Vasc. Pl. Pacif. Northwest 3: 588. 1961.
*Cornus alba* var. *occidentalis* (Torr. & Gray) Boivin, Phytologia 15: 428. 1967.

DERIVATION—Western.

RANGE—W. Wash., w. Oreg., and w. Calif., s. in mts. to s. Calif. Atlas vol. 3, map 52.

REFERENCE—See **Cornus stolonifera**

HYBRIDIZES WITH: *Cornus stolonifera* (*C.* ×*californica* C. A. Mey.).

*Cornus priceae*, see **C. drummondii**
*Cornus paniculata*, see **C. racemosa**

**Córnus racemòsa** Lam. — **gray dogwood**

*Cornus racemosa* Lam., Encycl. Méth. Bot. 2: 116. 1786.
*Cornus paniculata* L'Hér., Cornus 9, pl. 5. 1788.
*Thelycrania racemosa* (Lam.) D. Löve & Bernard, Sv. Bot. Tidskr. 53: 417. 1959.
*Cornus foemina* ssp. *racemosa* (Lam.) J. S. Wilson, Trans. Kans. Acad. Sci. 67: 795. 1965.

DERIVATION—Raceme-like, referring to the inflorescence.

RANGE—Maine and s. Ont. w. to n. Mich., Minn., and s. Man., s. to N. Dak., e. S. Dak., n. Nebr., Mo., and n. Ark., Tenn., and N.C. Atlas vol. 4, map 41.

Added here as a shrub sometimes becoming a small tree to 27 ft (8 m) high in Mich., according to Paul M. Thompson.

HYBRIDIZES WITH: *Cornus drummondii*; *C. purpusii* Koehne (*C.* ×*arnoldiana* Rehd.); *C. stricta*.

**Córnus rugòsa** Lam. — **roundleaf dogwood**

*Cornus rugosa* Lam., Encycl. Méth. Bot. 2: 115. 1786.
*Cornus circinata* L'Hér., Cornus 7, pl. 3. 1788.
*Svida rugosa* (Lam.) Rydb., Fl. Prair. Plains 605. 1932.

DERIVATION—Wrinkled.

RANGE—N.S., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., Minn., and se. Man., and s. to Iowa, n. Ind., n. Ky., Pa., and N.J. and in mts. to W. Va. and sw. Va. Atlas vol. 4, maps 40-N, 40-NE.

Added here as a shrub sometimes becoming a small tree to 40 ft (12 m) high in Mich., according to Paul M. Thompson.

HYBRIDIZES WITH: *Cornus stolonifera* (*C.* ×*slavinii* Rehd.).

*Cornus sericea*, see **C. stolonifera**

**Córnus séssilis** Torr. ex Durand **blackfruit dogwood‡**

‡*Cornus sessilis* Torr. ex Durand, J. Acad. Nat. Sci. Phila., Ser. 2, 3: 89. 1855.

DERIVATION—Sessile, the flowers in stalkless clusters.

OTHER COMMON NAME—miners dogwood.

RANGE—N. Calif. only. Atlas vol. 3, map 56.

**Córnus stolonífera** Michx. **red-osier dogwood‡**

*Cornus sericea* L., Mant. Pl. 199. 1771; in part; *nom. ambig.*
‡*Cornus stolonifera* Michx., Fl. Bor.-Am. 1: 92. 1803.
*Cornus baileyi* Coult. & Evans, Bot. Gaz. 15: 37. 1890.
*Suida interior* Rydb., Bull. Torrey Bot. Club 31: 572. 1904.
*Suida stolonifera* (Michx.) Rydb., Bull. Torrey Bot. Club 31: 572. 1904.
*Cornus alba* L. ssp. a *stolonifera* (Michx.) Wanger. in Engler, Pflanzenreich 41 (IV. 229): 53. 1919.
*Cornus alba* L. spp. b *baileyi* (Coult. & Evans) Wanger. in Engler, Pflanzenreich 41 (IV. 229): 55. 1910.
*Cornus instoloneus* A. Nels., Bot. Gaz. 53: 224. 1912.
*Cornus interior* (Rydb.) N. Petersen, Fl. Nebr. 163. 1912.
*Svida instolonea* (A. Nels.) Rydb., Fl. Rocky Mts. Plains 635, 1065. 1917.
*Svida baileyi* (Coult. & Evans) Rydb., Brittonia 1: 94. 1931.
*Cornus stolonifera* var. *baileyi* (Coult. & Evans) Drescher, Trans. Wis. Acad. Sci. Arts Lett. 28: 190. 1933.
*Cornus stolonifera* var. *interior* (Rydb.) St. John, Fl. Southeast. Wash. Idaho 303. 1937.
*Cornus sericea* ssp. *stolonifera* (Michx.) Fosberg, Bull. Torrey Bot. Club 69: 587. 1942.
*Thelycrania sericea* (L.) Dandy, Watsonia 4: 47. 1957.
*Cornus alba* var. *baileyi* (Coult. & Evans) Boivin, Phytologia 15: 428. 1967.
*Cornus alba* var. *interior* (Rydb.) Boivin, Phytologia 15: 428. 1967.

DERIVATION—Bearing stolons; the branches often touching the ground and rooting at the tips.

OTHER COMMON NAMES—American dogwood, redstem dogwood, red dogwood, kinnikinnik, squawbush.

RANGE—Very widely distributed from Nfld. and Labr., w. across Can. and n. contiguous U.S. to Yukon and c. Alaska, s. in w. mts. to c. Calif., s. Ariz., and s. N. Mex., and e. from Nebr. to s. Ill., W. Va., n. Va., and n. N.J. Also in mts. of n. Mex. (Chih., Dgo., and N.L.). Atlas vol. 2, map 63; vol. 3, maps 53-N, 53-NW, 53-SW; vol. 4, maps 43-N, 43-NE.

REFERENCES—Fosberg, F. R. Cornus sericea L. (C. stolonifera Michx.). Bull. Torrey Bot. Club 69: 583-589. 1942.

Rickett, H. W. Cornus stolonifera and Cornus occidentalis. Brittonia 5: 149-159, illus. 1944.

Generally shrubby but recorded as sometimes a small tree in the Southwest.

*Cornus sericea* L., the oldest name, was rejected by Rickett (No. Am. Fl. 28B: 304, 305. 1945) as ambiguous. It applied in part to *C. amomum* Mill. and has been used also for that shrubby species.

HYBRIDIZES WITH: *Cornus alternifolia* (*C.* ×*acadiensis* Fern.); *C. occidentalis* (*C.* × *californica* C. A. Mey.); *C. rugosa* (*C.* ×*slavinii* Rehd.).

**Córnus stricta** Lam. **swamp dogwood**

‡*Cornus stricta* Lam., Encycl. Méth. Bot. 2: 116. 1786.
*Svida stricta* (Lam.) Small, Fl. Southeast. U.S. 853, 1335. 1903.

DERIVATION—Drawn tight, upright, or stiff.

OTHER COMMON NAMES—bluefruit dogwood, stiffcornel, stiffcornel dogwood‡.

RANGE—Chiefly in Coastal Plain from Va. to c. Fla. and e. Tex., n. in Miss. Valley to se. Okla., se. Mo., c. Ill., s. Ind., and Ky. Atlas vol. 4, map 42; vol. 5, map 158.6.

The name *C. foemina* Mill., which was rejected by Rickett (No. Am. Fl. 28B: 311. 1945) as a doubtful species inadequately described, has been taken up by some authors for this species and by others for *C. racemosa* Lam., gray dogwood.

HYBRIDIZES WITH: *Cornus amomum* Mill.; *C. asperifolia*; *C. drummondii*; *C. racemosa*.

**Córylus** L. (Family Betulaceae) **hazel**

‡*Corylus* L., Sp. Pl. 998. 1753; Gen. Pl. ed. 5, 433. 1754.

DERIVATION—The classical Greek name, probably from the word for hood or helmet, suggested by the involucre.

OTHER COMMON NAMES—filbert, hazelnut.

NATIVE SPECIES: Native trees, 1; native shrubs, 1; Eurasia, about 13; total, n. temperate, about 15.

**Córylus cornùta** var. **californica** (A. DC.) Sharp **California hazel**‡

*Corylus rostrata* Ait. *ß californica* A. DC., Prodr. 16(2): 133. 1864.
*Corylus californica* (A. DC.) Rose, Gard. and Forest 8: 263. 1895.
‡*Corylus cornuta* Marsh. var. *californica* (A. DC.) Sharp, Stanford Univ., Contrib. Dudley Herb. 4: 59. 1951.

DERIVATION—Horned, from the long, hornlike involucre around the fruit; varietal epithet, of California.

OTHER COMMON NAME—California hazelnut.

RANGE of *Corylus cornuta* Marsh., beaked hazel (beaked filbert)—Nfld., N.S., s. Que., and s. Ont., w. across s. Can. to c. Man. and c. B.C., s. in Pacific Coast region to w. Wash., w. Oreg., and in Coast Ranges and Sierra Nev. to c. Calif., also from N. Dak. and extreme ne. S. Dak. e. to ne. Iowa, Mich., Pa., and N.J., and s. mostly in Appalachian Mts. to n. Ga. and ne. Ala. Also local in Black Hills of S. Dak., mts. of ne. Wyo., and mts. of c. Colo. Atlas vol. 3, maps 54-N, 54-NW; vol. 4, maps 44-N, 44-NE.

RANGE of var. *californica*—S. B.C. s. to w. Wash., w. Oreg., and in Coast Ranges and Sierra Nev. to c. Calif.

This variety of a shrub species sometimes becomes a small tree. *Corylus cornuta* Marsh. var. *cornuta* (Arbustr. Am. 37. 1785) beaked hazel (typical; or beaked filbert), the typical variety, is a shrub occupying the eastern part of the range of the species.

**Cótinus** Mill. (Family Anacardiaceae) **smoketree**

‡†*Cotinus* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

DERIVATION—From Greek *cotinos*, the oleaster (*Elaeagnus angustifolia* L.) or, as some say, the wild olive (*Olea europaea* L. var. *oleaster* DC.). The name was applied to this genus also by some pre-Linnaean botanists. Other pronunciation—*Cotìnus*.

REFERENCE—See **Rhus**

NUMBER OF SPECIES: Native trees, 1; Eurasia (s. Europe to China), 2; total, warm n. temperate, 3.

**Cótinus obovàtus** Raf. **American smoketree**‡†

*Rhus cotinoides* Nutt. in Torr. & Gray, Fl. No. Am. 1: 217. 1838: as synonym.
‡*Cotinus obovatus* Raf., Autikon Bot. 82. 1840.
†*Cotinus americanus* Nutt., No. Am. Sylva 3: 1, pl. 81. 1849.
*Rhus cotinoides* Nutt. ex Chapm., Fl. South. U.S. 70. 1860.

DERIVATION—Obovate, the shape of the leaves.

OTHER COMMON NAMES—smoketree, chittamwood, yellowwood.

RANGE—Rare and local in mts. of se. Tenn. and n. Ala., Ozark Plateau

of sw. Mo., Ark., and e. Okla., and Edwards Plateau of c. Tex. Also Ky. (Daviess Co.), perhaps introduced. Atlas vol. 4, map 46.

**Cowàn**ia D. Don (Family Rosaceae) **cliffrose**

‡†*Cowania* D. Don, Trans. Linn. Soc. Lond. 14: 574, pl. 22. 1825.

DERIVATION—James Cowan (died 1823), British merchant and amateur botanist who introduced many Peruvian and Mexican plants into England.

NUMBER OF SPECIES: Native shrubs, incl. 1 sometimes small tree, also in Mex., 2; Mex., 1 additional; total, 3.

**Cowània mexicàna** D. Don **cliffrose‡**

‡†*Cowania mexicana* D. Don, Trans. Linn. Soc. Lond. 14: 574, pl. 22. 1825.

*Cowania stansburiana* Torr. in Stansbury, Expl. Surv. Great Salt Lake Utah 386, pl. 3. 1852.

*Cowania mexicana* var. *stansburiana* (Torr.) Jeps., Man. Fl. Pl. Calif. 498. 1925.

DERIVATION—Mexican.

OTHER COMMON NAMES—Stansbury cliffrose, quininebush†.

RANGE—Sw. Colo., n. Utah, and Nev., and e. Calif., s. to se. Ariz. and sw. N. Mex., and to c. Mex. (B. Cal. to sw. Coah., s. to e. Jal. and Gto.). Atlas vol. 3, maps 55-N, 55-W.

**Crataègus** L. (Family Rosaceae) **hawthorn**

‡†*Crataegus* L., Sp. Pl. 475. 1753; Gen. Pl. ed. 5, 213. 1754.

DERIVATION—The classical Greek name of hawthorn, perhaps from the word for strength (of oak) and in reference to the wood and many thorns.

OTHER COMMON NAMES—haw, red haw, thorn, thorn-apple, hog-apple. Many species are not distinguished further by common name. Under other common names of a species, variations in the second word, such as pear haw and pear thorn in addition to pear hawthorn, have not been listed. Also, for species reduced to synonyms and hybrids, other common names derived from the scientific name have been omitted.

NUMBER OF SPECIES—Native trees (a few also shrubs), about 35; naturalized trees, 1; w. U.S., 7 (incl. 1 n. to Alaska and 4 also in e. U.S.); Mex., about 8 (incl. 2 also in Tex. and 1 naturalized s. to Ecuador); Eurasia e. to Japan, about 90; total, about 135.

This Checklist accepts only 35 native species of *Crataegus* and 1 naturalized species and distinguishes no varieties. The drastic reduction from 1953 checklist is compiled largely from other publications. This attempt toward a practical classification merits an explanation. Perhaps identification may be simplified by the relatively small number of species with general, rather than local, distribution. Also, many specimens can be named or placed in a species group in the broad sense.

HISTORICAL REVIEW—*Crataegus*, hawthorn, has more named species of small trees and shrubs in continental United States (nearly all in the eastern half) than any other genus of native seed plants, more than 1100. As a result, confusion has followed and identification has been difficult. Nearly all these names were proposed in the quarter century beginning in 1899 (mostly by 1910) by three investigators working independently and hastily.

Charles Sprague Sargent (1841-1927), director of the Arnold Arboretum of Harvard University (where his specimens are deposited), was the most active. He described about 700, far more than all others combined and more than all other species of native trees! The activity has been summarized in a chapter of Sargent's biography by Sutton (1970).[5] She wrote (p.279): ". . . he is also remembered as the man who made a taxonomic

[5] Authors followed by dates in parentheses refer to references on *Crataegus* which follow.

disaster out of the genus *Crataegus*." Further (p. 295): "The real fault found in Sargent's work is that he named so many species based on inconsequential differences . . . . To make hundreds of species on the grounds of minute characters defied the spirit of taxonomy."

William Willard Ashe (1872-1932), pioneer forester with the North Carolina Geological Survey and later with the Forest Service, named more than 170 species of *Crataegus* (the specimens not adequately preserved). Chauncey Delos Beadle (1866-1950), Canadian-born botanist at Biltmore Estate, N.C., was third with more than 140. His Biltmore Herbarium is now at the U.S. National Museum of Natural History (Smithsonian Institution).

In the last detailed descriptive treatment with descriptions, keys, and drawings, Sargent (*102*, p. 397-549, illus.) accepted 153 tree species of *Crataegus* for the United States and Canada, only a fraction of the total he had named. Minor variations as well as shrubs were omitted without explanation. The 1927 checklist followed that Manual mainly but contained additional tree species published up to 1925, several by Sargent.

Ernest Jesse Palmer (1875-1962), field collector for the Missouri Botanical Garden and later research assistant to Sargent at the Arnold Arboretum, became the authority on *Crataegus* through many years. He prepared a synopsis of the North American species (1925), discussed the *Crataegus* problem (1932) and the species concept (1943), and listed the northeastern species with synonymy (1946). Also he contributed the text of this genus in the northeastern floras by Fernald (*31*) and Gleason (*34*) and these State publications: Indiana by Deam (*28*), Ohio by Braun (1961), northern Florida by Kurz and Godfrey (1962), and Missouri by Steyermark (*119*). His work was adapted also by others, for example, the Southwest by Vines (1960) and Texas by Correll and Johnston (*21*).

The 1953 checklist likewise followed Palmer, who kindly answered various questions, reported additional reductions, and contributed helpful suggestions. That compilation of *Crataegus* contained 149 accepted species (also 1 naturalized) without varieties and also from Palmer's work 40 additional binomials mentioned in notes as local species or probable hybrids. Thus, the treatment was similar to that of the 1927 checklist and Sargent's Manual. However, changes and reductions to synonymy were based upon regional and State floras by Palmer and others, particularly Fernald (*31*). A few corrections in nomenclature were made, and newly described species were cited. It was stated that the number of species was still too large and doubtless would be reduced further.

The last specialist on *Crataegus* was the late Emil P. Kruschke (1907-1976), botanist with the Milwaukee Public Museum. For many years he studied the genus, particularly in Wisconsin, and assembled a large herbarium of carefully prepared specimens. The second of his two contributions (1955, 1965) contained a revised list, *Crataegus* in northern United States and adjacent Canada. Seymour followed Kruschke in his floras of Vermont and New England (*106*, *105*).

NEW NAMES AFTER 1950—During the 25-year interval after the 1953 checklist, naming of novelties in *Crataegus* has almost ceased. New scientific names and combinations in this genus, about 75, are included in Appendix 3, as extracted from the Gray Herbarium Card Index, and have not been repeated in the synonomy. Nearly all were by Kruschke (1965) and mainly reductions and transfers of older species to varieties and forms. Nine new species were published, 4 by Kruschke, 4 by Kendall Laughlin, and 1 by Palmer.

THE CRATAEGUS PROBLEM—The two parts of the *Crataegus* problem are:

first, the plants and their variations, and second, the specialists and their taxonomic judgment. The most recent summary is by Robertson (1974).

*Crataegus* is regarded as an unstable genus characteristic of openings and exposed areas, as noted in the 1953 checklist. The plants have expanded and evolved rapidly following the clearing of forests and the origin of vast new areas suitable for colonization. The variable, expanding populations probably produced numerous hybrids. Progeny tests have showed that many variations are perpetuated, or true breeding. Also, cytological evidence indicates that many of the supposed species are "asexual apomictic triploids." That is, they are clonal populations of hybrid origin with one and one-half the normal number of chromosomes (or other changed number). Also, they form viable seeds vegetatively without benefit of pollination and perpetuate their characters the same as if propagated by grafting. Thus, hybridization, change in chromosome number (polyploidy and aneuploidy), and propagation of seeds vegetatively (apomixis) apparently are involved.

Nevertheless, the *Crataegus* problem is largely artificial. Having been created by specialists, it can be solved by other investigators. The main criticism is that new species were named on the basis of minute characters such as number of stamens and color of anthers, which would not have specific rank in related genera. Repeated splitting led to a multiplication of weak species not easily distinguished, even by authorities. Twigs from the same tree sometimes were identified as different species. One critic remarked that the drawings in a publication, if mixed, could not be sorted under their proper names. Another suggested that if species were defined by ability to hybridize, perhaps the number might be reduced to one. However, the specialists have asserted that the morphological differences among populations are very real and breed true and that no authority would be willing to return to a small number of species.

The artificially large number of species in *Crataegus* can be reduced in several ways. Unfortunately, perhaps by custom, more evidence is needed to suppress a species than to erect it (even if named briefly from an incomplete specimen and not compared with others nor placed in a series). The simplest solution is to abandon all species as hopeless and use the next higher rank, the series. Or, use collective species, such as for each series the type species in a broad sense. Also, the minor variations could be reduced to a lower rank, such as variety, and their names would still be available. Another method is to return to the species (fewer than 20) accepted before 1899. A final suggestion is that a young person with adequate funds dedicate his life to this genus!

Several recent floras have returned to a small number of species of *Crataegus*, as indicated in the references cited. For example, in a "drastic condensation," Cronquist (*35*) accepted for the Northeast only 20 species (also 1 naturalized) with numerous synonyms and names suspected to apply to hybrids. Likewise, Radford, Ahles, and Bell (*88*) recognized only 13 species for North and South Carolina together. For Canada, Boivin (*11*) listed 31 species and 12 hybrids.

THIS COMPILATION—Merely by following recent conservative references, this compilation has reduced the number of species of *Crataegus* in continental United States to about one-fourth. As many other names have been placed tentatively as hybrids. There remain some local species in the Southeast cited below, which are omitted pending further studies by interested local persons.

The 35 species of *Crataegus* accepted (without varieties) include all 17 of the 19th century species (a few with changed names) in the 1898

checklist and other well defined species of mostly broad distribution. Most of these names are in general use. Incidentally, only 10 of the 35 species date from the activity beginning in 1899, and the last was named in 1909. The total score of the 3 active workers is: Ashe, 4 specific names (also 1 new name) accepted; Sargent, 3; and Beadle, 1.

The series of each accepted species is given after its citation. (The rank section, used in the 1953 checklist, would have been more appropriate for a group of related species.) Actually, 23 series (also 1 introduced) are represented, nearly as many as species.

ADDITIONAL SOUTHEASTERN LOCAL SPECIES—About 30 additional species of se. U.S., mostly local within a State were in the 1953 checklist. They should be studied further before acceptance.

For Texas, Correll and Johnston (*21*), following Palmer, accepted 33 species. Their 10 additional, mostly local or endemic within the State, are: *Crataegus anamesa* Sarg. (‡†*C. antiplasta* Sarg.), ‡†*C. brazoria* Sarg. (‡†*C. dallasiana* Sarg.; also Okla.), *C. pearsonii* Ashe (also La. and Miss. but e. to Ga., S.C., and N.C., the type locality), ‡†*C. poliophylla* Sarg., ‡†*C. sabineana* Ashe (also La.) ‡†*C. stenosepala* Sarg., ‡†*C. sublobulata* Sarg., ‡†*C. sutherlandensis* Sarg., ‡†*C. viburnifolia* Sarg., and ‡†*C. warneri* Sarg. Another, ‡†*Crataegus tripartita* Sarg., of se. Tex., was not mentioned.

These 6 local species from Alabama in the 1953 checklist were not cited by Clark (1971): ‡†*Crataegus amnicola* Beadle (also e. Tenn. and n. Ga.), ‡†*C. annosa* Beadle, ‡†*C. ignava* Beadle, ‡†*C. meridionalis* Sarg. (also e. Miss.), ‡†*C. venusta* Beadle, ‡†*C. vulsa* (also nw. Ga.). Also 2 others from Ala. were omitted as of uncertain status: ‡*C. mendosa* Beadle, ‡†*C. sargentii* Beadle (also se. Tenn. and nw. Ga.).

Ernest J. Palmer in Kurz and Godfrey (1962) accepted for northern Florida in a total of 18 species these 6 mostly local in the northwestern part: ‡*Crataegus leonensis* Palmer, ‡†*C. ravenelii* Sarg. (also Ga. and S.C.), ‡†*C. visenda* Beadle, *C. audens* Beadle, *C. egregia* Beadle, *C. paludosa* Sarg. Three local species were not mentioned: ‡†*Crataegus choriophylla* Sarg., ‡†*C. consanguinea* Beadle, ‡†*C. panda* Beadle.

Five species from the 1953 checklist were mostly local in Georgia: ‡†*Crataegus dispar* Beadle (also w. S.C.). ‡†*C. georgiana* Sarg., ‡†*C. ingens* Beadle (also se. Tenn.). ‡†*C. penita* Beadle (se. Tenn. only), ‡†*C. tristis* Beadle.

REFERENCES ON THE PROBLEM—Camp, W. H. The Crataegus problem. Castanea 7: 51-55. 1942.

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Harper, Roland M. Catalogue of the trees, shrubs and vines of Alabama. Ala. Geol. Surv. Monog. 9, 357 p., illus. 1928. (*Crataegus*, p. 202-211.)

Kruschke, Emil P. The hawthorns of Wisconsin. I. Status, objectives, and methods of collecting and preparing specimens. Milwaukee Public Mus. Publ. Bot. 2, 124 p., illus. 1955.

Laughlin, Kendall. Taxonomic problems of Crataegus, with special reference to species of hybrid origin. Phytologia 9: 185-186. 1963.

Palmer, Ernest J. The Crataegus problem. J. Arnold Arbor. 13: 342-362. 1932.

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Rickett, H. W. Forms of *Crataegus pruinosa*. Bot. Gaz. 97: 780-793, illus. 1936.

Robertson, Kenneth R. The genera of Rosaceae in the southeastern United States. J. Arnold Arbor. 55: 303-401, 611-662, illus. 1974. (*Crataegus*, p. 626-633.)

Sax, Karl. The origin and relationships of the Pomoideae. J. Arnold Arbor. 12: 3-21, illus. 1931.

Sutton, S. B. Charles Sprague Sargent and the Arnold Arboretum. 382 p., illus. 1970. (Chapter 11, Crataegus: A thorny problem, p. 279-298.)

REFERENCE FOR IDENTIFICATION—Under References (p. 25) are listed about 40 descriptive floras and manuals, both regional and State, designated by the section mark (§) and followed by information on *Crataegus*. Other titles are cited below.

Billington, Cecil. Shrubs of Michigan. Cranbrook Inst. Sci. Bull. 20, ed. 2, 339 p., illus. 1949. (*Crataegus*, 10 groups and spp., p. 134-149.)

Braun, E. Lucy. The woody plants of Ohio. 362 p., illus. 1961. (*Crataegus*, 64 spp., by Ernest J. Palmer, p. 172-199, illus.)

Clark, Ross C. The woody plants of Alabama. Ann. Mo. Bot. Gard. 29: 155-182, illus. 1971. (*Crataegus*, 12 spp., p. 174-175, maps.)

Coker, William C., and Henry R. Totten. Trees of the southeastern States. ed. 3, 419 p., illus. 1937. (*Crataegus*, 20 spp., p. 210-242, illus.)

Harvill, A. M., Jr. Spring flora of Virginia. 240 p., illus. 1970. (*Crataegus*, 14 spp., p. 107-110.)

Kruschke, Emil P. Contributions to the taxonomy of Crataegus. Milwaukee Public Mus. Publ. Bot. 3, 273 p., illus. 1965. Part III. Crataegus in northern United States and adjacent Canada, p. 143-189. (85 spp., many vars.)

Kurz, Herman, and Robert K. Godfrey. Trees of northern Florida. 311 p., illus. 1962. (*Crataegus*, 18 spp., by Ernest J. Palmer, p. 148-164, illus.)

Laughlin, Kendall. Manual of the hawthorns of Cook and Du Page Counties of Illinois. 76 p., illus. 1956. (*Crataegus*, 23 spp.)

Laughlin, Kendall. Third revised key to the species of hawthorns of Cook and Du Page Counties of Illinois. 9 p. 1960.

Palmer, Ernest J. Synopsis of North American Crataegi. J. Arnold Arbor. 6: 5-128. 1925.

Palmer, Ernest J. Some woody plants of Rhode Island. Rhodora 41: 314-316. 1939. (*Crataegus*, 7 spp. and 2 others reported.)

Stephens, H. A. Woody plants of North Central Plains. 530 p., illus. 1973. (*Crataegus*, 13 spp., 8 without text, p. 234-243, illus.)

Tucker, Gary Edward. A guide to the woody flora of Arkansas. 356 p., illus. Ph. D. thesis, Univ. Ark. 1976. (*Crataegus*, 18 spp., p. 98-105, maps.)

Vines, Robert A. Trees, shrubs and woody vines of the Southwest. 1104 p., illus. 1960. (*Crataegus*, 70 spp., with list and key by Ernest J. Palmer, p. 329-386, illus.)

SERIES AND SPECIES—To aid identification, the 35(1) species of *Crataegus* accepted here are listed below under the 23 series (also 1 introduced) arranged alphabetically.

*Crataegus* Series *Aestivales* (Sarg. ex Palmer) Rehd.

*C. aestivalis* (Walt.) Torr. & Gray, May hawthorn

*C. opaca* Hook. & Arn., riverflat hawthorn

Series *Apiifoliae* (Loud.) Rehd.
*C. marshallii* Eggl., parsley hawthorn
Series *Bracteatae* (Sarg. ex Palmer) Rehd.
*C. harbisonii* Beadle, Harbison hawthorn
Series *Brainerdianae* (Eggl.) Rehd.
*C. brainerdii* Sarg., Brainerd hawthorn
Series *Brevispinae* Beadle ex Rehd.
*C. brachyacantha* Sarg. & Engelm., blueberry hawthorn
*C. saligna* Greene, willow hawthorn
Series *Coccineae* (Loud.) Rehd.
*C. coccinea* L., scarlet hawthorn
Series *Cordatae* Beadle ex Rehd.
*C. phaenopyrum* (L. f.) Medic., Washington hawthorn
Series *Crus-gallianae* Rehd.
*C. berberifolia* Torr. & Gray, barberry hawthorn
*C. crus-galli* L., cockspur hawthorn
*C. reverchonii* Sarg., Reverchon hawthorn
*C. tracyi* Ashe ex Eggl. Tracy hawthorn
Series *Dilatatae* (Sarg. ex Palmer) Rehd.
*C. coccinioides* Ashe, Kansas hawthorn
*C. dilatata* Sarg., broadleaf hawthorn
Series *Douglasianae* Rehd.
*C. douglasii* Lindl., black hawthorn
*C. erythropoda* Ashe, Cerro hawthorn
Series *Flavae* (Loud.) Rehd.
*C. flava* Ait., yellow hawthorn
*C. lacrimata* Small, Pensacola hawthorn
Series *Intricatae* (Sarg. ex Palmer) Rehd.
*C. intricata* Lange, Biltmore hawthorn
Series *Macracanthae* (Loud.) Rehd.
*C. calpodendron* (Ehrh.) Medic., pear hawthorn
*C. succulenta* Schrad., fleshy hawthorn
Series *Microcarpae* (Loud.) Rehd.
*C. spathulata* Michx., littlehip hawthorn
Series *Molles* (Sarg.) Rehd.
*C. greggiana* Eggl., Gregg hawthorn
*C. mollis* Scheele, downy hawthorn
*C. texana* Buckl., Texas hawthorn
Series OXYACANTHAE (Loud.) Poiakova
C. MONOGYNA Jacq., oneseed hawthorn
Series *Parvifoliae* (Loud.) Rehd.
*C. uniflora* Muenchh., oneflower hawthorn
Series *Pruinosae* (Sarg. ex Palmer) Rehd.
C. *pruinosa* (H. L. Wendl.) K. Koch, frosted hawthorn
Series *Pulcherrimae* (Beadle ex Palmer) Robertson
*C. pulcherrima* Ashe, beautiful hawthorn
Series *Punctatae* (Loud.) Rehd.
*C. punctata* Jacq., dotted hawthorn
Series *Rotundifoliae* (Eggl.) Rehd.
*C. chrysocarpa* Ashe, fireberry hawthorn
*C. columbiana* Howell, Columbia hawthorn
Series *Tenuifoliae* (Sarg. ex Palmer) Rehd.
*C. flabellata* (Bosc) K. Koch, fanleaf hawthorn
Series *Triflorae* (Beadle ex Palmer) Rehd.
*C. triflora* Chapm., threeflower hawthorn

Series *Virides* (Beadle ex Palmer) Rehd.

*C. viridis* L., green hawthorn

HYBRIDS—Many binomials in the genus *Crataegus* represent populations intermediate between accepted species and have been classed tentatively as interspecific hybrids, though lacking experimental confirmation. About 20 probable hybrids were mentioned in notes in the 1953 checklist. Other intermediates have not been named formally.

The following list of binomials thought to represent about 34 hybrids has been adapted largely from that by Cronquist (*35*) but has 2 additions from southeastern States. It is limited to binomials mentioned in the 1953 checklist and to others available for crosses between species accepted here. Common names are omitted.

These binomials for hybrids are repeated also under both parent species. Additional, later binomials listed by Cronquist for the same crosses have been added. The first of two or more binomials is the oldest and is available for all intermediates between the same two parent species, including their synonyms and varieties, while any later binomials are synonyms.

BINOMIALS OF INTERSPECIFIC HYBRIDS:

‡†*Crataègus* ×*anómala* Sarg. (*C. coccinea* × *mollis*)
‡†*Crataègus* ×*apiomórpha* Sarg., see *C.* ×*lucorum* Sarg.
*Crataègus* ×*aùlica* Sarg. (*C. coccinea* × *dilatata*)
‡*Crataègus* ×*célsa* Sarg., see *C.* ×*integriloba* Sarg.
*Crataègus* ×*collícola* Ashe, see *C.* ×*disperma* Ashe
‡†*Crataègus* ×*corúsca* Sarg., see *C.* ×*anomala* Sarg.
‡*Crataègus* ×*dánielsii* Palmer, see *C.* ×*disperma* Ashe
*Crataègus* ×*densiflòra* Sarg. (*C. chrysocarpa* × *flabellata*)
*Crataègus* ×*desuèta* Sarg. (*C. brainerdii* × *punctata*)
‡*Crataègus* ×*dispérma* Ashe, (*C. crus-galli* × *punctata*)
‡*Crataègus* ×*dívida* Sarg., see *C.* ×*laneyi* Sarg.
*Crataègus* ×*durobrivénsis* Sarg. (*C. pruinosa* × *punctata*)
*Crataègus* ×*evansiàna* Sarg., (*C. flava* × *viridis*)
‡*Crataègus* ×*fretàlis* Sarg., see C. ×*lucorum* Sarg.
*Crataègus* ×*glareòsa* Ashe (*C. pruinosa* × *succulenta*)
*Crataègus* ×*haemocárpa* Ashe (*C. flabellata* × *pruinosa*)
‡*Crataègus* ×*hirtiflòra* Sarg., see *C.* ×*lettermanii* Sarg.
*Crataègus* ×*illecebròsa* Sarg. (*C. coccinea* × *coccinioides*)
*Crataègus* ×*immànis* Ashe (*C. chrysocarpa* × *pruinosa*)
*Crataègus* ×*improvìsa* Sarg. (*C. brainerdii* × *coccinea*)
‡†*Crataègus* ×*incaèdua* Sarg. (*C. calpodendron* × *punctata*)
‡†*Crataègus* ×*integrilòba* Sarg. (*C. punctata* × *succulenta*)
‡*Crataègus* ×*kellermánii* Sarg., see *C.* ×*durobrivensis* Sarg.
‡†*Crataègus* ×*kellóggii* Sarg. (*C. chrysocarpa* × *mollis*)
*Crataègus* ×*kénnedyi* Sarg. (*C. brainerdii* × *pruinosa*)
‡†*Crataègus* ×*kingstonénsis* Sarg. (*C. brainerdii* × *coccinioides*)
‡*Crataègus* ×*laetífica* Sarg., see *C.* ×*persimilis* Sarg.
*Crataègus* ×*làneyi* Sarg. (*C. brainerdii* × *succulenta*)
*Crataègus* ×*laurentiàna* Sarg. (*C. chrysocarpa* × *succulenta*)
*Crataègus* ×*lettermánii* Sarg. (*C. mollis* × *punctata*)
‡*Crataègus* ×*lócuples* Sarg. (*C. mollis* × *pruinosa*)
‡†*Crataègus* ×*lucòrum* Sarg. (*C. coccinea* × *flabellata*)
‡†*Crataègus* ×*mansfieldénsis* Sarg. (*C. coccinea* × *punctata*)
‡†*Crataègus* ×*nítida* (Engelm.) Sarg. (*C. crus-galli* × *viridis*)
*Crataègus* ×*nitídula* Sarg. (*C. punctata* × *rotundifolia*)
‡†*Crataègus* ×*nótha* Sarg. (*C. marshallii* × *mollis*)

‡†*Crataègus* ×*nùda* Sarg., see *C.* ×*persimilis* Sarg.
*Crataègus* ×*persímilis* Sarg. (*C. crus-galli* × *succulenta*)
*Crataègus* ×*pilòsa* Sarg. (*C. intricata* × *pruinosa*)
*Crataègus* ×*pùberis* Sarg. (*C. flabellata* × *punctata*)
*Crataègus* ×*randiàna* Sarg. (*C. brainerdii* × *flabellata*)
‡†*Crataègus* ×*silvéstris* Sarg., see *C.* ×*durobrivensis* Sarg.
‡*Crataègus* ×*simulàta* Sarg. (*C. calpodendron* × *crus-galli*)
‡*Crataègus* ×*vailiae* Britton (*C. calpodendron* × *uniflora*)
*Crataègus* ×*wébsteri* Sarg. (*C. brainerdii* × *calpodendron*)
‡*Crataègus* ×*whítakeri* Sarg. (*C. calpodendron* × *mollis*)

*Crataegus abbreviata*, see **C. viridis**
*Crataegus acutifolia*, see **C. crus-galli**

**Crataègus aestivàlis** (Walt.) Torr. & Gray **May hawthorn‡**
*Mespilus aestivalis* Walt., Fl. Car. 148. 1788.
‡†*Crataegus aestivalis* (Walt.) Torr. & Gray, Fl. No. Am. 1: 468. 1840. (Series Aestivales)

DERIVATION—Of summer.

OTHER COMMON NAMES—apple hawthorn, shining hawthorn.

RANGE—Coastal Plain from s. N.C. sw. to n. and nw. Fla., s. Ala., and s. Miss. Atlas vol. 6, map 1.

*Crataegus amicalis*, see **C. viridis**
*Crataegus apiifolia*, see **C. marshallii**
*Crataegus aprica*, see **C. flava**
*Crataegus arborescens*, see **C. viridis**
*Crataegus arnoldiana*, see **C. mollis**
*Crataegus ashei*, see **C. harbisonii**
*Crataegus basilica*, see **C. flabellata**
*Crataegus beata*, see **C. flabellata**

**Crataègus berberifòlia** Torr. & Gray **barberry hawthorn**
‡†*Crataegus berberifolia* Torr. & Gray, Fl. No. Am. 1: 469. 1840. (Series Crus-gallianae)
*Crataegus crus-galli* var. *berberifolia* (Torr. & Gray) Sarg., Gard. and Forest 2: 424. 1889.
‡†*Crataegus engelmannii* Sarg., Bot. Gaz. 31: 2. 1901.
‡†*Crataegus edita* Sarg., Bot. Gaz. 33: 110. 1902.
‡†*Crataegus fecunda* Sarg., Bot. Gaz. 33: 111. 1902.
‡†*Crataegus crocina* Beadle, Biltmore Bot. Stud. 1: 132. 1902.
‡†*Crataegus edura* Beadle, Biltmore Bot. Stud. 1: 128. 1902.
‡†*Crataegus fera* Beadle, Biltmore Bot. Stud. 1: 128. 1902.
‡†*Crataegus tersa* Beadle, Biltmore Bot. Stud. 1: 129. 1902.
‡*Crataegus torva* Beadle, Biltmore Bot. Stud. 1: 130. 1902.

DERIVATION—Barberryleaf.

OTHER COMMON NAMES—bigtree hawthorn, barberryleaf hawthorn‡.

RANGE—Miss. Valley region from s. Ill. w. to se. Kans., s. to n. c. and e. Tex., e. to Miss., and n. to w. Ky. Atlas vol. 6, map 2.

*Crataegus biltmoreana*, see **C. intricata**
*Crataegus blanda*, see **C. viridis**
*Crataegus blothra*, see **C. coccinea**
*Crataegus boyntonii*, see **C. intricata**

**Crataègus brachyacántha** Sarg. & Engelm. **blueberry hawthorn‡**
‡†*Crataegus brachyacantha* Sarg. & Engelm. in Engelm., Bot. Gaz. 7: 128. 1882. (Series Brevispinae)

DERIVATION—Short-spine.

OTHER COMMON NAMES—blue haw, pommette bleue.

RANGE—Coastal Plain in sw. Ga., Ala., La., sw. Ark., and e. Tex. Atlas vol. 6, map 3.

*Crataegus brachyphylla*, see **C. mollis**

**Crataègus brainérdii** Sarg. **Brainerd hawthorn**

‡*Crataegus brainerdii* Sarg., Rhodora 3: 27. 1901; "*brainerdi.*" (Series Brainerdianae)

†*Crataegus scabrida* Sarg., Rhodora 3: 29. 1901.

‡*Crataegus coleae* Sarg., Trees and Shrubs 1: 7, pl. 4. 1902.

‡*Crataegus dunbarii* Sarg., Proc. Rochester Acad. Sci. 4: 126. 1903.

‡*Crataegus macauleyae* Sarg., Proc. Rochester Acad. Sci. 4: 130. 1903.

DERIVATION—Named for its discoverer, Ezra Brainerd (1844-1924), American botanist and president of Middlebury College.

RANGE—N.S., Maine, and s. Que., w. to s. Ont. and Mich., s. to Ohio, and e. to Pa., N.Y., and Conn. Recorded from mts. of w. N.C. Atlas vol. 6, map 4.

HYBRIDIZES WITH: *Crataegus calpodendron* (*C.* ×*websteri* Sarg.); *C. chrysocarpa* (*C.* ×*ideae* Sarg.); *C. coccinea* (*C.* ×*improvisa* Sarg.); *C. coccinioides* (‡†*C.* ×*kingstonensis* Sarg.); *C. flabellata* (*C.* ×*randiana* Sarg., *C.* ×*rubrocarnea* Sarg.); *C. pruinosa* (*C.* ×*kennedyi* Sarg.); *C. punctata* (*C.* ×*desueta* Sarg., *C.* ×*harryi* Sarg., *C.* ×*shirleyensis* Sarg.); *C. succulenta* (*C.* ×*laneyi* Sarg., ‡*C.* ×*divida* Sarg.).

*Crataegus brumalis*, see **C. flabellata**
*Crataegus buckleyi*, see **C. intricata**
*Crataegus bushii*, see **C. crus-galli**

**Crataègus calpodéndron** (Ehrh.) Medic. **pear hawthorn‡**

†?*Crataegus tomentosa* L., Sp. Pl. 476. 1753; in part?; *nom. ambig.*

*Mespilus calpodendron* Ehrh., Beitr. Naturk. 2: 67. 1788.

‡†*Crataegus calpodendron* (Ehrh.) Medic., Gesch. Bot. 83. 1793. (Series Macracanthae)

DERIVATION—Urn-tree, referring to the shape of the fruit.

OTHER COMMON NAMES—pear haw†, pear thorn.

RANGE—N.Y. and s. Ont., w. to Wis. and Minn., s. to Iowa, se. Nebr., and e. Tex., e. to Ga., and n. to w. N.C., Va., and N.J. Atlas vol. 6, map 6.

REFERENCE—Palmer, Ernest J. J. Arnold Arbor. 19: 287-289. 1938.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*websteri* Sarg.); *C. crus-galli* (‡*C.* ×*simulata* Sarg.); *C. mollis* (‡*C.* ×*whitakeri* Sarg.); *C. punctata* (‡†*C.* ×*incaedua* Sarg.); *C. uniflora* (‡*C.* ×*vailiae* Britton).

*Crataegus canadensis*, see **C. mollis**
*Crataegus canbyi*, see **C. crus-galli**
*Crataegus cherokeensis*, see **C. crus-galli**

**Crataègus chrysocárpa** Ashe **fireberry hawthorn‡**

†*Crataegus rotundifolia* Moench, Verz. Ausl. Bäume Staud. Weiss. 29, pl. 1. 1785. Non *C. rotundifolia* Lam., Encycl. Méth. Bot. 1: 84. 1783.

‡*Crataegus chrysocarpa* Ashe, N.C. Agric. Exp. Stn. Bull. 175: 110. 1900. (Series Rotundifoliae)

‡†*Crataegus margaretta* Ashe, J. Elisha Mitchell Sci. Soc. 16: 72. 1900.

‡†?*Crataegus jonesiae* Sarg., Bot. Gaz. 31: 14. 1901.

*Crataegus piperi* Britton, Torreya 1: 55. 1901.

‡*Crataegus dodgei* Ashe, J. Elisha Mitchell Sci. 19: 26. 1903.

‡*Crataegus irrasa* Sarg., Rhodora 5: 116. 1903.

‡*Crataegus oakesiana* Eggl., Torreya 7: 35. 1907.

*Crataegus chrysocarpa* var. *piperi* (Britton) Kruschke, Milwaukee Public Mus. Publ. Bot. 3: 163. 1965.

‡?*Crataegus sicca* Sarg., Mo. Bot. Gard. Ann. Rep. 19: 101. 1908.

DERIVATION—Golden-fruit, the fruit rarely yellow.

OTHER COMMON NAMES—roundleaf hawthorn, golden-fruit hawthorn.

RANGE—Nfld., N.S., Que., and Maine, w. to Ont., Sask., and Alta., s. in mts. to Mont., ne. Wyo., and n. Colo., also from S. Dak. and Minn. s. to Mo., e. to W. Va. and Va., and n. to Pa., N.Y., and Mass. Atlas vol. 3, map 57; vol. 6, map 5.

The name *Crataegus rotundifolia* Moench, which a few authors have

adopted, must be rejected as a later homonym.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*ideae* Sarg.); *C. flabellata* (*C.* ×*densiflora* Sarg.); *C. mollis* (*C.* ×*kelloggii* Sarg.); *C. pruinosa* (*C.* ×*immanis* Ashe, *C.* ×*rotundata* Sarg.); *C. punctata* (*C.* ×*nitidula* Sarg., *C.* ×*neobaxteri* Sarg.); *C. succulenta* (*C.* ×*laurentiana* Sarg.).

**Crataegus coccínea** L. **scarlet hawthorn**‡

*Crataegus coccinea* L., Sp. Pl. 476. 1753. (Series Coccineae)
‡†*Crataegus holmesiana* Ashe, J. Elisha Mitchell Sci. Soc. 16: 78. 1900.
‡†*Crataegus pedicellata* Sarg., Bot. Gaz. 31: 226. 1901.
‡†*Crataegus pringlei* Sarg., Rhodora 3: 21. 1901.
‡†*Crataegus pennsylvanica* Ashe, Carnegie Mus. Ann. 1: 394. 1902.
‡*Crataegus tortilis* Ashe, J. Elisha Mitchell Sci. Soc. 18(1): 19. 1902.
†*Crataegus ellwangeriana* Sarg., Bot. Gaz. 33: 118. 1902.
‡*Crataegus putnamiana* Sarg., J. Arnold Arbor. 4: 102. 1923.
‡†*Crataegus hillii* Sarg., Bot. Gaz. 35: 384. 1903.
*Crataegus blothra* Laughlin, Man. Hawth. Cook DuPage Cos. Ill. 49, figs. 1956.
*Crataegus corusca* var. *hillii* f. *blothra* (Laughlin) Kruschke, Milwaukee Pub. Mus. Publ. Bot. 3: 187. 1965.

DERIVATION—Deep red or scarlet.

OTHER COMMON NAME—scarlet haw†.

RANGE—Maine, s. Que., and s. Ont., w. to Mich., Wis., and se. Minn., s. to Iowa and Ill., and e. to Ind., n. Ky., W. Va., Pa., and N.Y. Also local s. in mts. of w. Va. and w. N.C. Atlas vol. 6, map 7.

REFERENCE—Palmer, Ernest J. J. Arnold Arbor. 19: 285-287. 1938.

The name *Crataegus coccinea* L., formerly rejected as ambiguous, has been restored to this species.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*improvisa* Sarg.); *C. coccinioides* (*C.* ×*illecebrosa* Sarg.); *C. dilatata* (*C.* ×*aulica* Sarg.); *C. flabellata* (‡†*C.* ×*lucorum* Sarg., ‡*C.* ×*fretalis* Sarg., ‡†*C.* ×*apiomorpha* Sarg., *C.* ×*vittata* Ashe, *C.* ×*merita* Sarg., *C.* ×*xanthophylla* Sarg., *C.* ×*knieskerniana* Sarg.); *C. mollis* (‡†*C.* ×*anomala* Sarg., ‡†*C.* ×*corusca* Sarg.); *C. punctata* (†*C.* ×*mansfieldensis* Sarg.). †*C. ellwangeriana* Sarg., listed here and in the 1953 checklist as a synonym, may be the hybrid *C. coccinea* × *mollis*, according to Cronquist *(35)*.

**Crataègus coccinioìdes** Ashe **Kansas hawthorn**‡

‡†*Crataegus coccinioides* Ashe, J. Elisha Mitchell Sci. Soc. 16: 74. 1900. (Series Dilatatae)

DERIVATION—Resembling *Crataegus coccinea*, scarlet hawthorn.

RANGE—S. Ill., Mo., se. Kans., ne. Okla., and n. Ark. Atlas vol. 6, map 9.

HYBRIDIZES WITH: *Crataegus coccinea* (*C.* ×*illecebrosa* Sarg.).

*Crataegus cocksii*, see **C. crus-galli**
*Crataegus coleae*, see **C. brainerdii**
*Crataegus collina*, see **C. punctata**

**Crataègus columbiàna** Howell **Columbia hawthorn**‡

‡*Crataegus columbiana* Howell, Fl. Northwest. Am. 1: 163. 1898. (Series Rotundifoliae)
‡*Crataegus williamsii* Eggl., Bull. Torrey Bot. Club 36: 641. 1909.
*Crataegus chrysocarpa* var. *piperi* (Britton) Kruschke, Milwaukee Public Mus. Publ. Bot. 3: 163. 1965.

DERIVATION—From the Columbia River and tributaries east of the Cascades, where it was discovered.

RANGE—From extreme sw. Sask. (Cypress Hills) w. to c. B.C., s. to Oreg. and s. Mont. Atlas vol. 3, maps 58-N, 58-NW; vol. 6, map 8.

*Crataegus compta*, see **C. flabellata**
*Crataegus crocina*, see **C. berberifolia**

**Crataègus crus-gálli** L. **cockspur hawthorn**†

‡†*Crataegus crus-galli* L., Sp. Pl. 476. 1753; "*Crus galli*." (Series Crus-gallianae)
*Mespilus fontanesiana* Spach, Hist. Nat. Vég. Phanér. 2: 58. 1834.
‡*Crataegus fontanesiana* (Spach) Steud., Nom. Bot. ed. 2, 1: 432. 1840.
‡†*Crataegus harbisonii* Beadle, Bot. Gaz. 28: 413. 1899.
‡†*Crataegus mohrii* Beadle, Bot. Gaz. 28: 416. 1899.
‡†*Crataegus acutifolia* Sarg., Bot. Gaz. 31: 217. 1901.
‡†*Crataegus canbyi* Sarg., Bot. Gaz. 31: 3. 1901.
‡†*Crataegus signata* Beadle, Biltmore Bot. Stud. 1: 42. 1901.
‡?*Crataegus pyracanthoides* Beadle, Biltmore Bot. Stud. 1: 136. 1902.
‡†*Crataegus regalis* Beadle, Biltmore Bot. Stud. 1: 134. 1902.
‡†*Crataegus bushii* Sarg., Bot. Gaz. 33: 109. 1902.
‡†*Crataegus palmeri* Sarg., Trees and Shrubs 1: 57, pl. 29. 1903.
‡*Crataegus tantula* Sarg., Mo. Bot. Gard. Ann. Rep. 19: 49. 1908.
‡*Crataegus vallicola* Sarg., Mo. Bot. Gard. Ann. Rep. 19: 78. 1908.
*Crataegus olivacea* Sarg., Proc. Acad. Nat. Sci. Phila. 62: 153. 1910.
‡*Crataegus schizophylla* Eggl., Bull. Torrey Bot. Club 38: 243. 1911.
‡†*Crataegus triumphalis* Sarg., Trees and Shrubs 2: 236. 1913.
‡*Crataegus palliata* Sarg., Trees and Shrubs 2: 236. 1913.
‡†?*Crataegus uniqua* Sarg., Trees and Shrubs 3: 237. 1913.
‡†?*Crataegus cocksii* Sarg., J. Arnold Arbor. 1: 248. 1920.
†*Crataegus cherokeensis* Sarg., J. Arnold Arbor. 3: 1. 1922.
‡†*Crataegus subpilosa* Sarg., J. Arnold Arbor. 3: 6. 1922.
‡†*Crataegus ohioensis* Sarg., J. Arnold Arbor. 3: 183. 1922.
‡*Crataegus hannibalensis* Palmer, J. Arnold Arbor. 16: 353, fig. 1. 1935.
‡*Crataegus permixta* Palmer, Brittonia 5: 483. 1946.

DERIVATION—cock's spur, from the long spines.

OTHER COMMON NAMES—hog-apple, cockspur-thorn†, Newcastle-thorn.

RANGE—S. Que., Vt., and s. Ont., w. to s. Mich., s. Wis., and Iowa, s. to e. Kans. and n. c. and e. Tex., e. to n. Fla. and Ga., and n. to Mass. Introduced ne. to Maine. Atlas vol. 6, map 10.

HYBRIDIZES WITH: *Crataegus calpodendron* (‡*C.* ×*simulata* Sarg.); *C. punctata* (‡*C.* ×*disperma* Ashe, *C.* ×*collicola* Ashe, ‡*C.* ×*danielsii* Palmer); *C. succulenta* (*C.* ×*persimilis* Sarg., ‡*C.* ×*laetifica* Sarg., ‡†*C.* ×*nuda* Sarg.); *C. viridis* (‡†*C.* ×*nitida* (Engelm.) Sarg).

**Crataègus dilatàta** Sarg. **broadleaf hawthorn**

‡†*Crataegus dilatata* Sarg., Bot. Gaz. 31: 9. 1901. (Series Dilatatae)
*Crataegus coccinioides* Ashe var. *dilatata* (Sarg.) Eggl., Rhodora 10: 81. 1908.

DERIVATION—Dilated, widened, or spread out, referring to the broad leaves.

OTHER COMMON NAME—ample-leaf hawthorn.

RANGE—S. Que. and s. Ont. s. to N.Y., Vt., N.H., Mass., Conn., and R.I. Atlas vol. 6, map 11.

HYBRIDIZES WITH: *Crataegus coccinea* (*C.* ×*aulica* Sarg.).

*Crataegus disjuncta*, see **C. pruinosa**
*Crataegus dispessa*, see **C. mollis**
*Crataegus dodgei*, see **C. chrysocarpa**

**Crataègus douglásii** Lindl. **black hawthorn**‡

*Crataegus punctata* ß *brevispina* Dougl. ex Hook., Fl. Bor. Am. 1: 201. 1832.
‡†*Crataegus douglasii* Lindl., Edwards's Bot. Reg. 21: No. 1810, pl. 1810. 1835. (Series Douglasianae)
‡†*Crataegus rivularis* Nutt. in Torr. & Gray, Fl. No. Am. 1: 464. 1840.
*Crataegus douglasii* var. *suksdorfii* Sarg., Bot. Gaz. 44: 65. 1907.
*Crataegus suksdorfii* (Sarg.) Kruschke, Milwaukee Public Mus. Publ. Bot. 3: 163. 1965.

DERIVATION—Named for its discoverer, David Douglas (1798-1834), Scotch botanical explorer.

OTHER COMMON NAMES—Douglas hawthorn, river hawthorn‡.

RANGE—Local in s. and se. Alaska, from B.C. s. to c. Calif., e. mostly in mts. to N. Mex., and extreme nw. Tex., and n. to e. Mont. and s. Sask. Also local near Lake Superior in ne. Minn., n. Mich., and Ont. Atlas vol. 3, maps 59-N, 59-NW; vol. 6, map 12.

*Crataegus dunbarii*, see **C. brainerdii**
*Crataegus edita*, see **C. berberifolia**
*Crataegus edura*, see **C. berberifolia**
*Crataegus ellwangeriana*, see **C. coccinea**
*Crataegus engelmannii*, see **C. berberifolia**
*Crataegus enucleata*, see **C. viridis**

**Crataègus erythrópoda** Ashe — **Cerro hawthorn**‡

‡*Crataegus erythropoda* Ashe, N.C. Agric. Exp. Stn. Bull. 175: 113. 1900. (Series Douglasianae)

OTHER COMMON NAME—manzana de puya larga (Spanish).

RANGE—Mts. of s. Wyo., c. and w. Colo., n. N. Mex., and c. Ariz. Atlas vol. 3, map 60; vol. 6, map 13.

*Crataegus fastosa*, see **C. punctata**
*Crataegus fecunda*, see **C. berberifolia**
*Crataegus fera*, see **C. berberifolia**
*Crataegus filipes*, see **C. flabellata**

**Crataègus flabellàta** (Bosc) K. Koch — **fanleaf hawthorn**‡

*Mespilus flabellata* Bosc. Desf. Tab. l'Ecole 2: 271. 1815.
‡*Crataegus flabellata* (Bosc) K. Koch, Gartenb. Preuss. Verh. Ver. Beförd, Ser. 2, 1: 240. 1853. (Series Tenuifoliae)
‡*Crataegus macrosperma* Ashe, J. Elisha Mitchell Sci. Soc. 16: 73. 1900.
*Crataegus roanensis* Ashe, N.C. Agric. Exp. Stn. Bull. 175: 114. 1900.
‡*Crataegus brumalis* Ashe, Carnegie Mus. Ann. 1: 393. 1902.
‡*Crataegus populnea* Ashe, Carnegie Mus. Ann. 1: 395. 1902.
‡†*Crataegus basilica* Beadle, Biltmore Bot. Stud. 1: 125. 1902.
‡*Crataegus iracunda* Beadle, Biltmore Bot. Stud. 1: 124. 1902.
‡*Crataegus beata* Sarg., Proc. Rochester Acad. Sci. 4: 102. 1903.
‡*Crataegus compta* Sarg., Proc. Rochester Acad. Sci. 4: 102. 1903.
‡*Crataegus filipes* Ashe, J. Elisha Mitchell Sci. Soc. 19: 18. 1903.
‡*Crataegus gravis* Ashe, J. Elisha Mitchell Sci. Soc. 20: 49. 1904.
*Crataegus grayana* Eggl., Rhodora 10: 80. 1908.

DERIVATION—Fanlike, referring to the leaves.

RANGE—Nfld., N.S., s. Que., and Maine, w. to s. Ont., Mich., and Minn., s. to Ill. and La., and e. to Ga. Atlas vol. 6, map 14.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*randiana* Sarg., *C. rubrocarnea* Sarg.); *C. chrysocarpa* (*C.* ×*densiflora* Sarg.); *C. coccinea* (‡†*C.* ×*lucorum* Sarg., ‡†*C.* ×*fretalis* Sarg., ‡†*C.* ×*apiomorpha* Sarg., *C.* ×*vittata* Ashe, *C.* ×*merita* Sarg., *C.* ×*xanthophylla* Sarg., *C.* ×*knieskerniana* Sarg.); *C. pruinosa* (*C.* ×*haemocarpa* Ashe, *C.* ×*media* Sarg., *C.* ×*formosa* Sarg.); *C. punctata* (*C.* ×*puberis* Sarg.).

**Crataègus flàva** Ait. — **yellow hawthorn**‡

‡†*Crataegus flava* Ait., Hort. Kew. 2: 169. 1789. (Series Flavae)
‡†*Crataegus aprica* Beadle, Bot. Gaz. 30: 335. 1900.
‡†*Crataegus senta* Beadle, Bot. Gaz. 30: 341. 1900.
‡†*Crataegus floridana* Sarg., Bot. Gaz. 33: 124. 1902.
‡*Crataegus meridiana* Beadle, Biltmore Bot. Stud. 1: 115. 1902.
‡†*Crataegus recurva* Beadle, Biltmore Bot. Stud. 1: 106. 1902.

DERIVATION—Yellow, from the fruit color.

OTHER COMMON NAME—summer haw.

RANGE—Va. sw. to n. Fla., Miss., and e. Tenn. Atlas vol. 6, map 16.

HYBRIDIZES WITH: *Crataegus viridis* (*C.* ×*evansiana* Sarg.).

*Crataegus floridana*, see **C. flava**
*Crataegus fontanesiana*, see **C. crus-galli**
*Crataegus gattingeri*, see **C. pruinosa**
*Crataegus glabriuscula*, see **C. viridis**
*Crataegus gravis*, see **C. flabellata**
*Crataegus grayana*, see **C. flabellata**

**Crataègus greggiàna** Eggl. — **Gregg hawthorn**‡

‡†*Crataegus greggiana* Eggl., Bull. Torrey Bot. Club 36: 511. 1909. (Series Molles)

DERIVATION—Josiah Gregg (1806-50), early American explorer in the

West, who collected plant specimens and who wrote Commerce of the Prairies.

RANGE—C. Tex. (Edwards Plateau) s. to ne. Mex. (Coah., N.L.). Atlas vol. 6, map 15.

*Crataegus hannibalensis*, see **C. crus-galli**

**Crataègus harbisónii** Beadle **Harbison hawthorn‡**

‡†*Crataegus harbisonii* Beadle, Bot. Gaz. 28: 413. 1899; "*harbisoni*." (Series Bracteatae)

‡†*Crataegus ashei* Beadle, Bot. Gaz. 30: 339. 1900.

DERIVATION—Thomas Grant Harbison (1862-1936), botanist of North Carolina, who collected the type specimen.

RANGE—Tenn., Ala., and Miss. Atlas vol. 6, map 17.

*Crataegus hillii*, see **C. coccinea**
*Crataegus holmesiana*, see **C. coccinea**
*Crataegus induta*, see **C. mollis**

**Crataègus intricàta** Lange **Biltmore hawthorn**

*Crataegus intricata* Lange, Bot. Tidsskr. 19: 264. 1895. (Series Intricatae)
‡*Crataegus biltmoreana* Beadle, Bot. Gaz. 28: 406. 1899.
‡†*Crataegus boyntonii* Beadle, Bot. Gaz. 28: 409. 1899.
‡*Crataegus rubella* Beadle, Bot. Gaz. 30: 344. 1900.
‡*Crataegus buckleyi* Beadle, Biltmore Bot. Stud. 1: 131. 1902.
‡*Crataegus padifolia* Sarg., Trees and Shrubs 2: 75, pl. 35. 1908.
‡*Crataegus ouachitensis* Palmer, J. Arnold Arbor. 7: 124. 1926.

DERIVATION—Entangled.

OTHER COMMON NAMES—thicket hawthorn, Allegheny hawthorn.

RANGE—N.H. and Vt., w. to s. Ont. and s. Mich., s. to Mo., Ark., and se. Okla., and e. to Ga. and N.C. Atlas vol. 6, map 18.

This species was omitted from the 1953 checklist as a shrub. However, the tree species cited here as synonyms have been united under this older name.

HYBRIDIZES WITH: *Crataegus pruinosa* (*C.* ×*pilosa* Sarg., *C.* ×*littoralis* Sarg.).

*Crataegus invisa*, see **C. mollis**
*Crataegus iracunda*, see **C. flabellata**
*Crataegus irrasa*, see **C. chrysocarpa**
*Crataegus jesupii*, see **C. pruinosa**
*Crataegus jonesiae*, see **C. chrysocarpa**

**Crataègus lacrimàta** Small **Pensacola hawthorn‡**

‡†*Crataegus lacrimata* Small, Torreya 1: 97. 1901. (Series Flavae)

DERIVATION—Of tears, referring to the drooping or "weeping" branches.

OTHER COMMON NAMES—weeping hawthorn, sandhill hawthorn, yellow hawthorn.

RANGE—Nw. Fla. (Walton to Escambia Cos.). Atlas vol. 6, map 19.

*Crataegus lanuginosa*, see **C. mollis**
*Crataegus laxiflora*, see **C. succulenta**
*Crataegus leiophylla*, see **C. pruinosa**
*Crataegus leucantha*, see **C. succulenta**
*Crataegus limaria*, see **C. mollis**
*Crataegus macracantha*, see **C. succulenta**
*Crataegus macauleyae*, see **C. brainerdii**
*Crataegus mackenzii*, see **C. pruinosa**
*Crataegus macrosperma*, see **C. flabellata**
*Crataegus margaretta*, see **C. chrysocarpa**

**Crataègus marshállii** Eggl. **parsley hawthorn‡**

*Mespilus apiifolia* Marsh., Arbustr. Am. 89. 1785.
†*Crataegus apiifolia* Michx., Fl. Bor.-Am. 1: 287. 1803. Non *C. apiifolia* Medic., Gesch. Bot. 83. 1793.

‡*Crataegus marshallii* Eggl., Rhodora 10: 79. 1908. (Series Apiifoliae)

DERIVATION—Named for Humphry Marshall (1722-1801), American botanist who first described it.

OTHER COMMON NAME—parsley-leaf hawthorn.

RANGE—Coastal Plain mostly, from se. Va. s. to c. Fla. and w. to e. Tex., and n. in Miss. Valley to se. Okla., se. Mo., and w. Tenn. Atlas vol. 6, map 20.

HYBRIDIZES WITH: *Crataegus mollis* (‡†*C.* ×*lacera* Sarg., ‡†*C.* ×*notha* Sarg.).

*Crataegus meridiana*, see **C. flava**
*Crataegus mohrii*, see **C. crus-galli**

**Crataègus móllis** Scheele **downy hawthorn‡**

*Crataegus coccinea* ϵ ? *mollis* Torr. & Gray, Fl. No. Am. 1: 465. 1840.
‡†*Crataegus mollis* Scheele, Linnaea 21: 569. 1848. (Series Molles)
‡†*Crataegus submollis* Sarg., Bot. Gaz. 31: 7. 1901.
‡†*Crataegus canadensis* Sarg., Rhodora 3: 73. 1901.
‡†*Crataegus arnoldiana* Sarg., Bot. Gaz. 31: 221. 1901.
‡†*Crataegus lanuginosa* Sarg., Trees and Shrubs 1: 113, pl. 57. 1903.
‡†*Crataegus induta* Sarg., Trees and Shrubs 1: 115, pl. 58. 1903.
‡†*Crataegus dispessa* Ashe, J. Elisha Mitchell Sci. Soc. 19(1): 17. 1903.
‡†*Crataegus limaria* Sarg., Trees and Shrubs 2: 147, pl. 161. 1911.
†*Crataegus invisa* Sarg., Trees and Shrubs 2: 147, pl. 160. 1911.
‡†*Crataegus noelensis* Sarg., J. Arnold Arbor. 1: 253. 1920.
‡†*Crataegus brachyphylla* Sarg., J. Arnold Arbor. 3: 8. 1922.
‡?*Crataegus ridgwayi* Sarg., J. Arnold Arbor. 6: 2. 1925.

DERIVATION—Soft, referring to the hairy foliage.

RANGE—N.S., s. Que., and Maine, w. to s. Ont., n. Mich., Minn., and se. N. Dak., s. to s. c. Tex., e. to Ala., and n. to W. Va. and N.Y. Atlas vol. 6, map 21.

HYBRIDIZES WITH: *Crataegus calpodendron* (‡*C.* ×*whitakeri* Sarg.); *C. chrysocarpa* (‡†*C.* ×*kelloggii* Sarg.); *C. coccinea* (‡†*C.* ×*anomala* Sarg., ‡†*C.* ×*corusca* Sarg.); *C. marshallii* (‡†*C.* ×*lacera* Sarg., ‡†*C.* ×*notha* Sarg.); *C. pruinosa* (‡*C.* ×*locuples* Sarg., *C.* ×*lecta* Sarg.); *C. punctata* (‡†*C.* ×*lettermanii* Sarg., ‡*C.* ×*hirtiflora* Sarg.).

CRATAÈGUS MONÓGYNA Jacq. ONESEED HAWTHORN‡

‡*Crataegus monogyna* Jacq., Fl. Austr. 3: 50, pl. 292, fig. 1. 1775. (Series Oxyacanthae)

DERIVATION—Having 1 ovary; from the usually single nutlet.

OTHER COMMON NAMES—English hawthorn, European hawthorn, singleseed hawthorn.

RANGE—Escaped from cultivation and naturalized locally from N.S., Que., Maine, and N.Y., w. to Minn., s. to Nebr. and Okla., and e. to N.C., also in Oreg. Native of Europe and w. Asia.

‡†CRATAÈGUS OXYACÁNTHA L. (Sp. Pl. 477. 1753), English hawthorn‡†, a related species, is cultivated in ne. and nw. U.S. Recorded as escaped but not naturalized. Native of Europe and n. Africa.

*Crataegus noelensis*, see **C. mollis**
*Crataegus oakesiana*, see **C. chrysocarpa**
*Crataegus ohioensis*, see **C. crus-galli**
*Crataegus olivacea*, see **C. crus-galli**

**Crataègus opàca** Hook. & Arn. **riverflat hawthorn‡**

‡†*Crataegus opaca* Hook. & Arn. in Hook., Comp. Bot. Mag. 1: 25. 1835. (Series Aestivales)

DERIVATION—Opaque.

OTHER COMMON NAMES—May hawthorn, May haw, apple haw.

RANGE—Coastal Plain of sw. Ala., Miss., La., s. Ark., and e. Tex. Atlas vol. 6, map 22.

*Crataegus opima*, see **C. pulcherrima**
*Crataegus ouachitensis*, see **C. intricata**
*Crataegus oxyacantha*, see note under **C. monogyna**
*Crataegus padifolia*, see **C. intricata**
*Crataegus palliata*, see **C. crus-galli**
*Crataegus palmeri*, see **C. crus-galli**
*Crataegus pausiaca*, see **C. punctata**
*Crataegus pedicellata*, see **C. coccinea**
*Crataegus pennsylvanica*, see **C. coccinea**
*Crataegus peoriensis*, see **C. punctata**
*Crataegus permixta*, see **C. crus-galli**

**Crataègus phaenopỳrum** (L. f.) Medic. **Washington hawthorn**‡
*Mespilus phaenopyrum* L. f., Sup. Pl. Syst. Veg. 254. 1781.
‡†*Crataegus phaenopyrum* (L. f.) Medic., Gesch. Bot. 84. 1793. (Series Cordatae)
‡†*Crataegus youngii* Sarg., J. Arnold Arbor. 4: 105. 1923.

DERIVATION—With the appearance of a pear. Other pronunciation—*Crataègus phaenópyrum.*

OTHER COMMON NAME—Washington-thorn†.

RANGE—Va. w. to Ky., s. Ill., and s. Mo., s. to Ark., and e. to Ala., n. Fla., and S.C. Planted and escaped from Ohio and Md. ne. to Mass. and naturalized locally. Atlas vol. 6, map 23.

At one time known as *Crataegus cordata* (Mill.) Ait., which is of uncertain identification.

*Crataegus piperi*, see **C. chrysocarpa**
*Crataegus platycarpa*, see **C. pruinosa**
*Crataegus populnea*, see **C. flabellata**
*Crataegus porteri*, see **C. pruinosa**
*Crataegus pringlei*, see **C. coccinea**

**Crataègus pruinòsa** (H. L. Wendl.) K. Koch **frosted hawthorn**‡
*Mespilus pruinosa* H. L. Wendl., Flora 6: 701. 1823.
‡†*Crataegus pruinosa* (H. L. Wendl.) K. Koch, Hort. Dendrol. 168. 1853. (Series Pruinosae)
‡*Crataegus gattingeri* Ashe, J. Elisha Mitchell Sci. Soc. 17(1): 12. 1900.
‡*Crataegus rugosa* Ashe, J. Elisha Mitchell Sci. Soc. 17(1): 5. 1900.
‡*Crataegus porteri* Britton, Bull. N.Y. Bot. Gard. 1: 448. 1900.
‡*Crataegus mackenzii* Sarg. in Mackenzie, Man. Fl. Jackson Co., Mo. 108. 1902.
‡*Crataegus disjuncta* Sarg., Trees and Shrubs 1: 109, pl. 55. 1903.
‡*Crataegus jesupii* Sarg., Rhodora 5: 61. 1903.
‡*Crataegus leiophylla* Sarg., Proc. Rochester Acad. Sci. 4: 99. 1903.
‡*Crataegus platycarpa* Sarg., Mo. Bot. Gard. Ann. Rep. 19: 92. 1908.

DERIVATION—With a frostlike bloom, referring to the fruit.

OTHER COMMON NAME—waxy-fruit thorn.

RANGE—Nfld., s. Que., and Maine, w. to s. Ont., n. Mich., and Wis., s. to se. Iowa, se. Kans., and e. Okla., and e. to Ark., Tenn., and N.C. Atlas vol. 6, map 24.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*kennedyi* Sarg.); *C. chrysocarpa* (*C.* ×*immanis* Ashe, *C.* ×*rotundata* Sarg.); *C. flabellata* (*C.* ×*haemocarpa* Ashe, *C.* ×*media* Sarg., *C.* ×*formosa* Sarg.); *C. intricata* (*C.* ×*pilosa* Sarg., *C.* ×*littoralis* Sarg.); *C. mollis* (‡*C.* ×*locuples* Sarg., *C.* ×*lecta* Sarg.); *C. punctata* (*C.* ×*durobrivensis* Sarg., ‡†*C.* ×*silvestris* Sarg., ‡*C.* ×*kellermanii* Sarg.); *C. succulenta* (*C.* ×*glareosa* Ashe, *C.* ×*membranacea* Sarg., *C.* ×*spatiosa* Sarg., *C.* ×*chadsfordiana* Sarg., *C.* ×*putata* Sarg.).

**Crataègus pulchérrima** Ashe **beautiful hawthorn**
*Crataegus pulcherrima* Ashe, J. Elisha Mitchell Sci. Soc. 16: 77. 1900. (Series Pulcherrimae)
‡†*Crataegus opima* Beadle, Biltmore Bot. Stud. 1: 40. 1901.
‡†*Crataegus robur* Beadle, Biltmore Bot. Stud. 1: 69. 1902.

DERIVATION—Very beautiful.

RANGE—Sw. Ga., n. Fla., and s. Ala. Atlas vol. 6, map 25.

**Crataègus punctàta** Jacq. **dotted hawthorn**‡

‡†*Crataegus punctata* Jacq., Hort. Vindob. 1: 10, pl. 28. 1770. (Series Punctatae)
‡†*Crataegus collina* Chapm., Fl. South. U.S. ed. 2, Suppl. 2, 684. 1892.
‡†?*Crataegus peoriensis* Sarg., Bot. Gaz. 31: 55. 1901.
‡†?*Crataegus suborbiculata* Sarg., Rhodora 3: 72. 1901.
†?*Crataegus pausiaca* Ashe, Carnegie Mus. Ann. 1: 390. 1902.
‡†*Crataegus fastosa* Sarg., Trees and Shrubs 1: 61, pl. 31. 1903.
‡†*Crataegus verruculosa* Sarg., Man. Trees No. Am. 394, fig. 313. 1905.

DERIVATION—Dotted, referring to the fruits.

OTHER COMMON NAME—large-fruit thorn.

RANGE—Nfld., s. Que., and N.H., w. to s. Ont., n. and s. Mich., and e. Minn., s. to Mo., se. Kans., and e. Okla., and e. to Ark., Ga., and S.C. Atlas vol. 6, map 26.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*desueta* Sarg., *C.* ×*harryi* Sarg., *C.* ×*shirleyensis* Sarg.); *C. calpodendron* (‡†*C.* ×*incaedua* Sarg.); *C. chrysocarpa* (*C.* ×*nitidula* Sarg., *C.* ×*neobaxteri* Sarg.); *C. coccinea* (†*C.* ×*mansfieldensis* Sarg.); *C. crus-galli* (‡*C.* ×*disperma* Ashe, *C.* ×*collicola* Ashe, ‡*C.* ×*danielsii* Palmer); *C. flabellata* (*C.* ×*puberis* Sarg.); *C. mollis* (‡†*C.* ×*lettermanii* Sarg., ‡*C. hirtiflora* Sarg.); *C. pruinosa* (*C.* ×*durobrivensis* Sarg., ‡†*C.* ×*silvestris* Sarg., ‡*C.* ×*kellermannii* Sarg.); *C. succulenta* (‡†*C.* × *integriloba* Sarg., *C.* ×*mendiana* Sarg., ‡*C.* ×*celsa* Sarg., *C.* ×*ardua* Sarg.). †*C. pausiaca* Ashe, listed here and in the 1953 checklist as a synonym, may be the hybrid *C. crus-galli* × *punctata*, according to Cronquist (*35*).

*Crataegus putnamiana*, see **C. coccinea**
*Crataegus pyracanthoides*, see **C. crus-galli**
*Crataegus recurva*, see **C. flava**
*Crataegus regalis*, see **C. crus-galli**

**Crataègus reverchònii** Sarg. **Reverchon hawthorn**‡

‡*Crataegus reverchonii* Sarg., Trees and Shrubs 1: 55, pl. 28. 1903; "*reverchoni*." (Series Crus-gallianae)

DERIVATION—Julien Reverchon (1837-1905), Texan of French birth, who collected plants in Texas.

RANGE—S. Mo. and se. Kans., s. to sw. Okla., c. Tex., and Ark. Atlas vol. 6, map 28.

*Crataegus ridgwayi*, see **C. mollis**
*Crataegus rivularis*, see **C. douglasii**
*Crataegus roanensis*, see **C. flabellata**
*Crataegus robur*, see **C. pulcherrima**
*Crataegus rotundifolia*, see **C. chrysocarpa**
*Crataegus rubella*, see **C. intricata**
*Crataegus rugosa*, see **C. pruinosa**

**Crataègus saligna** Greene **willow hawthorn**‡

‡†*Crataegus saligna* Greene, Pittonia 3: 99. 1896. (Series Brevispinae)

DERIVATION—Of willow, from the slender drooping branches.

RANGE—Mts. of w. Colo. only. Atlas vol. 3, map 61; vol. 6, map 27.

*Crataegus scabrida*, see **C. brainerdii**
*Crataegus schizophylla*, see **C. crus-galli**
*Crataegus senta*, see **C. flava**
*Crataegus sicca*, see **C. chrysocarpa**
*Crataegus signata*, see **C. crus-galli**

**Crataègus spathulàta** Michx. **littlehip hawthorn**‡

‡†*Crataegus spathulata* Michx., Fl. Bor.-Am. 1: 288. 1803. (Series Microcarpae)

DERIVATION—Shaped like a spatula, or spoon-shaped, referring to the leaves.

OTHER COMMON NAMES—small-fruit hawthorn, pasture hawthorn.

RANGE—Va. w. to Tenn. and s. Mo., s. to se. Okla. and e. Tex., and e. to n. Fla. Atlas vol. 6, map 29.

*Crataegus submollis*, see **C. mollis**
*Crataegus suborbiculata*, see **C. punctata**
*Crataegus subpilosa*, see **C. crus-galli**

**Crataègus succulénta** Schrad. **fleshy hawthorn**‡

*Mespilus succulenta* Schrad. ex Sweet, Hort. Brit. ed. 2, 176. 1830; *nom. subnud.*
‡†*Crataegus succulenta* Schrad. ex Link, Grundr. Kraüt. Vorl. (Handb., Th. 2) 3: 78. 1831. (Series Macracanthae)
‡†*Crataegus macracantha* Lodd. ex Loud., Arb. Frut. Brit. 2: 819, fig. 572, pl. 105. 1838.
†*Crataegus laxiflora* Sarg., Bot. Gaz. 35: 400. 1903.
*Crataegus leucantha* Laughlin, Chicago Acad. Sci., Nat. Hist. Misc. 110: 1. 1952.

DERIVATION—Succulent, referring to the soft fruit.

OTHER COMMON NAMES—long-spine hawthorn, succulent hawthorn.

RANGE—N.S., P.E.I., s. Que., and Maine, w. to Ont., n. Mich., Minn., s. Man., and w. N. Dak., s. to Nebr. and Mo., e. to Tenn. and w. N.C., and n. to W. Va., Pa., and N.J. Also local in mts. of s. Mont., Wyo., Colo., and n. Utah and in Kans. Atlas vol. 3, map 62; vol. 6, map 31.

HYBRIDIZES WITH: *Crataegus brainerdii* (*C.* ×*laneyi* Sarg., †*C.* ×*divida* Sarg.); *C. chrysocarpa* (*C.* ×*laurentiana* Sarg.); *C. crus-galli* (*C.* ×*persimilis* Sarg., ‡*C.* ×*laetifica* Sarg., ‡†*C.* ×*nuda* Sarg.), *C. pruinosa* (*C.* ×*glareosa* Ashe, *C.* ×*membranacea* Sarg., *C.* ×*spatiosa* Sarg., *C.* ×*chadsfordiana* Sarg., *C.* ×*putata* Sarg); *C. punctata* (‡†*C.* ×*integriloba* Sarg., *C.* ×*menadiana* Sarg., ‡*C.* ×*celsa* Sarg., *C.* ×*ardua* Sarg.).

*Crataegus suksdorfii*, see **C. douglasii**
*Crataegus tantula*, see **C. crus-galli**
*Crataegus tersa*, see **C. berberifolia**

**Crataègus texàna** Buckl. **Texas hawthorn**‡

‡†*Crataegus texana* Buckl., Proc. Acad. Nat. Sci. Phila. 1861 [v. 13]: 454. 1862. (Series Molles)

DERIVATION—Of Texas.

RANGE—Se. and s. Tex, mostly near coast. Atlas vol. 6, map 30.

*Crataegus tomentosa*, see **C. calpodendron**
*Crataegus tortilis*, see **C. coccinea**
*Crataegus torva*, see **C. berberifolia**

**Crataègus tràcyi** Ashe ex Eggl. **Tracy hawthorn**‡

‡*Crataegus tracyi* Ashe ex Eggl., Bull. Torrey Bot. Club 36: 639. 1909. (Series Crus-gallianae)

DERIVATION—Samuel Mills Tracy (1847-1920), United States horticulturist, who collected the type specimen.

OTHER COMMON NAME—mountain hawthorn.

RANGE—C. Tex. (Edwards Plateau), Trans-Pecos Tex., and n. Coah., Mex. (Sierra del Carmen). Atlas vol. 3, map 63; vol. 6, map 32.

**Crataègus triflòra** Chapm. **threeflower hawthorn**‡

‡*Crataegus triflora* Chapm., Fl. South. U.S. ed. 2, Suppl. 2, 684. 1892. (Series Triflorae)

DERIVATION—Threeflower.

RANGE—Ga., Ala., and Miss. Atlas vol. 6, map 33.

*Crataegus triumphalis*, see **C. crus-galli**

**Crataègus uniflòra** Muenchh. **oneflower hawthorn**‡

‡*Crataegus uniflora* Muenchh., Hausvater 5: 147. 1770. (Series Parvifoliae)

DERIVATION—Oneflower.

OTHER COMMON NAME—dwarf hawthorn.

RANGE—N.Y. (Long Is.), N.J., and se. Pa., w. to s. Ohio, Ky., and s. Mo., s. to e. Okla. and e. Tex., and e. to n. Fla. Atlas vol. 6, map 34.

Generally a low shrub 2-5 ft (0.5-1.5 m) high but in n. Fla. sometimes a small tree 13-16 ft (4-5 m).

HYBRIDIZES WITH: *Crataegus calpodendron* (‡*C.* ×*vailiae* Britton).

*Crataegus uniqua*, see **C. crus-galli**
*Crataegus vallicola*, see **C. crus-galli**
*Crataegus verruculosa*, see **C. punctata**

**Crataègus víridis** L. **green hawthorn**‡
‡†*Crataegus viridis* L., Sp. Pl. 476. 1753. (Series Virides)
†*Crataegus arborescens* Ell., Sketch Bot. S.-Car. Ga. 1: 550. 1821.
‡†*Crataegus glabriuscula* Sarg., Bot. Gaz. 31: 235. 1901.
‡†*Crataegus blanda* Sarg., Bot. Gaz. 33: 121. 1902.
†*Crataegus amicalis* Sarg., Trees and Shrubs 2: 238. 1913.
†*Crataegus enucleata* Sarg., Trees and Shrubs 2: 239. 1913.
‡†*Crataegus abbreviata* Sarg., J. Arnold Arbor. 3: 187. 1922.

DERIVATION—Green.

OTHER COMMON NAME—southern hawthorn.

RANGE—Coastal Plain mostly, from Del., se. Md., and se. Va., s. to n. Fla., w. to e. Tex., and n. in Miss. Valley to e. Okla., se. Kans., Mo., s. Ill., and sw. Ind. Atlas vol. 6, map 35.

HYBRIDIZES WITH: *Crataegus crus-galli* (‡*C.* ×*nitida* (Engelm.) Sarg); *C. flava* (*C.* ×*evansiana* Sarg.).

*Crataegus williamsii*, see **C. columbiana**
*Crataegus youngii*, see **C. phaenopyrum**

‡CRESCÈNTIA CUJÉTE L. (Sp. Pl. 626. 1753; Family Bignoniaceae), calabash-tree (common calabash-tree‡), of Fla. is excluded as not native or naturalized. Collected at Key West by John Loomis Blodgett about 1840 but not found as a wild tree in Fla. in recent years. Planted in s. Fla. and Calif. Range—Bahamas through West Indies incl. P.R. and V.I. and from s. Mex. to Peru and Brazil, probably spread through cultivation. Reference—Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 5. 1976.

**Crossopétalum** P. Br. (Family Celastraceae) **crossopetalum**
‡*Crossopetalum* P. Br., Civ. Nat. Hist. Jam. 145, pl. 16, fig. 1. 1756.
†*Rhacoma* L., Syst. Nat. ed. 10: 896, 1361. 1759.

DERIVATION—Fringe-petal.

OTHER COMMON NAME—rhacoma.

The proposal to conserve *Rhacoma* L. (Little, Madroño 7: 246. 1944; Brittonia 7:46. 1949) was rejected (Taxon 8: 25. 1959; 10: 124. 1961.)

NUMBER OF SPECIES: Native trees (s. Fla.), 1; native shrubs (s. Fla.), 1; total, shrubs and small trees, tropical Am. from West Indies and Mex. to n. S. Am., about 20.

**Crossopétalum rhacòma** Crantz **Florida crossopetalum**‡
†*Rhacoma crossopetalum* L., Syst. Nat. ed. 10, 2: 896. 1759; "*crossopet.*"
‡*Crossopetalum rhacoma* Crantz, Inst. Rei Herbar. 2: 321. 1766.

DERIVATION—A Greek name meaning rags and used by Pliny for some Old World plant.

OTHER COMMON NAME—rhacoma.

RANGE—S. Fla. incl. Fla. Keys and pinelands of Dade Co., and local in w. Collier Co. From Bahamas through West Indies incl. P.R. and V.I. Apparently extinct in Bermuda. Also s. Mex., Colombia, and Venezuela. Atlas vol. 5, map 192.

**Cupània** L. (Family Sapindaceae) **cupania**
‡†*Cupania* L., Sp. Pl. 200. 1753; Gen. Pl. ed. 5, 93. 1754.

DERIVATION—Francis Cupani (1657-1710), Sicilian monk, physician, and botanist.

NUMBER OF SPECIES: Native trees (Fla. Keys), 1; P.R., 2 (1 also in V.I.); total, tropical Am. from Mex. to Argentina and West Indies, about 45.

**Cupània glàbra** Sw. **Florida cupania**‡

‡†*Cupania glabra* Sw., Nov. Gen. Sp. Pl. Prodr. 61. 1788.

DERIVATION—Glabrous, or hairless.

RANGE—Very rare and local in Lower Fla. Keys (Big Pine, Johnson, and perhaps extinct on Summerland), not on s. Fla. mainland. Also Cuba and Jamaica and from c. Mex. (Ver. to Sin.) s. to Costa Rica. Atlas vol. 5, map 193.

REFERENCE—Britton, N. L. Cupania on Pine Key, Florida. Torreya 1: 132. 1901.

Discovered near Key West about 1840 by John Loomis Blodgett and lost until rediscovered on Big Pine Key in 1921 by John Kunkel Small, according to the 1927 checklist (p. 197).

**Cupréssus** L. (Family Cupressaceae) **cypress**‡†

‡†*Cupressus* L., Sp. Pl. 1002. 1753; Gen. Pl. ed. 5. 435. 1754.

DERIVATION—Classical Greek and Latin name of Italian cypress, *Cupressus sempervirens* L.

REFERENCES—Gaussen, Henri. Les gymnospermes actuelles et fossiles. Les cupressacees. Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. II 2, fasc. 10. 1968.

Lawrence, Lorraine, Rita Bartschot, Eugene Zavarin, and James R. Griffin. Natural hybridization of Cupressus sargentii and C. macnabiana and the composition of the derived essential oils. Biochem. Syst. and Ecol. 2: 113-119. 1975.

Little, Elbert L., Jr. Varietal transfers in Cupressus and Chamaecyparis. Madroño 18: 161-167. 1966.

Little, Elbert L., Jr. Names of New World cypresses (Cupressus). Phytologia 20: 429-445, illus. 1970.

Posey, Clayton E., and James F. Goggans. Observations on species of cypress indigenous to the United States. Auburn Univ. Agric. Exp. Stn. Circ. 153, 190 p., illus. 1967.

Posey, Clayton E., and James F. Goggans. Variation in seeds and ovulate cones of some species and varieties of Cupressus. Auburn Univ. Agric. Exp. Stn. Circ. 160, 23p., illus. 1968.

Wolf, Carl B., and Wagener, Willis W. The New World cypresses. Aliso v. 1, 444 p., illus. 1948.

NUMBER OF SPECIES: Native trees, 7 (incl. 2 also in Mex.); Mex., 1 additional (also s. to Honduras); New World total, 8; Old World (Mediterranean region of s. Europe and n. Africa to China), about 7; total, about 15.

*Cupressus abramsiana*, see **C. goveniana** var. **abramsiana**

***Cupréssus arizónica** Greene **Arizona cypress**‡†

‡†*Cupressus arizonica* Greene, Bull. Torrey Bot. Club 9: 64. 1882.

*Cupressus arizonica* var. *bonita* Lemm., Handb. W.-Am. Cone-Bearers, ed. 3, 76. 1895.

RANGE—Rare and local in mts. from Trans-Pecos Tex. (Chisos Mts.) w. to sw. N. Mex. (Cooks Peak), se. and c. Ariz., and s. Calif (San Diego and Kern Cos.). Also n. Mex. (n. B. Cal. Norte and ne. Son., e. to Dgo., Coah., Zac., and Tamps.). (5 vars. or closely related spp.) Atlas vol. 1, map 13-W.

The 4 varieties listed below have also been accepted as species. A fifth, *C. arizonica* var. *montana* (Wiggins) Little (*C. montana* Wiggins), San Pedro Mártir cypress, is confined to Sierra San Pedro Mártir, n. B. Cal. Norte, Mex.

**Cupréssus arizónica** Greene var. **arizónica** **Arizona cypress (typical)**

DERIVATION—Of Arizona, where it was first collected.

OTHER COMMON NAME—Arizona rough cypress; cedro, cedro blanco (Spanish).

RANGE—Rare and local in mts. from Trans-Pecos Tex. (Chisos Mts.) w. to sw. N. Mex. (Cooks Peak), and se. Ariz. Also n. Mex. (ne. Son. e. to Dgo., Coah., Zac., and Tamps.). Atlas vol. 1, map 13-W (A).

**Cupréssus arizónica** var. **glàbra** (Sudw.) Little **Arizona smooth cypress**

†*Cupressus glabra* Sudw., Am. Forestry 16: 88, fig. 1910.

*Cupressus arizonica* var. *glabra* (Sudw.) Little, Madroño 18: 162. 1966.

DERIVATION—Smooth, referring to the bark.

OTHER COMMON NAME—smooth cypress, cedro (Spanish).

RANGE—C. Ariz. (s. Coconino, e. Yavapai, Gila, and ne. Maricopa Cos.). Atlas vol. 1, map 13-W (G.).

**Cupréssus arizónica** var. **nevadénsis** (Abrams) Little **Piute cypress**

*Cupressus nevadensis* Abrams, Torreya 19: 92. 1919.

*Cupressus macnabiana nevadensis* (Abrams) Abrams, Illus. Fl. Pacif. States 1: 73. 1923.

*Cupressus arizonica* var. *nevadensis* (Abrams) Little, Madroño 18: 164. 1966.

DERIVATION—Sierra Nevada, as this is the first cypress found there.

RANGE—Piute Mts. and vicinity, s.c. Calif. (Kern and Tulare Cos.). Atlas vol. 1, map 13-W (N).

**Cupréssus arizónica** var. **stephensónii** (C. B. Wolf) Little **Cuyamaca cypress**

*Cupressus stephensonii* C. B. Wolf, Aliso 1: 125, fig. 3 G-I, 9 B, 26. 1948.

*Cupressus arizonica* var. *stephensonii* (Wolf) Little, Madroño 18: 164. 1966.

DERIVATION—J. Bert Stephenson (died 1944), of the U.S. Department of Agriculture, Forest Service, who discovered it on his ranger district.

RANGE—Very rare and local in Cuyamaca Mts., s. Calif. (San Diego Co.). Also local in mts. in n. B. Cal. Norte, Mex. Atlas vol. 1, map 13-W (S).

**Cupréssus bàkeri** Jeps. **Baker cypress**

‡*Cupressus bakeri* Jeps., Fl. Calif. 1: 61. 1909.

*Cupressus macnabiana* var. *bakeri* (Jeps.) Jeps., Man. Fl. Pl. Calif. 58, fig. 50c. 1923.

*Cupressus bakeri* subsp. *matthewsii* C. B. Wolf, Aliso 1: 83, fig. 3 C, 7 B, 22. 1948.

DERIVATION—Milo Samuel Baker (1868-1961), California botanist, who discovered this species in 1898.

OTHER COMMON NAMES—Siskiyou cypress, Modoc cypress‡.

RANGE—Rare and local in mts. of sw. Oreg. (Josephine and Jackson Cos.) and n. Calif. (Siskiyou, Shasta, and Plumas Cos.). Atlas vol. 1, map 14-W.

*Cupressus forbesii*, see **C. guadalupensis** var. **forbesii**

*Cupressus glabra*, see **C. arizonica** var. **glabra**

**Cupréssus goveniàna** Gord. **Gowen cypress‡†**

†*Cupressus goveniana* Gord., J. Hort. Soc. Lond. 4: 295, fig. 1849.

DERIVATION—James Robert Gowen (died 1862), British horticulturist and noted developer of rhododendron varieties.

RANGE—Rare and local near coast and in Coast Ranges of nw. and c. Calif. (Mendocino, Somona, San Mateo, Santa Cruz, and Monterey Cos.). Atlas vol. 1, map 15-W.

**Cupréssus goveniàna** Gord. var. **goveniàna** **Gowen cypress (typical)**

RANGE—Very rare and local near coast in c. Calif. (Monterey Co.). Atlas vol. 1, map 15-W (G).

**Cupréssus goveniàna** var. **abramsiàna** (C.B. Wolf) Little

**Santa Cruz cypress**

*Cupressus abramsiana* C. B. Wolf, Aliso 1: 215, fig. 4 C, A 15-17, 13 B, 36. 1948.
*Cupressus goveniana* var. *abramsiana* (C. B. Wolf) Little, Phytologia 20: 435. 1970.

DERIVATION—LeRoy Abrams (1874-1956), botany professor at Stanford University, Calif., author of Illustrated Flora of the Pacific States (1923-60).

RANGE—Very rare and local in Santa Cruz Mts., near coast in c. Calif. (Santa Cruz and San Mateo Cos.). Atlas vol. 1, map 15-W (A).

**Cupréssus goveniàna** var. **pigmaèa** Lemm. **Mendocino cypress**

*Cupressus goveniana* var. *pigmaea* Lemm., Handb. W.-Am. Cone-bearers. ed. 3, 77. 1895; as "*pigm a*" but corrected in ink to "*pigmaea*."

DERIVATION—Pygmy, referring to the dwarf plants on the Mendocino White Plains (others are large trees).

OTHER COMMON NAME—pygmy cypress.

RANGE—Very rare and local on coast in nw. Calif. (Mendocino and nw. Sonoma Cos.). Atlas vol. 1, map 15-W (P).

**Cupréssus guadalupénsis** var. **fòrbesii** (Jeps.) Little **Tecate cypress**‡†

*Cupressus forbesii* Jeps., Madroño 1: 75. 1922.
*Cupressus guadalupensis* Wats. var. *forbesii* (Jeps.) Little, Phytologia 20: 435. 1970.

DERIVATION—Guadalupe Is., Mex.; and Charles Noyes Forbes (1883-1920), botanist of California and Hawaii.

OTHER COMMON NAME—Forbes cypress.

RANGE—Rare and local in mts. of sw. Calif. (Orange and San Diego Cos.). Also in nw. B. Cal. Norte, Mex. Atlas vol. 1, map 16-W.

‡†*Cupréssus guadalupénsis* Wats. (Proc. Am. Acad. Arts. Sci. 14: 300. 1879), Guadalupe cypress, includes also the typical variety, var. *guadalupensis*, Guadalupe cypress (typical), of Guadalupe Is., Mex.

**Cupréssus macnabiàna** A. Murr. **MacNab cypress**

‡†*Cupressus macnabiaa* A. Murr., Edinb. New Phil. J., New Ser., 1:293, pl. 11. 1855; "M'Nabiana."

DERIVATION—James MacNab (1810-1878), a founder and president of the Edinburgh Botanical Society and curator of the Edinburgh Botanic Garden, who made horticultural collections in the United States in 1834.

RANGE—Local in mts. of n. Calif. (Shasta and Trinity Cos.), s. in Coast Ranges (to Sonoma and Napa Cos.) and in Sierra Nev. (to Nevada and Amador Cos.). Atlas vol. 1, map 17-W.

HYBRIDIZES WITH: *Cupressus sargentii*.

**Cupréssus macrocárpa** Hartw. **Monterey cypress**‡†

*Cupressus macrocarpa* Hartw., J. Hort. Soc. London 2: 187. 1847; *nom. subnud.*
‡†*Cupressus macrocarpa* Hartw. ex Gord., J. Hort. Soc. Lond. 4: 296, fig. 1849.

DERIVATION—From the "very large fruit."

RANGE—Very rare and local on Pacific Coast near Monterey, w. Calif. (Monterey Co.). Widespread in cultivation as an ornamental. Atlas vol. 1, map 18-W.

*Cupressus nevadensis*, see **C. arizonica** var. **nevadensis**
*Cupressus pygmaea*, see **C. goveniana** var. **pigmaea**

**Cupréssus sargéntii** Jeps. **Sargent cypress**†

†*Cupressus sargentii* Jeps., Fl. Calif. 1: 61. 1909.

DERIVATION—Charles Sprague Sargent (1841–1927), United States dendrologist, founder and first director of the Arnold Arboretum of Harvard University and author of the 14-volume Silva of North America.

RANGE—Coast Ranges of Calif. (Mendocino and Colusa Cos. s. to Santa Barbara Co.). Atlas vol. 1, map 19-W.

Under *Cupressus goveniana* Gord. in the 1953 checklist.

HYBRIDIZES WITH: *Cupressus macnabiana*.

*Cupressus stephensonii*, see **C. arizonica** var. **stephensonii**
*Cylindropuntia*, see **Opuntia**
*Cynodendron*, see **Chrysophyllum**
*Cynoxylon*, see **Cornus**

**Cyrílla** Garden ex L. (Family Cyrillaceae) **cyrilla**
‡†*Cyrilla* Garden ex L., Syst. Nat. ed. 12, 2: 182. 1767; Mant. Pl. 5, 50. 1767.
DERIVATION—In honor of Domenico Cirillo (1734-1799), Italian physician, botanist, and patriot.
REFERENCE—Thomas, Joab L. A monographic study of the Cyrillaceae. Harvard Univ., Contrib. Gray Herb. 186, 114 p., illus. 1960.
NUMBER OF SPECIES: 1 (with named varieties or segregates; also P.R.).

**Cyrílla racemiflòra** L. **swamp cyrilla‡**
‡†*Cyrilla racemiflora* L., Mant. Pl. 50. 1767.
*Cyrilla antillana* Michx., Fl. Bor.-Am. 1: 158. 1803.
DERIVATION—Raceme-flowered, referring to the numerous small short-stalked flowers along an axis.
OTHER COMMON NAMES—leatherwood, swamp leatherwood, southern leatherwood, red titi, white titi, black titi, titi, "swamp-ironwood"‡, he-huckleberry; palo colorado (P.R.).
RANGE—Coastal Plain from se. Va. to c. Fla., and w. to se. Tex. Also West Indies in mts. from Cuba to P.R. and Lesser Antilles. Atlantic Coast of C. Am. from Belize to Nicaragua, and n. S. Am. from Guyana to Venezuela, Colombia, and Brazil. Atlas vol. 4, maps 45-N, 45-SE; vol. 5, map 48.
Two varieties may be distinguished, the very widespread typical variety and var. *parvifolia* Sarg., with very small leaves local in s. Ga. and Fla. The 1953 checklist accepted 3 species.

**Cyrílla racemiflòra** L. var. **racemiflòra** **swamp cyrilla (typical)**
RANGE—Same as sp.

**Cyrílla racemiflòra** var. **parvifòlia** Sarg. **littleleaf cyrilla‡**
‡*Cyrilla parvifolia* Raf., Autikon Bot. 8. 1840.
*Cyrilla parvifolia* Shuttl. ex Nash, Bull. Torrey Bot. Club 23: 101. 1896.
*Cyrilla racemiflora* var. *parvifolia* [Shuttl. ex Nash] Sarg., J. Arnold Arbor. 2: 166. 1921.
‡*Cyrilla arida* Small, Bull. Torrey Bot. Club 51: 383. 1924.
DERIVATION—Small-leaf.
OTHER COMMON NAMES—littleleaf titi, titi.
RANGE—Local from c. Ga. s. to c. Fla.

**Dàlea** L. (Family Leguminosae) **dalea**
‡†*Dalea* L., Opera Varia 244. 1758; *nom. cons.* Non *Dalea* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754; *nom. rejic.*
*Parosela* Cav., Descr. Pl. 185. 1802.
*Psorodendron* Rydb., No. Am. Fl. 24: 41. 1919.
*Psorothamnus* Rydb., No. Am. Fl. 24: 45. 1919.
DERIVATION—Samuel Dale (1659-1739), British botanist and physician.
REFERENCE—Barneby, Rupert C. Daleae imagines. Mem. N.Y. Bot. Gard. 27, 891 p., illus. 1977.
NUMBER OF SPECIES: Native trees, 1; native herbs and shrubs, about 50; total, mostly in warmer regions of New World, 250.

**Dàlea spinòsa** Gray **smokethorn‡**
‡†*Dalea spinosa* Gray, Mem. Am. Acad. Arts Sci., New Ser., 5: 315. 1855.
*Parosela spinosa* (Gray) Heller, Cat. No. Am. Pl. ed. 2, 7. 1900.
*Psorodendron spinosum* (Gray) Rydb., No. Am. Fl. 24: 45. 1919.
*Psorothamnus spinosus* (Gray) Barneby, Mem. N.Y. Bot. Gard. 27: 25, pl. 3. 1977.
DERIVATION—Spiny, the leafless twigs ending in sharp spines.
OTHER COMMON NAMES—indigobush†, smoketree.

RANGE—W. Ariz., extreme s. Nev., se. Calif., and nw. Mex. (B. Cal. and nw. Son.). Atlas vol. 3, map 64.

*Daubentonia punicea*, see **Sesbania punicea**

‡DELÒNIX RÈGIA (Bojer ex Hook.) Raf. (Fl. Tellur. 2: 92. 1837; †*Poinciana regia* Bojer ex Hook.; Family Leguminosae), flamboyant-tree‡ (royal poinciana†) is omitted as apparently not naturalized. Cultivated for ornament in s. Fla. incl. Fla. Keys, persistent and escaping locally. Hawaii, P.R., and V.I. Native of Madagascar but widely planted through the tropics and locally naturalized.

**Diospỳros** L. (Family Ebenaceae) **persimmon**

‡†*Diospyros* L., Sp. Pl. 1057. 1753; Gen. Pl. ed. 5, 478. 1754.
*Brayodendron* Small, Bull. Torrey Bot. Club 28; 356. 1901.

DERIVATION—From Greek, of the God Zeus or Jupiter, and grain, alluding to the edible fruit.

OTHER COMMON NAME—ebony.

REFERENCES—Spongberg, Stephen A. Ebenaceae hardy in temperate North America. J. Arnold Arbor. 58: 146-160, illus. 1977.

Wood, C. E., Jr., and R. B. Channell. J. Arnold Arbor. 41: 17-22. 1960.

NUMBER OF SPECIES: Native trees, 2; P.R., 2; Hawaii, 2; total, mostly tropical, especially Madagascar, Africa, and Malaysia, about 400.

**Diospỳros texàna** Scheele **Texas persimmon‡**

‡†*Diospyros texana* Scheele, Linnaea 22: 145. 1849.
*Brayodendron texanum* (Scheele) Small, Bull. Torrey Bot. Club 28: 356. 1901.

DERIVATION—Of Texas.

OTHER COMMON NAMES—black persimmon†, Mexican persimmon, chapote (Spanish).

RANGE—Se. to c. and Trans-Pecos Tex., s. to ne. Mex. (extreme e. Chih., Coah., N.L., and Tamps.). Atlas vol. 3, map 65.

***Diospỳros virginiàna** L. **common persimmon‡**

‡†*Diospyros virginiana* L., Sp. Pl. 1057. 1753.
*Diospyros pubescens* Pursh, Fl. Am. Sept. 1: 265. 1814. Non *Diospyros pubescens* Pers., Synops. Pl. 2: 625. 1807.
?*Diospyros virginiana* β *pubescens* Nutt., Gen. No. Am. Pl. 2: 240. 1818.
*Diospyros virginiana* α *pubescens* [Pursh] Dippel, Handb. Laubholzk. 1: 306. 1889.
†*Diospyros virginiana* var. *platycarpa* Sarg., J. Arnold Arbor. 2: 168. 1921.
*Diospyros mosieri* Small, J. N.Y. Bot. Gard. 22: 33. 1921.
‡†*Diospyros virginiana* var. *mosieri* (Small) Sarg., J. Arnold Arbor. 2: 170. 1921.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—persimmon†, eastern persimmon, simmon, possumwood, Florida persimmon.

RANGE—S. Conn., extreme se. N.Y., and N.J., w. to c. Ohio, c. Ill., extreme se. Iowa, n. Mo., and e. Kans., s. to c. Okla. and c. Tex., and e. to s. Fla. incl. Fla. Keys. Local in extreme se. Nebr. Atlas vol. 1, map 123-E; vol. 5, map 49.

REFERENCE—Skallerup, H. R. The distribution of Diospyros virginiana L. Ann. Mo. Bot. Gard. 40: 211-226, illus. 1953.

**Dipholis** A. DC. (Family Sapotaceae) **bustic**

‡†*Dipholis* A. DC. in DC., Prodr. 8: 188. 1844; *nom. cons.*

DERIVATION—From Greek, 2 scales, referring to the paired appendages of the corolla lobes.

REFERENCES—See also **Bumelia**

Cronquist, Arthur. Studies in the Sapotaceae, III. Dipholis and Bumelia. J. Arnold Arbor. 26: 435-471. 1945.

William T. Stearn (1968) and others have united this genus with

*Bumelia* Sw. The familiar usage is retained here.

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also in West Indies, including P.R. and V.I., Mex., and C. Am.); P.R., 2 additional; total, mostly West Indies, about 15.

**Diphòlis salicifòlia** (L.) A. DC. **willow bustic‡**

*Achras salicifolia* L., Sp. Pl. ed. 2, 470. 1762.
‡†*Dipholis salicifolia* (L.) A. DC. in DC., Prodr. 8: 188. 1844.
*Bumelia salicifolia* (L.) Sw., Nov. Gen. Sp. Pl. Prodr. 50. 1788.

DERIVATION—willow-leaf.

OTHER COMMON NAMES—bustic†, willow-leaf bustic, cassada.

RANGE—S. Fla. incl. Fla. Keys (n. locally to Martin, Hendry, and Collier Cos.). From Bahamas through West Indies incl. P.R. and V.I. Also from s. Mex. (Yuc. to Ver. and Oax.) s. to Belize and Guatemala. Atlas vol. 5, map 194.

**Dodonaèa** Mill. (Family Sapindaceae) **hopbush**

‡†*Dodonaea* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

DERIVATION—Rembert Dodoens or Dodonaeus (1518-1585), Dutch herbalist and physician.

OTHER COMMON NAME—hopseedbush.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 44: 475–478. 1963.

Sherff, Earl Edward. Some additions to the genus Dodonaea L. (fam. Sapindaceae). Am. J. Bot. 32: 202-214. 1945.

Sherff, Earl Edward. Further studies in the genus Dodonaea. Field Mus. Nat. Hist. Bot. Ser. 23: 269-317. 1947.

NUMBER OF SPECIES: Native small trees and shrubs (s. Fla., Ariz.), 1, also Hawaii, P.R., and V.I., and worldwide tropics; Hawaii, 2 additional; Madagascar, 1; total, tropical and subtropical, mostly Australia, about 60.

**Dodonaèa viscòsa** Jacq. **hopbush**

*Ptelea viscosa* L., Sp. Pl. 118. 1753.
*Dodonaea viscosa* Jacq., Enum. Syst. Pl. Carib. 19. 1760.
*Dodonaea angustifolia* L. f., Suppl. Pl. Syst. Veg. 218. 1781.
*Dodonaea elaeagnoides* Rudolphi ex Ledeb. & Adlerst., Diss. Bot. Sist. Pl. Doming. Decad. 18. 1805.
*Dodonaea jamaicensis* DC., Prodr. 1: 616. 1824.
*Dodonaea ehrenbergii* Schlechtend., Linnaea 18: 52 [36]. 1844.
*Dodonaea viscosa* var. *angustifolia* (L. f.) Benth., Fl. Austral. 1: 476. 1863.
*Dodonaea viscosa* var. *spathulata* (Sm.) Benth., Fl. Austral. 1: 476. 1863.
‡†*Dodonaea microcarya* Small, Torreya 25: 39. 1925.
*Dodonaea arizonica* A. Nels., Am. J. Bot. 21: 576. 1934.
*Dodonaea viscosa* var. *arborescens* (Cunn.) Sherff, Am. J. Bot. 32: 214. 1945.
*Dodonaea viscosa* var. *linearis* (Harv. & Sond.) Sherff, Am. J. Bot. 32: 214. 1945.

OTHER COMMON NAMES—Florida hopbush‡, varnishleaf, Florida hopseedbush.

RANGE—Local in s. Fla. incl. Fla. Keys and along coasts n. to c. Fla. A shrubby var. in c. and s. Ariz. Also in Hawaii. Widespread incl. several vars. through tropics of both hemispheres. Bermuda and from Bahamas through West Indies incl. P.R. and V.I. From n. Mex. (B. Cal. Norte and Son. to Tamps.) s. to S. Am. Atlas vol. 3, maps 66-N, 66-SW; vol. 5, map 195.

A very variable species represented in s. Fla. by 3 widespread varieties, sometimes regarded as species, also additional forms. This shrubby tree of worldwide distribution and *Sapindus saponaria* L., wingleaf soapberry, of the same family, are the only tree species native both in Hawaii and in continental U.S.

**Drypètes** Vahl (Family Euphorbiaceae) **drypetes**

‡†*Drypetes* Vahl, Eclog. Am. 3: 49. 1807.

DERIVATION—From Greek, drupe or overripe olive, describing the fruit.

REFERENCE—Webster, Grady L. J. Arnold Arbor. 48: 329-332. 1967.

NUMBER OF SPECIES: Native trees (S. Fla.), 2 (also in West Indies, 1 also in P.R., Mex., and C. Am.); P.R., 3 additional; total, tropical, mostly Old World, about 150.

**Drypètes diversifòlia** King & Urban **milkbark‡**

‡†*Drypetes diversifolia* Krug & Urban in Urban, Bot. Jahrb. 15: 353. 1892.

DERIVATION—Variable leaved; the leaves on young plants generally spiny but other leaves with entire margins.

OTHER COMMON NAMES—Florida whitewood, whitewood, big Guiana-plum†.

RANGE—Through Fla. Keys but absent from s. Fla. mainland. Also Bahamas. Atlas vol. 5, map 196.

**Drypètes lateriflòra** (Sw.) Krug & Urban **Guiana-plum†**

*Schaefferia lateriflora* Sw., Nov. Gen. Sp. Prodr. 38. 1788.

‡†*Drypetes lateriflora* (Sw.) Krug & Urban in Urban, Bot. Jahrb. 15: 357. 1892.

DERIVATION—With flowers lateral, or on the sides, referring to the axillary flowers.

RANGE—Rare and local in s. Fla. incl. Fla. Keys, n. on e. coast to Brevard Co. From Bahamas through Greater Antilles to P.R. Also s. Mex., Belize, Guatemala, and El Salvador. Atlas vol. 5, map 197.

‡*Duránta rèpens* L. (Sp. Pl. 637. 1753; family Verbenaceae), golden-dewdrop (golddrop skyflower‡; cuenta de oro, espina de paloma, Spanish), a shrub often vinelike is recorded as sometimes a small tree to 20 ft (6 m) tall. S. Fla. incl. Fla. Keys, also cultivated and perhaps introduced. Planted and escaped in s. Tex. and Hawaii. Widespread from Mex. to S. Am. and in West Indies, incl. P.R. and V.I., the range extended by cultivation.

**Ehrètia** P. Br. (Family Boraginaceae) **ehretia**

‡†*Ehretia* P. Br., Civ. Nat. Hist. Jam. 168, pl. 16, fig. 1. 1756.

DERIVATION—George Dionysius Ehret (1708-1770), German-English botanical artist.

NUMBER OF SPECIES: Native trees (s. Tex.), 1; total, tropical, mostly Old World, about 50.

**Ehrètia anàcua** (Terán & Berland.) I. M. Johnst. **anacua‡†**

*Gaza anacua* Terán & Berland., Mem. Comisión Limites 5. 1832.

†*Ehretia elliptica* DC., Prodr. 9: 503. 1845.

‡*Ehretia anacua* (Terán & Berland.) I. M. Johnst., Harvard Univ., Contrib. Gray Herb., New Ser., 70: 89. 1924.

DERIVATION—The Mexican name, spelled also anaqua and anagua.

OTHER COMMON NAMES—sugarberry, knackaway, knockaway.

RANGE—C. and s. Tex. and e. Mex. (Tamps. w. to se. Coah., s. to Gto., Hgo., and Ver.). Atlas vol. 3, maps 67-N, 67-SW.

**Elaeágnus** L. (Family Elaeagnaceae) **elaeagnus**

*Elaeagnus* L., Sp. Pl. 121. 1753; Gen. Pl. ed. 5, 57. 1754.

DERIVATION—From Greek olive and the classical name for the chaste-tree, *Vitex agnus-castus* L.

OTHER COMMON NAMES—oleaster, silverberry.

REFERENCE—Graham, Shirley A. The Elaeagnaceae in the southeastern United States. J. Arnold Arbor. 45: 274-278. 1964.

*Elaeágnus commutàta* Bernh., silverberry, a shrub of n. U.S. including Alaska and Can., is the only native example of this mostly Old World

genus of about 40 species. A few other shrubby species have been introduced and may have become naturalized locally.

ELAEÁGNUS ANGUSTIFÒLIA L. RUSSIAN-OLIVE‡
‡*Elaeagnus angustifolia* L., Sp. Pl. 121. 1753.
DERIVATION—Narrow-leaf.
OTHER COMMON NAME—oleaster.
RANGE—Planted for ornament and shelterbelts and escaping, through temperate U.S. from New Engl. w. to Calif., and s. Can. from Ont. to Man. and in B.C. Naturalized locally in Utah and other w. States. Native from s. Europe to w. and c. Asia. Mentioned in a note in the 1953 checklist.
REFERENCE—Christensen, Earl M. Naturalization of Russian olive (Elaeagnus angustifolia L.) in Utah. Am. Midl. Nat. 70: 133-137. 1963.

*Elaeagnus utilis*, see **Shepherdia argentea**
*Elaphrium*, see **Bursera**

**Ellióttia** Muhl. ex Ell. (Family Ericaceae) **elliottia**
*Elliottia* Muhl., Cat. Pl. Am. Sept. 40. 1813; *nom. nud.*
‡†*Elliottia* Muhl. ex Ell., Sketch Bot. S.-C. Ga. 1: 448. 1817.
DERIVATION—Stephen Elliott (1771-1830), botanist of South Carolina and author of A Sketch of the Botany of South-Carolina and Georgia (2 v., illus. 1816-24).
REFERENCE—Wood, Carroll E., Jr. J. Arnold Arbor. 42: 20-23, illus. 1961.
NUMBER OF SPECIES: 1. Two closely related species in Japan are usually placed in a separate genus, *Tripetaleia* Sieb. & Zucc.

**Ellióttia racemòsa** Muhl. ex Ell. **elliottia‡**
*Elliottia racemosa* Muhl., Cat. Pl. Am. Sept. 40. 1813; *nom. nud.*
‡†*Elliottia racemosa* Muhl. ex Ell., Sketch Bot. S.-C. Ga. 1: 448. 1817.
DERIVATION—Racemose, the flowers in long, racemelike clusters.
OTHER COMMON NAME—southern-plume.
RANGE—Very rare and local in e. and se. Ga. (Columbia, Burke, Screven, Bullock, Candler, Telfair, Coffee, and Turner Cos.). Formerly Richmond Co. and also S.C. (Aiken Co.) but extinct at those and perhaps other localities. Atlas vol. 4, map 47.
REFERENCE—Faircloth, Wayne R. An occurrence of Elliottia in central south Georgia. Castanea 35: 58-61. 1970.

*Enallagma*, see **Amphiecna**

**Erythrìna** L. (Family Leguminosae) **coralbean**
‡†*Erythrina* L., Sp. Pl. 706. 1753; Gen. Pl. ed. 5, 316. 1754.
*Micropteryx* Walp. in Duchass. & Walp., Linnaea 23: 739. 1851.
DERIVATION—Red, from the bright red flowers of some species.
REFERENCES—Krukoff, B.A. The American species of Erythrina. Brittonia 3: 205-337. 1939.
Krukoff, B. A. Supplementary notes on the American species of Erythrina. III. Phytologia 19: 113–175. 1969.
NUMBER OF SPECIES: Native trees, 2; Hawaii, 1; P.R. and V.I., 2; total, tropical and subtropical, 100.

‡ERYTHRÌNA CRISTA-GÁLLI L. (Mant. Pl. 99. 1767; *"crista galli"; Micropteryx crista-galli* (L.) Walp.), cockspur coralbean‡, was recorded by Small (Man. Southeast. Fl. 716. 1933) as a shrub or small tree in waste places and cultivated in the Coastal Plain of the Gulf States. Apparently not naturalized. Native of S. Am. but widely planted for ornament in tropical regions.

**Erythrìna flabelliformis** Kearney **southwestern coralbean‡**

‡*Erythrina flabelliformis* Kearney in Britton & Kearney, Trans. N.Y. Acad. Sci. 14: 32. 1894.

DERIVATION—With the form of a small fan, the shape of the broad leaflets.

OTHER COMMON NAMES—western coralbean, Indian-bean, chilicote (Spanish).

RANGE—Mts. of extreme sw. N. Mex. and se. Ariz. Also mts. of w. Mex. (w. Chih. and Son., s. to B. Cal. Sur, Jal., and Mich.). Atlas vol. 3, maps 68-N, 68-SW.

This species is a small tree southward in Mexico but generally a shrub at its northern limit.

**Erythrìna herbàcea** L. **southeastern coralbean**

‡*Erythrina herbacea* L., Sp. Pl. 706. 1753.
*Erythrina rubicunda* Jacq., Fragm. Bot. 75. 1809.
†*Erythrina herbacea* var. *arborea* Chapm., Fl. South. U.S. ed. 3, 117. 1897.
*Erythrina arborea* (Chapm.) Small, Fl. Southeast. U.S. 647, 1332. 1903.

DERIVATION—Herbaceous; the plants being herbs north of the tropical part of the range.

OTHER COMMON NAMES—eastern coralbean‡, Cherokee-bean, red-cardinal, cardinal-spear, colorín (Spanish).

RANGE—Coastal Plain from se. N.C. and S.C. to s. Fla. incl. Fla. Keys, and w. to e. and s. Tex. Also e. Mex. (Tamps. s. to Pue., Oax., and Ver.). A tree in U.S. only in s. Fla. incl. Fla. Keys, and shrubby or herbaceous n. Atlas vol. 4, maps 48-N, 48-SE; vol. 5, map 50.

**Esenbéckia** H.B.K. (Family Rutaceae) **esenbeckia**

‡*Esenbeckia* H.B.K., Nov. Gen. Sp. 7: 246, pl. 655. 1825.

DERIVATION—Christian Gottfried Nees von Esenbeck (1776-1858), German botanist.

NUMBER OF SPECIES: Native trees (s. Tex.), 1 (also in Mex.); total, tropical Am. from Mex. and West Indies to Brazil, about 30.

**Esenbéckia berlandiéri** Baill. **Berlandier esenbeckia**

*Esenbeckia berlandieri* Baill., Adansonia 10: 151. 1871.
‡*Esenbeckia runyonii* Morton, J. Wash. Acad. Sci. 20: 136. 1930; "*runyoni*."

DERIVATION—Jean Louis Berlandier (1805-1851), native of Belgium, who resided in Mexico and made large plant collections in northeastern Mexico and Texas.

OTHER COMMON NAMES—Runyon esenbeckia†, jopoy.

RANGE—Extinct in extreme s. Tex. (Cameron Co.) except in cultivation. Also nw. and c. Mex. (Tamps. and N.L., s. to Jal., Gro., and Ver.). Atlas vol. 3, maps 69-N, 69-W.

This Mexican species includes *Esenbeckia runyonii*‡, which was based upon 4 trees near Los Fresnos, Tex., at a locality since cleared of most vegetation. Presumably extinct in Tex. except in cultivation in Cameron Co., according to Correll and Johnston (Man. Vasc. Pl. Tex. 910. 1970).

EUCALÝPTUS L'Hér. (Family Myrtaceae) EUCALYPTUS

*Eucalyptus* L'Hér., Sert. Angl. 18. 1789; pl. 20. 1792.

DERIVATION—From Greek *eu*, well, and *kalyptos*, covered.

OTHER COMMON NAME—eucalypt.

Numerous species of this genus from Australia have been introduced and widely planted in subtropical areas, especially Calif. and Fla. However, only a few have escaped from cultivation. This genus is added here with 1 naturalized species. Munz (Calif. Fl. 963. 1959; Suppl. 135. 1968; Fl. South. Calif. 577. 1974) listed for Calif. 3 more species: *Eucalyptus camaldulensis* Dehnh., longbeak eucalyptus (camal eucalyptus, redgum); *E. polyanthemos* Schauer, redbox eucalyptus (redbox-gum, roundleaf

eucalyptus); and *E. tereticornis* Sm., horncap eucalyptus. Apparently no species of this genus has become established in Fla., according to Kenneth A. Wilson (J. Arnold Arbor. 41: 273. 1960). Many others have been introduced in Hawaii, and several in P.R.

EUCALÝPTUS GLÓBULUS Labill. BLUEGUM EUCALYPTUS

*Eucalyptus globulus* Labill., Relation Voy. Recherche Pérouse 1: 153, t. 13. 1800.

DERIVATION—Old name meaning a little globe.

OTHER COMMON NAMES—Tasmanian bluegum, bluegum, Tasmanian blue eucalyptus.

RANGE—Naturalized in Calif. Planted in Hawaii. Native of Australia (Tasmania and s. Victoria). This subtropical species is one of the most widely cultivated species of *Eucalyptus* in the world.

*Eugenia*, see also **Myrcianthes** and **Psidium**

**Eugènia** L. (Family Myrtaceae) **stopper; eugenia**

‡†*Eugenia* L. Sp. Pl. 470. 1753; Gen. Pl. ed. 5, 211. 1754.

DERIVATION—In commemoration of Prince Eugene of Savoy (1663-1736), a patron of botany and horticulture who made a collection of rare plants in the gardens of Belvidere Palace near Vienna.

REFERENCES—McVaugh, Rogers. Nomenclatural notes on Myrtaceae and related families. Taxon 5: 133-147, 162-167. 1956.

McVaugh, Rogers. Tropical American Myrtaceae. Notes on generic concepts and descriptions of previously unrecognized species. Fieldiana Bot. 29: 145-228, illus. 1956; 395-532, illus. 1963.

McVaugh, Rogers. The genera of American Myrtaceae—an interim report. Taxon 17: 354-418. 1968.

Wilson, Kenneth A. The genera of Myrtaceae in the southeastern United States. J.Arnold Arbor. 41: 270-278. 1960.

NUMBER OF SPECIES: Native trees (s. Fla.), 4, also in P.R. and V.I.; P.R. and V.I., additional native trees, 19, naturalized trees, 1, and native shrubs, 3; total, tropical, about 1,000. In number of tree species, the largest genus in P.R. and one of the largest in tropical Am.

**Eugènia axillàris** (Sw.) Willd. **white stopper†**

*Myrtus axillaris* Sw., Nov. Gen. Sp. Pl. Prodr. 78. 1788.

‡†*Eugenia axillaris* (Sw.) Willd., Sp. Pl. ed. 4, 2: 960. 1799.

DERIVATION—Axillary, the flowers clustered in axils of leaves.

OTHER COMMON NAMES—stopper, white-stopper eugenia‡.

RANGE—C. and s. Fla. incl. Fla. Keys. Bermuda and from Bahamas through West Indies incl. P.R. and V.I. Also var. from se. Mex. (Q. Roo) and Belize to Nicaragua. Atlas vol. 5, map 198.

**Eugènia confùsa** DC. **redberry stopper**

‡†*Eugenia confusa* DC., Prodr. 3: 279. 1828.

DERIVATION—Confused.

OTHER COMMON NAMES—red stopper†, redberry eugenia‡.

RANGE—Local in s. Fla. (s. Dade Co.) incl. northernmost Upper Fla. Keys. Bahamas, Greater Antilles incl. P.R., Guadeloupe, Dominica, and Trinidad (?). Atlas vol. 5, map 199.

**Eugènia foétida** Pers. **boxleaf stopper**

*Myrtus buxifolia* Sw., Nov. Gen. Sp. Pl. Prodr. 78. 1788.

†*Eugenia buxifolia* (Sw.) Willd., Sp. Pl. ed. 4, 2: 960. 1799. Non *Eugenia buxifolia* Lam., Encycl. Méth. Bot. 3: 204. 1789.

*Eugenia foetida* Pers., Synops. Pl. 2: 29. 1806.

‡*Eugenia myrtoides* Poir. in Lam., Encycl. Méth. Bot. Suppl. 3: 125. 1813.

‡*Eugenia anthera* Small, Man. Southeast. Fl. 935, 1506. 1933.

DERIVATION—With unpleasant odor, referring to the foliage.

OTHER COMMON NAMES—gurgeon stopper†, Spanish stopper, boxleaf eugenia‡.

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to Cape Canaveral. Also Bahamas and Greater Antilles incl. P.R. and V.I. Recorded from s. Mex. and Guatemala. Atlas vol. 5, map, 200.

REFERENCE—McVaugh, Rogers. J. Arnold Arbor. 54: 309-310. 1973.

‡*Eugenia anthera* Small, Smalls eugenia‡, of s. Fla. (type from Roseland), is here cited as a synonym.

**Eugènia rhómbea** (Berg) Krug & Urban **red stopper†**

*Eugenia foetida* Pers. γ *rhombea* Berg, Linnaea 27: 212. 1856.

‡†*Eugenia rhombea* (Berg) Krug & Urban in Urban, Bot. Jahrb. 19: 644. 1895.

DERIVATION—Rhombic, referring to the shape of the leaves.

OTHER COMMON NAMES—stopper, spiceberry eugenia‡.

RANGE—Local in Lower Fla. Keys near Key West and in Upper Fla. Keys, apparently absent from s. Fla. mainland. From Bahamas through Greater Antilles incl. P.R. and V.I. and Lesser Antilles to Guadeloupe. Atlas vol. 5, map 201.

EUGÈNIA UNIFLÒRA L. (Sp. Pl. 470. 1753), Surinam-cherry (pitanga), is a shrub or small tree widely planted for its edible fruit in tropical and subtropical regions, including s. Fla., s. Tex., s. Calif., Hawaii, P.R., and V.I. It may escape and is recorded as locally naturalized in s. Fla. (Long and Lakela, Fl. Trop. Fla. 644. 1971). Native of S. Am. from Brazil and Guianas to Argentina.

**Euónymus** L. (Family Celastraceae) **burningbush**

‡†*Euonymus* L., Sp. Pl. 197. 1753; "*Evonymus*." Gen. Pl. ed. 5, 91. 1754.

DERIVATION—Literally, of good name, from Greek; an old name applied to the European spindletree (*Euonymus europaeus* L.).

OTHER COMMON NAMES—spindletree, strawberry-bush, euonymus‡.

REFERENCE—Blakelock, R. A. A synopsis of the genus Euonymus L. Kew Bull. 1951: 210-290, illus. 1951.

Brizicky, George K. J. Arnold Arbor. 45: 206-215, illus. 1964.

NUMBER OF SPECIES: Native trees, 2; native shrubs, 2; world total, shrubs and small trees, widely distributed, concentrated in e. Asia, absent from S. Am. and West Indies, about 175.

**Euónymus atropurpùreus** Jacq. **eastern burningbush**

‡†*Euonymus atropurpureus* Jacq., Hort. Bot. Vindob. 2: 55, pl. 120. 1772.

DERIVATION—Dark purple, the color of the fruits.

OTHER COMMON NAMES—burningbush, eastern wahoo‡, wahoo†, strawberry-bush.

RANGE—C. N.Y. and extreme s. Ont., w. to s. Mich., c. Wis., c. Minn., and se. N. Dak., s. to e. Nebr., c. Okla., and c. Tex., e. to Ark., Miss., Ga., and nw. Fla. (Gadsden Co.), and n. to N.J. Atlas vol. 4, maps 49-NE, 49-SE; vol. 5, map 158.3.

**Euónymus occidentàlis** Nutt. ex Torr. **western burningbush**

‡*Euonymus occidentalis* Nutt. ex Torr. in U.S. Rep. Expl. Miss. Pacif. 4(5): 74. 1857.

*Euonymus parishii* Trel., Trans. Acad. Sci. St. Louis 5: 354. 1889.

*Euonymus occidentalis* var. *parishii* (Trel.) Jeps., Man. Fl. Pl. Calif. 610. 1925.

DERIVATION—Western.

OTHER COMMON NAME—western wahoo‡.

RANGE—Sw. Wash., w. Oreg., and nw. Calif. s. to Monterey Co. Also var. in mts. of s. Calif. (San Jacinto Mts. to Cuyama and Palomar Mts.). Atlas vol. 3, map 70.

**Exostèma** (Pers.) Rich. ex Humb. & Bonpl. (Family Rubiaceae) **exostema**

*Cinchona* sect. *Exostema* Pers., Syn. Pl. 1: 196. 1805.

‡†*Exostema* (Pers.) Rich. ex Humb. & Bonpl., Pl. Aequin. 1: 131, pl. 38. 1807.

DERIVATION—Exserted stamens, the stamens long.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R. and V.I.; P.R., additional, 2; total, tropical Am., about 40.

**Exostèma caribaèum** (Jacq.) Roem. & Schult. **princewood†**

*Cinchona caribaea* Jacq., Enum. Pl. Carib. 16. 1760.

‡†*Exostema caribaeum* (Jacq.) Roem. & Schult., Syst. Veget. 5: 18. 1819; *"Exostemma."*

DERIVATION—Caribbean.

OTHER COMMON NAME—Caribbean princewood‡.

RANGE—S. Fla. on several Fla. Keys, both Lower and Upper, but absent from mainland. From Bahamas through West Indies incl. P.R. and V.I. Also from c. Mex. (S.L.P. to Col.) s. to Costa Rica. Atlas vol. 5, map 202.

**Exóthea** Macfadyen (Family Sapindaceae) **inkwood**

‡†*Exothea* Macfadyen, Fl. Jam. 1: 232. 1837.

DERIVATION—From Greek, to expel, the genus having been separated from *Melicocca* L., honeyberry.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R.; total, tropical Am., incl. West Indies, Mex., and C. Am., 3.

**Exóthea paniculàta** (Juss.) Radlk. **inkwood†**

*Melicocca paniculata* Juss., Paris Mus. Hist. Nat. Mém. 3: 187, pl. 5. 1817.

*Exothea paniculata* Durand, Index Gen. Phaner. 81. 1888; *nom. nud.*

‡†*Exothea paniculata* (Juss.) Radlk., K. Beyer. Akad. Wiss. München, Math-Phys. Cl. Sitzber. 20: 276. 1891.

DERIVATION—Panicled.

OTHER COMMON NAMES—butterbough‡, "ironwood."

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to Volusia Co. Also Bahamas, Greater Antilles incl. P.R., and few of Lesser Antilles to St. Vincent. Also Mex. (S.L.P. to Chis.) and Guatemala. Atlas vol. 5, map. 203.

**Eysenhárdtia** H.B.K. (Family Leguminosae) **kidneywood**

*Viborquia* Gómez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. Dec. 66, pl. 9. 1798; *nom. rejic.*

‡†*Eysenhardtia* H.B.K., Nov. Gen. Sp. 6: 489, pl. 592. 1824 (ed. fol. 382); *nom cons.*

DERIVATION—Karl Wilhelm Eysenhardt (1794-1825), professor of botany in the University of Königsberg, Germany.

NUMBER OF SPECIES: native trees (Mex. border), 2; native shrubs, 1 in Trans-Pecos Tex.; total, about 10, including about 5 others in Mex. and 1 in C. Am. (Guatemala and Salvador).

**Eysenhárdtia polystàchya** (Gómez Ortega) Sarg. **kidneywood‡**

*Viborquia polystachya* Gómez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. Dec. 66, pl. 9. 1798.

*Eysenhardtia amorphoides* H.B.K. ? var. *orthocarpa* Gray, Pl. Wright. 2: 37. 1853.

†*Eysenhardtia orthocarpa* (Gray) Wats., Proc. Am. Acad. Arts Sci. 17: 339. 1882.

‡*Eysenhardtia polystachya* (Gómez Ortega) Sarg., Silva No. Am. 3: 29. 1892.

DERIVATION—With many spikes, referring to the numerous flower clusters.

RANGE—Mts. of extreme sw. N. Mex. and se. Ariz., and s. to s. Mex. (Son. e. to Coah. and Tamps., s. to Oax. and Gro.). Atlas vol. 3, maps 72-N, 72-W.

**Eysenhárdtia texàna** Scheele **Texas kidneywood‡**

*Eysenhardtia texana* Scheele, Linnaea 21: 462. 1848.

‡*Eysenhardtia angustifolia* Pennell, No. Am. Fl. 24: 38. 1919.

DERIVATION—Of Texas.

OTHER COMMON NAME—vara dulce (Spanish).

RANGE—C. to Trans-Pecos Tex., s. to ne. Mex. (Coah., N.L., Tamps. and e. S.L.P.). Atlas vol. 3, map 71.

Added here as a shrub, rarely small tree. Mentioned in a note in the 1953 checklist.

**Fàgus** L. (Family Fagaceae) **beech**

‡†*Fagus* L., Sp. Pl. 997. 1753; Gen. Pl. ed. 5, 432. 1754.

DERIVATION—The classical Latin name, from the Greek word meaning to eat, in reference to the edible beechnuts.

NUMBER OF SPECIES: Native trees, 1, incl. a variety in Mex.; Eurasia, about 9; total, n. temperate, about 10.

***Fàgus grandifòlia** Ehrh. **American beech‡**

*Fagus americana latifolia* Muenchh., Hausvater 5: 162. 1770; illegitimate as not a binomial.

‡†*Fagus grandifolia* Ehrh., Beitr. Naturk. 3: 22. 1788.

*Fagus ferruginea* Ait., Hort. Kew. 3: 362. 1789.

*Fagus americana* Sweet, Hort. Brit. 370. 1826.

†*Fagus ferruginea* 2 *caroliniana* Loud., Arb. Frut. Brit. 3: 1980, fig. 1915. 1838.

*Fagus grandifolia* var. *caroliniana* (Loud.) Fern. & Rehd. in Rehd., Rhodora 9: 114. 1907.

*Fagus mexicana* Martínez, Méx. Inst. Biol. An. 11: 85, fig. 1-3. 1940.

*Fagus grandifolia var. mexicana* (Martínez) Little, Castanea 30: 168. 1965.

DERIVATION—Large-leaf.

OTHER COMMON NAME—beech†.

RANGE—Cape Breton Is., N.S., P.E.I., and N.B., w. to Maine, s. Que., s. Ont., and n. Mich., s. to e. Wis., extreme e. and s. Ill., se. Mo., n. Ark., se. Okla., and e. Tex., and e. to n. Fla. and Ga. Also var. in mts. of ne. Mex. (Tamps., Hgo., and Pue.). Atlas vol. 1, maps 125-N, 125-E; vol. 5, map 51.

REFERENCES—Camp, W. H. A biogeographic and paragenetic analysis of the American Beech. Am. Phil. Soc. Yearb. 1960: 166-169. 1951.

Little, Elbert L., Jr. Mexican beech, a variety of Fagus grandifolia. Castanea 30: 167-170. 1965.

**Fìcus** L. (Family Moraceae) **fig**

‡†*Ficus* L., Sp. Pl. 1059. 1753; Gen. Pl. ed. 5, 482. 1754.

DERIVATION—The classical Latin name of fig.

REFERENCES—Condit, Ira J. Ficus: the exotic species. 363 p., illus. Univ. Calif. Div. Agric. Sci., Berkeley. 1969.

DeWolf, Gordon P. Ficus. *In*: Flora of Panama. Ann. Mo. Bot. Gard. 47: 146-165, illus. 1960.

NUMBER OF SPECIES: Native trees (c. and s. Fla.), 2, incl. 1 also in P.R. and V.I.; P.R. and V.I.; additional, 4; total, tropical, especially Indomalaysia and Polynesia, about 800.

**Fìcus aùrea** Nutt. **Florida strangler fig‡**

‡†*Ficus aurea* Nutt., No. Am. Sylva 2: 4, pl. 43. 1846.

DERIVATION—Golden, from the orange-yellow fruits, originally so described when ripe but actually red.

OTHER COMMON NAMES—golden fig†, strangler fig, wild fig.

RANGE—C. and s. Fla. incl. Fla. Keys. Also Bahamas, Cuba, Jamaica, Cayman Is., and Hispaniola. Atlas vol. 5, map 204.

‡†FÌCUS CÀRICA L. (Sp. Pl. 1059. 1753), fig (common fig‡†; higuera, Spanish), is omitted as not naturalized. A shrub or small tree widely cultivated in warm regions for the edible fruit. Persistent and escaped locally in se. U.S. from Va. to Fla. and Tex. and in Calif. Possibly naturalized in s. Fla., according to Long and Lakela (Fl. Trop. Fla. 361. 1971). Also Hawaii, P.R., and V.I. Native of w. Asia.

**Fìcus citrifòlia** Mill. **shortleaf fig‡**

*Ficus citrifolia* Mill., Gard. Dict. ed. 8, *Ficus* No. 10. 1768.

‡*Ficus laevigata* Vahl, Enum. Pl. 2: 183. 1805.
*Ficus populnea* Willd., Sp. Pl. 4: 1141. 1806.
†*Ficus brevifolia* Nutt., No. Am. Sylva 2: 3, pl. 42. 1846.
*Ficus populnea* var. a *brevifolia* (Nutt.) Warb. in Urban, Symb. Antill. 3: 473. 1903.
*Ficus laevigata* var. *brevifolia* (Nutt.) Warb. ex Rossberg, Notizbl. Berl. Bot. Gart. Mus. 12: 583. 1935.
*Ficus citrifolia* var. *brevifolia* (Nutt.) D'Arcy, Phytologia 25: 116. 1973.

DERIVATION—With leaf like *Citrus*.

OTHER COMMON NAMES—wild fig†, wild banyan.

RANGE—S. Fla. incl. Fla. Keys, n. locally to Palm Beach and Collier Cos. From Bahamas through Greater Antilles incl. P.R. and V.I. Also from Mex. to Guianas and Paraguay. Atlas Vol. 5, map 205.

The Fla. tree, formerly treated as a separate species, has been united with *Ficus citrifolia* Mill., which has wide distribution in tropical Am.

‡FÍCUS ELÁSTICA Roxb. ex Hornem., India-rubber fig‡ (India rubber-plant, rubber-plant), is planted in s. Fla. for ornament and shade (also n. as a house plant). It may persist and escape but apparently is not naturalized. Doubtfully naturalized in s. Fla., according to Long and Lakela (Fl. Trop. Fla. 361. 1971). Also Hawaii, P.R., and V.I. Native of tropical Asia from India to Malaya and Java. Mentioned in a note in 1953 checklist.

FIRMIÀNA Marsili (Family Sterculiaceae) FIRMIANA

‡*Firmiana* Marsili, Saggi Sci. Lett. Accad. Padova 1: 115, illus. 1786.

DERIVATION—Count K. J. Von Firmian (1716-1782), Austrian statesman and governor of Lombardy.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 47: 66-68. 1966.

Kostermans, A. J. G. H. The genus Firmiana Marsili (Sterculiaceae). Reinwardtia 4: 281-310, illus. 1957.

This genus formerly was included in the older genus †*Sterculia* L. (Sp. Pl. 1007. 1753; Gen. Pl. ed. 5, 438. 1754).

FIRMIÀNA SÍMPLEX (L.) W. F. Wight CHINESE PARASOLTREE‡†

*Hibiscus simplex* L., Sp. Pl. ed. 2, 2: 977. 1763.
†*Sterculia platanifolia* L. f., Suppl. Pl. Syst. Veget. 423. 1781.
‡*Firmiana platanifolia* (L. f.) Schott & Endl., Melet. Bot. 33: 1832.
*Firmiana simplex* (L.) W. F. Wight, U.S. Dep. Agric. Bur. Pl. Indus. Bull. 142: 67. 1909.

DERIVATION—Simple (not compound).

OTHER COMMON NAMES—bottletree, Phoenix-tree, Japanese varnish-tree.

RANGE—Planted as an ornamental and shade tree across s. U.S. from N.C. and S.C. s. to n. Fla., and w. to Tex. and in Ariz. and Calif. Escaped and naturalized locally, according to Small (Man. Southeast. Fl. 864. 1933) and Brizicky (1966). Native of China.

FLACOÚRTIA ÍNDICA (Burm. f.) Merr. (Interpr. Rumph. Herb. Amboin. 377. 1917; Family Flacourtiaceae, Flacourtia Family), governors-plum (Madagascar-plum, ramontçhi), is naturalized locally in s. Fla., according to Roy O. Woodbury and Long and Lakela (Fl. Trop. Fla. 616. 1971). Shrub or small tree cultivated for its fruits, also in Hawaii, P.R., and V.I. Native from Madagascar to s. Asia.

**Forestièra** Poir. (Family Oleaceae) **forestiera**

*Adelia* P. Br., Civ. Nat. Hist. Jam. 361, pl. 36, fig. 3. 1756; *nom rejic.* Non *Adelia* L., Syst. Nat. ed. 10, 2: 1285, 1298. 1759; *nom. cons.*
‡†*Forestiera* Poir. in Lam., Encycl. Méth. Bot. Suppl. 1: 132. 1810; 2: 664. 1812.
*Piptolepis* Benth., Pl. Hartw. 29. 1840; *nom. rejic.*

DERIVATION—Dedicated to Charles Le Forestier (died about 1820), French physician and naturalist at Saint-Quentin and first botany teacher of Poiret.

REFERENCE—Johnston, Marshall C. Synopsis of the United States species of Forestiera (Oleaceae). Southw. Nat. 2: 140-151. 1957 [1958].

NUMBER OF SPECIES: Native small trees (incl. 2 also in Mex.), 4; native shrubs, 5 or fewer; Mex. to S. Am., about 5 additional; West Indies (including P.R. and V.I.), 3 (1 also in Fla.); total, about 20.

**Forestièra acuminàta** (Michx.) Poir. **swamp-privet‡†**

*Adelia acuminata* Michx., Fl. Bor.-Am. 2: 225, pl. 48. 1803.

‡†*Forestiera acuminata* (Michx.) Poir. in Lam., Encycl. Méth. Bot. Suppl. 2: 664. 1812.

DERIVATION—Acuminate, or with tapering point, referring to the leaves.

OTHER COMMON NAMES—Texas forestiera, common adelia, Texas adelia, whitewood.

RANGE—Coastal Plain chiefly, from s. S.C. to n. Fla. and w. to e. Tex., and n. in Miss. Valley to e. Okla., extreme se. Kans., ne. Mo., c. Ill., sw. Ind., and c. Tenn. Atlas vol. 4, map 50; vol. 5, map 52.

**Forestièra angustifòlia** Torr. **Texas forestiera‡**

*Forestiera angustifolia* Torr., U.S. Mex. Bound. Bot. 168. 1859.

‡*Forestiera texana* Cory, Madroño 7: 252. 1944.

DERIVATION—Narrow-leaf.

OTHER COMMON NAMES—desert-olive, panalero (Spanish).

RANGE—S. and Trans-Pecos Tex. and ne. Mex. (e. Chih. and e. Dgo., se. to Hgo. and n. Ver.). Atlas vol. 3, maps 73-N, 73-W.

**Forestièra phillyreoìdes** (Benth.) Torr. **desert-olive forestiera‡**

*Piptolepis phillyreoides* Benth., Pl. Hartw. 29. 1840.

‡*Forestiera phillyreoides* (Benth.) Torr., U.S. Mex. Bound. Surv. Bot. 167. 1859.

*Forestiera shrevei* Standl., Field Mus. Nat. Hist., Bot. Ser. 17: 205. 1937.

DERIVATION—Resembling *Phillyrea*, phillyrea, a related genus of evergreen shrubs and small trees of the Mediterranean region.

OTHER COMMON NAMES—desert-olive, wild-olive.

RANGE—Desert mts. of s. Ariz. Also Mex. (Son. and B. Cal. Sur. se. to Gro. and Oax.). Atlas vol. 3, map 74.

**Forestièra segregàta** (Jacq.) Krug & Urban **Florida-privet**

*Myrica segregata* Jacq., Coll. Bot. 2: 273. 1788.

*Adelia porulosa* Michx., Fl. Bor.-Am. 2: 224. 1803.

*Forestiera porulosa* (Michx.) Poir. in Lam., Encycl. Méth. Bot. Suppl. 2: 664. 1812.

*Adelia segregata* (Jacq.) Kuntze, Rev. Gen. Pl. 410. 1891.

‡*Forestiera segregata* (Jacq.) Krug & Urban in Urban, Bot. Jahrb. 15: 339. 1893.

*Forestiera pinetorum* Small, Fl. Miami 143, 200. 1913.

*Forestiera segregata* var. *pinetorum* (Small) M. C. Johnst., Southwest. Nat. 2: 143. 1958.

DERIVATION—Separated.

OTHER COMMON NAMES—Florida forestiera, wild-olive.

RANGE—Along and near coasts from se. Ga. and ne. Fla. s. to Fla. Keys, and n. on Gulf Coast to w. Fla. (Levy Co.). Also Bermuda, Bahamas, Greater Antilles to P.R. and V.I., and Antigua. Atlas vol. 4, map 51; vol. 5, map 53.

**Franklínia** Bartr. ex Marsh. (Family Theaceae) **franklinia**

‡†*Franklinia* Bartr. ex Marsh., Arbustr. Am. 48. 1785.

DERIVATION—In honor of "that patron of sciences, and truly great and distinguished character, Dr. Benjamin Franklin" (1706-90).

Only 1 species, extinct except in cultivation, sometimes included in the related genus *Gordonia*.

**Franklínia alatamáha** Bartr. ex Marsh. **franklinia‡†**

‡†*Franklinia alatamaha* Bartr. ex Marsh., Arbustr. Am. 49. 1785.

*Gordonia alatamaha* (Bartr.) Sarg., Gard. and Forest 2: 616. 1889; "*altamaha*."

DERIVATION—From the Altamaha River (then spelled Alatamaha) of Georgia, where it was discovered.

OTHER COMMON NAME—Franklin-tree.

RANGE—Extinct as native and known only in cultivation. Originally occurring at a single locality near Fort Barrington, McIntosh Co., near the coast of se. Ga., where it was discovered by John and William Bartram in 1765. It has not been found growing wild since 1790. The original colony probably was exterminated by transplanting to cultivation. Atlas vol. 4, map 52.

REFERENCES—Harper, Francis, and Arthur N. Leeds. A supplementary chapter on Franklinia altamaha. Bartonia 19: 1-13 illus. 1937.

Jenkins, Charles F. Franklin's tree. Natl. Hort. Mag. 22: 119-127. 1943.

Kobuski, Clarence E. J. Arnold Arbor. 32: 128-132, illus. 1951.

**Fráxinus** L. (Family Oleaceae) **ash**

‡†*Fraxinus* L., Sp. Pl. 1057. 1753; Gen. Pl. ed. 5, 477. 1754.

DERIVATION—The classical Latin name of ash.

OTHER COMMON NAME—fresno (Spanish).

REFERENCES—Dayton, William A. Some more notes on United States ashes. J. Wash. Acad. Sci. 44: 385-390, illus. 1954.

Hardin, James W. Studies of the southeastern United States flora. IV. Oleaceae. Sida 5: 274-285. 1974.

Little, Elbert L., Jr. Notes on Fraxinus (ash) in the United States. J. Wash. Acad. Sci. 42: 369-380. 1952.

Miller, Gertrude N. The genus Fraxinus, the ashes, in North America, north of Mexico. [N.Y.] Cornell Univ. Agric. Exp. Stn. Mem. 335, 64 p., illus. 1955.

Wilson, Kenneth A., and Carroll E. Wood, Jr. J. Arnold Arbor. 40: 369-375. 1959.

NUMBER OF SPECIES: Native trees, 16 (incl. 7 also in Mex. and 1 also in Cuba); Mex. and Guatemala (mostly in mts.), about 5 others; Eurasia, chiefly e. Asia s. to Java, about 50; total, about 70.

***Fráxinus americàna** L. **white ash‡†**

‡†*Fraxinus americana* L., Sp. Pl. 1057. 1753.

†*Fraxinus biltmoreana* Beadle, Bot. Gaz. 25: 358. 1898.

*Fraxinus americana* var. *biltmoreana* (Beadle) J. Wright ex Fern., Rhodora 49: 159. 1947.

DERIVATION—American.

OTHER COMMON NAMES—Biltmore ash, Biltmore white ash†.

RANGE—Cape Breton Is., N.S., P.E.I., and N.B., w. to Maine, s. Que., s. Ont., n. Mich., n. Wis., and e. Minn., s. to n. Iowa, e. Nebr., e. Okla., and e. Tex., and e. to n. Fla. Atlas vol. 1, maps 126-N, 126-E; vol. 5, map 54.

**Fráxinus anómala** Torr. ex Wats. **singleleaf ash‡†**

‡†*Fraxinus anomala* Torr. ex Wats. in King, Rep. Geol. Expl. 40th Par. 5: 283. 1871.

*Fraxinus anomala* var. *triphylla* Jones, Proc. Calif. Acad. Sci., Ser. 2, 5: 707. 1895.

DERIVATION—Anomalous, referring to the simple leaves in this genus characterized by compound (pinnate) leaves.

OTHER COMMON NAME—dwarf ash.

RANGE—W. Colo., Utah, s. Nev., e. Calif., Ariz., and extreme nw. N. Mex. Atlas vol. 3, map 75.

**Fráxinus anómala** Torr. ex Wats. var. **anómala** **singleleaf ash (typical)**

RANGE—W. Colo., Utah, s. Nev., e. Calif., n. Ariz., and extreme nw. N. Mex.

**Fráxinus anómala** var. **lòwellii** (Sarg.) Little **Lowell ash‡**

†*Fraxinus lowellii* Sarg. in Rehd., Proc. Am. Acad. Arts Sci. 53: 211. 1917.
‡*Fraxinus anomala* var. *lowellii* (Sarg.) Little, J. Wash. Acad. Sci. 42: 370. 1952.

DERIVATION—Percival Lowell (1855-1916), United States astronomer, who collected this ash in northern Arizona.

RANGE—N. and c. Ariz.

**Fráxinus berlandieràna** A. DC. **Berlandier ash‡**

‡†*Fraxinus berlandierana* A. DC. in DC., Prodr. 8: 278. 1844; "*Berlanderiana*."
*Fraxinus viridis* var. *berlandierana* Torr., U.S. Mex. Bound. Surv. Bot. 166. 1859; "*berlandieriana*."

DERIVATION—Named for its discoverer, Jean Louis Berlandier (1805-51), native of Belgium, who resided in Mexico and made large plant collections in northeastern Mexico and Texas.

OTHER COMMON NAME—Mexican ash†.

RANGE—C. and s. Tex. and ne. Mex. (Tamps. and S.L.P., w. to Chih. and Dgo.). Atlas vol. 3, map 76.

*Fraxinus attenuata*, see **F. velutina**
*Fraxinus biltmoreana*, see **F. americana**

**Fráxinus caroliniàna** Mill. **Carolina ash‡**

‡†*Fraxinus caroliniana* Mill., Gard. Dict. ed. 8, *Fraxinus* No. 6. 1768.
†*Fraxinus pauciflora* Nutt., No. Am. Sylva 3: 61, pl. 100. 1849.
*Fraxinus cubensis* Griseb., Cat. Pl. Cub. 170. 1866.
*Fraxinus caroliniana* var. *ß cubensis* (Griseb.) Lingelsh., Bot. Jahrb. 40: 221. 1907.

DERIVATION—Of Carolina.

OTHER COMMON NAMES—water ash†, Florida ash, pop ash, swamp ash.

RANGE—Coastal Plain from ne. Va. to s. Fla. and w. to se. Tex. and s. Ark. Also var. in Cuba. Atlas vol. 4, map 53; vol. 5, map 55.

REFERENCE—Fernald, M.L., and Bernice G. Schubert. Rhodora 50: 186-190. 1948.

*Fraxinus coriacea*, see **F. velutina**

**Fráxinus cuspidàta** Torr. **fragrant ash‡**

‡†*Fraxinus cuspidata* Torr., U.S. Mex. Bound. Surv. Bot. 166. 1859.
*Fraxinus macropetala* Eastw., Bull. Torr. Bot. Club 30: 494. 1903.
‡*Fraxinus cuspidata* var. *macropetala* (Eastw.) Rehd., Proc. Am. Acad. Arts Sci. 53: 201. 1917.

DERIVATION—Cuspidate, referring to the sharp-pointed leaflets.

OTHER COMMON NAME—flowering ash†.

RANGE—Sw. and Trans-Pecos Tex., N. Mex., and Ariz., and n. Mex. (Chih., Coah., and N.L.). Atlas vol. 3, map 77.

**Fráxinus dipétala** Hook. & Arn. **two-petal ash‡**

‡*Fraxinus dipetala* Hook. & Arn., Bot. Beechey Voy. 362, pl. 87. 1838.
*Fraxinus dipetala* var. *trifoliolata* Torr., U. S. Mex. Bound. Bot. 167. 1859.
*Fraxinus trifoliolata* (Torr.) Lewis & Epling, Am. Midl. Nat. 24: 743. 1940.

DERIVATION—Two-petal.

OTHER COMMON NAMES—foothill ash, flowering ash, California flowering ash, California shrub ash, fringe-flowered ash, mountain ash.

RANGE—Nw. Ariz. and sw. Utah, w. to s. Nev. and Calif. Also in n. B. Cal., Mex. Atlas vol. 3, map 78.

**Fráxinus goóddingii** Little **Goodding ash‡**

‡*Fraxinus gooddingii* Little, J. Wash. Acad. Sci. 42: 373. 1952.

DERIVATION—Named for Leslie Newton Goodding (1880-1967), botanist of the United States Department of Agriculture, who discovered it in 1934.

RANGE—Local in mts. of se. Ariz. and ne. Son., Mex. Atlas vol. 3, map 79.

**Fráxinus gréggii** Gray **Gregg ash‡**

*Fraxinus schiedeana* Schlecht. & Cham. var. *parvifolia* Torr., U.S. Mex. Bound. Surv. Bot. 166. 1859; "*scheideana*."

‡†*Fraxinus greggii* Gray, Proc. Am. Acad. Arts Sci. 12: 63. 1876.

DERIVATION—Named for its discoverer, Josiah Gregg (1806-50), early explorer-trader in western United States and northern Mexico and author of Commerce of the Prairies.

OTHER COMMON NAMES—littleleaf ash†, dogleg ash; escobilla, barreta china (Spanish).

RANGE—Trans-Pecos Tex. and ne. Mex. (extreme e. Chih., Coah., N.L., and w. Tamps., s. to Gto., w. Hgo., and n. Mex.). Atlas vol. 3, maps 80-N, 80-SW.

*Fraxinus lanceolata*, see **F. pennsylvanica**

***Fráxinus latifòlia** Benth. **Oregon ash‡†**

‡*Fraxinus latifolia* Benth., Bot. Voy. Sulphur 33. 1844.

†*Fraxinus oregona* Nutt., No. Am. Sylva 3: 59, pl. 99. 1849.

*Fraxinus pennsylvanica* ssp. *oregona* (Nutt.) G. N. Mill., [N.Y.] Cornell Univ. Agric. Exp. Stn. Mem. 335: 41. 1955.

DERIVATION—Broad-leaf, referring to the leaflets.

RANGE—Pacific Coast region in w. Wash., w. Oreg., and s. in Coast Ranges and Sierra Nev. to c. Calif. Atlas vol. 1, map 127-W.

REFERENCE—Munz, Philip A., and J.D. Laudermilk. A neglected character in western ashes (Fraxinus). Aliso 2: 49-62, illus. 1949.

*Fraxinus lowellii*, see **F. anomala** var. **lowellii**

***Fráxinus nìgra** Marsh. **black ash‡†**

‡†*Fraxinus nigra* Marsh., Arbustr. Am. 51. 1785.

DERIVATION—Black.

OTHER COMMON NAMES—swamp ash, basket ash, brown ash, hoop ash, water ash.

RANGE—W. Nfld., Cape Breton Is., N.S., P.E.I., N.B., Gaspé Pen. of Que. and Anticosti Is., w. to c. Ont. and se. Man., s. to Minn. and Iowa, e. to s. Ind., Ohio, W. Va., n. Md., n. Del., and N.J. Also local in extreme ne. N. Dak. and n. Va. Atlas vol. 1, map 129.

*Fraxinus oregona*, see **F. latifolia**

**Fráxinus papillòsa** Lingelsh. **Chihuahua ash‡**

‡*Fraxinus papillosa* Lingelsh., Bot. Jahrb. 40: 219. 1907.

DERIVATION—Papillose, referring to the microscopic projections on under surface of leaflets.

RANGE—Local in mts. of Trans-Pecos Tex., sw. N. Mex., se. Ariz., and n. Mex. (Son. and Chih.). Atlas vol. 3, map 81.

*Fraxinus pauciflora*, see **F. caroliniana**

***Fráxinus pennsylvánica** Marsh. **green ash‡†**

‡†*Fraxinus pennsylvanica* Marsh., Arbustr. Am. 51. 1785.

*Fraxinus lanceolata* Borkh., Theor.-Prakt. Handb. Forstbot. 1: 826. 1800.

*Fraxinus juglandifolia* ß *subintegerrima* Vahl, Enum. Pl. 1: 50. 1804.

*Fraxinus viridis* Michx. f., Hist. Arb. For. Am. Sept. 3: 115, pl. 10. 1813. Non Bosc (1809).

†*Fraxinus pennsylvanica* var. *lanceolata* (Borkh.) Sarg., Silva No. Am. 6:50. 1894.

*Fraxinus pennsylvanica* var. *austini* Fern., Rhodora 40: 452, pl. 529, fig. 1, 2. 1938.

*Fraxinus pennsylvanica* var. *subintegerrima* (Vahl) Fern., Rhodora 49: 159. 1947.

DERIVATION—Of Pennsylvania.

OTHER COMMON NAMES—red ash†, Darlington ash, white ash, swamp ash, water ash.

RANGE—Cape Breton Is., N.S., N.B., s. Que., and Maine, w. to s. and sw. Ont., n. Mich., Minn., c. Man., c. Sask., and se. Alta., s. to c. Mont.,

ne. Wyo., extreme ne. Colo., Kans., and c. and se. Tex., and e. to nw. Fla. and Ga. Atlas vol 1, maps 130-W, 130-E, 130-N; vol. 5, map 56.

REFERENCE—Fernald, M. L. Rhodora 40: 450-454, illus. 1938.

***Fráxinus profúnda** (Bush) Bush **pumpkin ash‡†**

*Fraxinus tomentosa* Michx. f., Hist. Arb. For. Am. Sept. 3: 112, pl. 9. 1813; *nom. illegit.*

*Fraxinus americana profunda* Bush, Mo. Bot. Gard. Ann. Rep. 5: 147. 1894.

‡†*Fraxinus profunda* (Bush) Bush, Gard. and Forest 10: 515. 1897.

DERIVATION—Deep, referring to the swamps where it grows.

OTHER COMMON NAME—red ash.

RANGE—Local in swamps and river bottoms, chiefly in Coastal Plain from s. Md. and se. Va. s. to n. Fla. and w. to La., and n. in Miss. Valley to se. Mo., s. Ill., Ind., and sw. Ohio. Atlas vol. 4, map 54; vol. 5, map 57.

REFERENCE—Fernald, M. L. Rhodora 40: 450-452, illus. 1938.

***Fráxinus quadrangulàta** Michx. **blue ash‡†**

‡†*Fraxinus quadrangulata* Michx., Fl. Bor.-Am. 2: 255. 1803.

DERIVATION—Four-angled, referring to the twigs.

RANGE—Ohio w. to Ill., extreme s. Wis., and extreme se. Iowa, s. to Mo., se. Kans., and ne. Okla., e. to Ark., e. Tenn., and n. Ala. Also local in extreme s. Ont., s. Mich., w. W. Va., and nw. Ga. Atlas vol. 1, map 128-E.

**Fráxinus texénsis** (Gray) Sarg. **Texas ash‡†**

*Fraxinus americana* var. *texensis* Gray, Synopt. Fl. No. Am. 2(1): 75. 1878.

‡†*Fraxinus texensis* (Gray) Sarg., Silva No. Am. 6: 47, pl. 270. 1894.

*Fraxinus americana* ssp. *texensis* (Gray) G. N. Mill., [N.Y.] Cornell Univ. Agric. Exp. Stn. Mem. 335: 36. 1955.

RANGE—S. Okla. and Tex. only. Atlas vol. 3, map 82.

*Fraxinus tomentosa*, see **F. profunda**

**Fráxinus velùtina** Torr. **velvet ash‡†**

‡†*Fraxinus velutina* Torr. in Emory, Notes Mil. Reconn. Ft. Leav. Calif. 149. 1848.

*Fraxinus pistaciaefolia* Torr., U.S. Rep. Explor. Surv. Miss. Pacif. 4(5): 128. 1857.

*Fraxinus coriacea* Wats., Am. Nat. 7: 320. 1873.

†*Fraxinus pistaciaefolia* var. *coriacea* (Torr.) Gray, Synopt. Fl. No. Am. 2(1): 74. 1878.

*Fraxinus oregona* var. *β glabra* Lingelsh., Bot. Jahrb. 40: 220. 1907; *nom. nud.* Lingelsh., Pflanzenreich 72 Heft (IV. 243, I & II): 43. 1920.

*Fraxinus attenuata* Jones, Contrib. West. Bot. 12: 59. 1908 (March 26).

*Fraxinus toumeyi* Britton in Britton & Shafer, No. Am. Trees 803, fig. 732. 1908 (April).

†*Fraxinus oregona* var. *glabra* Lingelsh. ex Rehd., Proc. Am. Acad. Arts Sci. 53: 207. 1917.

*Fraxinus velutina* var. *coriacea* (Wats.) Rehd., Proc. Am. Acad. Arts Sci. 53: 206. 1917.

†*Fraxinus velutina* var. *glabra* Rehd., Proc. Am. Acad. Arts Sci. 53: 207. 1917.

†*Fraxinus velutina* var. *toumeyi* (Britton) Rehd., Proc. Am. Acad. Arts. Sci. 53: 204. 1917.

*Fraxinus pennsylvanica* ssp. *velutina* (Torr.) G. M. Mill., [N.Y.] Cornell Univ. Agric. Exp. Stn. Mem. 335: 40. 1955.

DERIVATION—Velvety, referring to the hairy leaflets and twigs.

OTHER COMMON NAMES—Arizona ash, desert ash†, Modesto ash, leather-leaf ash, smooth ash†, Toumey ash.

RANGE—Trans-Pecos Tex., N. Mex., Ariz., extreme sw. Utah, s. Nev., and s. Calif. Also in n. Mex. (n. B. Cal. and n. Son., e. to N.L.). Atlas vol. 3, map 83.

REFERENCE—Munz, Philip A. and J. D. Laudermilk. A neglected character in western ashes (Fraxinus). Aliso 2: 49-62, illus. 1949.

*Fremontia*, see **Fremontodendron**.

**Fremontodéndron** Cov. (Family Sterculiaceae) **fremontia**

*Fremontia* Torr., Proc. Am. Assoc. Adv. Sci. 4: 191. 1851; *nom. subnud.*

‡†*Fremontia* Torr., Smithson. Inst. Contrib. Knowl. 5(1) [6(2)] (Pl. Frémont.): 5, pl. 2. 1853. Non *Fremontia* Torr. in Frém., Rep. Explor. Mo. Rocky Mts. 91. 1843.

*Fremontodendron* Cov., U.S. Dep. Agric., Contrib. U.S. Natl. Herb. 4: 74. 1893.

DERIVATION—Gen. John Charles Frémont (1813-90), politician, soldier, and explorer of western United States, who collected plant specimens on his expeditions.

REFERENCE—Harvey, Margaret. A revision of the genus Fremontia. Madroño 7: 100-110, illus. 1943.

*Fremontodendron* is accepted here because of rejection of the proposal to conserve the name ‡†*Fremontia* (Little, Madroño 7: 247-248. 1944; Brittonia 7: 47. 1949; Taxon 3: 118. 1954). This genus is sometimes placed in the related tropical Bombax Family, Bombacaceae, where it would be the only native representative.

NUMBER OF SPECIES: Native shrubs and trees, 2 (also in B. Cal., Mex.); total, 2.

**Fremontodéndron californicum** (Torr.) Cov. **California fremontia‡**

‡†*Fremontia californica* Torr., Smithson. Inst. Contrib. Knowl. 5 (1) [6 (2)] (Pl. Frémont.): 6, pl. 2. 1853.

*Fremontodendron californicum* (Torr.) Cov., U.S. Dep. Agric., Contrib. U.S. Natl. Herb. 4: 74. 1893.

*Fremontia crassifolia* Eastw., Leafl. West. Bot. 1: 139. 1934.

*Fremontia napensis* Eastw., Leafl. West. Bot. 1: 140. 1934.

*Fremontia obispoënsis* Eastw., Leafl. West. Bot. 1: 140. 1934.

*Fremontia californica* subsp. *crassifolia* (Eastw.) Abrams, Illus. Fl. Pacif. States 3: 114. 1951.

*Fremontodendron californicum* ssp. *crassifolium* (Eastw.) J. H. Thomas, Leafl. West. Bot. 7: 224. 1955.

*Fremontodendron californicum* ssp. *napense* (Eastw.) Munz, Leafl. West. Bot. 10: 119. 1964.

*Fremontodendron californicum* ssp. *obispoense* (Eastw.) Munz, Leafl. West. Bot. 10: 119. 1964.

*Fremontodendron napense* (Eastw.) R. M. Lloyd, Brittonia 17: 384. 1965.

DERIVATION—Of California.

OTHER COMMON NAMES—flannelbush, California flannelbush, mountain leatherwood†, California slippery-elm, Napa fremontia.

RANGE—Mts. of Calif., c. Ariz., and n. B. Cal., Mex. Atlas vol. 3, map 84.

Several mostly shrubby variations have been named as varieties or subspecies.

**Fremontodéndron mexicànum** A. Davidson **Mexican fremontia‡**

*Fremontodendron mexicanum* A. Davidson, Bull. South. Calif. Acad. Sci. 16: 50. 1917.

‡*Fremontia mexicana* (A. Davidson) Macbr., Harvard Univ., Contrib. Gray Herbar., New Ser., 53: 14. 1918.

*Fremontia californica* var. *mexicana* (A. Davidson) Jeps., Man. Fl. Pl. Calif. 637. 1925.

DERIVATION—Of Mexico, where it was discovered.

RANGE—Extreme s. Calif. (San Diego Co.) and n. B. Cal., Mex. Atlas vol. 3, map 85.

REFERENCES—Payne, Theodore. History of the introduction of three California natives. Aliso 2: 109-114. 1950.

Wiggins, Ira L. The range of Fremontia mexicana (Davids.) Macbr., in southern and Lower California. Gard. Chron., Ser. 3, 97: 13. 1935.

**Gárrya** Dougl. ex Lindl. (Family Cornaceae; Garryaceae) **silktassel**

‡†*Carrya* Dougl. ex Lindl., Edwards' Bot. Reg. 20: No. 1686, pl. 1686. 1834.

DERIVATION—Named in compliment to Nicholas Garry (1781?-1856), secretary and later deputy governor of the Hudson Bay Company, for

assistance to David Douglas during his travels in northwestern America.

REFERENCE—Eyde, Richard H. Inferior ovary and generic affinities of Garrya. Am. J. Bot. 51: 1083-1092, illus. 1964.

This genus is placed in the separate family Garryaceae by some authors.

NUMBER OF SPECIES: Native trees, 1; native shrubs in sw. U.S., about 7, incl. 3 also in Mex.; Mex., additional, about 5, incl. 1 also in C. Am.; West Indies, 1; total, about 15.

**Gárrya ellíptica** Dougl. ex Lindl. **wavyleaf silktassel**‡

‡†*Garrya elliptica* Dougl. ex Lindl., Edwards' Bot. Reg. 20: No. 1686, pl. 1686. 1834.

DERIVATION—Elliptic, describing the leaves.

OTHER COMMON NAMES—coast silktassel, tasseltree†, quininebush.

RANGE—Pacific Coast Ranges from w. Oreg. s. to s. Calif. (Ventura Co.) and Santa Cruz Is. Atlas vol. 3, map 86.

**Genìpa** L. (Family Rubiaceae) **genip**

‡†*Genipa* L., Gen. Pl. ed. 5, 87. 1754.

*Casasia* A. Rich. in Sagra, Hist. Fis. Pol. Nat. Cuba 11: 9. 1850.

DERIVATION—The Brazilian name.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R. and V.I., 1; total, tropical Am., mainly West Indies, about 10.

**Genìpa clusiifòlia** (Jacq.) Griseb. **seven-year-apple**‡†

*Gardenia clusiifolia* Jacq., Coll. Bot. Chem. Hist. Nat. Suppl. 37, pl. 4, fig. 3. 1796; "*clusiaefolia*."

‡†*Genipa clusiifolia* (Jacq.) Griseb., Fl. Brit. West Ind. 317. 1861.

*Casasia clusiifolia* (Jacq.) Urban, Symb. Antill. 5: 505. 1908.

DERIVATION—With leaves like *Clusia*, a genus of tropical trees with thick, leathery leaves.

RANGE—Coasts of s. Fla. incl. Fla. Keys (n. to Broward and Lee Cos.). Also Bermuda, Bahamas, and Cuba. Atlas vol. 5, map 206.

**Gledítsia** L. (Family Leguminosae) **honeylocust**

‡†*Gleditsia* L., Sp. Pl. 1056. 1753; Gen. Pl. ed. 5, 476. 1754.

DERIVATION—Latinized name honoring Johann Gottlieb Gleditsch (1714-86), director of the botanical garden at Berlin.

REFERENCES—Isely, Duane, Mem. N.Y. Bot. Gard. 25 (2): 153-160, 213-214, illus. 1975.

McCoy, S. A new species of honey locust. Proc. Indiana Acad. Sci. 68: 320-321, illus. 1959.

Robertson, Kenneth R., and Yin-Tse Lee. J. Arnold Arbor. 57: 26-32, illus. 1976.

*Gleditsia hebecarpa* McCoy (Proc. Indiana Acad. Sci. 68: 320, fig. 1959) is a hybrid and synonym of *G.* ×*texana* Sarg., according to Isely (1975, p. 159). It was described from a single tree (since destroyed) in Knox Co., Ind., within the range of both parent species.

NUMBER OF SPECIES: native trees, 2; S. Am., 1; total, of wide distribution except Australia, about 14.

**Gledítsia aquática** Marsh. **waterlocust**‡†

‡†*Gleditsia aquatica* Marsh., Arbustr. Am. 54. 1785.

DERIVATION—Aquatic, from the habitat of river swamps.

RANGE—Coastal Plain from S. C. to c. Fla. and w. to e. Tex., and n. in Miss. Valley to Mo., s. Ill., extreme sw. Ind., and w. Ky. Not recorded from Ala. Atlas vol. 4, map 55; vol. 5, map 58.

HYBRIDIZES WITH: *Gleditsia triacanthos (G.* ×*texana* Sarg.; *G.* ×*hebecarpa* McCoy).

***Gledìtsia triacánthos** L. **honeylocust‡†**

†*Gleditsia triacanthos* L., Sp. Pl. 1056. 1753.

DERIVATION—Three-thorn, referring to the large branched spines.

OTHER COMMON NAMES—sweet-locust, thorny-locust.

RANGE—C. Pa. w. to Ohio, extreme s. Ont., s. Mich., s. Wis., extreme se. Minn., Iowa, and se. S. Dak., s. to e. Nebr., c. Kans., c. and w. Okla., and c. and se. Tex., e. to Ala. and nw. Fla., and ne. to extreme nw. Ga., sw. Va., and w. Md. Naturalized e. to Appalachian Mts. from S.C. n. to Pa. and in N.Y. and New Engl. Atlas vol. 1, maps 132-W, 132-E; vol. 5, map 59.

The thornless form, occasionally found wild and common in cultivation, is *Gleditsia triacanthos* f. *inermis* Schneid. (Illus. Handb. Laubh. 2: 12. 1907), according to Isely (1975, p. 214).

HYBRIDIZES WITH: *Gleditsia aquatica (G. ×texana* Sarg.; G. *×hebecarpa* McCoy).

**Gordònia** Ellis (Family Theaceae) **gordonia**

‡†*Gordonia* Ellis, Philos. Trans. R. Soc. Lond. 60: 518, 520, pl. 11. 1771; *nom. cons.*

DERIVATION—James Gordon (1728-91), British nurseryman.

REFERENCES—Kobuski, Clarence E. J. Arnold Arbor. 32: 124-127, illus. 1951.

Wood, Carroll E., Jr. The genera of Theaceae of the southeastern United States. J. Arnold Arbor. 40: 413-419, illus. 1959.

NUMBER OF SPECIES: Native trees, 1; total, the others tropical and subtropical, se. Asia and Indomalaysia, about 30.

**Gordònia lasiánthus** (L.) Ellis **loblolly-bay‡†**

*Hypericum lasianthus* L., Sp. Pl. 783. 1753.

‡†*Gordonia lasianthus* (L.) Ellis, Philos. Trans. R. Soc. Lond. 60: 523, pl. 11. 1771.

DERIVATION—*Lasianthus*, an older name for the genus, meaning hairy-flowered.

OTHER COMMON NAMES—gordonia, bay, holly-bay.

RANGE—Coastal Plain from e. N.C. to c. Fla. and s. Miss. Atlas vol. 4, map 56; vol. 5, map 60.

‡†*Gossýpium* L. (Sp. Pl. 693. 1753; Gen. Pl. ed. 5, 309. 1754; Family Malvaceae), cotton, perhaps should be removed from the checklist, as the 2 species apparently do not attain tree size. Both have been partly eradicated as hosts of pests of cultivated cotton. Reference—Fryxell, Paul A. A nomenclator of Gossypium: the botanical names of cotton. U.S. Dep. Agric. Tech. Bull. 1491, 114 p. 1976.

‡GOSSÝPIUM HIRSÙTUM L. (Sp. Pl. ed. 2, 2: 975. 1763), upland cotton‡ (wild cotton), is a shrub of s. Fla. incl. Fla. Keys, apparently naturalized, rather than native. Under the name *G. barbadense*, it was noted in 1872 as introduced at Key West (Melvill, J. Cosmo. Mem. Manchester Lit. Phil. Soc. Ser. 3, 8: 138-154. 1884).

‡*Gossýpium thúrberi* Todaro (Rel. Cult. Cot. Ital. Monogr. Gossypium 120. 1877; *Thurberia thespesioides* Gray), Thurber cotton (desert cotton), is a native shrub commonly less than 6 ft (2 m) high, reported rarely to attain tree size, perhaps formerly or in Mex. Desert mts. of se. and c. Ariz. and nw. Mex. (Son. and w. Chih.).

‡†GREVÌLLEA ROBÚSTA A. Cunn. (in R. Br., Suppl. Prodr. Fl. Nov. Holl. 24. 1830; Family Proteaceae, Protea Family), silk-oak‡ (silky-oak†), is omitted here as apparently not naturalized, though included in the 1927 and 1953 checklists. Planted for shade and ornament in s. Fla. and persistent. Also in s. Ariz., s. Calif., Hawaii, and P.R. Native of Australia but widely introduced through tropical regions.

**Guaìacum** L. (Family Zygophyllaceae) **lignumvitae**

‡†*Guaiacum* L., Sp. Pl. 381. 1753; "*Guajacum*"; Gen. Pl. ed. 5, 179. 1754.

DERIVATION—From the Carib Indian name, guayacán.

REFERENCE—Porter, Duncan M. The genera of Zygophyllaceae in the southeastern United States. J. Arnold Arbor. 53: 531-552, illus. 1972.

NUMBER OF SPECIES: Native trees (Fla. Keys and Tex.), 2, incl. 1 also in P.R.; P.R. and V.I., also 1 additional; total, tropical Am., about 5.

**Guaìacum angustifòlium** Engelm. **Texas lignumvitae**

*Guaiacum angustifolium* Engelm. in Wislizenus, Mem. Tour. North. Mex. 113. 1848; "*Guajacum.*"

‡†*Porliera angustifolia* (Engelm.) Gray, Pl. Wright. 1: 28. 1952.

DERIVATION—Narrowleaf, referring to the very narrow leaflets.

OTHER COMMON NAMES—Texas porliera‡, soapbush, guayacán (Spanish).

RANGE—S. to c. and Trans-Pecos Tex. and ne. Mex. (e. Chih. se. to n. S.L.P. and Tamps.). Atlas vol. 3, map 87.

REFERENCE—Porter, Duncan M. Taxon 23: 344. 1974.

Formerly placed in ‡†*Porliera* Ruiz & Pav., a related genus of s. S. Am.; as *Porlieria* in 1953 checklist.

**Guaìacum sánctum** L. **roughbark lignumvitae**

‡†*Guaiacum sanctum* L. Sp. Pl. 382. 1753; "*Guajacum.*"

*Guaiacum guatemalense* Planch. ex Rydb., No. Am. Fl. 25: 106. 1910.

DERIVATION—Holy.

OTHER COMMON NAMES—holywood lignumvitae‡, lignumvitae†.

RANGE—S. Fla., rare and local on several Upper Keys and extinct on Key West, and absent from mainland. Bahamas, Cuba, Hispaniola, and P.R. Also s. Mex (Yuc.), Guatemala, Honduras, and Nicaragua. Atlas vol. 5, map 207.

**Guapìra** Aubl. **blolly**

*Guapira* Aubl., Hist. Pl. Guiane Franç. 1: 308, pl. 119. 1775.

‡†*Torrubia* Vell., Fl. Flum. 139. 1825; Icones 3: pl. 150. 1835.

DERIVATION—Apparently a local name of the type species in French Guiana; unexplained by the author.

REFERENCES—Bogle, A. Linn. J. Arnold Arbor. 55: 28-37, illus. 1974.

Little, Elbert L., Jr. Transfers to Guapira from Torrubia (Nyctaginaceae). Phytologia 17: 367-368. 1968.

The proposal to conserve *Torrubia* Vell. (Little, Regn. Veg. 34: 58-59. 1964) was rejected (Taxon 17: 462-463. 1968). Thus, *Guapira* Aubl., the older name is accepted here.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R.; P.R., 2 additional (1 also in V.I.); total, tropical Am., about 30.

**Guapìra díscolor** (Spreng.) Little **longleaf blolly‡**

*Pisonia discolor* Spreng., Syst. Veget. ed. 16, 2: 168. 1825.
*Pisonia discolor γ longifolia* Heimerl in Urban, Bot. Jahrb. 21: 627. 1896.
*Torrubia discolor* (Spreng.) Britton, Bull. Torrey Bot. Club 31: 613. 1904.
‡†*Torrubia longifolia* (Heimerl) Britton, Bull. Torrey Bot. Club 31: 614. 1904.
‡†*Torrubia bracei* Britton, Bull. Torrey Bot. Club 31: 614. 1904.
*Pisonia longifolia* Sarg., Man. Trees No. Am. 314, fig. 251. 1905.
‡*Torrubia globosa* Small, Man. Southeast. Fl. 490, 1504. 1933.
*Guapira discolor* (Spreng.) Little, Phytologia 17: 368. 1968.
*Guapira bracei* (Britton) Little, Phytologia 17: 367. 1968.
*Guapira globosa* (Small) Little, Phytologia 17: 367. 1968.
*Guapira longifolia* (Heimerl) Little, Phytologia 17: 367. 1968.

OTHER COMMON NAMES—Brace blolly‡, roundleaf blolly‡, beeftree, beefwood, porkwood, pigeonwood.

REFERENCE—Gillis, William T. Phytologia 29: 155-156. 1974.

RANGE—Coasts of s. Fla. incl. Fla. Keys, n. on e. coast to Cape

Canaveral. Also Bermuda, Bahamas, Greater Antilles incl. P.R., and Grand Cayman. Atlas vol. 5, map 208.

The variations of blolly, differing mainly in leaf shape and formerly regarded as separate species, have been united by Gillis (1974) under a single variable species.

**Guettárda** L. (Family Rubiaceae) **velvetseed**

‡†*Guettarda* L., Sp. Pl. 991. 1753; Gen. Pl. ed. 5, 428. 1754.

DERIVATION—Jean Étienne Guettard (1715-86), French botanist, mineralogist, and physician.

NUMBER OF SPECIES: Native trees (s. Fla.), 2, also in P.R. and V.I.; P.R., additional, 5, including 1 also in V.I.; total, tropical, many in West Indies and mostly New World, 100.

**Guettárda ellíptica** Sw. **elliptic-leaf velvetseed**

‡†*Guettarda elliptica* Sw., Nov. Gen. Sp. Pl. Prodr. 59. 1788.

DERIVATION—Elliptic, referring to the leaf shape.

OTHER COMMON NAMES—Everglades velvetseed‡, velvetseed†.

RANGE—Local in s. Fla. incl. Fla. Keys., n. to Broward Co. Bahamas, Grand Cayman, Greater Antilles incl. P.R., and St. Thomas. Also s. Mex. (Yuc., Sin., Nay., Tres Marías Is., and Revillagigedo Is.) to Belize, Guatemala, Panama, Venezuela, and Guyana. Atlas vol. 5, map 209.

**Guettárda scàbra** (L.) Vent. **roughleaf velvetseed‡†**

*Matthiola scabra* L., Sp. Pl. 1192. 1753.

‡†*Guettarda scabra* (L.) Vent., Choix Pl. Jard. Cels 1, pl. 1. 1803.

DERIVATION—Rough, the leaves being very rough above.

RANGE—S. Fla. incl. Fla. Keys, n. to Broward Co. From Bahamas through West Indies incl. P.R. and V.I. to Trinidad and Tobago and Margarita (Venezuela). Atlas vol. 5, map 210.

**Gymínda** (Griseb.) Sarg. (Family Celastraceae) **falsebox**

*Myginda* Sect. *Gyminda* Griseb., Cat. Pl. Cub. 55. 1866.

‡†*Gyminda* (Griseb.) Sarg., Gard. and Forest 4: 4. 1891.

DERIVATION—Anagram of *Myginda* Jacq., the related genus from which it was segregated.

NUMBER OF SPECIES: Native trees (Fla. Keys), 1, also in P.R. and V.I.; total, shrubs and small, trees, tropical Am. from West Indies to Mex. and C. Am., 3.

**Gymìnda latifòlia** (Sw.) Urban **falsebox**

*Myginda latifolia* Sw., Nov. Gen. Sp. Pl. Prodr. 39. 1788.

*Rhacoma latifolia* (Sw.) Loes in Engler & Prantl, Nat. Pflanzenfam. 3(5): 217. 1892.

‡†*Gyminda latifolia* (Sw.) Urban, Symb. Antill. 5: 80. 1904.

DERIVATION—Broad-leaf.

OTHER COMMON NAMES—false-boxwood†, West Indies falsebox‡.

RANGE—Very rare in s. Fla. in Lower Fla. Keys (recorded from 11 keys from Key West e. to Grassy Key), and absent from mainland. From Bahamas through West Indies incl. P.R. and V.I. Also ne. Mex. (Tamps. and Ver.). Atlas vol. 5, map 211.

**Gymnánthes** Sw. (Family Euphorbiaceae) **oysterwood**

*Ateramnus* P. Br., Civ. Nat. Hist. Jam. 339. 1756.

‡†*Gymnanthes* Sw., Nov. Gen. Sp. Prodr. 6, 95. 1788. *Nom. conserv. propos.*

DERIVATION—Naked flower, the flowers with perianth reduced to bractlike scales or absent.

REFERENCE—Gillis, William T. Rhodora 76: 96. 1974.

The generic name *Gymnanthes* Sw. is retained here pending further consideration of a proposal for conservation. An earlier proposal was not approved because conservation was thought unnecessary (Taxon 3: 241. 1954).

NUMBER OF SPECIES: Native trees (S. Fla.), 1, also in P.R. and V.I.; total, mostly West Indies, Mex., and C. Am., about 15.

**Gymnánthes lùcida** Sw. **oysterwood‡**

‡†*Gymnanthes lucida* Sw., Nov. Gen. Sp. Prodr. 96. 1788.

*Ateramnus lucidus* (Sw.) Rothm., Repert. Sp. Nov. Fedde 53: 5. 1944.

DERIVATION—Bright, or shining, referring too the shiny dark green evergreen leaves.

OTHER COMMON NAME—crabwood†.

RANGE—S. Fla. incl. Fla. Keys, local in Dade Co. (extinct in Palm Beach Co.). Bahamas, Grand Cayman, Greater Antilles incl. P.R. and V.I., and n. Lesser Antilles to Guadeloupe. Also se. Mex. (Yuc.), Belize, and Guatemala. Atlas vol. 5, map 212.

**Gymnócladus** Lam. (Family Leguminosae) **coffeetree**

‡†*Gymnocladus* Lam., Encycl. Méth. Bot. 1: 733. 1785.

DERIVATION—From Greek, naked branch, presumably referring to the few stout twigs, conspicuous both without leaves and with the sparse foliage. Other pronunciation—*Gymnocládus*.

REFERENCES—Isely, Duane. Mem. N.Y. Bot. Gard. 25(2): 160-161, 215. 1975.

Lee, Yin-Tse. The genus Gymnocladus and its tropical affinity. J. Arnold Arbor. 57: 91-112, illus. 1976; also p. 21-26, illus.

NUMBER OF SPECIES: Native trees, 1; se. Asia (China to India), 3; world total, 4.

***Gymnócladus dioìcus** (L.) K. Koch **Kentucky coffeetree‡**

*Guilandina dioica* L., Sp. Pl. 381. 1753.

‡†*Gymnocladus dioicus* (L.) K. Koch, Dendrol. 1: 5. 1869.

DERIVATION—Dioecious, the staminate and pistillate flowers generally on different trees. The common name refers to a former use of the seeds as a coffee substitute.

OTHER COMMON NAME—coffeetree†.

RANGE—C. N.Y. and extreme s. Ont. w. to s. Mich., s. Minn., and extreme se. S. Dak., s. to c. Kans. and s. Okla., and e. to Ark., nw. Miss., c. Tenn., Ky., sw. Va., and s. Pa. Also naturalized eastward. Atlas vol. 4, map 57.

**Halèsia** Ellis ex L. (Family Styracaceae) **silverbell**

‡†*Halesia* Ellis ex L., Syst. Nat. ed. 10: 1044, 1369. 1759; *nom. cons.* Non *Halesia* P. Br., Civ. Nat. Hist. Jam. 205, pl. 20, fig. 1. 1756; *nom. rejic.*

DERIVATION—Stephen Hales (1677-1761), British clergyman and author of Vegetable Staticks (1722).

OTHER COMMON NAMES—silverbell-tree, snowdrop-tree.

REFERENCES—Godfrey, R. K. Some identities in Halesia (Styracaceae). Rhodora 60: 86-88, illus. 1958.

Reveal, James L., and Margaret J. Seldin. On the identity of Halesia carolina L. (Styracaceae). Taxon 25: 123-140, illus. 1976.

Wood, C. E., Jr. J. Arnold Arbor. 41: 26-31, illus. 1970.

NUMBER OF SPECIES: Native trees (se. U.S.), 3; e. China, 1; total, 4.

***Halèsia carolìna** L. **Carolina silverbell‡**

‡†*Halesia carolina* L., Syst. Nat. ed. 10, 2: 1044. 1759.

*Halesia tetraptera* Ellis. [R. Soc. Lond.] Phil. Trans. 51: 932, pl. 22 A. 1761.

‡*Halesia carolina* var. *monticola* Rehd., Mitt. Dtsch. Dendrol. Ges. 22: 260. 1913 [1914].

†*Halesia monticola* (Rehd.) Sarg., J. Arnold Arbor. 2: 171. 1921.

DERIVATION—Of Carolina.

OTHER COMMON NAMES—mountain silverbell‡†, snowdrop-tree, opossum-wood.

RANGE—Mostly in mts. from sw. Va., s. W. Va., and s. Ohio, w. to extreme s. Ill., s. to w. Tenn., Ala., n. Fla., and ne. to c. N.C. Also local in mts. of Ark. and se. Okla. Atlas vol. 4, map 58; vol. 5, map 61.

Reveal and Seldin (1976) concluded that this species should be designated as *Halesia tetraptera* Ellis and that the name *H. carolina* L. should be applied to the species long known as *H. parviflora* Michx.

**Halèsia dîptera** Ellis **two-wing silverbell**‡†

‡†*Halesia diptera* Ellis, [R. Soc. Lond.] Phil. Trans. 61: 932, pl. 22B. 1761.
*Halesia diptera* var. *magniflora* R. K. Godfrey, Rhodora 60: 88. 1958.

DERIVATION—Two-wing, describing the fruit.

OTHER COMMON NAME—snowdrop-tree.

RANGE—Coastal Plain from extreme s. S.C. and Ga. to nw. Fla., w. to se. Tex. and s. Ark. (Nevada Co.). Atlas vol. 4, map 59; vol. 5 map 62.

**Halèsia parviflòra** Michx. **little silverbell**‡†

‡†*Halesia parviflora* Michx., Fl. Bor.-Am. 2: 40. 1803.

DERIVATION—Small-flower.

OTHER COMMON NAME—Florida silverbell.

RANGE—Local chiefly in Coastal Plain, S. C. (Saluda Co.), Ga., n. Fla., Ala., and Miss. Atlas vol. 4, map 60; vol. 5, map 63.

**Hamamèlis** L. (Family Hamamelidaceae) **witch-hazel**

‡†*Hamamelis* L., Sp. Pl. 124. 1753; Gen. Pl. ed. 5, 59. 1754.

DERIVATION—Classical Greek name of *Mespilus germanica* L., medlar, or perhaps *Sorbus domestica* L., servicetree; from words meaning together (in a time sense) and apple, suggesting flowers at the same time.

NUMBER OF SPECIES: Native trees, 1; native shrubs 1; Mex., 1; temperate e. Asia, 3; total, 6.

REFERENCE—Ernst, Wallace R. The genera of Hamamelidaceae and Platanaceae in the southeastern United States. J. Arnold Arbor. 44: 193-210, illus. 1963.

**Hamamèlis virginiàna** L. **witch-hazel**‡†

‡†*Hamamelis virginiana* L., Sp. Pl. 124. 1753.
†*Hamamelis macrophylla* Pursh, Fl. Am. Sept. 1: 116. 1814.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—common witch-hazel, southern witch-hazel.

RANGE—N.S., N.B., Maine, and s. Que., w. to s. Ont., n. Mich., and se. Minn., s. to e. Iowa, Ark., se. Okla., and Edwards Plateau and se. Tex., and e. to c. Fla. Also in ne. Mex. (Tamps.). Atlas vol. 4, maps 61-N, 61-NE, 61-SE; vol. 5, map 64.

A second species, *Hamamèlis vernàlis* Sarg., Ozark witch-hazel (vernal witch-hazel), is a shrub of the Ozark region of s. Mo., Ark., and e. Okla.

**Hamèlia** Jacq. (Family Rubiaceae) **hamelia**

‡†*Hamelia* Jacq., Enum. Pl. Carib. 2, 16. 1760.

DERIVATION—Henry Louis Duhamel du Monceau (1700-82), French botanist.

REFERENCE—Elias, Thomas S. A monograph of the genus Hamelia (Rubiaceae). Mem. N.Y. Bot. Gard. 26(4): 81-144, illus. 1976.

NUMBER OF SPECIES: Native shrubs or small trees (s. and c. Fla.), 1, also P.R. and V.I.; P.R. and V.I., shrubs, 1; total, shrubs and trees, tropical Am., about 25.

**Hamèlia pàtens** Jacq. **scarletbush**‡

‡†*Hamelia patens* Jacq., Enum. Pl. Carib. 16. 1760; Select. Stirp. Am. 72, pl. 50. 1763.
*Hamelia erecta* Jacq., Enum. Pl. Carib. 16. 1760; Select. Stirp. Am. 71. 1763.

DERIVATION—Open or spreading, referring to the flower clusters.

OTHER COMMON NAME—firebush.

RANGE—C. and s. Fla. incl. Fla. Keys. Widespread through tropical Am. Bermuda, from Bahamas through West Indies incl. P.R. and V.I. Also from Mex. (Tamps., Ver., Oax., and Yuc.) s. to Brazil, Paraguay, and Argentina. Atlas vol. 5, map 213.

Commonly a shrub in Fla. but recorded also as a small tree in Fla. Keys. One of the most common shrubs through tropical Am.

**Heliétta** Tulasne (Family Rutaceae) **helietta**

‡†*Helietta* Tulasne, Ann. Sci. Nat., Bot., Sér. 3, 7: 280. 1847.

DERIVATION—Lewis Théodore Hélie (1804-67), French physician.

NUMBER OF SPECIES: Native shrubs or trees (s. Tex.), 1 (also in Mex.); Cuba, 2; total, New World tropics, about 8.

**Heliétta parvifòlia** (Gray) Benth. **barreta**‡†

*Ptelea parvifolia* Gray in Hemsl., Biol. Centr.-Am. Bot. 1: 170. 1879; excl. fruit.

‡†*Helietta parvifolia* (Gray) Benth. in Hook., Icon. Pl., Ser. 3, 4: 66, pl. 1385. 1882.

DERIVATION—Small-leaf.

RANGE—Extreme s. Tex. and ne. Mex. (Tamps. to Coah., s. to S.L.P. and Hgo.). Atlas vol. 3, maps 89-N, 89-SW.

As noted in the 1953 checklist, this species of the Mexican border perhaps should not be included. However, it becomes a tree 20-25 ft (6-7.6 m) tall southward in ne. Mex. and possibly for that reason was accepted as a tree by Sargent (Silva No. Am. 1: 79-82, pl. 35. 1891; Man. Trees No. Am. ed. 2, corr. 637-639, fig. 581. 1926) and by Sudworth in his checklists. A spindly shrub to 13 ft (4 m) tall, according to Correll and Johnston (Man. Vasc. Pl. Tex. 908. 1970).

*Hesperopeuce*, see **Tsuga**

**Heterómeles** M. J. Roem. (Family Rosaceae) **toyon**

‡*Photinia* Lindl. ex Edwards in Edwards' Bot. Reg. 6: No. 491, pl. 491. 1820.

†*Heteromeles* M. J. Roem., Fam. Nat. Regn. Veg. Synops. Monogr. 3: 105. 1847.

DERIVATION—Greek, other or different, and apple.

The segregate genus †*Heteromeles* M. J. Roem., accepted in the 1927 checklist, is restored here to conform to current usage. Only the following species.

**Heterómeles arbutifòlia** (Lindl.) M. J. Roem. **toyon**

*Crataegus arbutifolia* Ait. f., Hort. Kew. ed. 2, 3: 202. 1811. Non *Crataegus arbutifolia* Lam., Encycl. Méth. Bot. 1: 83. 1783.

‡*Photinia arbutifolia* [Ait. f.] Lindl. ex Edwards in Edwards' Bot. Reg. 6: No. 491, pl. 491. 1820.

†*Heteromeles arbutifolia* (Lindl.) M. J. Roem., Fam. Nat. Regn. Veg. Synops. Monogr. 3: 205. 1847.

DERIVATION—With leaves of *Arbutus*, or madrone, from the similar foliage.

OTHER COMMON NAMES—Christmas-berry‡†, California-holly, hollyberry.

RANGE—N. to s. Calif. in Coast Ranges and Sierra Nev. foothills, and Channel Is. of Calif. Also B. Cal., B. Cal. Sur, and Guadalupe Is., Mex. Atlas vol. 3, maps 109-NW, 109-SW (as *Photinia arbutifolia*).

**Hibíscus** L. (Family Malvaceae) **hibiscus**

‡†*Hibiscus* L., Sp. Pl. 693. 1753; Gen. Pl. ed. 5, 310. 1754; *nom. cons.*

*Pariti* Adans., Fam. Pl. 2: 401, 588. 1763.

DERIVATION—Ancient Greek and Latin name of the marshmallow.

The native species of *Hibiscus* are herbs, called rosemallows, and also include shrubs in Florida. Introduced species known as hibiscus are shrubs and trees. Number of species, mostly tropical, about 300.

‡HIBÍSCUS RÒSA-SINÉNSIS L. (Sp. Pl. 694. 1753), Chinese hibiscus‡ (Chinese-rose), a shrub or sometimes small tree, has persisted and escaped from cultivation in s. Fla. It has been recorded as a naturalized shrub (Long and Lakela, Fl. Trop. Fla. 597. 1971). Widely planted as an ornamental in tropical regions. Native of tropical Asia, apparently from China to India. Mentioned in a note in the 1953 checklist.

‡HIBÍSCUS SYRÌACUS L. (Sp. Pl. 695. 1753), shrub-althea‡ (rose-of-Sharon), a shrub or sometimes small tree southward, has persisted and escaped from cultivation in e. U.S. from Mass. w. to N.Y., Ohio, and Mo., s. to e. Tex., and e. to Fla., but apparently is not naturalized. Native of e. Asia.

HIBÍSCUS TILIÀCEUS L. SEA HIBISCUS‡

‡†*Hibiscus tiliaceus* L., Sp. Pl. 694. 1753.
*Paritium tiliaceum* (L.) St.-Hil., Juss., & Camb., Fl. Brasil. Merid. 1: 256. 1827.
?*Pariti grande* Britton ex Small, Man. Southeast. Fl. 859. 1933.

DERIVATION—Like *Tilia* L., basswood, perhaps because of the large, similar shaped leaves.

OTHER COMMON NAMES—mahoe, tree hibiscus.

RANGE—Naturalized along shores of Fla. incl. Fla. Keys. Also Hawaii, P.R., and V.I. Widely distributed on shores of tropical Am. Native probably in Old World tropics.

*Hicoria*, see **Carya**

**Hippómane** L. (Family Euphorbiaceae) **manchineel**

‡†*Hippomane* L., Sp. Pl. 1191. 1753; Gen. Pl. ed. 5, 499. 1754.

DERIVATION—A classical name (Greek, *hippomanes*) for an Arcadian plant, apparently of this family, reported to make horses mad.

NUMBER OF SPECIES: Native trees (S. Fla.), 1, also in West Indies incl. P.R. and V.I. and from Mex. to n. S. Am.; also Hispaniola, 2.

**Hippómane mancinélla** L. **manchineel**‡†

‡†*Hippomane mancinella* L., Sp. Pl. 1191. 1753.

DERIVATION—Latinized from Spanish manzanilla, little apple, referring to the applelike fruits (deadly poisonous).

RANGE—S. Fla. incl. Fla. Keys and shores of s. Dade and s. Monroe Cos. From Bahamas through West Indies incl. P.R. and V.I. Also from s. Mex. (Ver., Yuc., and Oax.) s. on Atlantic Coast to Venezuela and on Pacific Coast to Revillagigedo Is. and to Ecuador incl. Galápagos Is. Atlas vol. 5, map 214.

**Holacántha** Gray (Family Simaroubaceae) **holacantha**

‡*Holacantha* Gray, Am. Acad. Arts. Sci. Mem., New Ser., 5: 310. 1855.

DERIVATION—From Greek wholly and thorn, alluding to the spiny branches throughout.

OTHER COMMON NAME—crucifixion-thorn.

REFERENCE—Moran, Reid, and Richard Felger. Castela polyandra, a new species in a new section; union of Holacantha with Castela (Simaroubaceae). Trans. San Diego Soc. Nat. Hist. 15: 31-40, illus. 1968.

The second species is a low shrub of Trans-Pecos Tex. and n. Mex. This genus has been united also with *Castela* Turp., which has about 15 species in tropical Am.

NUMBER OF SPECIES: Native trees, 1 (also in Mex.); native shrubs, 1 (also in Mex.); total, 2.

**Holacántha émoryi** Gray **holacantha**

‡*Holacantha emoryi* Gray, Am. Acad. Arts Sci. Mem., New Ser., 5: 310. 1855.

*Castela emoryi* (Gray) Moran & Felger, Trans. San Diego Sci. Nat. Hist. 15: 40. 1968.

DERIVATION—Named for its discoverer, Lt. Col. William Hemsley Emory (1811-87), who was in charge of the United States and Mexican boundary survey after the Mexican War and a major general in the Civil War.

OTHER COMMON NAMES—crucifixion-thorn; corona de Cristo, rosario (Spanish).

RANGE—S. Ariz., se. Calif., and nw. Son., Mex. Atlas vol. 3, map 88.

**Hypelàte** P. Br. (Family Sapindaceae) **hypelate**

‡†*Hypelate* P. Br., Civ. Nat. Hist. Jam. 208. 1756.

DERIVATION—A classical Greek plant name (Latin *ruscum*) thought to apply to the lilaceous butchers-broom genus *Ruscus* L.

NUMBER OF SPECIES: 1 (s. Fla.), also in West Indies, incl. P.R.

**Hypelàte trifoliàta** Sw. **hypelate**

‡†*Hypelate trifoliata* Sw., Nov. Gen. Sp. Prodr. 61. 1788.

DERIVATION—Three-leaved, from the compound leaves with 3 leaflets.

OTHER COMMON NAMES—white-ironwood†, inkwood‡.

RANGE—Very rare and local in s. Fla., incl. Long Pine Key (s. Dade Co.), and Fla. Keys (Key Largo to Big Pine Key). Bahamas, Cayman Is., Greater Antilles incl. P.R., San Martin, and Anguilla. Atlas vol. 5, map 215.

**Ìlex** L. (Family Aquifoliaceae) **holly**

‡†*Ilex* L., Sp. Pl. 125. 1753; Gen. Pl. ed. 5, 60. 1754.
*Prinos* L., Sp. Pl. 330. 1753; Gen. Pl. ed. 5, 153. 1754.

DERIVATION—The classical Latin name of *Quercus ilex* L., holly oak, of Europe, which has hollylike leaves.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 44: 227-234. 1964.

Edwin, Gabriel. The "Cassina" and the "Dahoon." Castanea 28: 49-54, illus. 1963.

Fogg, John M., Jr. The deciduous hollies. Bull. Morris Arbor. 11: 59-63, illus. 1960.

Galle, F. C. North American hollies. p. 11-31. *In* Dengler, H. W., ed. Handbook of hollies. Natl. Hort. Mag. 36 (1): 1-193. 1957.

Hume, H. Harold. Evergreen hollies native in the U.S. Natl. Hort. Mag. 26: 143-179, illus. 1947.

Lundell, Cyrus Longworth. Aquifoliaceae. Fl. Tex. 3: 112-122. 1943.

Woods, Frank W. The genus Ilex in Tennessee. Rhodora 53: 229-240, illus. 1951.

Wunderlin, Richard P., and James E. Poppleton. The Florida species of Ilex (Aquifoliaceae). Fla. Sci. 40: 7-21, illus. 1977.

One additional native species in se. U.S. is a shrub: *Ilex glabra* (L.) Gray, inkberry (gallberry, smooth gallberry). A few others listed here are usually shrubby. *Ilex collina* Alexander, cited in the 1953 checklist doubtfully as a synonym of *I. montana*, is now accepted and listed here as *Nemopanthus collinus* (Alexander) Clark, the second species of that related genus.

NUMBER OF SPECIES: Native trees (e. U.S.), 13 (3 also in Mex. and 1 of these in P.R.); native shrubs, 1; P.R., 8 additional; Hawaii, 1; Europe, 1; tropical Africa, 1; Australia, 1; total, trees and shrubs, widespread and mostly tropical, centering in e. Asia (China) and S. Am. (Brazil), about 300-350.

**Ìlex ambígua** (Michx.) Torr. **Carolina holly**‡

*Cassine caroliniana* Walt., Fl. Carol. 242. 1788. Non *Cassine caroliniana* Lam., Encycl. Méth. Bot. 1: 652. 1785.
*Prinos ambiguus* Michx., Fl. Bor.-Am. 2: 236. 1803.
‡*Ilex ambigua* (Michx.) Torr., Fl. N.Y. 2: 2. 1843; "*ambiguus*"; as to new combination but not description.
*Ilex buswellii* Small, Bull. Torrey Bot. Club 51: 382. 1924.

DERIVATION—Ambiguous or doubtful.

OTHER COMMON NAME—sand holly.

RANGE—Coastal Plain chiefly, from N.C. to c. Fla. and e. Tex., n. to se. Okla., n. Ark., and n. Ala. Atlas vol. 4, map 62; vol. 5, map 65.

**Ìlex amelánchier** M. A. Curtis **sarvis holly**‡

*Prinos dubius* G. Don, Gen. Syst. Gard. Bot. 2: 20. 1832.
‡*Ilex amelanchier* M. A. Curtis in Chapm., Fl. South. U.S. 270. 1860.
*Ilex dubia* (G. Don) B.S.P., Prelim. Cat. Anth. Pter. N.Y. 11. 1888. Non *Ilex dubia* Weber, Paleontographica 2: 203, pl. 22, fig. 9. 1851 (fossil, Oligocene, Prussia).

DERIVATION—*Amelanchier*, serviceberry, from the resemblance of the foliage to that unrelated genus.

OTHER COMMON NAME—serviceberry holly.

RANGE—Rare and local in Coastal Plain in N.C., S.C., Ga., nw. Fla., Ala., Miss., and se. La. Atlas vol. 4, map 63.

REFERENCE—Little, Elbert L., Jr. J. Wash. Acad. Sci. 33: 131. 1943.

A shrub generally less than 6 ft (2 m) high but rarely a small tree, according to Radford, Ahles, and Bell (Man. Vasc. Fl. Carol. 682. 1968) and Small (Man. Southeast. Fl. 1502. 1933). Mentioned in a note in 1953 checklist.

*Ilex arenicola*, see **I. opaca** var. **arenicola**
*Ilex buswellii*, see **I. ambigua**
*Ilex caroliniana*, see **I. ambigua**

**Ìlex cassìne** L. **dahoon**‡†

‡†*Ilex cassine* L., Sp. Pl. 125. 1753.
*Ilex dahoon* Walt., Fl. Carol. 241. 1788.

DERIVATION—Old name for *Ilex vomitoria* Ait., yaupon, misapplied to this species.

OTHER COMMON NAMES—Alabama dahoon, dahoon holly, Christmasberry, Henderson-wood.

RANGE—Coastal Plain from N.C. to s. Fla., and w. to s. La. Recorded long ago from se. Tex. (Brazoria Co.). Also local in Bahamas, w. Cuba, and ne. P.R., and a var. in c. Mex. (Ver. and Mex.). Atlas vol. 4, maps 64-N, 64-SE; vol. 5, map 66.

HYBRIDIZES WITH: *Ilex opaca* (*Ilex* ×*attenuata* Ashe).

*Ilex collina*, see **Nemopanthus collinus**

**Ìlex coriàcea** (Pursh) Chapm. **large gallberry**‡

*Prinos lucidus* Ait., Hort. Kew. 1: 478. 1789.
*Prinos coriaceus* Pursh, Fl. Am. Sept. 1: 221. 1814.
‡*Ilex coriacea* (Pursh) Chapm., Fl. South. U.S. 270. 1860.
*Ilex lucida* (Ait.) Torr. & Gray ex Wats., Bibl. Index No. Am. Bot. 1: 159. 1878; non Presl, 1844.

DERIVATION—Leathery, referring to the evergreen leaves.

OTHER COMMON NAMES—sweet gallberry, bay-gallbush.

RANGE—Coastal Plain from se. Va. to n. Fla. and w. to se. Tex. Atlas vol. 4, map 65; vol. 5, map 67.

*Ilex cumulicola*, see **I. opaca** var. **arenicola**
*Ilex curtissii*, see **I. decidua**
*Ilex cuthbertii*, see **I. decidua**

**Ìlex decídua** Walt. **possumhaw**‡

‡†*Ilex decidua* Walt., Fl. Carol. 241. 1788.

†*Ilex decidua* var. *curtissii* Fern., Bot. Gaz. 33: 155. 1902.
*Ilex curtissii* (Fern.) Small, Man. Southeast. Fl. 815. 1933.
*Ilex cuthbertii* Small, Man. Southeast. Fl. 815. 1933.

DERIVATION—Deciduous.

OTHER COMMON NAMES—winterberry†, deciduous holly, swamp holly, Curtiss possumhaw.

RANGE—Md. and Va., s. in Coastal Plain and Piedmont to c. Fla., and w. to se. and c. Tex., and n. in interior to e. Okla., se. Kans., ne. Mo., c. Ill., sw. Ind., w. Ky., and se. Tenn. Also ne. Mex. (Tamps. and N.L.). Atlas vol. 4, map 66; vol. 5, map 68.

*Ilex glabra*, see note under **Ilex**

**Ìlex krugiàna** Loes. **tawnyberry holly‡**

‡†*Ilex krugiana* Loes. in Urban, Bot. Jahrb. 15: 317. 1893.

DERIVATION—Leopold Krug (1833-98), German businessman, botanist, and patron of science, who resided in Puerto Rico and who studied the flora of the West Indies.

OTHER COMMON NAMES—Krug holly, southern holly.

RANGE—Local in s. Fla. (Dade Co.), apparently not on Fla. Keys. Bahamas and Hispaniola. Atlas vol. 5, map 216.

**Ìlex laevigàta** (Pursh) Gray **smooth winterberry‡**

*Prinos laevigatus* Dum.-Cours., Bot. Cult. ed. 2, 6: 255. 1811; *nom. nud.*
*Prinos laevigatus* Pursh, Fl. Am. Sept. 1: 220. 1814.
‡*Ilex laevigata* (Pursh) Gray, Man. Bot. North. U.S. ed. 2, 264. 1856.

DERIVATION—Smooth, the leaves being hairless or nearly so.

RANGE—Sw. Maine to c. N.Y., and s. mostly in Coastal Plain to ne. S.C. Also local in sw. Pa. and sw. Va. Atlas vol. 4, map 67.

**Ìlex lóngipes** Chapm. ex Trel. **Georgia holly‡**

‡*Ilex longipes* Chapm. ex Trel., Trans. Acad. Sci. St. Louis 5: 346. 1889.
*Ilex longipes* var. *hirsuta* Lundell, Fl. Tex. 3: 118. 1943.
*Ilex decidua* var. *longipes* (Chapm.) Ahles, J. Elisha Mitchell Sci. Soc. 80: 173. 1964.

DERIVATION—Long-stalk, referring to the fruits.

OTHER COMMON NAME—Chapman holly.

RANGE—W. N.C., S.C., and s. Tenn., s. to nw. Fla., and w. to La., sw. Ark., and e. Tex. Atlas vol. 5, map 158.2.

**Ìlex montàna** Torr. & Gray **mountain winterberry‡**

‡†*Ilex montana* Torr. & Gray in Gray, Man. Bot. North. U.S. 276. 1848.
*Ilex monticola* Gray, Man. Bot. North. U.S. ed. 2, 264. 1856.
*Ilex mollis* Gray, Man. Bot. North. U.S. ed. 5, 306. 1867.
*Ilex amelanchier* β *monticola* (Gray) Wood, Am. Bot. Florist 208. 1870.
*Ilex montana* var. *mollis* (Gray) Britton, Bull. Torrey Bot. Club 17: 313. 1894.
*Ilex beadlei* Ashe, Bot. Gaz. 26: 377. 1897; *nom. subnud.*
*Ilex beadlei* Ashe ex Kearney, Bull. Torrey Bot. Club 24: 569. 1897.
*Ilex montana* var. *beadlei* (Ashe) Fern., Rhodora 41: 428. 1939.
*Ilex ambigua* var. *montana* (Torr. & Gray) Ahles, J. Elisha Mitchell Sci. Soc. 80: 173. 1964.
*Ilex ambigua* var. *monticola* (Gray) Wunderlin & Poppleton, Fla. Sci. 40: 10. 1977.

DERIVATION—Of mountains.

OTHER COMMON NAME—mountain holly†.

RANGE—Mts. mostly, from w. Mass. and c. and sw. N.Y., s. to e. Ky., c. Tenn., n. Ga., and S.C. Also local s. and w. to nw. Fla., s. Ala., Miss., and La. Also a closely related sp. or var. in Japan. Atlas vol. 4, map 68; vol. 5, map 69.

Closely related to *Ilex ambigua* (Michx.) Torr. and cited as a variety of that species by Radford, Ahles, and Bell (Man. Vasc. Fl. Car. 683. 1968) and by Wunderlin and Poppleton (1977).

*Hex macropoda* Miq., of Japan, accepted by Jisaburo Ohwi (Fl. Jap.

598. 1965), has been treated also as a variety, *Ilex montana* var. *macropoda* (Miq.) Fern. (Rhodora 41: 428. 1939).

*Ilex monticola*, see **I. montana**

**Ìlex myrtifòlia** Walt. **myrtle dahoon‡**

‡*Ilex myrtifolia* Walt., Fl. Carol. 241. 1788.
*Ilex dahoon* var. *myrtifolia* (Walt.) Chapm., Fl. Southeast. U.S. 269. 1860.
†*Ilex cassine* var. *myrtifolia* (Walt.) Sarg., Gard. and Forest 2: 616. 1889.

DERIVATION—Myrtle-leaf.

OTHER COMMON NAMES—dahoon†, myrtle holly.

RANGE—Coastal Plain from N.C. to n. Fla. and w. to se. La. Recorded long ago from se. Tex. Atlas vol. 4, map 69; vol. 5, map 70.

Also regarded as a variety, †*Ilex cassine* var. *myrtifolia* (Walt.) Sarg.

***Ìlex opàca** Ait. **American holly‡**

‡†*Ilex opaca* Ait., Hort. Kew. 1: 169. 1789 (before Oct. 1).
*Ilex laxiflora* Lam., Encycl. Méth. Bot. 3: 147. 1789 (Oct. 19).
*Ilex opaca* β *integra* Wood, Am. Bot. Florist 207. 1870.

DERIVATION—Opaque or dark, referring to the dull green leaves.

OTHER COMMON NAMES—holly†, white holly.

RANGE—E. Mass., s. Conn., and se. N.Y. (Long Is.), sw. to se. Pa., W. Va., extreme s. Ohio, e. and c. Ky., se. Mo., and se. Okla., s. to e. and s.c. Tex., and e. to c. Fla. Atlas vol. 1, map 131-E; vol. 5, map 71.

HYBRIDIZES WITH: *Ilex cassine* (*Ilex* ×*attenuata* Ashe).

**Ìlex opàca** Ait. var. **opàca** **American holly (typical)**

RANGE—Same as sp.

**Ìlex opàca** var. **arenícola** (Ashe) Ashe **dune holly‡**

*Ilex arenicola* Ashe, J. Elisha Mitchell Sci. Soc. 40: 44. 1924 (before Sept. 16, Aug. ?).
*Ilex cumulicola* Small, Bull. Torrey Bot. Club 51: 382. 1924 (Sept. 18).
‡†*Ilex opaca arenicola* (Ashe) Ashe, Charleston Mus. Q. 1(2): 31. 1925.
*Ilex pygmaea* McFarlin, Rhodora 34: 17, pl. 229. 1932.

DERIVATION—Growing in sandy places.

OTHER COMMON NAMES—hummock holly, scrub holly.

RANGE—N. to c. Fla. (Baker and Clay to Polk and Highlands Cos.).

**Ìlex verticillàta** (L.) Gray **common winterberry‡**

*Prinos verticillatus* L., Sp. Pl. 330. 1753.
*Prinos padifolius* Willd., Enum. Pl. Hort. Berol. 394. 1809.
*Prinos verticillatus* β *tenuifolius* Torr., Fl. North. Mid. U.S. 338. 1824.
‡*Ilex verticillata* (L.) Gray, Man. Bot. North. U.S. ed. 2, 264. 1856.
*Ilex verticillata* var. *padifolia* (Willd.) Torr. & Gray ex Wats., Bibl. Index No. Am. Bot. 1: 160. 1878.
*Ilex verticillata* var. *tenuifolia* (Torr.) Wats., Bibl. Index No. Am. Bot. 1: 160. 1878.

DERIVATION—Whorled, referring to the clusters of axillary flowers.

OTHER COMMON NAMES—winterberry, black-alder.

RANGE—Nfld., P.E.I., N.S., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., and ne. Minn., se. to ne. Iowa, se. Mo., Ark., and se. La., and e. to nw. Fla. Atlas vol. 4, maps 70-N, 70-NE, 70-SE; vol. 5, map 72.

**Ìlex vomitòria** Ait. **yaupon‡†**

*Cassine paragua* Mill., Gard. Dict. ed. 8, *Cassine* No. 2. 1768. Non *Cassine peragua* L., Sp. Pl. 268. 1753.
*Ilex cassine* Walt., Fl. Carol. 241. 1788. Non *Ilex cassine* L., Sp. Pl. 125. 1753.
‡†*Ilex vomitoria* Ait., Hort. Kew. 1: 170. 1789.
*Ilex vomitoria* var. *chiapensis* Sharp, Harvard Univ. Bot. Mus. Leafl. 14: 107. 1950.

DERIVATION—Causing vomiting, in reference to the emetic properties of tea prepared from the leaves.

OTHER COMMON NAMES—cassena, Christmas-berry, evergreen holly.

RANGE—Coastal Plain from se. Va. to c. Fla. and w. to s. and c. Tex.,

and n. to extreme se. Okla., sw. Ark., n. Miss., and n. Ala. Also a var. in s. Mex. (Ver. and Chis.). Naturalized in Bermuda. Atlas vol. 4, map 71-N, 71-SE; vol. 5, map 73.

REFERENCE—Schultes, Richard Evans. The correct name of the yaupon. Harvard Univ. Bot. Mus. Leafl. 14: 97-105, illus. 1950.

**Illícium** L. (Family Magnoliaceae; Illiciaceae) **anise-tree**

‡*Illicium* L. Syst. Nat. ed. 10, 1050, 1370. 1759.

DERIVATION—Allurement, in reference to the fragrance.

REFERENCES—Smith, A. C. The families Illiciaceae and Schisandraceae. Sargentia 7, 224 p., illus. 1947.

Stone, Donald E., and Judith L. Freeman. Cytotaxonomy of Illicium floridanum and I. parviflorum (Illiciaceae). J. Arnold Arbor. 49: 41-51. 1968.

A. C. Smith (1947) adopted the segregate family Illiciaceae for this genus.

NUMBER OF SPECIES: Native shrubs or small trees, 2; West Indies, 2; Mex., 1; se. Asia, about 35; total, about 40.

**Illícium floridànum** Ellis **Florida anise-tree‡**

‡*Illicium floridanum* Ellis, [R. Soc. Lond.] Phil. Trans. 60: 529, pl. 12. 1770.

DERIVATION—Of Florida.

OTHER COMMON NAMES—polecat-tree, purple anise-tree, star-anise, star-bush, stinkbush.

RANGE—Coastal Plain of nw. Fla. to c. Ala., s. Miss., and se. La. Also ne. Mex. (Tamps.). Atlas vol. 4, maps 72-N, 72-NE; vol. 5, map 74.

**Illícium parviflòrum** Michx. ex Vent. **yellow anise-tree‡**

‡*Illicium parviflorum* Michx. ex Vent., Tabl. Regn. Vég. 3: 71. 1791.

DERIVATION—Small-flower.

OTHER COMMON NAME—small-flower anise tree, star-anise.

RANGE—Rare and local in c. Fla. (Volusia, Marion, Lake, Seminole, and Polk Cos.). Atlas vol. 5, map 75.

**Jacquínia** L. (Family Theophrastaceae) **jacquinia**

‡†*Jacquinia* L. in L. & Sandmark, Fl. Jam. 27. 1759; "*Jaquinia*"; Amoen. Acad. 5: 388. 1760; L., Sp. Pl. ed. 2, 271. 1762; "*Jaquinia*."

*Jacquinia* corr. Jacq., Enum. Pl. Carib. 2, 15. 1760.

*Jacqvinia* corr. L., Gen. Pl. ed. 6, 101. 1764.

DERIVATION—Nikolas Joseph von Jacquin (1727-1817), Austrian botany professor, perhaps best known for his illustrated works on West Indian plants.

REFERENCE—Dugand, Armando. Phytologia 13: 393-395. 1966.

The original spelling *Jaquinia* was used in the 1927 and 1953 checklists.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R. and V.I., 2, also 1 additional in V.I.; total, tropical Am., about 30.

**Jacquínia keyénsis** Mez **joewood‡†**

‡†*Jacquinia keyensis* Mez in Urban, Symb. Antill. 2: 444. 1901.

DERIVATION—Of the keys.

OTHER COMMON NAME—cudjoe-wood.

RANGE—S. Fla. incl. Fla. Keys w. to Marquesas Key and Dry Tortugas, n. on mainland to s. Dade Co. and on w. coast to is. of Lee and Charlotte Cos. Bahamas, Cuba, Jamaica, Hispaniola. Atlas vol. 5, map 217.

**Júglans** L. (Family Juglandaceae) **walnut**

‡†*Juglans* L., Sp. Pl. 997. 1753; Gen. Pl. ed. 5, 431. 1754.

*Wallia* Alef., Bonplandia 9: 335. 1861.

DERIVATION—The classic Latin name of the walnut, meaning nut of Jupiter. Other pronunciation—*Jùglans*.

REFERENCES—Manning, Wayne E. The genus Juglans in Mexico and Central America. J. Arnold Arbor. 38: 121-150. 1957.

Manning, Wayne E. The genus Juglans in South America and the West Indies. Brittonia 12: 1-26, illus. 1960.

Manning, Wayne E. Additional notes on Juglans and Carya in Mexico and Central America. Bull. Torrey Bot. Club 89: 110-113. 1962.

Sudworth, George B. (ed. and annotated by W. A. Dayton). Poplars, principal tree willows and walnuts of the Rocky Mountain region. U.S. Dep. Agric. Tech. Bull. 420, 112 p., illus. 1934.

NUMBER OF SPECIES: Native trees, 6; Mex. and C. Am. (mts., incl. 2 also in U.S.), 5; S. Am. (Andes), 5; West Indies (very rare in P.R.), 1; Eurasia, about 5; total, about 20.

**Júglans califórnica** Wats. **southern California walnut**

‡†*Juglans californica* Wats., Proc. Am. Acad. Arts Sci. 10: 349. 1875.

DERIVATION—Of California

OTHER COMMON NAMES—California walnut‡†, southern California black walnut, California black walnut.

RANGE—Coastal s. Calif. only. Atlas vol. 3, map 90.

***Júglans cinèrea** L. **butternut‡†**

‡†*Juglans cinerea* L., Syst. Nat. ed. 10, 1272. 1759.

*Wallia cinerea* (L.) Alef., Bonplandia 9: 336. 1861.

DERIVATION—Ash-color, referring to the bark.

OTHER COMMON NAMES—white walnut, oilnut.

RANGE—Sw. N.B., sw. Maine, and s. Que., w. to s. Ont., Mich., Wis., and e. Minn., s. to Mo. and Ark., and e. to n. Miss., n. Ga., nw. S.C., and N.C. Atlas vol. 1, map 133-E.

**Júglans hìndsii** Jeps. ex R. E. Smith **northern California walnut**

*Juglans californica* var. *hindsii* Jeps., Bull. So. Calif. Acad. Sci. 7: 24. 1908.

‡†*Juglans hindsii* Jeps. ex R. E. Smith, Calif. Agric. Exp. Stn. Bull. 203: 27, fig. 9A. 1909; "*hindsi*" except on fig. 9A.

DERIVATION—Richard Brinsley Hinds, (1812-47), British botanist who discovered it in 1837 on a voyage around the world in 1836-42 on the ship *Sulphur*.

OTHER COMMON NAMES—Hinds walnut‡†, California black walnut, Hinds black walnut.

RANGE—Local in c. Calif., in part naturalized. Atlas vol. 3, map 91.

REFERENCES—Thomsen, Harriette H. Juglans hindsii, the central California black walnut, native or introduced? Madroño 17: 1-9. 1963.

Howell, John Thomas. A lectotype for the Hinds walnut. Madroño 22: 144. 1973.

**Júglans màjor** (Torr.) Heller **Arizona walnut‡**

†*Juglans rupestris* Engelm. *β major* Torr. in Sitgreaves, Rep. Exped. Zuni Colo. Rivers 171, pl. 16. 1853.

‡*Juglans major* (Torr.) Heller, Muhlenbergia 1: 50. 1904.

*Juglans microcarpa* var. *major* (Torr.) L. Benson in Benson & Darrow, Trees Shrubs Southwest. Deserts 110, 414. 1954.

DERIVATION—Larger, the fruits being much larger than in *Juglans microcarpa* (*J. rupestris*).

OTHER COMMON NAMES—Arizona black walnut; nogal†, nogal silvestre (Spanish).

RANGE—C. and Trans-Pecos Tex., sw. N. Mex., and Ariz., and mts. of Mex. (e. Son. to w. Coah., s. to Gro.). Atlas vol. 3, maps 92-N, 92-SW.

**Júglans microcárpa** Berland. **little walnut‡†**

‡*Juglans microcarpa* Berland. in Berland. & Chovel, Diario Viage Comisión Límites Mier y Terán 276. 1850.

†*Juglans rupestris* Engelm. ex Torr. in Sitgreaves, Rep. Exped. Zuni Colo. Rivers 171, pl. 15. 1853.

DERIVATION—Small-fruit, from the nuts.

OTHER COMMON NAMES—Texas walnut, Texas black walnut, river walnut; nogal, nogalito, namboca (Spanish).

RANGE—Sw. Kans., w. and s. Okla., Tex., and N. Mex., and ne. Mex. (extreme e. Chih., Coah., and N.L.). Atlas vol. 3, map 93.

REFERENCE—Johnston, Ivan M. J. Arnold Arbor. 25: 436. 1944.

***Júglans nìgra** L. **black walnut‡†**

‡†*Juglans nigra* L., Sp. Pl. 997. 1753.

*Wallia nigra* (L.) Alef., Bonplandia 9: 336. 1861.

DERIVATION—Black, perhaps referring to the dye in the fruit husk or the dark brown wood.

OTHER COMMON NAMES—eastern black walnut, American walnut.

RANGE—W. Vt., w. Mass., and N.Y., w. to extreme s. Ont., c. Mich., s. Minn., e. S. Dak., and ne. Nebr., s. to w. Okla. and c. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, map 134-E; vol. 5, map 76.

**Juníperus** L. (Family Cupressaceae) **juniper**

‡†*Juniperus* L., Sp. Pl. 1038. 1753; Gen. Pl. ed. 5, 461. 1754.

*Sabina* Mill., Gard. Dict. Abr. ed. 4, v. 3. 1754.

DERIVATION—The classical Latin name.

OTHER COMMON NAMES—redcedar, "cedar."

REFERENCES—Gaussen, Henri. Les gymnospermes actuelles et fossiles. Les cupressacees. Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. II 2, fasc. 10. 1968.

Hall, Marion T. Nomenclatural notes concerning Juniperus. Rhodora 56: 169-177, illus. 1954.

Little, Elbert L., Jr. Older names for two western species of Juniperus. Leafl. West. Bot. 5: 125-132. 1948.

Vasek, Frank C. The distribution and taxonomy of three western junipers. Brittonia 18: 350-327, illus. 1966.

Zanoni, Thomas A. The American junipers of the section Sabina (*Juniperus*, Cupressaceae)—a century later. Phytologia 38: 433-454. 1978.

Zanoni, Thomas A., and Robert P. Adams. The genus *Juniperus* (Cupressaceae) in Mexico and Guatemala: numerical and morphological analysis. Bol. Soc. Bot. Méx. 35: 69-92, illus. 1975.

NUMBER OF SPECIES: Native trees, 13 (1 usually a shrub and n. to Alaska, and 9 also in Mex.); native shrubs, 1 (n. to Alaska); Mex., additional, 8 (incl. 3 also in Guatemala); West Indies (Bahamas, Cuba, Hispaniola), 1-5; Bermuda, 1; New World, total, about 25; Old World, about 25; total, about 50.

‡*Juníperus horizontàlis* Moench (Meth. Pl. 699. 1794), creeping juniper‡, is a prostrate shrub, 1 of the 2 species of native shrubby conifers. Range—Widespread across n. N. Am. near n. limit of trees, from Nfld. and Labr. w. to Hudson Bay, nw. Mack. and Yukon, s. to e. B.C, and e. to s. Man., n. Minn., n. Mich., s. Que., and N.S. Also local in se. interior Alaska and s. to Mont., Wyo., and n. Colo., and e. to ne. Iowa, ne. Ill., N.Y., and Mass. Atlas vol. 1, maps 22.1-N, 22.1-W, 22.1-E; vol. 2, map 14.

**Juníperus áshei** Buchholz **Ashe juniper**‡

‡*Juniperus ashei* Buchholz, Bot. Gaz. 90: 329, fig. 1-2. 1930.

DERIVATION—Named in honor of William Willard Ashe (1872-1932), pioneer forester of the U.S. Department of Agriculture, Forest Service, who collected it in Arkansas.

OTHER COMMON NAMES—mountain-cedar†, rock-cedar, post-cedar, Mexican juniper.

RANGE—Ozark Mts. of s. Mo., n. Ark., and ne. Okla., s. Okla. (Arbuckle Mts.), and c. Tex. (Edwards Plateau and w.). Also in ne. Mex. (Coah.). Atlas vol. 1, maps 21-W, 21-E.

REFERENCES—Hall, Marion T. A hybrid swarm in Juniperus. Evolution 6: 347–366, illus. 1952.

Hall, Marion Trufant. Variation and hybridization in Juniperus. Ann. Mo. Bot. Gard. 39: 1–64, illus. 1952.

In the 1927 checklist referred to †*Juniperus mexicana* Spreng. of Mexico, which is rejected also as superfluous when published.

HYBRIDIZES WITH: *Juniperus pinchotii*; *J. virginiana*.

*Juniperus barbadensis*, see note under **J. silicicola**

**Juníperus califórnica** Carr. **California juniper**‡†

‡†*Juniperus californica* Carr., Rev. Hort. [Paris], Sér. 4, 3: 352, fig. 21. 1854.
*Sabina californica* (Carr.) Ant., Cupress.-Gatt. 52, pl. 72. 1857-60.

DERIVATION—Of California.

RANGE—Mts. of Calif. (Shasta Co. s.), extreme s. Nev., and w. Ariz. Also n. B. Cal., Mex., incl. Guadalupe and Cedros Is. Atlas vol. 1, map 20-W.

*Juniperus coahuilensis*, see **J. erythrocarpa**

**Juníperus commùnis** L. **common juniper**‡

‡†*Juniperus communis* L., Sp. Pl. 1040. 1753.
*Juniperus communis* α *erecta* Pursh, Fl. Am. Sept. 2: 646. 1814.

DERIVATION—Common.

OTHER COMMON NAMES—dwarf juniper†, prostrate juniper.

RANGE—Very widespread across n. N. Am. beyond n. limit of trees, from s. Greenland, Nfld., and Labr., w. to Hudson Bay, nw. Mack., and n. and w. Alaska, s. to s. and se. Alaska and B.C., and in w. mts. from Wash. to c. Calif., c. Ariz., c. N. Mex., and s. S. Dak., and from N. Dak. and Minn. e. to ne. Ill., Ind., n. Ohio, and N.J., and s. in mts. to Va., w. N.C., and nw. S.C. Also Iceland and across Eurasia. Including geographic varieties, this species is the most widely distributed native conifer in N. Am. and the world and perhaps the tree species with greatest range in the world. Atlas vol. 1, maps 22-W, 22-E, 22-N; vol. 2, map 13.

REFERENCE—Franco, J. do Amaral. Taxonomy of the common juniper. Bol. Soc. Broter., Sér. 2, 36: 101-120, illus. 1962.

Usually a low mat-forming shrub but rarely a small tree to 25 ft (7.6 m) high in New England and elsewhere (H. B. Peirson, Forest Trees Maine 22. 1951). Commonly a tree in Europe.

Franco (1962) distinguished 4 subspecies, including 2 in the United States. These, as varieties mentioned also in the 1953 checklist, are: oldfield common juniper, *Juniperus communis* var. *depressa* Pursh (ssp. *depressa* (Pursh) Franco), of U.S. and Can. (except on Pacific slope); and mountain common juniper, *J. communis* var. *saxatilis* Pall. (ssp. *nana* Syme), on Pacific slope.

***Juníperus deppeàna** Steud. **alligator juniper**‡†

*Juniperus mexicana* Schiede & Deppe in Schlecht. & Cham., Linnaea 5: 77. 1830.
Non *Juniperus mexicana* Spreng., Syst. Veg. 3: 909. 1826.
‡*Juniperus deppeana* Steud., Nomencl. Bot. ed. 2, 1: 835. 1840.

†*Juniperus pachyphloea* Torr. in U.S. Rep. Expl. Surv. Miss. Pacif. 4(5): 142. 1857; "*pachyphlaea*."

*Juniperus deppeana* var. *pachyphlaea* (Torr.) Martínez, An. Méx. Inst. Biol. 17: 53, fig. 40-43. 1946.

*Juniperus deppeana* var. *sperryi* Correll, Wrightia 3: 188. 1966.

DERIVATION—In honor of Ferdinand Deppe (died 1861), German botanist who had given this species a name previously used for another species.

OTHER COMMON NAMES—checker-bark juniper, western juniper, cedro chino (Spanish).

RANGE—Mts. of Trans-Pecos Tex. nw. to nw. N. Mex. and n. and se. Ariz. Also in mts. of n. and c. Mex. (Son. to N.L., s. to Mich., Pue., and Ver.). Atlas vol. 1, maps 23-W, 23-N.

**Juníperus erythrocárpa** Cory **redberry juniper**

*Juniperus erythrocarpa* Cory, Rhodora 38: 186. 1936.

*Juniperus erythrocarpa* var. *coahuilensis* Martínez, An. Inst. Biol. Méx. 17: 115, 116. 1946.

*Juniperus texensis* Van Melle, Phytologia 4: 26. 1952.

*Juniperus coahuilensis* (Martínez) Gaussen, Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. II 2, fasc. 10: 101, 154. 1968; without citation of basionym.

DERIVATION—Red-fruit.

RANGE—Trans-Pecos Tex., s. N. Mex., and s. Ariz. Also in n. Mex. (Son. to Dgo., Zac., and Tamps.). Atlas vol. 6, map 36.

REFERENCES—Adams, R. P. Numerical-chemosystematic studies of infraspecific variation in *Juniperus pinchotii*. Biochem. Syst. Ecol. 3: 71-74. 1975.

Cory, V. L. Three junipers of western Texas. Rhodora 38: 182-187. 1936.

Van Melle, P. J. Juniperus texensis sp. nov.—West-Texas juniper in relation to J. monosperma, J. ashei et al. Phytologia 4: 26-35. 1952.

This species added here has been confused with *Juniperus pinchotii* Sudw. and was cited doubtfully under that species in the 1953 checklist. For example, that species was noted from c. and s. Ariz. by Sargent (Man. Trees North Am. ed. 2, 81-82. 1922). Both have reddish cones or "fruits."

**Juníperus fláccida** Schlecht. **drooping juniper**‡†

‡†*Juniperus flaccida* Schlecht., Linnaea 12: 495. 1838.

DERIVATION—Relaxed, or hanging down, referring to the pendulous or drooping branches.

OTHER COMMON NAMES—weeping juniper, Mexican drooping juniper, tascate (Spanish).

RANGE—Trans-Pecos Tex. (Chisos Mts.). Also mts. of Mex. (Tamps. to ne. Son., s. to Oax.). Atlas vol. 1, maps 24-W, 24-N.

*Juniperus lucayana*, see note under **J. silicicola**

*Juniperus mexicana*, see note under **J. ashei**

**Juníperus monospérma** (Engelm.) Sarg. **oneseed juniper**‡†

*Juniperus occidentalis* var. *β monosperma* Engelm., Trans. Acad. Sci. St. Louis 3: 590. 1877.

‡†*Juniperus monosperma* (Engelm.) Sarg., Silva North Am. 10: 89, pl. 522. 1896.

*Sabina monosperma* (Engelm.) Rydb., Bull. Torrey Bot. Club 32: 598. 1905.

DERIVATION—One-seed.

OTHER COMMON NAMES—cherry-stone juniper, West Texas juniper, sabina (Spanish).

RANGE—Mts. mostly, from extreme nw. Okla. nw. to c. Colo., sw. to c. Ariz., and e. to Trans-Pecos and nw. Tex. Also mts. of n. Mex. (Coah. to Tamps. and Hgo.). Atlas vol. 1, maps 25-W, 25-N.

***Juníperus occidentàlis** Hook. **western juniper‡†**

‡†*Juniperus occidentalis* Hook., Fl.-Bor. Am. 2: 166. 1839.
*Sabina occidentalis* (Hook.) Ant., Cupress.-Gatt. 64, pl. 84-86. 1857-60.
*Juniperus californica* var. *siskiyouensis* Henderson, Rhodora 33: 203. 1931.
*Juniperus occidentalis* ssp. *australis* Vasek, Brittonia 18: 325. 1966.
*Juniperus occidentalis* var. *australis* (Vasek) A. & N. Holmgr. in Cronq. et al., Intermt. Flora 1: 239. 1972.

DERIVATION—Western.

OTHER COMMON NAME—Sierra juniper.

RANGE—Mts. of Pacific Coast region from c. and se. Wash. s. in sw. Idaho, Oreg., nw. and w. Nev., and from n. to s. Calif. Atlas vol. 1, map 26-W.

***Juníperus osteospérma** (Torr.) Little **Utah juniper‡†**

*Juniperus tetragona* Schlecht. var. *osteosperma* Torr. in U.S. Rep. Expl. Surv. Miss. Pacif. 4(5): 141. 1857.
*Sabina osteosperma* (Torr.) Ant., Cupress.-Gatt. 51. 1857-60.
*Juniperus californica* var. *utahensis* Engelm., Trans. Acad. Sci. St. Louis 3: 588. 1877.
†*Juniperus utahensis* (Engelm.) Lemm., Calif. State Bd. For. Bien. Rep. 3: 183, pl. 28, fig. 2. 1890.
‡*Juniperus osteosperma* (Torr.) Little, Leafl. West. Bot. 5: 125. 1948.

DERIVATION—Bone-seed.

OTHER COMMON NAMES—bigberry juniper, sabina morena (Spanish).

RANGE—Mts. of Great Basin region chiefly, from Wyo. w. to se. Idaho and Nev., s. to s. Calif., c. Ariz., and w. N. Mex. Also local in s. Mont. Atlas vol. 1, map 27-W.

*Juniperus pachyphloea*, see **J. deppeana**

**Juníperus pinchótii** Sudw. **Pinchot juniper†**

‡†*Juniperus pinchotii* Sudw., Forestry and Irrig. 11: 204, fig. 1-4. 1905; "*pinchoti*."
*Juniperus monosperma* var. *pinchotii* (Sudw.) Van Melle, Phytologia 4: 29. 1952.

DERIVATION—In honor of Gifford Pinchot (1865-1946), forester, statesman, and first chief of the U.S. Department of Agriculture, Forest Service.

OTHER COMMON NAME—redberry juniper†.

RANGE—Great Plains region of sw. Okla., nw., c., and Trans-Pecos Tex., and se. N. Mex. Also ne. Mex. (Coah.). Atlas vol. 1, map 28-W.

REFERENCE—Hall, Marion T., J. F. McCormick, and George G. Fogg. Hybridization between Juniperus ashei Buchholz and Juniperus pinchoti Sudworth in southwestern Texas. Butler Univ. Bot. Stud. 12: 9-28, illus. 1962.

HYBRIDIZES WITH: *Juniperus ashei*.

***Juníperus scopulòrum** Sarg. **Rocky Mountain juniper‡**

‡†*Juniperus scopulorum* Sarg., Gard. and Forest 10: 420, fig. 54. 1897; *nom. provisor.* Sarg., Silva North Am. 14: 93, pl. 739. 1902.
*Juniperus virginiana* var. *scopulorum* Lemm., Handb. W.-Am. Cone-Bearers. ed. 4, 113. 1900.
*Sabina scopulorum* (Sarg.) Rydb., Bull. Torrey Bot. Club 32: 598. 1905.

DERIVATION—Of the rocks, perhaps referring to the Rocky Mountains.

OTHER COMMON NAMES—redcedar, Rocky Mountain redcedar†, river juniper, cedro rojo (Spanish).

RANGE—Mts. mostly, from w. N. Dak. and Mont. w. to sw. Alta. and c. B.C., s. to Wash., ne. Oreg., and s. Nev., e. to c. Ariz., s. N. Mex., Trans-Pecos and nw. Tex., and n. to extreme nw. Okla., w. Nebr., and c. S. Dak. Also mts. of n. Mex. (e. Son., nw. Chih., and nw. Coah.). Atlas vol. 1, maps 30-W, 30-N.

REFERENCES—See **J. virginiana**

HYBRIDIZES WITH: *Juniperus horizontalis* (*J.* ×*fassettii* Boivin); *J. virginiana*.

***Juníperus silicícola** (Small) Bailey **southern redcedar‡†**

*Sabina silicicola* Small, J. N.Y. Bot. Gard. 24: 5. 1923.

‡*Juniperus silicicola* (Small) Bailey, Cult. Conif. No. Am. 197. 1933.

DERIVATION—Growing in sand.

OTHER COMMON NAMES—redcedar, sand-cedar, coast juniper, eastern redcedar.

RANGE—Coastal Plain chiefly near coast, from ne. N.C. s. to c. Fla. and w. to se. Tex. Atlas vol. 1, map 29-E; vol. 5, map 2.

At one time referred to *Juniperus barbadensis* L. of the West Indies, and in the 1927 checklist to †*J. lucayana* Britton, which was treated as a synonym of the former by J. P. Carabia (Caribb. For. 2: 97-99. 1941).

*Juniperus texensis*, see **J. erythrocarpa**

*Juniperus utahensis*, see **J. osteosperma**

***Jumíperus virginiàna** L. **eastern redcedar‡†**

‡†*Juniperus virginiana* L., Sp. Pl. 1039. 1753.

*Sabina virginiana* (L.) Ant., Cupress.-Gatt. 61. pl. 83, 84. 1857-60.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—redcedar, red juniper, savin.

RANGE—Widespread in e. half of U.S. from sw. Maine w. to n. N.Y., extreme s. Que., s. Ont., s. Mich., s. Minn., e. S. Dak., and sw. N. Dak., s. to w. Nebr. and nw. and c. Tex., and e. to n. Fla. and Ga. Atlas vol. 1, maps 31-W, 31-E; vol. 5, map 3.

REFERENCES—Fassett, Norman C. Juniperus virginiana, J. horizontalis, and J. scopulorum—V. Taxonomic treatment. Bull. Torrey Bot. Club 72: 480-482, illus. 1945.

Ross, James G., and Robert E. Duncan. Cytological evidences of hybridization between Juniperus virginiana and J. horizontalis. Bull. Torrey Bot. Club 76: 414-429, illus. 1949.

Van Haverbeke, David F. A population analysis of Juniperus in the Missouri River Basin. Univ. Nebr. Stud., new ser., 38, 82 p., illus. 1968.

HYBRIDIZES WITH: *Juniperus ashei*; *J. horizontalis*; *J. scopulorum*.

**Kálmia** L. (Family Ericaceae) **kalmia**

‡†*Kalmia* L., Sp. Pl. 391. 1753; Gen. Pl. ed. 5, 185. 1754.

*Kalmiella* Small, Fl. Southeast. U.S. 886, 1336. 1903.

DERIVATION—Dedicated by Linnaeus to his student Peter Kalm (1716-79), Swedish botanist who traveled and collected in Canada and eastern United States.

REFERENCES—Ebinger, John E. A systematic study of the genus Kalmia (Ericaceae). Rhodora 76: 315-398. 1974.

Southall, Russell M., and James W. Hardin. A taxonomic revision of Kalmia (Ericaceae). J. Elisha Mitchell Sci. Soc. 90: 1-23, illus. 1974.

NUMBER OF SPECIES: Native trees, 1; native shrubs, 5 (incl. 1 n. to Alaska); Cuba, shrubs, 1; total, about 7.

***Kálmia latifòlia** L. **mountain-laurel‡†**

‡†*Kalmia latifolia* L., Sp. Pl. 391. 1753.

DERIVATION—Broad-leaf, contrasted with a narrow-leaf species.

OTHER COMMON NAMES—calico-bush, ivybush, laurel.

RANGE—Se. Maine w. to N.Y., Ohio, and s. Ind., s. to w. Tenn., e. Miss., and se. La., and e. to n. Fla. and Ga. Atlas vol. 4, maps 75-NE, 75-SE; vol. 5, map 77.

REFERENCE—Kurmes, Ernest A. The distribution of Kalmia latifolia L. Am. Midl. Nat. 77: 525-526, illus. 1967.

**Koeberlínia** Zucc. (Family Koeberliniaceae) **allthorn**

‡†*Koeberlinia* Zucc., K. Bayer. Akad. Wiss. München, Abhandl. Math.-Phys. 1: 358. 1832. Flora [Jena] 15(2), Beibl. 73. 1832.

DERIVATION—Christoph Ludwig Köberlin (died 1862), German clergyman and amateur botanist.

This genus with only 1 species is usually placed in a separate family or sometimes in the Caper Family, Capparaceae.

**Koeberlínia spinòsa** Zucc. **allthorn**‡†

‡†*Koeberlinia spinosa* Zucc., K. Bayer. Akad. Wiss. München, Abhandl. Math.-Phys. 1: 359. 1832. Flora [Jena] 15(2), Beibl. 74. 1832.

*Koeberlinia spinosa* var. *tenuispina* Kearney & Peebles, J. Wash. Acad. Sci. 29: 486. 1939.

DERIVATION—Spiny, the almost leafless twigs ending in sharp stiff spines.

OTHER COMMON NAMES—crown-of-thorns, crucifixion-thorn; junco, corona de Cristo, corona de púas (Spanish).

RANGE—S., sw., and Trans-Pecos Tex., s. N. Mex., s. Ariz., and se. Calif. Also n. Mex. (B. Cal., B. Cal. Sur, and Son., e. to Tamps. and S.L.P.). Also local in Bolivia. Atlas vol. 3, maps 95-N, 95-SW.

**Krugiodéndron** Urban (Family Rhamnaceae) **leadwood**

‡†*Krugiodendron* Urban, Symb. Ant. 3: 313. 1902.

DERIVATION—Krug's tree, honoring Carl Wilhelm Leopold Krug (1833-98), German businessman, botanist, and patron of science, who resided in Puerto Rico and studied the flora of the West Indies.

NUMBER OF SPECIES: 1.

**Krugiodéndron férreum** (Vahl) Urban **leadwood**‡

*Rhamnus ferreus* Vahl ex West, Bidrag Ste. Croix 276. 1793; *nom. nud.*

*Rhamnus ferreus* Vahl, Symb. Bot. 3: 41, pl. 58. 1794.

*Rhamnidium ferreum* (Vahl) Sarg., Gard. and Forest 4: 16. 1891; *nom. provisor.* Sarg., Silva No. Am. 2: 29, pl. 58. 1891.

‡†*Krugiodendron ferreum* (Vahl) Urban, Symb. Ant. 3: 314. 1902.

DERIVATION—Of iron, referring to the very heavy wood, which has the highest specific gravity of all native woods in continental U.S. (1.34-1.42).

OTHER COMMON NAME—black-ironwood†.

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to Cape Canaveral. From Bahamas through West Indies incl. P.R. and V.I. Also Mex. (Tamps. and S.L.P. to Yuc.), Belize, Guatemala, and Honduras. Atlas vol. 5, map 218.

‡†LAGERSTROEMIA INDICA L. (Syst. Nat. ed. 10, 1076. 1759; Family Lythraceae, Loosestrife Family), crapemyrtle†, (common crapemyrtle‡, crespón, Spanish), is widely planted for ornament from Md. to Fla. and e. and s. Tex. and in Calif. Also Hawaii, P.R., and V.I. It is long persistent at old home sites and may occasionally escape as noted previously but apparently is not naturalized. Native of China and adjacent se. Asia. Reference—Graham, Shirley A. J. Arnold Arbor. 45: 237. 1964.

**Lagunculària** Gaertn. f. (Family Combretaceae) **white-mangrove**

‡†*Laguncularia* Gaertn. f., Suppl. Carp. Fruct. Sem. Pl. 3: 209, pl. 217, fig. 3. 1807.

DERIVATION—From Latin *laguncula*, a small flask or bottle, from the fancied resemblance of the calyx and fruit.

NUMBER OF SPECIES: Native trees (s. and c. Fla.), shores, 1, also P.R. and V.I. and through tropical Am. and in w. Africa; total, shores, tropical Am. and w. Africa, 1 or 2.

**Lagunculària racemòsa** (L.) Gaertn. f. **white-mangrove**‡

*Conocarpus racemosus* L., Syst. Nat. ed. 10, 2: 930. 1759; "*racemos.*"

‡†*Laguncularia racemosa* (L.) Gaertn. f., Suppl. Carp. Fruct. Sem. Pl. 3: 209, pl. 217, fig. 3. 1807.

DERIVATION—Racemose, referring to the flower clusters.

OTHER COMMON NAMES—white buttonwood†, buttonwood.

RANGE—Silt shores of coasts and islands of c. and s. Fla. incl. Fla. Keys w. to Marquesas Key and Dry Tortugas, n. on e. coast to Volusia Co. and on w. coast to Cedar Keys, Levy Co. Also widely distributed on coasts of tropical Am. from Bermuda and Bahamas through West Indies incl. P.R. and V.I. From n. Mex. (Tamps., Son., and B. Cal. Norte) s. on Atlantic Coast to Brazil and on Pacific Coast to Ecuador incl. Galápagos Is. and nw. Peru. Also on coasts of w. Africa. Atlas vol. 5, map 219.

**Lárix** Mill. (Family Pinaceae) **larch**

‡†*Larix* Mill., Gard. Dict. Abr. ed. 4, v. 2. 1754.

DERIVATION—The classical name of *Larix decidua* Mill., European larch.

OTHER COMMON NAME—tamarack.

REFERENCE—Jaurès, R., and Y. de Ferré. A propos des Larix d'Amérique du Nord. Lab. For. Toulouse Trav. tome 1, v. 4, art. 33, 16 p., illus. 1949.

NUMBER OF SPECIES: Native trees, 3, incl. 1 north to Alaska; Eurasia, about 7; total, cool n. temperate, about 10.

LARIX DECIDUA Mill. (Gard. Dict. ed. 8, *Larix* no. 1. 1768; *Larix europaea* DC.) European larch, of n. and e. Europe is planted in s. Can. and ne. U.S. and has become established and naturalized locally in Conn. and N.Y. and perhaps elsewhere. Reference—Cook, David B. European larch reproduces in eastern New York. J. For. 37: 891-893. 1939.

***Lárix laricìna** (Du Roi) K. Koch **tamarack‡†**

*Pinus laricina* Du Roi, Dissert. Inaug. Observ. Bot. 49. 1771.

‡†*Larix laricina* (Du Roi) K. Koch, Dendrol. 2(2): 263. 1873.

*Larix alaskensis* W. F. Wight, Smithson. Inst. Misc. Collect. 1: 174, pl. 17. 1908.

*Larix laricina* var. *alaskensis* (W. F. Wight) Raup, Sargentia 6: 105. 1947.

DERIVATION—Like European larch (at that time known as *Pinus larix* L.).

OTHER COMMON NAMES—eastern larch, American larch, Alaska larch, hackmatack.

RANGE—Widespread across n. N. Am. near n. limit of trees, from Nfld., Labr., and n. Que. w. to Hudson Bay, nw. Mack., n. Yukon, and c. Alaska, s. to se. Yukon, ne. B.C., and c. Alta., and e. to s. Man., Minn., Wis., extreme ne. Ill., n. Ind., Pa., n. N.J., and Maine. Also local in mts. of n. W. Va. and w. Md. Atlas vol. 1, maps 32-N, 32-E; vol. 2, map 3.

**Lárix lyàllii** Parl. **subalpine larch‡**

‡†*Larix lyallii* Parl., Conif. Nov. Nonn. Descr.3. 1863 (Jan.). Parl. ex Seemann, J. Bot. Brit. Foreign 1: 35. 1863 (Feb.?).

DERIVATION—Named in honor of its discoverer, David Lyall (1817-95), Scotch surgeon and naturalist on various British expeditions and surveys.

OTHER COMMON NAMES—alpine larch†, timberline larch, tamarack.

RANGE—High mts. of sw. Alta., se. B.C., w. Mont., n. Idaho, and n.c. Wash. Atlas vol. 1, map 33-W.

REFERENCE—Arno, Stephen F., and James R. Habeck. Ecology of alpine larch (Larix lyallii Parl.) in the Pacific Northwest. Ecol. Monogr. 42: 417-450, illus. 1972.

HYBRIDIZES WITH: *Larix occidentalis*.

***Lárix occidentàlis** Nutt. **western larch‡†**

‡†*Larix occidentalis* Nutt., No. Am. Sylva 3: 143, pl. 120. 1849.

DERIVATION—Western.

OTHER COMMON NAMES—hackmatack, Montana larch, mountain larch, tamarack, western tamarack.

RANGE—High mts. of Upper Columbia River Basin in se. B.C., nw. Mont., n. and c. Idaho, Wash., and n. and ne. Oreg. Atlas vol. 1, map 34-W.

HYBRIDIZES WITH: *Larix lyallii*.

**Leitnèria** Chapm. (Family Leitneriaceae) **corkwood**
‡†*Leitneria* Chapm., Fl. South. U.S. 427. 1860.

DERIVATION—Edward F. Leitner (died 1838), German naturalist who was killed in Florida during the Seminole War.

REFERENCE—Channell, R. B., and C. E. Wood, Jr. The Leitneriaceae in the southeastern United States. J. Arnold Arbor. 43: 435-438, illus. 1962.

NUMBER OF SPECIES: 1 (se. U.S.), very distinct and alone in its family.

**Leitnèria floridàna** Chapm. **corkwood‡†**
‡†*Leitneria floridana* Chapm., Fl. South. U.S. 428. 1860.

DERIVATION—Of Florida, where it was discovered.

RANGE—Rare and local in Coastal Plain in s. Ga., n. Fla., se. Tex., e. Ark., and se. Mo. Atlas vol. 4, map, 74; vol. 5, map 78.

**Leucaèna** Benth. (Family Leguminosae) **leucaena**
‡†*Leucaena* Benth., Hook. J. Bot. 4: 416. 1842.
*Caudoleucaena* Britton & Rose, No. Am. Fl. 23: 130. 1928.
*Rytholeucaena* Britton & Rose, No. Am. Fl. 23: 130. 1928.

DERIVATION—From Greek *leukainein*, to whiten, referring to the color of the flowers.

OTHER COMMON NAME—leadtree‡.

REFERENCES—Elias, Thomas S. J. Arnold Arbor. 55: 78–82, illus. 1974.

Isely, Duane. Castanea 35: 252-257. 1970.

Isely, Duane. Mem. N.Y. Bot. Gard. 25(1): 94-96, 143, illus. 1973.

NUMBER OF SPECIES: native trees, 2; naturalized trees, 1; total, tropical and subtropical, nearly all New World, about 10.

‡†*Leucaèna gréggii* Wats. (Proc. Am. Acad. Arts Sci. 23: 272. 1888), Gregg leucaena (Gregg leadtree‡), is omitted as not native. It was included in previous checklists from s. Tex., based upon the report (without specimen) by Sargent (Silva No. Am. 13: 17-18, pl. 679. 1902). However, B. L. Turner (Legumes Tex. 43. 1959) and Isely (*Castanea* 35: 257. 1970) saw no Texas specimen. Correll and Johnston (Man. Vasc. Pl. Tex. 774-775. 1970) did not mention this species. Native of ne. and e. Mex. (N.L., Tamps., and Ver.).

LEUCAÈNA LEUCOCÉPHALA (Lam.) de Wit LEUCAENA
*Mimosa leucocephala* Lam., Encycl. Méth. Bot. 1: 12. 1783.
*Leucaena leucocephala* (Lam.) de Wit, Taxon 10: 54. 1961.

DERIVATION—White-head, referring to the white balls of flower clusters.

OTHER COMMON NAMES—leadtree‡, popinac, white popinac.

RANGE—Introduced and naturalized in s. Fla. incl. Fla. Keys and in s. Tex., and planted in Calif. Naturalized also in Hawaii, P.R., and V.I. Native apparently in se. Mex. (Yuc.) and widely naturalized through New and Old World tropics.

REFERENCES—See also **Lysiloma latisiliquum**

De Wit, H. C. D. Typification and correct names of Acacia villosa Willd. and Leucaena glauca (L.) Bth. Taxon 10: 50-54. 1961.

Gillis, William T., and William T. Stearn. Typification of the names

of the species of Leucaena and Lysiloma in the Bahamas. Taxon 23: 185-191, illus. 1974.

Long known as ‡*Leucaena glauca* Benth.; not *Mimosa glauca* L., which is now *Acacia glauca* (L.) Moench (*A. villosa* (Sw.) Willd.), of C. Am.

**Leucaèna pulverulénta** (Schlecht.) Benth. **great leucaena**

*Acacia pulverulenta* Schlecht., Linnaea 12: 571. 1838.

‡†*Leucaena pulverulenta* (Schlecht.) Benth., Hook. J. Bot. 4: 417. 1842.

DERIVATION—Pulverulent, or powdered, referring to the dusty appearance of the foliage.

OTHER COMMON NAMES—great leadtree‡, tepeguaje (Spanish).

RANGE—Extreme s. Tex., s. to s. Mex. (Tamps w. to s. Coah., s. to Oax., Pue., and Ver.). Atlas vol. 3, maps 96-N, 96-SW.

**Leucaèna retùsa** Benth. **littleleaf leucaena**

‡†*Leucaena retusa* Benth. in Gray, Pl. Wright. 1: 64. 1852.

*Caudoleucaena retusa* (Benth.) Britton & Rose, No. Am. Fl. 23: 131. 1928.

DERIVATION—Retuse, with a shallow notch at a rounded apex, in reference to the leaflets.

OTHER COMMON NAMES—littleleaf leadtree‡, wahoo-tree.

RANGE—Sw. and Trans-Pecos Tex., se. N. Mex. (Guadalupe Mts.), and n. Mex. (Chih. and Coah.). Atlas vol. 3, map 94.

**Libocèdrus** Endl. (Family Cupressaceae) **incense-cedar**

‡†*Libocedrus* Endl., Synops. Conif. 42. 1847

*Calocedrus* Kurz, J. Bot. (Lond.) 11: 196. 1873 (July).

*Heyderia* K. Koch, Dendrol. 2(2): 177. 1873 (Nov.?). Non *Heyderia* Link, Handb. 3: 311. 1833; (fungus).

DERIVATION—From Greek, drop or tear, and *Cedrus*, cedar, referring to the trickling of resin. Other pronunciation—*Libocédrus*.

REFERENCES—Florin, Rudolf, and Julius B. Boutelje. External morphology and epidermal structure of leaves in the genus *Libocedrus*, *s. lat.* Acta Horti Bergiani 17: 8-37, illus. 1954.

Li, Hui-lin. A reclassification of Libocedrus and Cupressaceae. J. Arnold Arbor. 34: 17-36, illus. 1953.

NUMBER OF SPECIES: Native trees, 1 (also in Mexico); S. Am., 1; w. Pacific from New Zealand to China, about 8; total, about 10.

***Libocèdrus decúrrens** Torr. **incense-cedar**‡†

‡†*Libocedrus decurrens* Torr., Smithsn. Inst. Contrib. Knowl. 5(1) [6(2)] (Plant. Fremont.): 7, pl. 3. 1853 (Apr.).

*Heyderia decurrens* (Torr.) K. Koch, Dendrol. 2(2): 179. 1873.

*Calocedrus decurrens* (Torr.) Florin, Taxon 5: 192. 1956.

DERIVATION—Decurrent, the scale leaves running down the twig.

OTHER COMMON NAME—California incense-cedar.

RANGE—Mts. from w. Oreg. s. in higher Coast Ranges and Sierra Nev. to s. Calif. and extreme w. Nev. Also n. B. Cal. Norte, Mex. Atlas vol. 1, map 35-W.

This species has been placed also in a segregate genus, *Calocedrus* Kurz, which has another species in Taiwan and a third from China to Burma. The small genus *Libocedrus* had been almost universally accepted. Its division based on differences in morphology and distribution seems unnecessary.

**Licària** Aubl. (Family Lauraceae) **licaria**

‡*Licaria* Aubl., Hist. Pl. Guiana Franç. 1: 313, pl. 121. 1775.

†*Misanteca* Schiede & Deppe ex Schlecht. & Cham., Linnaea 6: 367. 1831.

*Acrodiclidium* Nees, Pl. Laurin. Sec. 13. 1833.

DERIVATION—From the Carib name *licari kanali* used in French Guiana.

OTHER COMMON NAME—misanteca.

REFERENCES—Kostermans, A. J. G. H. Revision of the Lauraceae II. The genera Endlicheria, Cryptocarya (American species) and Licaria. Rec. Trav. Bot. Néerland. 34: 500-609. 1937.

Wood, Carroll E., Jr. J. Arnold Arbor. 39: 338-339. 1958.

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also in West Indies incl. P.R.); P.R., 2 additional (1 also in V.I.); total, New World tropics, about 45.

**Licària triándra** (Sw.) Kosterm. **Florida licaria**

*Laurus triandra* Sw., Nov. Gen. Sp. Pl. Prodr. 65. 1788.
†*Misanteca triandra* (Sw.) Mez, Jahrb. Berlin K. Bot. Gart. Mus. 5: 103. 1889.
‡*Licaria triandra* (Sw.) Kosterm., Rec. Trav. Bot. Néerland. 34: 588. 1937.
*Acrodiclidium triandrum* (Sw.) Lundell, Contrib. Univ. Mich. Herb. 7: 12. 1942.

DERIVATION—Three stamens.

OTHER COMMON NAME—Gulf licaria‡, Gulf misanteca.

RANGE—Very rare and local in and near Miami, Dade Co., s. Fla. Greater Antilles incl. P.R. and Martinique. Atlas vol. 5, map 220.

LIGÙSTRUM L. (Family Oleaceae) PRIVET

‡*Ligustrum* L., Sp. Pl. 7. 1753; Gen. Pl. Ed. 5, 8. 1754.

DERIVATION—The classical Latin name of *Ligustrum vulgare* L., European privet.

REFERENCES—Hardin, James W. Sida 5: 274-285. 1974.

Wilson, Kenneth A., and Carroll E. Wood, Jr. J. Arnold Arbor. 40: 381-382. 1959.

LIGÙSTRUM JAPÓNICUM Thunb. JAPANESE PRIVET

*Ligustrum japonicum* Thunb., Nov. Act. Soc. Sci. Upsal. 3: 207. 1780.

DERIVATION—Japanese.

RANGE—Planted in se. U.S. from N.C. and S.C. to Ala., La., and Tex. and naturalized locally. A shrub or small tree native of Japan and Korea.

LIGÙSTRUM OVALIFÒLIUM Hassk. CALIFORNIA PRIVET‡

‡*Ligustrum ovalifolium* Hassk., Cat. Pl. Hort. Bot. Bogor. Alt. 119. 1844.

DERIVATION—Oval-leaf.

RANGE—Planted across s. U.S. from Va. to Calif. and naturalized locally in se. from Va. to Fla. A shrub or small tree native of Japan and widely cultivated.

LIGÙSTRUM SINÉNSE Lour. CHINESE PRIVET

*Ligustrum sinense* Lour., Fl. Cochinch. 1: 23. 1790.

DERIVATION—Chinese.

OTHER COMMON NAME—trueno de seto (Spanish).

RANGE—Planted in se. U.S. from Va. to Ga., Tex., and Okla. and widely naturalized. A shrub or small tree native of China.

*Lindèra bénzoin* (L.) Blume (Mus. Bot. Lugd.-Bat. 1: 324. 1851; Family Lauraceae), spicebush. Generally a shrub but also a small tree to 16 ft (5 m) tall in Tex., according to Correll and Johnston (Man. Vasc. Pl. Tex. 661. 1970). Range—Sw. Maine w. to s. Ont., s. Mich., Ill., and se. Kans., s. to c. Tex., and e. to Fla.

**Liquidámbar** L. (Family Hamamelidaceae) **sweetgum**

‡†*Liquidambar* L., Sp. Pl. 999. 1753; Gen. Pl. ed. 5, 434. 1754.

DERIVATION—From the Spanish common name in Mexico (indirectly from Latin liquid and amber), in reference to the fragrant resin.

NUMBER OF SPECIES: Native trees, 1 (incl. a variety in mts. of Mex. and C. Am.); Asia, 2: total, 3.

***Liquidámbar styracíflua** L. **sweetgum**‡

‡†*Liquidambar styraciflua* L., Sp. Pl. 999. 1753.

*Liquidambar macrophylla* Oerst., Am. Centr. 16. 1863.
*Liquidambar styraciflua* var. *mexicana* Oerst., Am. Centr. 16. 1863.

DERIVATION—Old name of this genus meaning styrax- (or storax-) flowing, alluding to the medicinal storax from *Liquidambar orientalis* Mill. of western Asia and from this species. Other pronunciation—*L. styraciflùa*.

OTHER COMMON NAMES—redgum†, sapgum, starleaf-gum, bilsted.

RANGE—Extreme sw. Conn., extreme se. N.Y., and N.J., w. (except in high mts.) to W. Va., s. Ohio, and s. Ill., sw. to se. Mo., Ark., se. Okla., and e. Tex., and e. to c. Fla. Also var. in mts. of e. Mex. (Tamps. to Chis.) and Belize to Nicaragua. Atlas vol. 1, maps 135-N, 135-E; vol. 5, map 79.

**Liriodéndron** L. (Family Magnoliaceae) **yellow-poplar**
‡†*Liriodendron* L., Sp. Pl. 535. 1753; Gen. Pl. ed. 5, 239. 1754; "*Liriodendrum*."

DERIVATION—From Greek, lily and tree, because of the showy, "lilylike" (or, better, tuliplike) flowers.

OTHER COMMON NAME—tuliptree.

This genus has been placed in a separate tribe and recently has been proposed in a separate family, Liriodendraceae (Barkley, Fred A. Phytologia 32: 304. 1976).

NUMBER OF SPECIES: Native trees (e. U.S.), 1; China and Vietnam, 1; total, 2.

***Liriodéndron tulipífera** L. **yellow-poplar**‡†
‡†*Liriodendron tulipifera* L., Sp. Pl. 535. 1753.

DERIVATION—Old generic name meaning tulip-bearing.

OTHER COMMON NAMES—tuliptree, "poplar," tulip-poplar, white-poplar, whitewood.

RANGE—R. I., Mass., and Vt., w. to extreme s. Ont. and s. Mich., s. to s. Ill., se. Mo., e. Ark., and La., and e. to n. Fla. Atlas vol. 1, map 137-E; vol. 5, map 80.

**Lithocárpus** Blume (Family Fagaceae) **tanoak**
‡†*Lithocarpus* Blume, Bijr. Fl. Ned. Indië 526. 1825.
*Synaedrys* Lindl., Nat. Syst. Bot. ed. 2, 441. 1836.
*Pasania* (Miq.) Oerst., Vidensk. Medd. Kjoeb. 1866: 81. 1867.

DERIVATION—From Greek, stone and fruit, in allusion to the hard acorns.

REFERENCE—Rehder, Alfred, and E. H. Wilson. *In* Sargent, C. S. Plantae Wilsonianae 3: 205. 1916.

NUMBER OF SPECIES: Native trees (Calif. and Oreg.), 1; se. Asia and Indomalaysia, 100-200; total, 100-200.

***Lithocárpus densiflòrus** (Hook. & Arn.) Rehd. **tanoak**‡†
*Quercus densiflora* Hook. & Arn., Bot. Beech Voy. 391. 1840.
*Pasania densiflora* (Hook. & Arn.) Oerst., Vidensk. Medd. Kjoeb. 1866: 83. 1867.
‡†*Lithocarpus densiflorus* (Hook. & Arn.) Rehd. in Bailey, Stand. Cycl. Hort. 6: 3569, 3574. 1917; "*densiflora*."

DERIVATION—Densely flowered.

OTHER COMMON NAME—tanbark-oak.

RANGE—Pacific Coast region mostly near coast, from sw. Oreg. s. to s. Calif. and in Sierra Nev. to c. Calif. Atlas vol. 1, map 136-W.

**Lyònia** Nutt. (Family Ericaceae) **lyonia**
‡†*Lyonia* Nutt., Gen. No. Am. Pl. 1: 266. 1818; *nom. cons.* Non *Lyonia* Raf., Med. Repos. N.Y. 11 (Ser. 2, v. 5): 353. 1808; *nom. rejic.* Nec *Lyonia* Ell., Sketch Bot. S.-C. Ga. 1: 36. 1817.
*Xolisma* Raf., Am. Mon. Mag. 4: 193. 1819.

DERIVATION—Named for John Lyon (c1780-1818?), early American

botanist and explorer of the southern Appalachians, who introduced many plants into England.

NUMBER OF SPECIES: Native shrubs in se. U.S., 5 (1 also a small tree); Mex., 1; West Indies, about 20 (incl. 1 in P.R. and V.I.); Himalayas to e. Asia, about 15; total, shrubs or sometimes trees, about 40.

**Lyònia ferrugínea** (Walt.) Nutt. **tree lyonia‡**

*Andromeda ferruginea* Walt., Fl. Carol. 138. 1788.
*Andromeda ferruginea* var. *a arborescens* Michx., Fl. Bor.-Am. 1: 252. 1803.
‡†*Lyonia ferruginea* Nutt., Gen. No. Am. Pl. 1: 266. 1818.
*Xolisma ferruginea* (Walt.) Heller, Cat. No. Am. Pl. 6. 1898.

DERIVATION—Ferrugineous, or rusty colored, describing the lower leaf surfaces.

OTHER COMMON NAMES—staggerbush, titi, rusty lyonia.

RANGE—Coastal Plain of extreme s. S.C. and se. Ga. to s. and nw. Fla. Atlas vol 4, map 76; vol. 5, map 81.

**Lyonothámnus** Gray (Family Rosaceae) **Lyontree**

‡†*Lyonothamnus* Gray, Proc. Am. Acad. Arts Sci. 20: 291. 1885.

DERIVATION—Lyon's shrub, in honor of its discoverer, William Scrugham Lyon (1852-1916), United States horticulturist and forester who collected plants on Santa Catalina Island in 1884-85.

NUMBER OF SPECIES: 1.

**Lyonothámnus floribúndus** Gray **Lyontree‡**

‡†*Lyonothamnus floribundus* Gray, Proc. Am. Acad. Arts Sci. 20: 292. 1885.
*Lyonothamnus asplenifolius* Greene, Bull. Calif. Acad. Sci. 1: 136. 1890.
*Lyonothamnus floribundus* var. *asplenifolius* (Greene) Brandegee, Zoe 1: 136. 1890.
*Lyonothamnus floribundus* ssp. *asplenifolius* (Greene) Raven, Aliso 5: 324. 1963.

DERIVATION—Abounding in flowers.

OTHER COMMON NAMES—Catalina-ironwood, lyonothamnus, Santa-Cruz-ironwood†.

RANGE—Santa Rosa, Santa Cruz, Santa Catalina, and San Clemente Is. of Calif. only. Atlas vol. 3, map 98.

Two varieties (or subspecies) have been proposed in this distinct species confined to the California islands.

**Lysilòma** Benth. (Family Leguminosae) **lysiloma**

‡†*Lysiloma* Benth., Hook. Lond. J. Bot. 3: 82. 1844.

DERIVATION—From Greek, loosing and border, in reference to the separation of the sides of the pods from the persistent borders at maturity.

REFERENCES—Elias, Thomas S. J. Arnold Arbor. 55: 107-109. 1974.
Isely, Duane. Castanea 35: 249-252. 1970.
Isely, Duane. Mem. N.Y. Bot. Gard. 25(1): 96-99, 143, illus. 1973.

The gender is neuter, according to Gillis and Stearn (Taxon 23: 190. 1974).

NUMBER OF SPECIES: native trees, 2; total in tropical Am., about 30.

**Lysilòma latisíliquum** (L.) Benth. **Bahama lysiloma‡**

*Mimosa latisiliqua* L., S. Pl. 519. 1753.
*Lysiloma latisiliquum* (L.) Benth., Trans. Linn. Soc. Lond. 30: 534. 1875; "*latisiliqua*."
‡†*Lysiloma bahamense* Benth., Hook. Lond. J. Bot. 3: 82. 1844; "*Bahamensis*."
*Leucaena latisiliqua* (L.) Gillis, Taxon 23: 190. 1974.

DERIVATION—Broad pod.

OTHER COMMON NAMES—wild-tamarind†, tamarind.

REFERENCES—De Wit, H. C. D. Typification of Leucaena leucocephala (Lam.) De Wit, Lysiloma latisiliquum (L.) Bth., and Acacia glauca (L.) Moench. Taxon 24: 349-352, illus. 1975.
Gillis, William T., and William T. Stearn. Typification of the names

of the species of Leucaena and Lysiloma in the Bahamas. Taxon 23: 185-191, illus. 1974.

Polhill, R. M., and W. T. Stearn. Linnaeus's notes on Plumier drawings with special reference to Mimosa latisiliqua. Taxon 25: 323-325, illus. 1976.

Shaw, E. A., and B. G. Schubert. A reinterpretation of Leucaena and Lysiloma. J. Arnold Arbor. 57: 113-118. 1976.

RANGE—S. Fla. incl. Fla. Keys, n. to Broward and Collier Cos. Bahamas, Cuba, and se. Mex. (Yuc.) and Belize. Atlas vol. 5, map 221.

**Lysilòma microphýllum** Benth. **littleleaf lysiloma**‡

‡*Lysiloma microphyllum* Benth., Hook. Lond. Jour. Bot. 3: 83. 1844; "*microphylla.*"

†*Lysiloma watsonii* Rose, U.S. Dep. Agric., Contrib. U.S. Natl. Herb. 1: 99. 1891; "*watsoni.*"

*Lysiloma thornberi* Britton & Rose, No. Am. Fl. 23: 83. 1928.

*Lysiloma microphyllum* var. *thornberi* (Britton & Rose) Isely, Castanea 35: 252. 1970; "*microphylla.*"

*Lysiloma watsonii* ssp. *thornberi* (Britton & Rose) Felger & Lowe, J. Ariz. Acad. Sci. 6: 83. 1970.

DERIVATION—Littleleaf, referring to the leaflets.

RANGE—Se. Ariz. (Rincon Mts.) and Mex. (Son. se. to Oax. and Chis.). Atlas vol. 3, maps 97-N, 97-SW.

Generally a shrub in s. Ariz. but a small tree in cultivation there and in Mexico. Mentioned in a note in the 1953 checklist.

**Maclùra** Nutt. (Family Moraceae) **Osage-orange**

*Ioxylon* Raf., Am. Mon. Mag. Crit. Rev. 2: 118, 1817; *nom. rejic.*

‡*Maclura* Nutt., Gen. No. Am. Pl. 2: 233. 1818; *nom. cons.*

†*Toxylon* Raf., Am. Mon. Mag. Crit. Rev. 4: 188. 1818.

DERIVATION—William Maclure (1763-1840), American geologist.

REFERENCE—Corner, E. J. H. Gard. Bull. Singapore 19: 235-240. 1962.

NUMBER OF SPECIES: 1. If the related genus *Chlorophora* Gaud. of tropical Am. and Africa is united, total, about 12.

***Maclùra pomífera** (Raf.) Schneid. **Osage-orange**‡†

*Ioxylon pomiferum* Raf., Am. Mon. Mag. Crit. Rev. 2: 118. 1817.

†*Toxylon pomiferum* Raf. ex Sarg., Silva No. Am. 7: 89, pl. 322, 323. 1895.

‡†*Maclura pomifera* (Raf.) Schneid., Illus. Handb. Laubholzk. 1: 806. 1906.

DERIVATION—Bearing pomes or apples, in allusion to the large ball fruits.

OTHER COMMON NAMES—bodark, bodock, bois-d'arc, bowwood, hedge-apple, horse-apple, hedge, naranjo chino (Spanish).

RANGE—Sw. Ark., e. Okla., and e., c., and Trans-Pecos (Chisos Mts.) Tex. Native range uncertain and may have extended to nw. La. Widely planted in e. and nw. States and escaped and naturalized. Atlas vol. 1, map 138-W, 138-E.

**Magnòlia** L. (Family Magnoliaceae) **magnolia**

‡†*Magnolia* L., Sp. Pl. 535. 1753; Gen. Pl. ed. 5, [240] (err. "140"). 1754.

*Tulipastrum* Spach, Hist. Nat. Vég. Phanér. 7: 481. 1839.

DERIVATION—Pierre Magnol (1638-1715), professor of botany and medicine and director of the botanical garden at Montpellier, France.

REFERENCES—Fogg, John M., Jr. The temperate American magnolias. Morris Arbor. Bull. 12: 51-58, illus. 1961.

Hardin, James W. Studies of the southeastern United States flora. III. Magnoliaceae and Illiciaceae. J. Elisha Mitchell Sci. Soc. 88: 30-32. 1972.

Kosar, William F. Magnolias native to North America. J. Calif. Hort. Soc. 23: 2-12, illus. 1962.

Miller, Ronald F. The deciduous magnolias of West Florida. Rhodora 77: 64-75. 1975.

Murray, Edward. Magnolia species descriptions. Kalmia 5: 1-17. 1973.

Spongberg, Stephen A. Magnolias hardy in temperate North America. J. Arnold Arbor. 57: 250-312, illus. 1976.

NUMBER OF SPECIES: Native trees, 8; Mex., C. Am., and n. S. Am. (mostly in mts.), about 10; West Indies, about 8 (incl. 2 in P.R.); e. Asia (Himalayas to Japan) s. to Java, about 50; total, about 80.

***Magnòlia acuminàta** L. **cucumbertree‡**

*Magnolia virginiana* ϵ *acuminata* L., Sp. Pl. 536. 1753.
‡†*Magnolia acuminata* L., Syst. Nat. ed. 10, 2: 1082. 1759.
†*Magnolia cordata* Michx., Fl. Bor.-Am. 1: 328. 1803.
*Tulipastrum americanum* var. *subcordatum* Spach, Hist. Nat. Vég. Phanér. 7: 483. 1839.
‡*Magnolia acuminata* var. *cordata* (Michx.) Ser., Fl. Jard. 3: 229. 1849.
*Tulipastrum acuminatum* (L.) Small, Fl. Southeast, U.S. 451, 1331. 1903.
*Tulipastrum cordatum* (Michx.) Small, Fl. Southeast. U.S. 451, 1331. 1903.
*Magnolia acuminata* var. *ozarkensis* Ashe, J. Elisha Sci. Soc. 41: 269. 1926.
*Magnolia acuminata* var. *subcordata* (Spach) Dandy in S. C. Tucker, Am. J. Bot. 51: 1056. 1964.

DERIVATION—Acuminate, referring to the pointed leaves.

OTHER COMMON NAMES—cucumber magnolia†, mountain magnolia, yellow-flower magnolia†, yellow cucumbertree‡.

RANGE—Mts. mostly, from w. N.Y. and extreme s. Ont. sw. to Ohio, s. Ind., extreme s. Ill., and s. Mo., s. to se. Okla. and La., e. to nw. Fla. and c. Ga., and n. in mts. to Pa. Atlas vol. 1, map 140-E; vol. 5, map 82.

REFERENCES—Coker, W. C. Magnolia cordata Michaux. J. Elisha Mitchell Sci. Soc. 59: 81-88, illus. 1943.

Hardin, James W. An analysis of variation with Magnolia acuminata L. J. Elisha Mitchell Sci. Soc. 70: 298-312, illus. 1954.

Three geographical varieties have been distinguished: var. *acuminata*, var. *subcordata* (Spach) Dandy (var. ‡*cordata* (Michx.) Sarg.), and var. *ozarkensis* Ashe.

**Magnòlia áshei** Weatherby **Ashe magnolia‡**

‡†*Magnolia ashei* Weatherby, Rhodora 28: 35. 1926.
*Magnolia macrophylla* ssp. *ashei* (Weatherby) Spongberg, J. Arnold Arbor. 57: 268. 1976.

DERIVATION—Named for its discoverer, William Willard Ashe (1872-1932), of the United States Department of Agriculture—Forest Service.

OTHER COMMON NAME—sandhill magnolia.

RANGE—Local in nw. Fla. (8 cos. from Leon and Wakulla w. to Okaloosa Co.). Atlas vol. 4, map 77; vol. 5, map 83.

**Magnòlia fràseri** Walt. **Fraser magnolia‡**

‡†*Magnolia fraseri* Walt., Fl. Carol. 159, pl. 1788.

DERIVATION—Dedicated to John Fraser (1750-1811), Scotchman who introduced this and other North American plants to Europe and who published the book containing its description.

OTHER COMMON NAMES—mountain magnolia†, earleaf cucumbertree, umbrella-tree, earleaf umbrella-tree, mountain-oread.

RANGE—Mts. in w. Va., W. Va., e. Ky., e. Tenn., n. Ga., nw. S.C., and w. N.C. Atlas vol. 4, map 78.

***Magnòlia grandiflòra** L. **southern magnolia‡**

*Magnolia virginiana* ß *foetida* L., Sp. Pl. 536. 1753.
‡†*Magnolia grandiflora* L., Syst. Nat. ed. 10, 2: 1082. 1759.
*Magnolia foetida* (L.) Sarg., Gard. and Forest 2: 615. 1889.

DERIVATION—Large-flower.

OTHER COMMON NAMES—evergreen magnolia†, bull-bay, big-laurel, large-flower magnolia.

RANGE—Coastal Plain from e. N.C. to c. Fla. and w. to e. Tex. Reported from extreme se. Va. Atlas vol. 1, map 141-E; vol. 5, map 84.

**Magnòlia macrophýlla** Michx. **bigleaf magnolia**‡†

‡†*Magnolia macrophylla* Michx., Fl. Bor.-Am. 1: 327. 1803.

DERIVATION—Long-leaf, or large-leaf, referring to the largest simple leaves of all native trees except palms.

OTHER COMMON NAMES—large-leaf magnolia, umbrella-tree, large-leaf cucumbertree, white cucumbertree, silverleaf magnolia, royal-oread.

RANGE—Rare and local from c. N.C. to extreme sw. Va., e. Ky., and c. Tenn., s. to n. and se. La., s. Miss., s. Ala., and w. Ga. Also local in s. Ohio (Jackson Co.), ne. Ark. (Clay Co.), and se. S.C. (Dorchester and Charleston Cos.). Atlas vol. 4, map 79.

**Magnòlia pyramidàta Bartr.** **pyramid magnolia**‡

‡†*Magnolia pyramidata* Bartr., Travels N. S. Car. Ga. Fla. 6, 408. 1791.
*Magnolia pyramidata* Bartr. ex Pursh, Fl. Am. Sept. 2: 382. 1814.
*Magnolia auriculata* β *pyramidata* Nutt., Gen. Pl. 2: 13. 1818.
*Magnolia fraseri* var. *pyramidata* (Bartr.) Pampanini, Bull. R. Soc. Toscana Ortic. 40: 230. 1915.

DERIVATION—Pyramidal, from the shape of the crown.

OTHER COMMON NAMES—southern cucumbertree, mountain magnolia†, mountain-oread, wood-oread.

RANGE—Coastal Plain chiefly, from e. Ga. w. to nw. Fla., c. Ala., s. Miss., La., and se. Tex. Also local in S.C. (Richmond Co.). Atlas vol. 4, map 80; vol. 5, map 85.

**Magnòlia tripétala** L. **umbrella magnolia**‡†

*Magnolia virginiana* δ *tripetala* L., Sp. Pl. 536. 1753.
‡†*Magnolia tripetala* L., Syst. Nat. ed. 10, 2: 1082. 1759.

DERIVATION—With 3 petals, perhaps in reference to the 3 sepals, which are longer than the 6 or 9 petals.

OTHER COMMON NAMES—umbrella-tree, elkwood.

RANGE—S. Pa. w. to s. Ohio and s. Ind. (Crawford Co.), s. to c. Tenn., se. Miss., nw. Fla. (Okaloosa Co.), and Ga. Also local in mts. of Ark. and se. Okla. (Le Flore Co.). Atlas vol. 4, map 81; vol. 5, map 158.4.

***Magnòlia virginiàna** L. **sweetbay**‡†

‡†*Magnolia virginiana* L., Sp. Pl. 535. 1753.
*Magnolia virginiana* α *glauca* L., Sp. Pl. 535. 1753.
*Magnolia glauca* L., Syst. Nat. ed. 10, 1082. 1759.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—swampbay, southern sweetbay, laurel magnolia, swamp magnolia, sweet magnolia, white-bay, white-laurel, swamp-laurel.

RANGE—Coastal Plain chiefly, from Long Is., N.J., and se. Pa., s. to s. Fla., w. to se. Tex., and n. to s. Ark. and s. Tenn. Also local in ne. Mass. Atlas vol. 1, map 142-E; vol. 5, map 86.

*Malachodendron*, see **Stewartia**
*Malosma*, see **Rhus**

**Màlus** Mill. (Family Rosaceae) **apple**

*Pyrus* L., Sp. Pl. 479. 1753; Gen. Pl. ed. 5, 214. 1754; in part.
‡†*Malus* Mill., Gard. Dict. Abr. ed. 4, v. 2. 1754.

DERIVATION—The classical Latin name for apple.

OTHER COMMON NAME—crab apple.

REFERENCES—Bailey, L. H. The Pyrus-Malus puzzle. Gentes Herbarum 8: 40-43, illus. 1949.

Eseltine, G. P. van. Notes on the species of apples. 1. The American

crabapples. N.Y. State Agric. Exp. Stn. Tech. Bull. 208, 22 p., illus. 1933.

Fernald, M. L. Rhodora 45: 450-452. 1943.

Fernald, M. L. Minor transfers in Pyrus. Rhodora 49: 229-233. 1947.

Koidzumi, G. A synopsis of the genus Malus. Acta. Phytotax. Geobot. 3: 179-196. 1934.

McVaugh, Rogers. The status of certain anomalous native crabapples in eastern United States. Bull. Torrey Bot. Club 70: 418-429, illus. 1943.

Robertson, Kenneth R. J. Arnold Arbor. 55: 640-654, illus. 1970.

*Malus*, like its relative *Crataegus*, is a taxonomically difficult genus with numerous intergrading variations and hybrids for which many scientific names have been given. In this conservative treatment varieties have not been distinguished and specific names for minor variations have been placed in synonymy.

NUMBER OF SPECIES: Native trees, 4, incl. 1 n. to se. Alaska; naturalized trees, 1; Eurasia, about 25; total, n. temperate zone, about 30.

MÀLUS BACCÀTA (L.) Borkh. (*Pyrus baccata* L.), Siberian crab apple, and MÀLUS PRUNIFÒLIA, (Willd.) Borkh. (*Pyrus prunifolia* Willd.), Chinese apple, both introduced from Asia, have escaped from cultivation in ne. U.S. but apparently are not naturalized. They were mentioned in a note in the 1953 checklist.

**Màlus angustifòlia** (Ait.) Michx. **southern crab apple‡**

*Pyrus angustifolia* Ait., Hort. Kew. 2: 176. 1789.
‡†*Malus angustifolia* (Ait.) Michx., Fl. Bor.-Am. 1: 292. 1803.

DERIVATION—Narrow-leaf.

OTHER COMMON NAMES—narrowleaf crab apple†, wild crab apple, southern crab, wild crab.

RANGE—Coastal Plain chiefly, from s. N.J., Del., and Md., s. to n. Fla., and w. to s. La. and se. Tex., and n. to n. Ark., s. Ill., and w. Ky. Also local in s. Ohio and W. Va. Atlas vol. 4, map 82; vol. 5, map 87.

HYBRIDIZES WITH: *Malus sylvestris* (*M.* ×*platycarpa* Rehd.).

*Malus baccata*, see note under **Malus**

**Màlus coronària** (L.) Mill. **sweet crab apple‡†**

*Pyrus coronaria* L., Sp. Pl. 480. 1753.
‡†*Malus coronaria* (L.) Mill., Gard. Dict. ed. 8, *Malus* No. 2. 1768.
†*Malus glaucescens* Rehd. in Sarg., Trees and Shrubs 2: 139, pl. 157. 1911.
*Malus lancifolia* Rehd., in Sarg., Trees and Shrubs 2: 141, pl. 158. 1911.
†*Malus bracteata* Rehd. in Sarg., Trees and Shrubs 2: 230. 1913.
‡†*Malus glabrata* Rehd. in Sarg., Trees and Shrubs 2: 225, pl. 188. 1913.
*Pyrus glabrata* (Rehd.) Bailey, Rhodora 18: 154. 1916.
*Pyrus bracteata* (Rehd.) Bailey, Rhodora 18: 154. 1916.
*Pyrus glaucescens* (Rehd.) Bailey, Rhodora 18: 154. 1916.
*Pyrus lancifolia* (Rehd.) Bailey, Rhodora 18: 154. 1916.
*Malus coronaria* var. *dasycalyx* Rehd., J. Arnold Arbor. 2: 52. 1920.
*Pyrus coronaria* var. *dasycalyx* (Rehd.) Fern., Rhodora 49: 232. 1947.
*Pyrus coronaria* var. *lancifolia* (Rehd.) Fern., Rhodora 49: 232. 1947.

DERIVATION—For a crown or wreath.

OTHER COMMON NAMES—crab apple†, wild crab, wild sweet crab, Biltmore crab apple‡, Dunbar crab, Alabama crab, Allegheny crab, Missouri crab, garland-tree.

RANGE—C. N.Y. w. to s. Ont., c. Mich., and n. Ill., s. to w. Mo. and ne. Ark., and e. to n. Ala., n. Ga., w. N.C., se. Va., and N.J. Atlas vol. 4, map 83.

REFERENCE—Laughlin, Kendall. Malus lancifolia Rehder. Phyto-

logia 9: 108-112, illus. 1963; Phytologia 16: 354-356. 1968.
HYBRIDIZES WITH: *Malus sylvestris* (*M.* ×*playtycarpa* Rehd.).

*Malus diversifolia*, see **M. fusca**

**Màlus fúsca** (Raf.) Schneid. **Oregon crab apple**‡†
*Pyrus fusca* Raf., Med. Fl. 2: 254. 1830; "*fusea*"; *nom. subnud.*
*Pyrus diversifolia* Bong., Acad. Imp. Sci. St. Pétersbourg Mém., Sér. 6, Sci. Math. Phys. Nat. 2: 133. 1832.
*Pyrus rivularis* Dougl. ex Hook., Fl. Bor.-Am. 1: 203, pl. 68. 1832.
‡*Malus diversifolia* (Bong.) Roem., Fam. Nat. Regn. Veg. Synops. 3: 215. 1847.
†*Malus rivularis* (Dougl.) Roem., Fam. Nat. Regn. Veg. Synops. 3: 215. 1847.
*Malus fusca* (Raf.) Schneid., Illus. Handb. Laubholzk. 1: 723, figs. 399d, 400i-l. 1906.
DERIVATION—Fuscous, dusky, or brownish, perhaps referring to the fruit.
OTHER COMMON NAMES—Pacific crab apple, western crab apple, wild crab apple, Oregon crab.
RANGE—Pacific Coast region from s. Alaska (Kenai Peninsula and Prince William Sound) and se. Alaska s. near coast in w. B.C., w. Wash., w. Oreg., and nw. Calif. (Sonoma Co.). Atlas vol. 2, map 49; vol. 3, maps 100-N, 100-W (as *Malus diversifolia* (Bong.) Roem.).
REFERENCE—Hartman, H. Hybrids between Pyrus Malus and Pyrus fusca. J. Hered. 20: 378-380. 1929.
*Malus fusca* is adopted here to conform to current usage by recent authors. That name was rejected in the 1953 checklist as not validly published, because the original description was very brief. The 1953 checklist accepted *M. diversifolia* and the 1927 checklist, *M. rivularis*.
HYBRIDIZES WITH: *Malus sylvestris*.

*Malus glabrata*, see **M. coronaria**
*Malus glaucescens*, see **M. coronaria**

**Màlus ioénsis** (Wood) Britton **prairie crab apple**‡
*Pyrus coronaria* ß *ioensis* Wood, Class-book Bot. Rev. ed., 333. 1861.
*Pyrus ioensis* (Wood) Bailey, Am. Gard. 12: 473, fig. 7, 8. 1891.
‡†*Malus ioensis* (Wood) Britton in Britton & Brown, Illus. Fl. North. States Can. 2: 235, fig. 1980. 1897.
DERIVATION—Of Iowa, where it was first distinguished as a variety.
OTHER COMMON NAMES—wild crab apple, crab apple†, Iowa crab, prairie crab, wild crab, Bechel crab.
RANGE—N. Ind. to s. Wis., se. Minn., and extreme se. S. Dak., s. to se. Nebr., e. Kans., e. Okla., and Ark. Also local in Edwards Plateau of c. Tex. and in La. Atlas vol. 4, map 84.
HYBRIDIZES WITH: *Malus sylvestris* (*M.* ×*soulardii* (Bailey) Britton).

*Malus lancifolia*, see **M. coronaria**
*Malus prunifolia*, see note under **Malus**
*Malus pumila*, see **M. sylvestris**
*Malus rivularis*, see **M. fusca**

MÀLUS SYLVÉSTRIS (L.) Mill. APPLE‡
*Pyrus malus* L., Sp. Pl. 479. 1753.
*Pyrus malus* [var.] *sylvestris* L., Sp. Pl. 479. 1753.
*Malus sylvestris* (L.) Mill., Gard. Dict. ed. 8, *Malus* No. 1. 1768.
‡†*Malus pumila* Mill., Gard. Dict. ed. 8, *Malus* No. 3, 1768.
DERIVATION—Of forests.
OTHER COMMON NAMES—common apple, wild apple†.
RANGE—Cultivated fruit tree, persistent, escaped, and naturalized locally across s. Can., in e. continental U.S., and from Wash. s. to Calif. Native of Europe and w. Asia.
HYBRIDIZES WITH: *Malus angustifolia* and *M. coronaria* (*M.* ×*platycarpa* Rehd.); *M. fusca*; *M. ioensis* (*M.* ×*soulardii* (Bailey) Britton.)

MANGÍFERA L. (Family Anacardiaceae) MANGO

‡†*Mangifera* L., Sp. Pl. 200. 1753; Gen. Pl. ed. 5, 93. 1754.

DERIVATION—Bearing mangoes, from the Portuguese common name of this popular tropical fruit.

REFERENCES—Mukherjee, S. K. A monograph on the genus Manifera L. Lloydia 12: 73-136. 1949.

Mukherjee, S. K. Origin, distribution and phylogenetic affinity of the species of Mangifera L. J. Linn. Soc. Bot. 55: 65-83. 1953.

MANGÍFERA ÍNDICA L. MANGO‡†

‡†*Mangifera indica* L., Sp. Pl. 200. 1753.

DERIVATION—Of India.

OTHER COMMON NAME—common mango.

RANGE—Escaped from cultivation and naturalized locally in s. Fla. incl. Fla. Keys. Also Hawaii, P.R., and V.I. Native of tropical Asia probably from India e. to Vietnam. Widely planted as a fruit tree and naturalized in tropical regions.

**Manilkàra** Adans. **manilkara**

‡†*Achras* L., Sp. Pl. 1190. 1753; Gen. Pl. ed. 5, 497. 1754; *nom. rejic.*
†*Mimusops* L., Sp. Pl. 349. 1753; Gen. Pl. ed. 5, 165. 1754; in part.
*Sapota* Mill., Gard. Dict. Abr. ed. 4, v. 3. 1754.
*Manilkara* Adans., Fam. Pl. 2: 166, 574. 1763; *nom. cons.*

DERIVATION—From Malabar, *manyl-kara*, applied to a species of this genus.

REFERENCES—Cronquist, Arthur. Studies in the Sapotaceae—IV. The North American species of Manilkara. Bull. Torrey Bot. Club 72: 550-562. 1945.

Gilly, Charles L. Studies in the Sapotaceae, II. The Sapodilla—Nispero complex. Yale Univ., School For., Trop. Woods 73: 1–22. 1943.

Monachino, Joseph V. The South American Species of Manilkara. Phytologia 4: 94-118. 1952.

Wood, C. E., Jr., and R. B. Channell. J. Arnold Arbor. 41: 13-17, illus. 1960.

The generic name Manilkara Adans. includes ‡*Achras* L. A proposal to conserve *Achras* L. (Little, Brittonia 7: 48-49. 1949) was rejected (Taxon 3: 119. 1954). The proposal to conserve *Manilkara* Adans. (Lam and van Royen, Taxon 2: 112. 1953) was accepted (Taxon 9: 16. 1960).

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also in West Indies); naturalized trees, 1; P.R., 4 (2 also in V.I.); total, tropical, about 85.

**Manilkàra bahaménsis** (Baker) Lam & Meeuse **wild-dilly‡†**

*Sloanea emarginata* L., Sp Pl. 512. 1753.
*Achras zapotilla β parvifolia* Nutt., No. Am. Sylva 3: 28. 1849.
*Mimusops jaimiqui* Wright in Griseb., Cat. Pl. Club. 64. 1866; in part.
*Achras bahamensis* Baker in Hook., Icon. Pl. 18: pl. 1795. 1888.
†*Mimusops parvifolia* (Nutt.) Radlk. ex Pierre, Not. Bot. Sapot. 37. 1891. Non *Mimusops parvifolia* R. Br., Prodr. Fl. Nov. Holl. 1: 531. 1810. Nec *Mimusops parvifolia* Kurz, For. Fl. Brit. Burma 2: 124. 1877.
*Mimusops emarginata* (L.) Britton, Torreya 11: 129. 1911.
*Manilkara emarginata* (L.) Britton & Wils., Sci. Surv. P.R. 6: 366. 1926. Non *Manilkara emarginata* H. J. Lam, Bull. Buitenzorg Jard. Bot. Sér. 3, 7: 241. 1925.
*Manilkara bahamensis* (Baker) Lam & Meeuse, Blumea 4: 351, 354. 1941.
*Manilkara jaimiqui* subsp. *emarginata* (L.) Cronquist, Bull. Torrey Bot. Club 73: 467. 1946.
‡*Achras emarginata* (L.) Little, Rhodora 49: 292. 1947.

DERIVATION—Of the Bahama Islands.

OTHER COMMON NAME—wild sapodilla.

RANGE—S. Fla. incl. Fla. Keys, n. to s. Dade Co. and Cape Sable, Monroe Co. Bahamas and Cuba. Atlas vol. 5, map 222.

MANILKÀRA ZAPÒTA (L.) v. Royen SAPODILLA‡†

‡†*Achras zapota* L., Sp. Pl. 1190. 1753; in part. Emend. L., Syst. Nat. ed. 10, 988. 1759.
*Achras zapota* ß *zapotilla* Jacq., Stirp. Am. 57. pl. 41. 1763.
*Sapota achras* Mill., Gard. Dict. ed. 8, *Sapota* No. 1. 1768.
*Achras zapotilla* P. Br., Civ. Nat. Hist. Jam. ed. 2, Index. 1789.
*Achras zapotilla* Nutt., No. Am. Sylva 3: 28, pl. 90. 1849.
*Manilkara zapotilla* (Jacq.) Gilly, Yale Univ., School For., Trop. Woods 73: 20. 1943.
*Manilkara zapota* (L.) v. Royen, Blumea 7: 410. 1953.
*Manilkara achras* (Mill.) Fosberg, Taxon 13: 255. 1964.

DERIVATION—From the Mexican Indian name, sapote.

OTHER COMMON NAMES—chicle, chicle-tree, níspero.

RANGE—Escaped from cultivation and sparingly naturalized in s. Fla. incl. Fla. Keys. Also, Hawaii, P.R., and V.I. Native from Mex. s. to Costa Rica. Planted for fruit and shade through the tropics and naturalized locally.

REFERENCES—Cook, Orator F. Nomenclature of the sapote and the sapodilla. U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 277-285, illus. 1913.

Fosberg, F. R. The correct name of the chicle. Taxon 13: 254-255. 1964.

Lawrence, G. H. M. Gentes Herbarum 8: 59-61. 1949.

Moore, Harold E., Jr., and William T. Stearn. The identity of Achras zapota L. and the names for the sapodilla and the sapote. Taxon 16: 382-395, illus. 1967.

Pittier, Henry. Zapotes and zapotillas. U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 18: 76-86, illus. 1914.

Ponce de León, Antonio. La denomiación científica de los zapotes. Rev. Soc. Cubana Bot. 2: 116-122, illus. 1945.

**Mastichodéndron** H. J. Lam (Family Sapotaceae) **mastichodendron**

‡†*Sideroxylon* L., Sp. Pl. 192. 1753. Gen. Pl. ed. 5, 89. 1754; "*Sideroxylum*"; in part.
*Mastichodendron* Jacq. ex R. Hedw., Gen. Pl. 116. 1806; *pro syn.*
*Mastichodendron* H. J. Lam, Rec. Trav. Bot. Néerland. 36: 521. 1939.

DERIVATION—From Greek gum mastic (or to chew) and tree, presumably in reference to chewing gum.

REFERENCE—Cronquist, Arthur. Studies in the Sapotaceae—II. Survey of the North American genera. Lloydia 9: 241-292. 1946.

This genus segregated from ‡†*Sideroxylon* has been widely adopted. That older genus has about 100 species, all in Old World.

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also in West Indies incl. P.R. and V.I., Mex., and C. Am.); total, tropical, mostly Mex. and C. Am., about 7.

**Mastichodéndron foetidíssimum** (Jacq.) H. J. Lam **false-mastic**

‡†*Sideroxylon foetidissimum* Jacq., Enum. Pl. Ins. Carib. 15. 1760.
*Sideroxylon mastichodendron* Jacq., Coll. Bot. 2: 253, pl. 17, fig. 5. 1788.
*Mastichodendron foetidissimum* (Jacq.) H. J. Lam, Rec. Trav. Bot. Néerland. 36: 521. 1939.
*Mastichodendron foetidissimum* (Jacq.) Cronq., Lloydia 9: 246. 1946.

DERIVATION—Very ill-smelling, referring to the cheeselike odor of the numerous flowers.

OTHER COMMON NAMES—mastic†, wild-mastic, wild-olive.

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to Cape Canaveral and on w. coast to Manatee Co. From Bahamas through West Indies incl. P.R. and V.I. Also var. in se. Mex. (Yuc. Pen.) and Belize. Atlas vol. 5, map 223.

**Maytènus** Molina (Family Celastraceae) **mayten**

‡†*Maytenus* Molina, Sagg. Stor. Nat. Chili 177. 1782.

*Tricerma* Liebm., Vidensk. Meddel. Dansk Naturhist. Foren. Kjoeb. 1853: 97. 1854.

DERIVATION—From mayten, the Chilean name of the type species.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; native shrubs (s. Tex.), 1; P.R., 4, incl. 2 also in V.I.; world total, shrubs and small trees, tropical, about 200.

**Maytènus phyllanthoides** Benth. **Florida mayten**

‡†*Maytenus phyllanthoides* Benth., Bot. Voy. Sulphur 54. 1844.
*Tricerma phyllanthoides* (Benth.) Lundell, Wrightia 4: 158. 1971.

DERIVATION—Like *Phyllanthus*, leaf-flower, a genus of Euphorbiaceae.

OTHER COMMON NAMES—maytenus, guttapercha mayten‡.

RANGE—Rare on coasts of s. Fla. incl. Fla. Keys, local n. on w. coast to Pasco and Levy Cos. Also Mex. (Yuc. to Pue., S.L.P., Son., and B. Cal. Sur.) and C. Am. Atlas vol. 5, map 224.

The shrub of s. Tex. and adjacent Mex. formerly included as a variety is now accepted as a separate species, *Maytenus texana* Lundell (*Tricerma texanum* (Lundell) Lundell).

MELALEÙCA L. (Family Myrtaceae) MELALEUCA

*Kajuputi* Adans., Fam. Pl. 2: 84 ("*Caju puti*"), 530. 1763; *nom. rejic.*
‡*Melaleuca* L., Syst. Nat. ed. 12, 509. 1767; Mant. Pl. 14, 105. 1767; *nom. cons.*

DERIVATION—From Greek, black and white, in allusion to the dark trunk and white branches of one species.

REFERENCE—Blake, S. T. A revision of Melaleuca leucadendron and its allies (Myrtaceae). Contrib. Queensl. Herb. 1, 114 p., illus. 1968.

MELALEÙCA QUINQUENÉRVIA (Cav.) S. T. Blake CAJEPUT-TREE‡

*Metrosideros quinquenervia* Cav., Icon. Descr. Plant. 4: 19, pl. 333. 1797.
*Melaleuca quinquenervia* (Cav.) S. T. Blake, Proc. Roy. Soc. Queensl. 69: 76. 1958.

DERIVATION—Five-nerved, referring to the leaves.

OTHER COMMON NAMES—punktree, bottlebrush.

RANGE—Naturalized and very common in s. Fla. Planted also in s. Tex., s. Calif., Hawaii, and P.R. Native from e. Australia to New Caledonia and Papua. Planted and naturalized in tropical regions.

Formerly referred to ‡*Melaleuca leucadendron* (L.) L., a related species of n. and ne. Australia, s. New Guinea, and Amboina.

MÈLIA L. (Family Meliaceae) CHINABERRY

‡†*Melia* L., Sp. Pl. 384. 1753; Gen. Pl. ed. 5, 182. 1754.

DERIVATION—A classical Greek name for the ash tree, and transferred by Linnaeus to this genus.

MÈLIA AZÉDARACH L. CHINABERRY‡†

‡†*Melia azedarach* L., Sp. Pl. 384. 1753.

DERIVATION—From the Persian name *azad dirakht*, literally noble tree, for this species.

OTHER COMMON NAMES—umbrella chinaberry†, chinatree, pride-of-India, umbrella-tree; paraíso, canelón (Spanish).

RANGE—Widely planted and escaped and naturalized locally in se. U.S. from se. Va. to Fla., w. to s. and c. Tex., and n. to se. Okla., Ark., and w. Tenn., also in Calif., Hawaii, P.R., and V.I. Native of s. Asia, probably from Iran and Himalaya to China, but cultivated and naturalized in tropical and warm temperate regions of the world.

MELICÓCCUS BIJUGÀTUS Jacq. (Enum. Syst. Pl. Ins. Carib. 19. 1760; Family Sapindaceae), Spanish-lime (ginep, mamoncillo), is planted as a fruit and shade tree in s. Fla. and has escaped locally but perhaps should not be classed as naturalized. It may have been spread by prehistoric Indians. Planted in Hawaii, P.R., and V.I. Native of Colombia, Ven-

ezuela, and Guianas in n. S. Am. but planted in world tropics. Cited from Fla. by George K. Brizicky (J. Arnold Arbor. 44: 472-473. 1963) and Long and Lakela (Fl. Trop. Fla. 574-575. 1971) but apparently not in earlier lists.

**Metòpium** P. Br. (Family Anacardiaceae) **poisontree**

‡†*Metopium* P. Br., Civ. Nat. Hist. Jam. 177, pl. 13, fig. 3. 1756.

DERIVATION—A Latin word from Greek *metopion*, literally forehead, also reported to be the classical name of an African tree.

REFERENCE—See **Rhus**

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also West Indies incl. P.R.); Mex. and C. Am. (Belize and Guatemala), 1 (also in West Indies); Cuba, 3; total, 3.

**Metòpium toxíferum** (L.) Krug & Urban **Florida poisontree‡**

*Amyris toxifera* L., Syst. Nat. ed. 10, 2: 1000. 1759.

‡†*Metopium toxiferum* (L.) Krug & Urban in Urban, Bot. Jahrb. 21: 612. 1896.

DERIVATION—Bearing poison, the sap causing skin irritation similar to that produced by its relative poison-ivy.

OTHER COMMON NAMES—poisonwood†, West Indies poisontree.

RANGE—S. Fla. incl. Fla. Keys, n. on e. coast to St. Lucie Co. Bahamas, Cuba, Hispaniola, P.R., and Anguilla. Atlas vol. 5, map 225.

*Mimusops*, see **Manilkara**
*Misanteca*, see **Licaria**
*Morella*, see **Myrica**

‡†MORÍNGA OLEÍFERA Lam. (Encycl. Méth. Bot. 1: 398. 1785; Family Moringaceae, Horseradish-tree Family), horseradish-tree‡†, is planted as a roadside tree in s. Fla. incl. Fla. Keys and may have escaped. Also P.R. and V.I. Native of East Indies, se. Asia, and India but planted through world tropics. In the 1953 checklist cited as perhaps not naturalized. Possibly naturalized, according to Wallace R. Ernest (J. Arnold Arbor. 44: 93-95. 1963).

**Mòrus** L. (Family Moraceae) **mulberry**

‡†*Morus* L., Sp. Pl. 986. 1753; Gen. Pl. ed. 5, 424. 1754.

DERIVATION—The classical Latin name of mulberry.

NUMBER OF SPECIES: Native trees, 2 (including 1 also in Mex.); naturalized trees, 2; Mex. and n. S. Am., mts., 2 additional; Africa to Asia, about 5; total, about 10.

MÒRUS ÁLBA L. WHITE MULBERRY‡†

‡†*Morus alba* L., Sp. Pl. 986. 1753.

DERIVATION—White, referring to the fruit (also pink to dark purple).

OTHER COMMON NAMES—silkworm mulberry, Russian mulberry, weeping mulberry; mora, moral blanco (Spanish).

RANGE—Widely planted for ornament across contiguous U.S. and in Hawaii. Escaped and naturalized from N.Y. w. to se. Nebr., s. to Tex., and e. to Fla., and locally w. to Calif. and Wash. Native of China but cultivated as food of silkworms and naturalized in many regions.

**Mòrus microphýlla** Buckl. **Texas mulberry‡**

‡†*Morus microphylla* Buckl., Proc. Acad. Nat. Sci. Phila. 1862 [v. 14]: 8. 1862.

DERIVATION—Small-leaf.

OTHER COMMON NAMES—Mexican mulberry, mountain mulberry, littleleaf mulberry.

RANGE—S. Okla., Tex., N. Mex., and Ariz., and n. Mex. (n. Son., Chih., and Coah.). Atlas vol. 3, map 99.

MÒRUS NÌGRA L. BLACK MULBERRY‡†

‡†*Morus nigra* L., Sp. Pl. 986. 1753.

DERIVATION—Black, referring to the fruit.

RANGE—Planted from Fla. to Tex. and escaped and naturalized locally. Also Hawaii and P.R. Native of w. Asia, probably Iran and Asia Minor.

***Mòrus rùbra** L. **red mulberry‡†**

‡†*Morus rubra* L., Sp. Pl. 986. 1753.
*Morus tomentosa* Raf., Fl. Ludovic 113. 1817.
*Morus rubra* β *tomentosa* (Raf.) Bur. in A. DC., Prodr. 17: 246. 1873.

DERIVATION—Red, referring to the fruit.

OTHER COMMON NAME—moral (Spanish).

RANGE—Mass. and s. Vt. w. to extreme s. Ont., s. Mich., c. Wis., and se. Minn., s. to Iowa, se. Nebr., c. Kans., w. Okla., and c. Tex., and e. to s. Fla. Atlas vol. 1, maps 139-W, 139-E; vol. 5, map 88.

*Mosiera*, see **Psidium**

MUNTÍNGIA CALABÙRA L. (Sp. Pl. 509. 1753; Family Elaeocarpaceae, Elaeocarpus Family), muntingia (Jamaica-cherry, strawberry-tree), has been planted as an ornamental in s. Fla. and has escaped and may be naturalized locally. Introduced also in Hawaii and P.R. and through the tropics. Native from s. Mex. to Brazil, Argentina, and Peru and in West Indies. References—Brizicky, George K. J. Arnold Arbor. 46: 304-307. 1965. Long and Lakela, Fl. Trop. Fla. 587. 1971.

**Myrciánthes** Berg (Family Myrtaceae) **myrcianthes**

*Myrcianthes* Berg, Linnaea 27: 136, 315. 1856.
*Anamomis* Griseb., Fl. Brit. W. Indies 240. 1860.

DERIVATION—From *Myrcia*, a related genus, and flower, in reference to the resemblance.

OTHER COMMON NAME—nakedwood.

REFERENCES—See also **Eugenia**

McVaugh, Rogers. Tropical American Myrtaceae, II. 5. Myrcianthes Berg. Synopsis of the genus (eastern South America excluded). Fieldiana: Botany 29: 473-497. 1963.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R. and V.I.; total, tropical Am., about 50.

**Myrciánthes fràgrans** (Sw.) McVaugh **twinberry stopper**

*Myrtus fragrans* Sw., Prodr. Veg. Ind. Occ. 79. 1788.
‡†*Eugenia dicrana* Berg, Linnaea 27: 259. 1856.
*Anamomis dicrana* (Berg) Britton in Britton & Shafer, No. Am. Trees 728, fig. 668. 1908.
*Myrcianthes dicrana* (Berg) K. A. Wils., J. Arnold Arbor. 41: 276. 1960.
*Myrcianthes fragrans* (Sw.) McVaugh, Fieldiana Bot. 29: 485. 1963.

DERIVATION—Fragrant.

OTHER COMMON NAMES—twinberry eugenia‡, nakedwood, naked stopper†, twinberry.

RANGE—S. Fla. (var. on N. Key Largo in Upper Fla. Keys), n. on e. coast to Volusia Co. and on w. coast to Lee Co. and local in Pinellas Co. Bahamas, Greater Antilles incl. P.R. and V.I., and Lesser Antilles to Martinique. Also from e. and s. Mex. (Tamps. to Ver. and Q. Roo) s. to Colombia and Venezuela. Atlas vol. 5, map 226.

**Myrciánthes fràgrans** (Sw.) McVaugh var. **fràgrans**
**twinberry stopper (typical)**

RANGE—S. Fla. (apparently not Fla. Keys), n. on e. coast to Volusia Co. and on w. coast to Lee Co. and local in Pinellas Co. Bahamas, Greater Antilles incl. P.R. and V.I., and Lesser Antilles to Martinique. Also from

e. and s. Mex. (Tamps. to Ver. and Q. Roo) s. to Colombia and Venezuela.

**Myrcianthes fragrans** var. **simpsonii** (Small) R. W. Long **Simpson stopper**

*Anamomis simpsonii* Small, Torreya 17: 222, fig. 1917.
‡†*Eugenia simpsonii* (Small) Sarg., Man. Trees No. Am. ed. 2, 775, fig. 697. 1922.
*Myrcianthes simpsonii* (Small) K. A. Wils., J. Arnold Arbor. 41: 276. 1960.
*Myrcianthes fragrans* var. *simpsonii* (Small) R. W. Long, Rhodora 72: 23. 1970.

DERIVATION—Named for Charles Torrey Simpson (1846-1932), Florida naturalist and one of the discoverers.

OTHER COMMON NAMES—Simpson eugenia ‡, Florida myrtle, stopper†.

RANGE—Rare and local in extreme s. Fla. (Dade Co.) incl. N. Key Largo in Upper Fla. Keys.

**Myrica** L. (Family Myricaceae) **bayberry**

‡†*Myrica* L., Sp. Pl. 1024. 1753; Gen. Pl. ed. 5, 449. 1754.
*Morella* Lour., Fl. Cochinch. 548. 1790.
*Cerothamnus* Tidestr., Elysium Marianum 40, pl. 10. 1910.

DERIVATION—The Latin name from Greek for tamarisk, *Tamarix*, transferred by Linnaeus to this unrelated and dissimilar genus.

OTHER COMMON NAME—waxmyrtle.

REFERENCE—Elias, Thomas S. The genera of Myricaceae in the southeastern United States. J. Arnold Arbor. 52: 305-318, illus. 1971.

NUMBER OF SPECIES: Native shrubs or small trees, 5; native shrubs, 2; total, shrubs and trees, temperate and tropical, about 35.

**Myrica californica** Cham. **Pacific bayberry‡**

‡†*Myrica californica* Cham. in Cham. & Schlecht., Linnaea 6: 535. 1831.

DERIVATION—Of California, first collected at San Francisco.

OTHER COMMON NAMES—Pacific waxmyrtle†, western waxmyrtle, California waxmyrtle.

RANGE—Pacific Coast region near coast from sw. Wash. to w. Oreg. and s. Calif. (Santa Monica Mts.). (A rare escape on s. Vancouver Is., B.C.) Atlas vol. 3, map 101.

**Myrica cerifera** L. **southern bayberry‡**

‡†*Myrica cerifera* L., Sp. Pl. 1024. 1753.
*Myrica mexicana* Willd., Enum. Pl. 2: 1011. 1809.
*Myrica pusilla* Raf., Alsogr. Am. 10. 1838.
*Morella cerifera* (L.) Small, Fl. Southeast. U.S. 337, 1329. 1903.
*Cerothamnus ceriferus* (L.) Small, Fl. Miami 61, 200. 1913.

DERIVATION—Bearing wax; the fruits have waxy coats and are used in making candles.

OTHER COMMON NAMES—bayberry, candleberry, waxmyrtle†, southern waxmyrtle, dwarf waxmyrtle; cerero, arrayán (Spanish, P.R.).

RANGE—Coastal Plain from s. N.J., Del., and s. Md., s. to s. Fla. incl. Fla. Keys, and w. to s. and c. Tex., and n. to extreme se. Okla., c. Ark., and c. Miss. Also in Bermuda, Bahamas, Cuba, Hispaniola, and P.R. and in Mex. and C. Am. from Belize s. to Costa Rica. Atlas vol. 4, map 85; vol. 5. map 89.

REFERENCE—Thieret, John W. Habit variation in Myrica pennsylvanica and M. cerifera. Castanea 31: 183–185. 1966.

HYBRIDIZES WITH: *Myrica pensylvanica* (*M.* ×*macfarlanei* Youngken).

**Myrica heterophylla** Raf. **evergreen bayberry‡**

‡*Myrica heterophylla* Raf., Alsogr. Am. 9. 1838; "*heterophyla.*"
*Myrica curtissi* Chev., Mém. Soc. Sci. Nat. Cherbourg 32: 269. 1901.
*Myrica heterophylla* var. *curtissi* (Chev.) Fern., Rhodora 40: 410. 1938.

DERIVATION—With different or variable leaves.

RANGE—Coastal Plain from s. N.J., se. Pa., and Del., s. to n. Fla., and

w. to La. and n. to c. Ark. and n. Ala. Atlas vol. 4, map 86; vol. 5, map 90.

**Myrica inódora** Bartr. **odorless bayberry‡**

‡†*Myrica inodora* Bartr., Travels N. S. Car. Ga. Fla. 405. 1791.
*Morella inodora* (Bartr.) Small, Fl. Southeast. U.S. 337, 1329. 1903.
*Cerothamnus inodorus* (Bartr.) Small, Fla. Trees 12, 102. 1913.

DERIVATION—Odorless, the plant not aromatic as in related species.

OTHER COMMON NAMES—odorless waxmyrtle, waxmyrtle†.

RANGE—Coastal Plain of sw. Ga., nw. Fla., s. Ala., s. Miss., and se. La. Atlas vol. 4, map 87; vol. 5, map 91.

**Myrica pensylvánica** Loisel. **northern bayberry‡**

‡*Myrica pensylvanica* Loisel. in Du Hamel, Traité Arb. Arbust. ed. 2, 2: 190, pl. 55. 1804.

DERIVATION—Of Pennsylvania.

OTHER COMMON NAMES—bayberry, candleberry.

RANGE—Near Atlantic coast chiefly, from s. Nfld., N.S., P.E.I., and s. Que., se. to s. Maine, Mass., N.J., se. Va., and e. N.C., and w. locally to w. Pa., ne. Ohio, and extreme s. Ont. Atlas vol. 4, maps 88-N, 88-NE.

REFERENCE—Fernald, M. L. Rhodora 37: 423. 1935.

HYBRIDIZES WITH: *Myrica cerifera* (*M.* ×*macfarlanei* Youngken).

*Myrsine*, see **Rapanea**
*Myrtus*, see **Psidium**

**Nectándra** Roland. ex Rottboell (Family Lauraceae) **nectandra**

‡*Nectandra* Roland. ex Rottboell, Acta Litt. Univ. Hafn. 1: 279. 1778; *nom. cons.* Non *Nectandra* Bergius, Descr. Pl. Cap. 131. 1767; *nom. rejic.*

DERIVATION—From Greek, nectar and stamens.

REFERENCE—Wood, Carroll E., Jr. J. Arnold Arbor. 39: 336–338. 1958.

†*Ocotea* Aubl. (Hist. Pl. Guiane Franc. 2: 780, pl. 310. 1775) was accepted for this genus and its single native species in the 1927 checklist and by Sargent (Man. Trees No. Am. ed. 2, corr. 359-360, fig. 323. 1926). However, most authorities on the family Lauraceae now accept *Nectandra* Roland. as a segregate genus.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R. and V.I.; P.R., 5 additional (3 also in V.I.); total, tropical Am., about 175.

**Nectándra coriàcea** (Sw.) Griseb. **Florida nectandra**

*Laurus coriacea* Sw., Nov. Gen. Sp. Pl. Prodr. 65. 1788.
*Laurus catesbyana* Michx., Fl. Bor.-Am. 1: 244. 1803.
‡*Nectandra coriacea* (Sw.) Griseb., Fl. Brit. West Ind. 281. 1860.
†*Ocotea catesbyana* (Michx.) Sarg., Silva No. Am. 7: 11, pl. 303. 1895.
*Ocotea coriacea* (Sw.) Britton in Britton & Millsp., Bahama Fl. 143. 1920.

DERIVATION—Leathery, referring to the thick evergreen leaves.

OTHER COMMON NAMES—Jamaica nectandra‡, lancewood†.

RANGE—S. Fla. incl. Upper Fla. Keys, n. on e. coast to Volusia Co. and on w. coast to s. Collier Co. From Bahamas through West Indies incl. P.R. and V.I. Also se. Mex. (Yuc. Pen.), Belize, and Guatemala. Atlas vol. 5, map 227.

*Negundo*, see **Acer**

**Nemopánthus** Raf. **mountain-holly**

*Nemopanthus* Raf., Am. Mon. Mag. Crit. Rev. 2: 176. 1816; *nom. subnud.*; 4: 357. 1819; *nom. cons.*

DERIVATION—From Greek, thread, foot, and flower, referring to the slender flower stalks.

REFERENCE—Clark, Ross C. Ilex collina, a second species of

Nemopanthus in the southern Appalachians. J. Arnold Arbor. 55: 435-440, illus. 1974.

This genus is added here. Its lone shrub species rarely reaches tree size, and a second species has been transferred from *Ilex*, holly.

NUMBER OF SPECIES: Native trees and shrubs, 2; total, 2.

**Nemopánthus collìnus** (Alexander) Clark **mountain-holly**

*Ilex collina* Alexander, Castanea 6: 30. 1941.

*Nemopanthus collinus* (Alexander) Clark, J. Arnold Arbor. 55: 437. 1974.

*Nemopanthus collinus* f. *van-trompii* (M. Brooks) Clark, J. Arnold Arbor. 55: 438. 1974.

DERIVATION—Of hills.

OTHER COMMON NAME—long-stalk holly.

RANGE—Rare and local in mts. of W. Va., w. Va., and w. N.C. Atlas vol. 4, map 89.

A shrub or small tree to 13 ft (4 m) high, cited in the 1953 checklist as a doubtful synonym of *Ilex montana* Torr. & Gray.

*Nemopánthus mucronàtus* (L.) Trel. (Trans. Acad. Sci. St. Louis 5: 349. 1889; *nom. provis.*; Loes., Monogr. Aquifol. 1: 501, pl. 14, fig. 2,3. 1901), mountain-holly, has been recorded as a small tree rarely to 20 ft (6 m) tall in Mich. Generally a shrub 3-10 ft (1-3 m) high. Range—Nfld. and Que., w. to Minn., s. to Ill., and e. to W. Va. and Va.

‡†NÈRIUM OLEÁNDER L. (Sp. Pl. 209. 1753; Family Apocynaceae, Dogbane Family), oleander‡† (laurel rosa, Spanish), is excluded as not naturalized. Planted across s. U.S. from Fla. to La., Tex., Ariz., and Calif. Hawaii, P.R. and V.I. Persistent and escaping locally. Native of Mediterranean region and cultivated as an ornamental in tropical and subtropical regions.

**Nicotiàna** L. (Family Solanaceae) **tobacco**

‡*Nicotiana* L., Sp. Pl. 180. 1753; Gen. Pl. ed. 5, 84. 1754.

DERIVATION—Jean Nicot (1530-1600), French ambassador to Portugal, who introduced tobacco into France in 1560.

This genus is represented also by native herbs and by the cultivated tobacco.

REFERENCE—Goodspeed, Thomas Harper. The genus Nicotiana. Chron. Bot. 16, 536 p., illus. 1954.

NUMBER OF SPECIES: Naturalized trees, 1 (also in Hawaii); native herbs (sw. U.S.), about 6; total, tropical and warm temperate, about 65.

NICOTIÀNA GLAÙCA Graham TREE TOBACCO‡

‡*Nicotiana glauca* Graham, Edinb. New Phil. J. 1828 [v. 5]: 175. 1828 (Apr.-June); Curt. Bot. Mag. 55: No. 2837, pl. 2837. 1828 (July 1).

DERIVATION—Glaucous, or covered with a bloom, in reference to blue-green foliage and branches.

OTHER COMMON NAMES—wild tobacco, sacred-mustard, mustardtree; tronadora, buena moza, gigante, rape (Spanish).

RANGE—Naturalized, especially in roadsides and waste places, s. to Trans-Pecos Tex., s. N. Mex., s. Ariz., and s. to c. Calif., also Hawaii. Recorded from Fla. (Small, Man. Southeast Fl. 1120. 1933). Native of Argentina and possibly Bolivia but extensively naturalized in tropical and subtropical regions.

**Nolìna** Michx. (Family Liliaceae; Agavaceae) **nolina**

‡*Nolina* Michx., Fl. Bor.-Am. 1: 207. 1803.

DERIVATION—In honor of P. C. Nolin, French author of an essay on agriculture in 1755 and grower of American plants.

NUMBER OF SPECIES: Native shrubs, 1 also tree (sw. and se. U.S.), 13, incl. 6 also in Mex.; Mex., additional, about 15; total, about 30.

**Nolina bigelòvii** (Torr.) Wats. **Bigelow nolina**‡

*Dasylirion bigelovii* Torr. in U.S. Rep. Expl. Surv. Miss. Pacif. 4(5): 151. 1857.
‡*Nolina bigelovii* (Torr.) Wats., Proc. Am. Acad. Arts Sci. 14: 247. 1879.
*Nolina parryi* Wats., Proc. Am. Acad. Sci. 14: 247. 1879.
*Nolina bigelovii* var. *parryi* (Wats.) L. Benson, in Benson & Darrow, Man. Southwest Desert Trees Shrubs 76, 384. 1944.
*Nolina parryi* ssp. *wolfii* Munz in Munz & Roos, Aliso 2: 221, fig. 1, 2, 5, 8. 1950.
*Nolina bigelovii* var. *wolfii* (Munz) L. Benson in Benson & Darrow, Trees Shrubs Southwest Deserts (2d ed.) 72, 418. 1954.

DERIVATION—Named for its discoverer, John Milton Bigelow (1804-78), United States physician and botanist, who made large plant collections in the Southwest on Government surveys from 1850 to 1854.

REFERENCES—Little, Elbert L., Jr. Southwestern trees. U.S. Dep. Agric., Agric. Handb. 9: 30-31, fig. 1950.

Munz, Philip A., and John C. Roos. Aliso 2: 221-227, illus. 1950.

Wolf, Carl B. Rancho Santa Ana Bot. Gard. Occas. Pap. Ser. 1, 2: 46-47. 1938.

RANGE—Ariz., extreme s. Nev., s. Calif., and B. Cal. and nw. Son., Mex. Atlas vol. 3, map 102.

A variation with palmlike habit reaches tree size in Tinajas Altas Mountains, Yuma Co., sw. Ariz., and in s. Calif. The unbranched trunk to 13 ft (4 m) high and 2-3 ft (60-90 cm) in diameter may bear a flower stalk 10-13 ft (3-4 m) high, according to Munz and Roos (1950).

**Nýssa** L. (Family Cornaceae; Nyssaceae) **tupelo**

‡†*Nyssa* L., Sp. Pl. 1058. 1753; Gen. Pl. ed. 5, 478. 1754.

DERIVATION—The name of a water nymph, so called because the type species, *Nyssa aquatica* L., water tupelo, grows in water.

OTHER COMMON NAME—sourgum.

REFERENCE—Rickett, Harold William. Nyssaceae. No. Am. Fl. 28B: 313-316. 1945.

Eyde, Richard H. The discovery and naming of the genus Nyssa. Rhodora 61: 209-218. 1959.

Eyde, Richard H. Morphological and paleobotanical studies of the Nyssaceae, I. A survey of the modern species and their fruits. J. Arnold Arbor. 44: 1-59, illus. 1963.

Eyde, Richard H. The Nyssaceae in the southeastern United States. J. Arnold Arbor. 47: 117-125, illus. 1966.

Some authors place this genus and relatives of se. Asia in a separate family, Nyssaceae†.

NUMBER OF SPECIES: Native trees (e. U.S.), 3 (1 also in mts. of Mex.); se. Asia, 2; total, 5.

***Nýssa aquática** L. **water tupelo**‡

‡†*Nyssa aquatica* L., Sp. Pl. 1058. 1753; in part.
*Nyssa uniflora* Wangenh., Betyr. Teutsch. Forstwiss. Nordam. Holz. 83, pl. 27, fig. 57. 1787.

DERIVATION—Aquatic, from its habitat in swamps.

OTHER COMMON NAMES—cotton-gum, sourgum, tupelo, swamp tupelo, tupelo-gum†, water-gum.

RANGE—Coastal Plain from se. Va. to n. Fla., w. to se. Tex., and n. in Miss. Valley to e. Ark., se. Mo., s. Ill., w. Ky., and w. Tenn. Atlas vol. 1, map 143-E; vol. 5, map 92.

REFERENCE—Eyde, Richard H. Typification of Nyssa aquatica L. Taxon 13: 129-132. 1964.

*Nyssa ogèche Bartr. ex Marsh. **Ogeechee tupelo‡**

‡†*Nyssa ogeche* Bartr. ex Marsh., Arbustr. Am. 97. 1785.
*Nyssa acuminata* Small, Fl. Southeast. U.S. 852, 1335. 1903.

DERIVATION—From Ogeechee River in Georgia.

OTHER COMMON NAMES—Ogeechee-lime, sour tupelo, sour tupelo-gum†, white tupelo.

RANGE—Coastal Plain in extreme s. S.C., s. Ga., and n. and nw. Fla. Atlas vol. 1, map 145-E; vol. 5, map 93.

*Nyssa sylvática Marsh. **black tupelo‡; blackgum‡†**

*Nyssa aquatica* L, Sp. Pl. 1058. 1753; in part.
‡†*Nyssa sylvatica* Marsh., Arbustr. Am. 97. 1785.
*Nyssa caroliniana* Poir. in Lam., Encycl. Méth. Bot. 4: 507. 1797.
*Nyssa sylvatica* var. *caroliniana* (Poir.) Fern., Rhodora 37: 436, pl. 400. 1935.
*Nyssa sylvatica* var. *dilatata* Fern., Rhodora 37: 436, pl. 399. 1935.

DERIVATION—Of the woods.

OTHER COMMON NAMES—sourgum, pepperidge, tupelo, tupelo-gum.

RANGE—Sw. Maine w. to N.Y., extreme s. Ont., c. Mich., e. Ill., and c. Mo., s. to e. Okla. and e. Tex., and e. to s. Fla. Also extreme se. Wis. (perhaps extinct). Local in mts. of c. and s. Mex. (Hgo., Pue., and Chis.). Atlas vol. 1, maps 144-N, 144-E; vol. 5, map 94.

REFERENCE—Fernald, M. L. The varieties of Nyssa sylvatica (Plates 397-400). Rhodora 37: 433-437, illus. 1935.

**Nyssa sylvática** Marsh. var. **sylvática** **black tupelo (typical)**

RANGE—Same as sp.

**Nyssa sylvática** var. **biflòra** (Walt.) Sarg. **swamp tupelo‡; blackgum‡**

†*Nyssa biflora* Walt., Fl. Carol. 253. 1788.
‡*Nyssa sylvatica* var. *biflora* (Walt.) Sarg., Sylva No. Am. 5: 76, pl. 218. 1893.
*Nyssa ursina* Small, Torreya 27: 92. 1927.

DERIVATION—Two-flower.

OTHER COMMON NAME—swamp blackgum†.

RANGE—Coastal Plain chiefly, from Del., e. Md., and se. Va., s. to s. Fla. and e. Tex., and n. in Miss. Valley to s. Ark. and w. and s. Tenn.

*Ocotea*, see note under **Nectandra**

*Oemlèria cerasifórmis* (Torr. & Gray) Landon (Taxon 24: 200. 1975; *Osmaronia cerasiformis* (Torr. & Gray) Greene; Family Rosaceae), osoberry. Generally a several-stemmed shrub less than 10 ft (3 m) high, rarely may become a small tree as much as 16 ft (5 m) high. Range—Sw. B.C. and w. Wash., s. to c. Calif.

**Ólneya** Gray (Family Leguminosae) **tesota**

‡†*Olneya* Gray, Mem. Am. Acad. Arts Sci., New Ser. 5: 328. 1855.

DERIVATION—Stephen Thayer Olney (1812-78), businessman and botanist of Rhode Island.

NUMBER OF SPECIES: 1.

**Ólneya tesòta** Gray **tesota‡†**

‡†*Olneya tesota* Gray, Mem. Am. Acad. Arts Sci., New Ser. 5: 328. 1855.

DERIVATION—The American Indian name.

OTHER COMMON NAMES—Arizona-ironwood, desert-ironwood; palo de hierro, palo fierro (Spanish).

RANGE—S. and sw. Ariz., se. Calif., and nw. Mex. (B. Cal., B. Cal. Sur, and Son.). Atlas vol. 3, map 103.

**Opúntia** Mill. (Family Cactaceae) **pricklypear; cholla**

‡†*Opuntia* Mill., Gard. Dict. Abr. ed. 4, v. 2. 1754.
*Brasiliopuntia* (K. Schum.) Berger, Entwickl. Kakt. 17, 18, 94, 100. 1926.
*Cylindropuntia* (Engelm.) F. M. Knuth in Backeberg & Knuth, Kaktus-ABC 117, 410. 1935.

DERIVATION—Old Latin name of plant which grew near Opus, a town in Greece.

REFERENCE—Benson, Lyman. The cacti of Arizona. ed. 3. 218 p., illus. 1969. *Opuntia*, p. 29-106, illus.

A few of the larger species of *Opuntia* may be classed as trees, and many others are shrubs. Additional treelike cacti of southwestern United States mentioned in previous checklists are: ‡*Opuntia acanthocarpa* Engelm. & Bigel. (in Engelm., Proc. Am. Acad. Arts Sci. 3: 308. 1856), buckhorn cholla‡; ‡†*Opuntia spinosior* (Engelm.) Toumey (Bot. Gaz. 25: 119. 1898), tasajo‡†; and ‡†*Opuntia versicolor* Engelm. (ex. Coult., U.S. Dep. Agric., Div. Bot., Contrib. U.S. Natl. Herb. 3: 452. 1896), staghorn cholla‡.

NUMBER OF SPECIES: Native stem succulents, trees, 1, and shrubs, about 50; naturalized trees, 2; P.R. and V.I., trees, 2, and shrubs, about 5; total, incl. Mex. to S. Am. and in West Indies, shrubs and trees, about 250.

OPÚNTIA BRASILIÉNSIS (Willd.) Haw. BRAZIL PRICKLYPEAR‡

*Cactus brasiliensis* Willd., Enum. Pl. Hort. Berol. Suppl. 33. 1813.
‡*Opuntia brasiliensis* (Willd.) Haw., Sup. Pl. Succ. 79. 1819; "*braziliensis*."
*Brasiliopuntia brasiliensis* (Willd.) Berger, Entwickl. Kakt. 94, 100. 1926.

DERIVATION—Of Brazil.

RANGE—Persistent, escaped, and naturalized in s. Fla. incl. Fla. Keys, according to Small (Man. Southeast. Fl. 911. 1933) and Long and Lakela (Fl. Trop. Fla. 626-627. 1971). Perhaps only local. Native of S. Am.

OPÚNTIA FÍCUS-ÍNDICA (L.) Mill. INDIAN-FIG‡

*Cactus ficus-indica* L., Sp. Pl. 468. 1753; "*Ficus indica*."
‡*Opuntia ficus-indica* (L.) Mill., Gard. Dict. ed. 8, *Opuntia* No. 2. 1767; "*Ficus Indica*."
‡*Opuntia megacantha* Salm-Dyck, Hort. Dyck. 363. 1834.
*Opuntia occidentalis* Englem. & Bigel., Proc. Am. Acad. Arts Sci. 3: 291. 1856.

DERIVATION—Indian-fig.

OTHER COMMON NAMES—mission cactus, mission pricklypear‡; tuna, nopal de Castilla (Spanish).

RANGE—Planted, persistent, and escaped in s. Calif., s. Tex., and s. Fla., and perhaps naturalized locally. Native probably in Mex., where many cultivated varieties and hybrids are known. Widely introduced for the edible fruits and naturalized in dry tropical and subtropical regions of the world.

REFERENCE—Benson, Lyman, and David L. Walkington. The southern Californian prickly pears—invasion, adulteration, and trial-by-fire. Ann. Mo. Bot. Gard. 52: 262-273. 1965.

**Opúntia fúlgida** Engelm. **jumping cholla‡**

‡†*Opuntia fulgida* Engelm., Proc. Am. Acad. Arts Sci. 3: 306. 1856.
*Cylindropuntia fulgida* (Engelm.) F. M. Knuth in Backeberg & Knuth, Kaktus-ABC 126. 1935.

DERIVATION—Shining.

OTHER COMMON NAME—cholla†.

RANGE—C. and s. Ariz. and nw. Mex. (Son. and islands westward). Atlas vol. 3, map 104.

**Osmánthus** Lour. (Family Oleaceae) **osmanthus**

‡†*Osmanthus* Lour., Fl. Cochinch. 1: 28. 1970.
*Amarolea* Small, Man. Southeast. Fl. 1043, 1507. 1933.

DERIVATION—From Greek, odor and flower, referring to the fragrant flowers.

REFERENCES—Green, P. S. A monographic revision of Osmanthus in

Asia and America. Notes R. Bot. Gard. Edinb. 22: 439-542, illus. 1958.

Johnson, L. A. S. A review of the family Oleaceae. New S. Wales Dep. Agric., Contrib. New S. Wales Herb. 2: 395-418. 1957.

NUMBER OF SPECIES: Native trees, 1 (also in Mexico); Mex., 1 additional; e. Asia, mostly China, to Japan and Sumatra, trees and shrubs, about 30; total, about 32.

**Osmánthus americànus** (L.) Benth. & Hook. f. ex Gray **devilwood**‡†

*Olea americana* L., Mant. Pl. 24. 1767.

‡†*Osmanthus americanus* (L.) Benth. & Hook. f. ex Gray, Synopt. Fl. No. Am. 2(1): 78. 1878.

*Amarolea americana* (L.) Small, Man. Southeast. Fl. 1043. 1933.

*Amarolea megacarpa* Small, Man. Southeast. Fl. 1043, 1507. 1933.

*Osmanthus megacarpus* (Small) Small ex Little, J. Wash. Acad. Sci. 33: 10. 1943.

*Osmanthus americanus* var. *megacarpus* (Small) P. S. Green, Notes R. Bot. Gard. Edinb. 22: 462. 1962.

DERIVATION—American.

OTHER COMMON NAME—wild-olive.

RANGE—Coastal Plain from se. Va. and e. N.C. to c. Fla., and w. to se. La. Also Mex. (N.L., Tamps., Ver., Oax.). Atlas vol. 4, map 90; vol. 5, map 95.

*Osmaronia*, see **Oemleria**

**Ostrya** Scop. (Family Betulaceae) **hophornbeam**

‡†*Ostrya* Scop., Pl. Carn. 414. 1760; *nom. cons.*

DERIVATION—Latinized from Greek *ostrua*, a tree with very hard wood and very likely the related European hornbeam, *Carpinus betulus* L.

NUMBER OF SPECIES: Native trees, 3 (incl. 1 also s. in mts. to C. Am.); Eurasia, about 5; total, about 8.

**Ostrya chisosénsis** Correll **Chisos hophornbeam**

*Ostrya chisosensis* Correll, Wrightia 3: 128. 1965.

DERIVATION—Chisos Mts., Tex.

OTHER COMMON NAME—Big Bend hophornbeam.

RANGE—Rare and local in Chicos Mts., Trans-Pecos Tex. Atlas vol. 3, map 105.

This species named in 1965 is added here as a tree to 46 ft (14 m) tall.

**Ostrya knowltonii** Cov. **Knowlton hophornbeam**‡

‡†*Ostrya knowltonii* Cov., Gard. and Forest 7: 115, fig. 23. 1894; "*knowltoni*."

*Ostrya baileyi* Rose, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 8: 293. 1905.

DERIVATION—Named for its discoverer, Frank Hall Knowlton (1860-1926), United States botanist and paleobotanist.

OTHER COMMON NAMES—western hophornbeam†, wolf hophornbeam, "ironwood."

RANGE—Local in mts. and canyons of se. Utah, n. Ariz., se. N. Mex., and Trans-Pecos Tex. Atlas vol. 3, map 106.

***Ostrya virginiàna** (Mill.) K. Koch **eastern hophornbeam**‡

*Carpinus virginiana* Mill., Gard. Dict. ed. 8, *Carpinus* No. 4. 1768.

‡†*Ostrya virginiana* (Mill.) K. Koch, Dendrol. 2(2): 6. 1973.

*Ostrya italica* ssp. *virginiana* var. *guatemalensis* Winkl., Pflanzenreich IV. 61: 22. 1904.

*Ostrya virginiana* var. *guatemalensis* (Winkl.) Macbr., Field Mus. Bot. 4: 193. 1929.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—American hophornbeam, hophornbeam†, hornbeam, leverwood, "ironwood."

RANGE—Cape Breton Is., P.R.I., N.S., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., n. Minn., and se. Man., s. to e. N. Dak., Black Hills of

S. Dak. and ne. Wyo., n. Nebr., e. Kans., e. Okla., and e. Tex., and e. to n. Fla. Also in mts. of Mex. (N.L. to Son. s. to Chis.), s. to El Salvador and Honduras. Atlas vol. 1, maps 146-N, 146-W, 146-E; vol. 5, map 96.

**Oxydéndrum** DC. (Family Ericaceae) **sourwood**
‡†*Oxydendrum* DC., Prodr. 7: 601. 1839.

DERIVATION—From Greek, sour and tree, from the acid taste of the leaves.

NUMBER OF SPECIES: 1.

**Oxydéndrum arbòreum** (L.) DC. **sourwood‡†**
*Andromeda arborea* L., Sp. Pl. 394. 1753.
‡†*Oxydendrum arboreum* (L.) DC., Prodr. 7: 601. 1839.

DERIVATION—Arboreal, its relatives being shrubby.

OTHER COMMON NAMES—sorrel-tree, lily-of-the-valley-tree.

RANGE—Sw. Pa. to s. Ohio and s. Ind., s. to w. Ky., w. Tenn., Miss., and La., e. to nw. Fla., and ne. to e. Ga., se. Va. and se. Md. Atlas vol. 4, map 91; vol. 5, map 97.

REFERENCE—Baldwin, J. T., Jr. Cytogeography of Oxydendrum arboreum. Bull. Torrey Bot. Club. 69: 134-136, illus. 1942.

*Parkinsonia*, see also **Cercidium**

**Parkinsònia** L. (Family Leguminosae) **parkinsonia**
‡†*Parkinsonia* L., Sp. Pl. 375. 1753; Gen. Pl. ed. 5, 177. 1754.

DERIVATION—John Parkinson (1567-1650), British botanist and herbalist to James I.

REFERENCES—See also **Cercidium**

Robertson, Kenneth R., and Yin-Tse-Lee. J. Arnold Arbor. 57: 32-34. 1976.

NUMBER OF SPECIES: Native trees, also widely distributed in tropical Am. from Mex. s., 1; total, incl. 1 in Africa, 2.

**Parkinsònia aculeàta** L. **Jerusalem-thorn‡**
‡†*Parkinsonia aculeata* L., Sp. Pl. 375. 1753.

DERIVATION—With spines or prickles.

OTHER COMMON NAMES—horsebean†, Mexican paloverde; paloverde, retama (Spanish).

RANGE—S. to Trans-Pecos Tex. and local in s. Ariz. Widely distributed in tropical Am. from n. Mex. (B. Cal. to Tamps.) s. Cultivated and becoming naturalized s. to Argentina, in W.I. (incl. P.R. and V.I.) and Old World tropics. Planted and becoming naturalized across s. U.S. from Fla. and Ga. to Tex. and s. Calif. Introduced in Hawaii. Atlas vol. 3, map 107.

HYBRIDIZES WITH: *Cercidium texanum*.

PAULÒWNIA Sieb. & Zucc. (Family Scrophulariaceae) PAULOWNIA
‡†*Paulownia* Sieb. & Zucc., Fl. Jap. 1: 25, pl. 10. 1835.

DERIVATION—In honor of Anna Paulowna (1795-1865), daughter of Czar Paul I of Russia, also princess of the Netherlands and ancestor of the present queen.

This introduced species is the only tree representative of its family in the U.S. Sometimes (and in the 1953 checklist) placed in the family Bignoniaceae. Related to *Catalpa* and close to the common stock of the two families, according to H. K. Airy Shaw (Willis, Dict. Flow. Pl. Ferns ed. 7, 838. 1966).

PAULÒWNIA TOMENTÒSA (Thunb.) Sieb. & Zucc. ex Steud.
ROYAL PAULOWNIA‡†
*Bignonia tomentosa* Thunb., Fl. Iaponica 252. 1784.

‡†*Paulownia tomentosa* (Thunb.) Sieb. & Zucc. ex Steud., Nom. Bot. ed. 2, 2: 278. 1841.

DERIVATION—Tomentose, or densely soft hairy.

OTHER COMMON NAMES—paulownia, princess-tree, empress-tree.

RANGE—Cultivated and naturalized in U.S. from s. N.Y. to W. Va., s. Ind., s. Ill., and e. Mo., and s. to s. Tex. and n. Fla. Planted also along Atlantic Coast n. to Mass. and in Pacific States. Native of China.

*Paurotis*, see **Acoelorrhaphe**

**Pérsea** Mill. (Family Lauraceae) **persea**

‡†*Persea* Mill., Gard. Dict. Abr. ed. 4, v. 3. 1754; *(nom. cons.)*.
*Tamala* Raf., Sylva Tellur. 136. 1838.

DERIVATION—Ancient Greek name for an unidentified Egyptian tree with fruit growing directly from the stem, later transferred to this genus.

REFERENCES—Kopp, Lucille E. A taxonomic revision of the genus Persea in the Western Hemisphere (Perseae-Lauraceae). Mem. N.Y. Bot. Gard. 14(1): 1-117, illus. 1966.

Spongberg, Stephen A. J. Arnold Arbor. 56: 17-19. 1975.

Wofford, B. Eugene, and Ronald W. Pearman. An SEM study of leaf surface pubescence in the southeastern taxa of Persea. Sida 6: 19-23, illus. 1975.

NUMBER OF SPECIES: Native trees, 1; naturalized trees, 1 (also in Hawaii, P.R., and V.I.); P.R., 2; New World, tropical, about 80; total, tropical, about 150.

PÉRSEA AMERICÀNA Mill. AVOCADO‡†

*Laurus persea* L., Sp. Pl. 370. 1753.
‡*Persea americana* Mill., Gard. Dict. ed. 8. 1768.
†*Persea gratissima* Gaertn. f., Suppl. Carp. Fruct. Sem. Pl. 3: 222, pl. 221. 1805.

DERIVATION—American.

OTHER COMMON NAMES—alligator-pear, aguacate (Spanish).

RANGE—Persists after cultivation as fruit tree and naturalized locally in s. Fla. incl. Fla. Keys. Planted also in Calif., Hawaii, P.R., and V.I. Also widely cultivated and naturalized in tropical and subtropical regions. Native of Mex., Guatemala, and Honduras.

***Pérsea borbònia** (L.) Spreng. **redbay‡†**

*Laurus borbonia* L., Sp. Pl. 370. 1753.
*Laurus caroliniensis* Michx., Fl. Bor.-Am. 1: 245. 1803.
‡†*Persea borbonia* (L.) Spreng., Syst. Veget. ed. 16, 2: 268. 1825.
*Persea carolinensis* Nees, Syst. Laurin. 150. 1836.
*Tamala borbonia* Raf., Sylva Tellur. 136. 1838.
‡†*Persea littoralis* Small, Fl. Southeast. U.S. 820, 1335. 1903.
*Tamala littoralis* (Small) Small, Fl. Southeast. U.S. ed. 2, 822, 1375. 1913.

DERIVATION—An old generic name of *Persea*.

OTHER COMMON NAME—shorebay‡.

RANGE—Coastal Plain from s. Del., se. Md., and se. Va., s. to s. Fla. incl. Fla. Keys, and w. to La. and e. and s. Tex., also sw. Ark. (Miller Co., apparently extinct). Also Bahamas (Grand Bahama Is.). Atlas vol. 4, map 92; vol. 5, map 98.

Three varieties, regarded also as species, may be distinguished.

**Pérsea borbònia** (L.) Spreng. var. **borbònia** **redbay (typical)**

RANGE—Coastal Plain from se. Va. and e. N.C. s. to s. Fla., and w. to e. and s. Tex., also sw. Ark. (Miller Co., apparently extinct).

**Pérsea borbònia** var. **hùmilis** (Nash) Kopp **silkbay‡**

‡†*Persea humilis* Nash, Bull. Torrey Bot. Club 22: 157. 1895.
*Tamala humilis* (Nash) Small, Fl. Southwast. U.S. ed. 2, 822, 1375. 1913.
*Persea borbonia* var. *humilis* (Nash) Kopp, Mem. N.Y. Bot. Gard. 14(1): 44. 1966.

DERIVATION—Dwarf, or low growing; originally found as a compact shrub.

OTHER COMMON NAME—scrub-bay.

RANGE—C. Fla.

**Pérsea borbònia** var. **pubéscens** (Pursh) Little **swampbay**†

*Laurus carolinensis* var. *β pubescens* Pursh, Fl. Am. Sept. 1: 276. 1814.
*Tamala palustris* Raf., Sylva Tellur. 137. 1838.
*Persea carolinensis* var. *palustris* (Raf.) Chapm., Fl. South. U.S. 393. 1860.
*Persea carolinensis* var. *β pubescens* (Pursh) Meissn. in DC., Prodr. 15(1): 51. 1864.
*Persea carolinensis* f. *pubescens* (Pursh) Mez, Jahrb. Bot. Gart. 5: 176. 1889.
*Persea palustris* Sarg., Silva No. Am. 7: pl. 302. 1895 *nom.*
†*Persea pubescens* (Pursh) Sarg., Silva No. Am. 7: 7 [pl. 302]. 1895.
*Tamala pubescens* (Pursh) Small, Fl. Southeast. U.S. Ed. 2, 822, 1375. 1913.
*Persea palustris* (Raf.) Sarg., Bot. Gaz. 67: 229. 1919.
*Persea borbonia* f. *pubescens* (Pursh) Fern., Rhodora 47: 149. 1945.
*Persea borbonia var. pubescens* (Pursh) Little, Phytologia 42: 219. 1979.

DERIVATION—Pubescent or soft hairy.

OTHER COMMON NAMES—swamp redbay, redbay, sweetbay.

RANGE—Coastal Plain near coast, from s. Del., se. Md., and se. Va., s. to Fla. and w. to se. Tex. Also Bahamas (Grand Bahama Is.).

REFERENCE—Fernald, M. L. Rhodora 47: 149-151. 1945.

Swampbay, treated here as a variety, was accepted as a species in the 1927 checklist. This variation was mentioned in a note as a synonym in the 1953 checklist. As a species the name is *Persea palustris* (Raf.) Sarg.

‡PHOÊNIX DACTYLÍFERA L. (Sp. Pl. 1188. 1753; Family Palmae), date‡ (date-palm), is planted as an ornamental in s. Fla. and persistent but doubtfully naturalized, according to Long and Lakela (Fl. Trop. Fla. 242-243. 1971). Also a commercial fruit tree in se. Calif. Native of n. Africa and Arabia but widely cultivated in semiarid tropical regions. In the 1953 checklist accepted as naturalized, according to Small (Man. Southeast. Fl. 239. 1933).

*Photinia*, see **Heteromeles**

‡PHYLLÁNTHUS ÁCIDUS (L.) Skeels (U.S. Dep. Agric., Pl. Ind. Bull. 148: 17. 1909; "*acida*"; Family Euphorbiaceae), Otaheite gooseberry-tree‡ (gooseberry-tree), is omitted here as not naturalized, according to Grady L. Webster (J. Arnold Arbor. 48: 334. 1967). Earlier it was recorded as naturalized in s. Fla. incl. Fla. Keys (Small, Man. Southeast. Flora 779. 1933). Widely planted for its edible fruit and for ornament in tropical regions including s. Fla., Hawaii, P.R., and V.I. Native of tropical Asia and perhaps also East Indies.

**Pìcea** A. Dietr. (Family Pinaceae) **spruce**

‡†*Picea* A. Dietr., Fl. Berlin 794. 1824.

DERIVATION—The ancient Latin name (from *pix*, *picis*, pitch) of a pitchy pine, probably Scotch pine, *Pinus sylvestris* L.

REFERENCE—Wright, Jonathan W. Species crossability in spruce in relation to distribution and taxonomy. For. Sci. 1: 319-349, illus. 1955.

NUMBER OF SPECIES: Native trees, 7, including 3 north to Alaska; Mex., 2; Eurasia, especially east Aisa, about 20; total, cool n. temperate, about 30.

PÌCEA ÀBIES (L.) Karst. (Dtsch. Fl. Pharm.-Med. Bot. 325, fig. 155. 1881; *Picea excelsa* Link), Norway spruce, native of Europe, is planted in se. Can. and ne. U.S. It has escaped from cultivation from Conn. to Mich. and perhaps elsewhere and may be naturalized locally.

**Picea breweranа** Wats. **Brewer spruce‡**

‡†*Picea brewerana* Wats., Proc. Am. Acad. Arts Sci. 20: 378. 1885; "*breweriana*."

DERIVATION—Named for its discoverer, William Henry Brewer (1828-1920), United States botanist and professor of agriculture at Yale University.

REFERENCE—Waring, R. H., W. H. Emmingham, and S. W. Running. Environmental limits of an endemic spruce, Picea breweriana. Can. J. Bot. 53: 1599–1613, illus. 1975.

OTHER COMMON NAME—weeping spruce†.

RANGE—Local, chiefly in Siskiyou Mts., sw. Oreg. (Josephine and Curry Cos.), and nw. Calif. (to n. Trinity and nw. Shasta Cos.). Atlas vol. 1, map 36-W.

***Picea engelmánnii** Parry ex Engelm. **Engelmann spruce‡†**

*Abies engelmannii* Parry, Trans. Acad. Sci. St. Louis 2: 122. 1863; "*engelmanni*"; *nom. nud.*

‡†*Picea engelmannii* Parry ex Engelm., Trans. Acad. Sci. St. Louis 2: 212. 1863; "*engelmanni*."

*Picea engelmannii* var. *glabra* Goodman, Madroño 10: 177. 1950; "*engelmanni*."

*Picea glauca* ssp. *engelmannii* (Parry) T. M. C. Taylor, Madroño 15: 114. 1959.

*Picea glauca* var. *engelmannii* (Parry) Boivin, Nat. Can. 93: 272. 1966.

DERIVATION—George Engelmann (1809-84), German-born physician and botanist of St. Louis, an authority on conifers who first recognized this species as undescribed.

OTHER COMMON NAMES—Columbian spruce, mountain spruce, silver spruce, white spruce, pino real (Spanish).

RANGE—Rocky Mt. region chiefly, from sw. Alta. and c. B.C. s. in high mts. from Wash. to n. Calif., e. to e. Nev., se. Ariz., and s. N. Mex., and n. to Wyo. and c. Mont. Atlas vol. 1, maps 37-W, 37-N.

REFERENCES—See **Picea glauca** and **P. pungens**

HYBRIDIZES WITH: *Picea glauca*.

*Picea excelsa*, see **P. abies**

***Pìcea glaùca** (Moench) Voss **white spruce‡†**

?*Abies canadensis* Mill., Gard. Dict. ed. 8, *Abies* No. 4. 1768; *nom. confus.*

*Pinus glauca* Moench, Verzeichn. Baeume Weissenst. 73. 1785.

?*Picea canadensis* (Mill.) B.S.P., Prelim. Cat. Anth. Pter. N.Y. 71. 1888. Non *Picea canadensis* (Michx.) Link, Linnaea 15: 524. 1841.

*Picea glauca* Beissn., Handb. Conif. 59. 1887; as synonym.

*Picea canadensis* [var.] *glauca* (Moench) Sudw., U.S. Dep. Agric. Div. For. Bull. 14: 37. 1897.

*Picea albertiana* S. Brown, Torreya 7: 126. 1907.

‡†*Picea glauca* (Moench) Voss, Mitt. Dtsch. Dendrol. Ges. 16: 93. 1907 [1908].

*Picea alba* var. *albertiana* (S. Brown) Beissn., Handb. Nadelholzk. ed. 2, 273. 1909.

‡†*Picea glauca* var. *albertiana* (S. Brown) Sarg., Bot. Gaz. 67: 208. 1919.

*Picea glauca* var. *densata* Bailey, Cult. Conif. 108. 1933.

‡*Picea glauca* var. *porsildii* Raup, Sargentia 6: 102, pl. 12. 1947.

DERIVATION—Glaucous, or covered with a bloom, referring to the blue-green foliage.

OTHER COMMON NAMES—Canadian spruce, skunk spruce, cat spruce, Black Hills spruce, western white spruce‡†, Alberta white spruce, Porsild spruce‡.

RANGE—Widespread across n. N. Am. near n. limit of trees, from Nfld., Labr., and n. Que., w. to Hudson Bay, nw. Mack., and nw. and sw. Alaska, s. to s. B.C., s. Alta., and nw. Mont., e. to s. Man., c. Minn., c. Mich., s. Ont., n. N.Y., and Maine. Also Black Hills of S. Dak. and Wyo. Atlas vol. 1, maps 39-W, 39-E, 39-N; vol. 2, map 5.

REFERENCES—Daubenmire, R. Taxonomic and ecologic relationships between Picea glauca and Picea engelmannii. Can. J. Bot. 52: 1545-1560, illus. 1974.

Garman, E. H. The occurrence of spruce in the interior of British

Columbia. B.C. For. Serv. Tech. Publ. T. 49, 31 p., illus. 1957.

La Roi, George H., and Janet R. Dugle. A systematic and genecological study of Picea glauca and P. engelmannii, using paper chromatograms of needle extracts. Can. J. Bot. 46: 649-687, illus. 1968.

Little, Elbert L., Jr., and Scott S. Pauley. A natural hybrid between black and white spruce in Minnesota. Am. Midl. Nat. 60: 202-211, illus. 1958.

Taylor, T. M. C. The taxonomic relationship between Picea glauca (Moench) Voss and P. engelmannii Parry. Madroño 15: 111-115. 1959.

It seems unnecessary to distinguish varieties, though 3 were accepted in the 1953 checklist. The 4 named varieties were rejected by Daubenmire (1974). However, the trees in Alaska have a distinctive, narrow spirelike crown.

HYBRIDIZES WITH: *Picea engelmannii*; *P. mariana*; *P. sitchensis* (*P.* ×*lutzii* Little).

***Pìcea marìàna** (Mill.) B.S.P. **black spruce‡†**

*Abies mariana* Mill., Gard. Dict. ed. 8, *Abies* No. 5. 1768.
*Pinus nigra* Ait., Hort. Kew. 3: 370. 1789.
*Picea nigra* Link, Grundr. Kraüt. (Handb. v. 2) 3: 478. 1831.
‡†*Picea mariana* (Mill.) B.S.P., Prel. Cat. Anth. Pter. N.Y. 71. 1888.

DERIVATION—Of Maryland, in a broad sense for northeastern North America (this species is not native in Maryland).

OTHER COMMON NAMES—bog spruce, swamp spruce, shortleaf black spruce†.

RANGE—Widespread across n. N. Am. near n. limit of trees, from Nfld., Labr., and n. Que., w. to Hudson Bay, nw. Mack., and c., w., and s. Alaska, s. to c. B.C., and e. to s. Man., c. Minn., Wis., se. Mich., s. Ont., N.Y., c. and ne. Pa., n. N.J., R.I., and Mass. Atlas vol. 1, maps 38-N, 38-E; vol. 2, map 4.

HYBRIDIZES WITH: *Picea glauca*; *P. rubens*.

***Pìcea púngens** Engelm. **blue spruce‡†**

*Abies menziesii parryana* André, L'Illus. Hort. 23: 199. 1876.
‡†*Picea pungens* Engelm., Gard. Chron., New Ser. 11: 334. 1879.
*Picea parryana* Sarg., Gard. and Forest 10: 481. 1897.

DERIVATION—Sharp-pointed, referring to the needles.

OTHER COMMON NAMES—Colorado blue spruce, Colorado spruce, silver spruce, pino real (Spanish).

RANGE—Rocky Mt. region in high mts. from s. and w. Wyo. and e. Idaho, s. to Utah, n. and e. Ariz., s. N. Mex., and c. Colo. Atlas vol. 1, map 40-W.

REFERENCE—Daubenmire, R. On the relation between Picea pungens and Picea engelmannii in the Rocky Mountains. Can. J. Bot. 50: 733-742, illus. 1972.

***Pìcea rùbens** Sarg. **red spruce‡†**

*Pinus mariana rubra* Du Roi, Dissert. Inaug. Observ. Bot. 39. 1771.
†*Picea rubra* (Du Roi) Link, Grundr. Kraüt. (Handb. v. 2) 3: 478. 1831. Non *Picea rubra* A. Dietr., Fl. Berlin 795. 1824.
‡*Picea rubens* Sarg., Silva No. Am. 12: 33, pl. 597. 1898.
*Picea australis* Small, Fl. Southeast. U.S. 30, 1326. 1903.

DERIVATION—Reddish, referring to the reddish brown cones.

OTHER COMMON NAMES—yellow spruce, West Virginia spruce, eastern spruce, he-balsam.

RANGE—Cape Breton Is., N.S., and N.B., w. to Maine, s. Que., and se. Ont., and s. to c. N.Y., ne. Pa., n. N.J., and Mass. Also s. in Appalachian Mts. of extreme w. Md., e. W. Va., n. and w. Va., w. N.C., and e. Tenn. Atlas vol. 1, maps 41-N, 41-E.

REFERENCE—Morgenstern, E. K., and J. L. Farrar. Introgressive hybridization in red spruce and black spruce. Univ. Toronto, Fac. For., Tech. Rep. 4, 46 p., illus. 1964.

HYBRIDIZES WITH: *Picea mariana*.

***Picea sitchénsis** (Bong.) Carr. **Sitka spruce**‡†

*Pinus sitchensis* Bong., Acad. Imp. Sci. St. Pétersbourg Mém., Sér. 6. Sci. Math. Phys. Nat. 2: 164. 1832 (Aug.).

‡†*Picea sitchensis* (Bong.) Carr., Traité Gén. Conif. 260. 1855.

DERIVATION—Sitka Island (now Baranof Island) in southeastern Alaska.

OTHER COMMON NAMES—coast spruce, tideland spruce, yellow spruce.

RANGE—Pacific Coast region from s. Alaska (Kodiak Is. and Cook Inlet) se. through se. Alaska, w. B.C., w. Wash., w. Oreg., and nw. Calif. Atlas vol. 1, maps 42-W, 42-N; vol. 2, map 6.

REFERENCES—Daubenmire, R. Some geographic variations in Picea sitchensis and their ecologic interpretation. Can. J. Bot. 46: 787-798, illus. 1968.

Little, Elbert L., Jr. A natural hybrid spruce in Alaska. J. For. 51: 745-747. 1953.

HYBRIDIZES WITH: *Picea glauca* (*P.* ×*lutzii* Little).

**Picrámnia** Sw. (Family Simaroubaceae) **bitterbush**

‡†*Picramnia* Sw., Nov. Gen. Sp. Prodr. 2, 27. 1788; *nom. cons.*

DERIVATION—From Greek, bitter and bush, referring to the bitter bark, wood, and foliage.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in P.R. and V.I.; total, tropical Am., 40.

**Picrámnia pentándra** Sw. **bitterbush**‡†

‡†*Picramnia pentandra* Sw., Fl. Ind. Occ. 1: 220. 1797.

DERIVATION—Five stamens.

OTHER COMMON NAME—Florida bitterbush.

RANGE—Very rare in and near Miami, Dade Co., Fla. (reported in error from Fla. Keys). From Bahamas through West Indies incl. P.R. and V.I. Also Colombia and Venezuela. Atlas vol. 5, map 228.

*Pilocereus*, see **Cereus**
*Pilosocereus*, see **Cereus**

**Pinckněya** Michx. (Family Rubiaceae) **pinckneya**

‡†*Pinckneya* Michx., Fl. Bor.-Am. 1: 103, pl. 13. 1803.

DERIVATION—Charles Cotesworth Pinckney (1746-1825), of South Carolina, statesman and general in the Revolutionary War, who also was interested in botany.

NUMBER OF SPECIES: 1.

**Pinckněya pùbens** Michx. **pinckneya**‡

*Bignonia bracteata* Bartr., Travels No. So. Car. Ga. Fla. 468. 1791; *nom. nud.*; description on p. 16.

‡†*Pinckneya pubens* Michx., Fl. Bor.-Am. 1: 105, pl. 13. 1803.

*Pinckneya bracteata* (Bartr.) Raf., Casket 1827: 194, fig. 17. 1827.

DERIVATION—Downy, or soft-hairy, referring to the young twigs.

OTHER COMMON NAMES—fevertree†, fever-bark, Georgia-bark.

RANGE—Rare in Coastal Plain of extreme s. S.C. (Beaufort Co.), Ga., and n. and nw. Fla. Atlas vol. 4, map 93; vol. 5, map 99.

**Pìnus** L. (Family Pinaceae) **pine**

†*Pinus* L., Sp. Pl. 1000. 1753; Gen. Pl. ed. 5, 434. 1754.

*Apinus* Neck., Elem. Bot. 3: 269. 1790; *nom. illegit.*

*Strobus* (Sweet) Opiz, Lotos [Prag] 4: 94. 1854.

*Caryopitys* Small, Fl. Southeast. U.S. 29, 1326. 1903.

DERIVATION—The classical Latin name.

REFERENCES—Bingham, R. T. Taxonomy, crossability, and relative blister rust resistance of 5-needled white pines. *In* Biology of rust resistance in forest trees: proceedings of a NATO-IUFRO advanced study institute, August 17-24, 1969. Richard T. Bingham, scientific director. U.S. Dep. Agric. Misc. Publ. 1221: 271-280. 1972.

Critchfield, William B., and Elbert L. Little, Jr. Geographic distribution of the pines of the world. U.S. Dep. Agric. Misc. Publ. 991, 97 p., illus. 1966.

Gaussen, Henri. Les gymnospermes actuelles et fossiles. Ch. 11. Generalites, genre *Pinus*. Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. 2, 272 p., illus. 1960.

Harlow, W. M. The identification of the pines of the United States, native and introduced, by needle structure. N.Y. State Col. Forestry, Syracuse Univ. Tech. Pub. 32, 21 p., illus. 1931.

Little, Elbert L., Jr., and William B. Critchfield. Subdivisions of the genus Pinus (pines). U.S. Dep. Agric. Misc. Publ. 1144, 51 p., illus. 1969.

Mirov, N.T. The genus Pinus. 602 p., illus. 1967.

Shaw, George Russell. The genus Pinus. Publ. Arnold Arbor. 5, 96 p., illus. 1914.

Steinhoff, R. J. White pines of western North America and Central America. *In* Biology of rust resistance in forest trees: proceedings of a NATO-IUFRO advanced study institute, August 17-24, 1969. Richard T. Bingham, scientific director. U.S. Dep. Agric. Misc. Publ. 1221: 215-232, illus. 1972.

Wyman, Donald. Simple key to the pines (native or available from nurseries in the United States). Arnoldia 11: 63-70, illus. 1951.

NUMBER OF SPECIES: Native trees, 36, incl. 1 n. to Alaska; naturalized trees, 1; Mex., about 38, incl. 17 also in U.S. and 5 also in C. Am. (3 s. to Nicaragua); West Indies, 4, incl. 1 also in C. Am.; total, New World, about 60; Old World, Eurasia and n. Africa, about 35, s. in tropical mts. (1 crossing equator in Sumatra); total, mostly n. temperate and n. tropical mts., about 95.

REFERENCES ON NATURAL HYBRIDS—Haller, John R. Variation and hybridization in ponderosa and Jeffrey pines. Calif. Univ. Publ. Bot. 34: 123-167, illus. 1962.

Keng, Hsuan, and Elbert L. Little, Jr. Needle characteristics of hybrid pines. Silvae Genet. 10: 131-146, illus. 1961.

Lanner, Ronald M. Natural hybridization between Pinus edulis and Pinus monophylla in the America Southwest. Silvae Genetica 23: 108-116, illus. 1974.

Little, Elbert L., Jr., Silas Little, and Warren T. Doolittle. Natural hybrids among pond, loblolly, and pitch pines. U.S.D.A. For. Serv. Res. Pap. NE-67, 22 p., illus. 1967.

Little, Elbert L., Jr., and Francis I. Righter. Botanical descriptions of forty artificial pine hybrids. U.S. Dep. Agric. Tech. Bull. 1345, 47 p., illus. 1965.

Mergen, François. Genetic variation in needle characteristics of slash pine and in some of its hybrids. Silvae Genet. 7: 1-9. 1958.

Moss, E. H. Natural pine hybrids in Alberta. Can. J. Res., Sect. C, Bot. Sci. 27: 218-229, illus. 1949.

Righter, F. I., and J. W. Duffield. Hybrids between ponderosa and Apache pine. J. For. 49: 345-349, illus. 1951.

Righter, F. I., and J. W. Duffield. Interspecies hybrids in pines. J. Hered. 42: 75-80, illus. 1951.

Smouse, Peter E., and LeRoy C. Saylor. Studies of the Pinus rigida-serotina complex. II. Natural hybridization among the Pinus rigida-serotina complex, P. taeda and P. echinata. Ann. Mo. Bot. Gard. 60: 192-203, illus. 1973.

Wright, Jonathan W. Species hybridization in the white pines. For. Sci. 5: 210-222. 1959.

Zobel, Bruce. The natural hybrid between Coulter and Jeffrey pines. Evolution 5: 405-413, illus. 1951.

Zobel, Bruce. Are there natural loblolly-shortleaf pine hybrids? J. For. 51: 494-495, illus. 1953.

BINOMIALS OF NATURAL INTERSPECIFIC HYBRIDS:

*Pìnus ×attenuradiàta* Stockwell & Righter (*P. attenuata* × *radiata*)
*Pìnus ×murraybanksiàna* Righter & Stockwell (*P. banksiana* × *contorta*)
*Pìnus ×rigitaèda* (*P. rigida* × *taeda*)
*Pìnus ×sonderéggeri* H. H. Chapm. (*P. palustris* × *taeda*)

**Pìnus albicaùlis** Engelm. **whitebark pine**‡†

‡†*Pinus albicaulis* Engelm., Trans. Acad. Sci. St. Louis 2: 209. 1863.
*Apinus albicaulis* (Engelm.) Rydb., Bull. Torrey Bot. Club 32: 598. 1905.

DERIVATION—White-stem.

OTHER COMMON NAMES—scrub pine, white pine.

RANGE—High mts. of sw. Alta. w. to c. B.C., s. to Wash., Oreg., and in Sierra Nev. to c. Calif., and e. to n. Nev., c. Idaho, and w. Wyo. Atlas vol. 1, maps 43-W, 43-N.

*Pinus apacheca*, see **P. engelmannii**

***Pìnus arìstàta** Engelm. **bristlecone pine**‡†

‡†*Pinus aristata* Engelm. in Parry & Engelm., Am. J. Sci. Arts, Ser. 2, 34: 331. 1862.
*Pinus balfouriana* var. *aristata* (Engelm.) Engelm. in Rothr., Wheeler Rep. U.S. Geogr. Surv. 6: 375. 1878.

DERIVATION—Awned, in reference to the long slender prickles on the cones.

OTHER COMMON NAMES—foxtail pine, hickory pine.

RANGE–Local in high mts. near timberline of Colo., n. N. Mex., n. Ariz. (San Francisco Mt.), Utah, Nev., and e. Calif. Atlas vol. 1, map 44-W.

REFERENCES—Bailey, D. K. Phytogeography and taxonomy of Pinus subsection Balfourianae. Ann. Mo. Bot. Gard. 57: 210-249, illus. 1970.

Critchfield, William B. Hybridization of foxtail and bristlecone pines. Madroño 24: 193-212. 1977.

Two geographic varieties, eastern and western, have been distinguished.

**Pìnus arìstàta** Engelm. var. **arìstàta** **Colorado bristlecone pine**

OTHER COMMON NAME—bristlecone pine (typical).

RANGE—Local in high mts. near timberline of Colo., n. N. Mex., and n. Ariz. (San Francisco Mt.).

**Pìnus arìstàta** var. **longaèva** (D. K. Bailey) Little
**Intermountain bristlecone pine**

*Pinus longaeva* D. K. Bailey, Ann. Mo. Bot. Gard. 57: 243, fig. 23. 1970.
*Pinus aristata* var. *longaeva* (D. K. Bailey) Little, Phytologia 42: 221. 1979.

DERIVATION—Long-lived.

RANGE—Local in high mts. near timberline of Utah, Nev., and e. Calif.

*Pinus arizonica*, see **P. ponderosa** var. **arizonica**

***Pinus attenuata** Lemm. **knobcone pine‡†**

*Pinus tuberculata* Gord., J. Hort. Soc. Lond. 4: 218, illus. 1849. Non *P. tuberculata* D. Don, Trans. Linn. Soc. Lond. 17: 442. 1836.

‡†*Pinus attenuata* Lemm., Mining Sci. Press 64: 45. 1892 (Jan. 16). Lemm. ex Sarg., Gard. and Forest 5: 65. 1892 (Feb. 10).

DERIVATION—Attenuate, gradually narrowed to a point, suggested by the long, tapering cones and by the slender crown.

RANGE—Mts. of sw. Oreg. and s. in Sierra Nev. and Coast Ranges to s. Calif. Also local in nw. B. Cal. Norte, Mex. Atlas vol. 1, map 48-W.

HYBRIDIZES WITH: *Pinus radiata* (*Pinus* ×*attenuradiata* Stockwell & Righter).

*Pinus australis*, see **P. palustris**

**Pinus balfouriana** Grev. & Balf. **foxtail pine‡†**

‡†*Pinus balfouriana* Grev. & Balf. in A. Murr., Bot. Exped. Oreg. [Rep. No. 8] No. 618, pl. 1853.

DERIVATION—In honor of John Hutton Balfour (1808-1884), botany professor in the University of Edinburgh, Scotland, and chairman of the committee sending the discoverer, John Jeffrey, to California.

RANGE—Local in high mts. of n. Calif. and s. Sierra Nev. of e.c. Calif. Atlas vol. 1, map 45-W.

REFERENCES—See **Pinus aristata**

***Pinus banksiana** Lamb. **jack pine‡†**

*Pinus sylvestris* δ *divaricata* Ait., Hort Kew. 3: 366. 1789.

*Pinus divaricata* Dum.-Cours., Bot. Cult. 3: 760. 1802; as var. of *P. sylvestris* L.; *nom. subnud.*

‡†*Pinus banksiana* Lamb., Descr. Genus Pinus 1: 7, pl. 3. 1803.

*Pinus divaricata* (Ait.) Sudw., Bull. Torrey Bot. Club 20: 44. 1893.

DERIVATION—Dedicated to Joseph Banks (1743-1820), director of Kew Gardens, England, botanical collector, and patron of sciences, to whom its author was obliged for first knowledge of it.

OTHER COMMON NAMES—scrub pine, gray pine, black pine, Banksian pine, Hudson Bay pine.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., Maine, and c. Que., w. to n. Ont., n. Man., sw. Keewatin, and w. Mack., s. to extreme ne. B.C. and c. Alta., and e. to se. Man., Minn., Wis., extreme nw. Ind., Mich., s. Ont., n. N.Y., and N.H. Also extinct in n. Vt. and n. Ill. Atlas vol. 1, maps 46-N, 46-E.

REFERENCE—Boivin, Bernard. Nat. Can. 93: 269-273. 1966.

HYBRIDIZES WITH: *Pinus contorta* (*Pinus* ×*murraybanksiana* Righter & Stockwell).

*Pinus brachyptera*, see **P. ponderosa**

*Pinus caribaea*, see note under **P. elliottii**

**Pinus cembroides** Zucc. **Mexican pinyon‡†**

‡†*Pinus cembroides* Zucc., K. Bayer. Akad. Wiss. München, Abhandl. Math.-Phys. 1: 392. 1832; Flora [Jena] 15(2), Beibl. 93. 1832.

*Pinus cembroides* var. *remota* Little, Wrightia 3: 183. 1966.

*Pinus cembroides* var. *bicolor* Little, Phytologia 17: 336. 1968.

DERIVATION—Resembling *Pinus cembra* L., Swiss stone pine, of Europe.

OTHER COMMON NAMES—pinyon, nut pine, "Mexican pinyon pine"; piñón, pino piñonero (Spanish).

RANGE—Edwards Plateau of c. Tex. and mts. of Trans-Pecos Tex., sw. N. Mex., and se. Ariz. Also mts. of n. and c. Mex. (Son. e. to Chih., N.L., and Tamps., s. to Méx., Tlax., and Pue.), and local in s. B. Cal. Sur. Atlas vol. 1, maps 47-W, 47-N.

HYBRIDIZES WITH: *Pinus edulis*.

*Pinus chihuahuana*, see **P. leiophylla** var. **chihuahuana**

***Pinus clausa** (Chapm. ex Engelm.) Vasey ex Sarg. **sand pine**‡†

*Pinus clausa* Chapm. ex Vasey, Gard. Monthly and Hort. 18: 151. 1876. Cat. For. Trees U.S. 30. 1876; *nom. nud.*

*Pinus inops* var. *clausa* Chapm. ex Engelm., Bt. Gaz. 2: 125. 1877.

‡†*Pinus clausa* (Engelm.) Vasey ex Sarg., U.S. Census, 10th, 1880, v. 9 (Rep. For. North Am.): 199. 1884.

*Pinus clausa* var. *immuginata* D. B. Ward, Castanea 28: 4. 1963.

DERIVATION—Closed, some cones remaining closed a few years before releasing the seeds.

OTHER COMMON NAMES—scrub pine, spruce pine.

RANGE—Ne. to s. Fla. and in nw. Fla. and extreme s. Ala. (Baldwin Co.). Atlas vol. 1, map 49-E; vol. 5, map 4.

REFERENCES—Little, Elbert L., Jr., and Keith W. Dorman. Geographic differences in cone-opening in sand pine. J. For. 50: 204-205. 1952.

Ward, Daniel B. Castanea 28: 2-4, illus. 1963.

Two geographic races have been distinguished: Ocala (var. *clausa*) from ne. to s. Fla. and Choctawhatchee (var. *immuginata* D. B. Ward) in nw. Fla. and extreme s. Ala. (Baldwin Co.).

***Pinus contórta** Dougl. ex Loud. **lodgepole pine**‡†

‡†*Pinus contorta* Dougl. ex Loud., Arb. Frut. Brit. 4: 2292, figs. 2210, 2211. 1838.

DERIVATION—Contorted or twisted, alluding to the irregular crown of the typical, scrubby shore pine of the coast.

OTHER COMMON NAMES—tamarack pine, shore pine, scrub pine.

RANGE—Pacific Coast and Rocky Mt. regions from n. end of se. Alaska c. Yukon, and sw. Mack., s. in Alta., B.C., and from Wash. to c. Mont., s. on Pacific Coast to n. Calif., in Sierra Nev. and high mts. of s. Calif., and in Rocky Mts. chiefly, to ne. Utah and s. Colo. Also local in Black Hills (S. Dak.) and sw. Sask., and in mts. of n. B. Cal. Norte, Mex. Atlas vol. 1, maps 50-W, 50-N; vol. 2, map 2.

REFERENCES—Critchfield, William B. Geographic variation in *Pinus contorta*. Harvard Univ., Maria Moors Cabot Found. Publ. 3, 118 p., illus. 1957.

Fosberg, F. R. Pinus contorta and its variations. Baileya 7: 7-10. 1959.

HYBRIDIZES WITH: *Pinus banksiana* (*P.* ×*murraybanksiana* Righter & Stockwell).

Three geographic varieties are distinguished here. A fourth (var. *bolanderi* (Parl.) Vasey) is a shrub local in Mendocino Co., Calif.

**Pinus contórta** Dougl. ex Loud. var. **contórta** **shore pine**

OTHER COMMON NAMES—coast pine, beach pine.

RANGE—Pacific Coast region from n. end of se. Alaska to w. B.C. and near in w. Wash., w. Oreg., and nw. Calif. Atlas vol. 1, maps 50-W, 50-N; vol. 2, map 2.

**Pinus contórta** var. **latifòlia** Engelm. **lodgepole pine**

*Pinus contorta* var. *latifolia* Engelm. in Wats. in King, Rep. U.S. Geol. Expl. 40th Par. 5: 331. 1871.

*Pinus contorta* ssp. *latifolia* (Engelm.) Critchfield, Harvard Univ., Maria Moors Cabot Found. Publ. 3: 107. 1957.

DERIVATION—Broadleaf.

OTHER COMMON NAMES—Rocky Mountain lodgepole pine, black pine.

RANGE—Rocky Mt. region from c. Yukon and sw. Mack., s. in Alta. and B.C., and from c. Wash. and nw. Oreg. to c. Mont., and s. in mts. to ne. Utah and s. Colo. Also local in Black Hills (S. Dak.) and sw. Sask. Atlas vol. 1, maps 50-W, 50-N; vol. 2, map 2.

**Pìnus contórta** var. **murrayàna** (Grev. & Balf.) Engelm.

**Sierra lodgepole pine**

*Pinus murrayana* Grev. & Balf. in A. Murr., Bot. Exped. Oreg. [Rep. No. 8] 2, No. 740, pl. 1853.

*Pinus contorta* var. *murrayana* (Grev. & Balf.) Engelm. in Wats., Bot. Calif. 2: 126. 1879.

*Pinus contorta* ssp. *murrayana* (Balf.) Critchfield, Harvard Univ., Maria Moors Cabot Found. Publ. 3: 106. 1957.

DERIVATION—Andrew Murray (1812-1878), Scotch entomologist and botanist, specialist on conifers.

OTHER COMMON NAMES—lodgepole pine, tamarack pine.

RANGE—Cascade Mts. of sw. Wash. and w. Oreg., s. in Sierra Nev. to c. Calif. and extreme w. Nev., and in high mts. of s. Calif. Local in mts. of n. B. Cal. Norte, Mex. Atlas vol. 1, maps 50-W, 50-N.

**Pìnus coùlteri** D. Don **Coulter pine**‡†

‡†*Pinus coulteri* D. Don, Trans. Linn. Soc. Lond. 17: 440. 1836.

DERIVATION—Named for its discoverer, Thomas Coulter (1793-1843), Irish botanist and physician who collected plants in Mexico and California.

OTHER COMMON NAMES—bigcone pine, pitch pine.

RANGE—Mts., chiefly Coast Ranges, of c. and s. Calif. Also n. B. Cal. Norte, Mex. Atlas vol. 1, map 51-W.

HYBRIDIZES WITH: *Pinus jeffreyi*.

*Pinus densa*, see **P. elliottii** var. **densa**

*Pinus divaricata*, see **P. banksiana**

***Pìnus echinàta** Mill. **shortleaf pine**‡†

‡†*Pinus echinata* Mill., Gard. Dict. ed. 8, *Pinus* No. 12. 1768.

DERIVATION—Spiny, or prickly, describing the cones.

OTHER COMMON NAMES—shortleaf yellow pine, southern yellow pine, yellow pine, shortstraw pine, Arkansas pine.

RANGE—Extreme se. N.Y. and N.J. w. to Pa., s. Ohio, e. Ky., s. Ill., and s. Mo., s. to e. Okla. and e. Tex., and e. to n. Fla. and Ga. Atlas vol. 1, map 52-E; vol. 5, map 5.

HYBRIDIZES WITH: *Pinus glabra, P. rigida, P. serotina, P. taeda.*

***Pìnus édulis** Engelm. **pinyon**‡†

‡†*Pinus edulis* Engelm. in Wisliz., Mem. Tour North. Mex. 88. 1848.

*Caryopitys edulis* (Engelm.) Small, Flora Southeast. U.S. 29, 326. 1903.

*Pinus cembroides* var. *edulis* (Engelm.) Voss, Dtsch. Gartenrat Beil. 123. 1904 (not seen). Mitt. Dtsch. Dendrol. Gesell. 16: 95. 1907 [1908]; "*cembrodes.*"

*Pinus edulis* var. *fallax* Little, Phytologia 17: 331. 1968.

DERIVATION—Edible, describing the large seeds, known as pinyon nuts, Indian nuts, pine nuts, and piñones. Other pronunciation—*Pìnus edùlis.*

OTHER COMMON NAMES—two-leaf pinyon, two-needle pinyon, Colorado pinyon, nut pine, "pinyon pine," piñón (Spanish).

RANGE—S. Rocky Mt. region, mostly foothills, from Colo. and Utah s. to c. Ariz. and s. N. Mex. Also local in sw. Wyo., extreme nw. Okla., Trans-Pecos Tex., se. Calif. (?), and nw. Chih., Mex. Atlas vol. 1, map 53-W.

HYBRIDIZES WITH: *Pinus cembroides, P. monophylla.*

***Pìnus elliòttii** Engelm. **slash pine**‡†

*Pinus taeda* L. var. *heterophylla* Ell., Sketch Bot. S.-Car. Ga. 2: 636. 1824.

*Pinus elliottii* Engelm. ex Vasey, Cat. Forest Trees U.S. 30. 1876; U.S. Commr. Agric. Rep. 1875: 178. 1876; *nom. nud.*

*Pinus elliottii* Engelm., Trans. Acad. Sci. St. Louis 4: 186, pls. 1-3. 1880; reprinted as folio.

*Pinus heterophylla* (Ell.) Sudw., Bull. Torrey Bot. Club 20: 45. 1893. Non *P.*

*heterophylla* K. Koch, Linnaea 22: 295. 1849. Nec *P. heterophylla* Presl, Epim. Bot. 236. 1849.

DERIVATION—Named for its discoverer, Stephen Elliott (1771-1830), botanist and banker of South Carolina and author of a classic work, Sketch of the Botany of South-Carolina and Georgia.

OTHER COMMON NAMES—yellow slash pine, swamp pine, pitch pine.

RANGE—Coastal Plain from s. S.C. to s. Fla., also Lower Fla. Keys, and w. to se. La. Atlas vol. 1, map 54-E; vol. 5, map 6.

REFERENCES—Little, Elbert L., Jr., and Keith W. Dorman. Slash pine (*Pinus elliottii*), its nomenclature and varieties. J. For. 50: 918-923, illus. 1952.

Little, Elbert L., Jr., and Keith W. Dorman. Slash pine (*Pinus elliottii*) including South Florida slash pine, nomenclature and description. U.S.D.A. For. Serv., Southeast. For. Exp. Stn., Stn. Pap. 36, 82 p., illus. 1954.

Squillace, Anthony E. Racial variation in slash pine as affected by climatic factors. USDA For. Serv., Southeast. For. Exp. Stn. Res. Pap. SE-21, 10 p. 1966.

Formerly and in the 1927 checklist included under †*Pinus caribaea* Morelet, Caribbean pine, a closely related species of Bahama Is., w. Cuba, Isle of Pines, and C. Am. from Belize to e. Guatemala, n. Honduras, and e. Nicaragua. Also referred to *Pinus palustris* Mill., the name generally accepted for longleaf pine, by Small (Man. Southeast. Flora 4. 1933) and others.

HYBRIDIZES WITH: *Pinus taeda*.

**Pinus ellióttii** Engelm. var. **ellióttii** **slash pine (typical)**

RANGE—Coastal Plain from s. S.C. to c. Fla. and w. to se. La. Atlas vol. 1, map 54-E; vol. 5, map 6.

**Pinus ellióttii** var. **dénsa** Little & Dorman **South Florida slash pine**‡

‡*Pinus elliottii* var. *densa* Little & Dorman, J. For. 50: 921, fig. 1, 2. 1952.

*Pinus densa* (Little & Dorman) Gaussen, Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. 2, fasc. 6: 52, 108. 1960; without citation of basionym.

DERIVATION—Dense, referring to the dense, very heavy, hard wood with very thick summerwood; also to the grasslike seedlings with crowded needles, very thick hypocotyl, and thick tap root, and to the thick hypoderm of the needles.

OTHER COMMON NAMES—Dade County pine, Dade County slash pine.

RANGE—S. Fla. and n. along coasts to c. Fla. Also 8 of Lower Fla. Keys (Big Pine, Little Pine, No Name, Middle Torch, Big Torch, Ramrod, Howe, Cudjoe) and extinct on Key Largo. Known only from Fla. Atlas vol. 1, map 54-E; vol. 5, map 6.

***Pinus engelmánnii** Carr. **Apache pine**‡†

*Pinus macrophylla* Engelm. in Wisliz., Mem. Tour North. Mex. 103. 1848. Non *P. macrophylla* Lindl., Edwards' Bot. Reg. v. 25, Misc. 63. 1839.

‡*Pinus engelmannii* Carr., Rev. Hort., Sér. 4, 3: 227. 1854; "*engelmanni*."

*Pinus latifolia* Sarg., Gard. and Forest 2: 496, fig. 135. 1889.

†*Pinus apacheca* Lemm., Erythea 2: 103, pl. 3. 1894.

DERIVATION—George Engelmann (1809-84), German-born physician and botanist of St. Louis Mo., who first named this species.

OTHER COMMON NAME—Arizona longleaf pine.

RANGE—Mts. of extreme sw. N. Mex. and se. Ariz. Also mts. of n. Mex. (Son. and Chih. to Dgo., Zac., and Ags.). Atlas vol. 1, maps 55-W, 55-N.

HYBRIDIZES WITH: *Pinus ponderosa*.

***Pinus fléxilis** James **limber pine**‡†

‡†*Pinus flexilis* James, Exped. Rocky Mts. 2: 27, 35. 1823.

*Apinus flexilis* (James) Rydb., Bull. Torrey Bot. Club 32: 598. 1905.

DERIVATION—Flexible, or limber.

OTHER COMMON NAMES—white pine, Rocky Mountain white pine.

RANGE—Rocky Mt. region chiefly, from sw. Alta. and se. B.C., s. in mts. of Mont., Idaho, Nev., and c. and s. Calif., e. to n. N. Mex., and n. to Colo. and Wyo. Also local in ne. Oreg., n. Ariz., w. Nebr., Black Hills of S. Dak., and sw. N. Dak. Atlas vol. 1, maps 56-W, 56-N.

HYBRIDIZES WITH: *Pinus strobiformis*.

***Pinus glabra** Walt. **spruce pine**‡†

‡†*Pinus glabra* Walt., Fl. Carol. 237. 1788.

DERIVATION—Glabrous, or smooth, referring to the smoothish bark.

OTHER COMMON NAMES—cedar pine, Walter pine, bottom white pine.

RANGE—Coastal Plain from e. S.C. to n. Fla. and w. to se. La. Atlas vol. 1, map 58-E; vol. 5, map 7.

HYBRIDIZES WITH: *Pinus echinata*.

*Pinus insignis* see **P. radiata**

***Pinus jeffreyi** Grev. & Balf. **Jeffrey pine**‡†

‡†*Pinus jeffreyi* Grev. & Balf. in A. Murr., Bot. Exped. Oreg. [Rep. No. 8] 2, pl. 1853.

*Pinus ponderosa* var. *jeffreyi* Balf. ex Vasey, Cat. Forest Trees U.S. 31. 1876; U.S. Commr. Agric. Rep. 1875: 179. 1876.

*Pinus ponderosa* var. *jeffreyi* (Grev. & Balf.) Engelm. in Wats., Bot. Calif. 2: 126. 1879.

DERIVATION—Named for its discoverer, John Jeffrey (1826-53?), Scotch botanical explorer who collected seeds and plants in Oregon and California (1850-53) for introduction to Scotland.

OTHER COMMON NAMES—western yellow pine, bull pine, black pine, ponderosa pine.

RANGE—Mts. from sw. Oreg. s. in Calif. through Sierra Nev. to w. Nev. and to s. Calif. Also in n. B. Cal. Norte, Mex. Atlas vol. 1, map 57-W.

HYBRIDIZES WITH: *Pinus coulteri*, *P. ponderosa*.

*Pinus juarezensis*, see **P. quadrifolia**

***Pinus lambertiana** Dougl. **sugar pine**‡†

‡†*Pinus lambertiana* Dougl., Trans. Linn. Soc. Lond. 15: 500. 1827.

DERIVATION—Aylmer Bourke Lambert (1761-1842), of England, author of a classic illustrated work on the genus *Pinus* (including related conifers) and also a patron of botany.

OTHER COMMON NAME—California sugar pine.

RANGE—Mts. from w. Oreg. s. in Calif. through Sierra Nev. to w. Nev. and to s. Calif. Also in n. B. Cal. Norte, Mex. Atlas vol. 1, map 59-W.

*Pinus latifolia*, see **P. engelmannii**

**Pinus leiophylla** var. **chihuahuana** (Engelm.) Shaw **Chihuahua pine**‡†

*Pinus chihuahuana* Engelm. in Wisliz., Mem. Tour North. Mex. 103. 1848.

‡*Pinus leiophylla* Schiede & Deppe in Schlecht. & Cham. var. *chihuahuana* (Engelm.) Shaw, Pines Mex. 14. pl. 7, fig. 10-11. 1909.

DERIVATION—Smooth-leaf; the varietal name, Chihuahua, refers to the State in Mexico where the variety was discovered.

OTHER COMMON NAMES—yellow pine, pino real (Spanish).

RANGE—Mts. of sw. N. Mex., e. c. and se. Ariz., and nw. Mex. (Son. and Chih., s. to Dgo., Nay., and Jal.). Also typical var. in Mex. (Chih. to Mich., Oax., and Ver.).

The typical variety of †*Pinus leiophylla* Schiede & Deppe (in Schlecht. & Cham., Linnaea 6: 354. 1831), *Pinus leiophylla* var. *leiophylla*, is characterized by 5 needles in a bundle or fascicle instead of 3.

*Pinus longaeva*, see **P. aristata** var. **longaeva**

***Pìnus monophýlla** Torr. & Frém. **singleleaf pinyon**‡†

‡†*Pinus monophylla* Torr. & Frém. in Frém., Rep. Explor. Exped. Rocky Mts. 319, pl. -4. 1845; "*monophyllus*."

*Caryopitys monophylla* (Torr. & Frém.) Rydb., Bull. Torrey Bot. Club 32: 597. 1905.

*Pinus cembroides* var. *monophylla* (Torr. & Frém.) Voss, Dtsch. Gartenrat Beil. 123. 1904 (not seen). Mitt. Dtsch. Dendrol. Gesell. 16: 95. 1907 [1908]; "*cembrodes*."

DERIVATION—One-leaf, alluding to the solitary needles in a sheath.

OTHER COMMON NAMES—pinyon, nut pine, "singleleaf pinyon pine," one-leaf pine, piñón (Spanish).

RANGE—Mts. chiefly of Great Basin region, se. Idaho, n. and w. Utah., Nev., nw. Ariz., and c. and s. Calif. Also n. B. Cal. Norte, Mex. Atlas vol. 1, map 60-W.

HYBRIDIZES WITH: *Pinus edulis*; *P. quadrifolia*.

***Pìnus montícola** Dougl. ex D. Don **western white pine**‡†

‡†*Pinus monticola* Dougl. ex D. Don in Lamb., Descr. Genus Pinus. ed. 3 (8°), v. 2, unnumbered p. between p. 144 and p. 145. 1832.

*Strobus monticola* (Dougl.) Rydb., Fl. Rocky Mts. 13, 1060. 1917.

DERIVATION—Inhabiting mountains.

OTHER COMMON NAMES—mountain white pine, Idaho white pine, white pine, silver pine.

RANGE—Mts. mostly, from nw. Mont., extreme sw. Alta., and s. B.C., s. to Wash., Oreg., and Calif. through Sierra Nev. to w. Nev. and c. Calif. Atlas vol. 1, map 62-W.

**Pìnus muricàta** D. Don **bishop pine**‡†

‡†*Pinus muricata* D. Don, Trans. Linn. Soc. Lond. 17: 441. 1836.

*Pinus remorata* Mason, Madroño 2: 9. 1930.

DERIVATION—Muricate, or rough with hard sharp points, describing the cone scales.

OTHER COMMON NAMES—prickle-cone pine, Santa Cruz Island pine.

RANGE—Local on coast of n. and c. Calif. and Santa Cruz and Santa Rosa Is. off coast of s. Calif. Also local in nw. B. Cal. Norte and var. on Cedros Is., Mex. Atlas vol. 1, map 63-W.

*Pinus murrayana*, see **P. contorta** var. **murrayana**

PÌNUS NÌGRA Arnold (Reise Mariazell 8, pl. 1785; *P. laricio* Poir.), Austrian pine (European black pine), has been planted extensively in U.S. Escaped from cultivation locally in Northeast w. to Mo. but apparently not yet naturalized. Native of s. Europe and Asia Minor, also local in nw. Africa.

***Pìnus palústris** Mill. **longleaf pine**‡†

†*Pinus palustris* Mill., Gard. Dict. ed. 8, *Pinus* No. 14. 1768.

*Pinus australis* Michx. f., Hist. Arbor. Am. Sept. 1: 64, pl. 6. 1810.

DERIVATION—Of marshes.

OTHER COMMON NAMES—longleaf yellow pine, southern yellow pine, longstraw pine, hill pine, pitch pine, hard pine, heart pine.

RANGE—Coastal Plain from se. Va. to c. Fla. and w. to e. Tex. Atlas vol. 1, map 65-E; vol. 5, map 8.

REFERENCES—Ward, Daniel B. Castanea 28: 7-8. 1963.

Ward, Daniel B. On the scientific name of the longleaf pine. Rhodora 76: 20-24. 1974.

HYBRIDIZES WITH: *P. taeda* (*P.* ×*sondereggeri* H. H. Chapm.).

*Pinus parryana*, see **P. quadrifolia**

***Pìnus ponderòsa** Dougl. ex Laws. **ponderosa pine**†

*Pinus ponderosa* Dougl. ex Loud., Hort. Brit. 387. 1830; *nom. nud.*

‡†*Pinus ponderosa* Dougl. ex Laws., Agr. Man. 354. 1836.

DERIVATION—Ponderous, or heavy, referring to the wood.

OTHER COMMON NAMES—western yellow pine†, yellow pine, pondosa pine, blackjack pine, bull pine, rock pine; pinabete, pino real (Spanish).

RANGE–Widely distributed, chiefly in Rocky Mts. and mts. of Pacific Coast region, from sw. N. Dak. and Mont. to s. B.C., s. through Wash. and Oreg. to s. Calif., e. to Ariz. and Trans-Pecos Tex., and n. to N. Mex., extreme nw. Okla., Colo., w. and n. Nebr., and w. S. Dak. Also in n. Mex. (Son. and Sin. to S.L.P. and Tamps.). Atlas vol. 1, maps 64-W, 64-N.

REFERENCES—Smith, Richard H. Monoterpenes of ponderosa pine xylem resin in western United States. U.S. Dep. Agric. Tech. Bull. 1532, 48 p., illus. 1977.

Squillace, A.E., and Roy R. Silen. Racial variation in ponderosa pine. For. Sci. Monogr. 2, 27 p. 1962.

Weidman, R. H. Evidences of racial influence in a 25-year test of ponderosa pine. J. Agric. Res. 59: 855-887, illus. 1939.

Wells, Osborn O. Geographic variation in ponderosa pine. I. The ecotypes and their distributions. Silvae Genet. 13: 89-103. 1964.

HYBRIDIZES WITH: *Pinus jeffreyi*.

This widespread species includes several minor geographic races which intergrade. Three varieties are distinguished here.

**Pìnus ponderòsa** Dougl. ex Laws. var. **ponderòsa**
**ponderosa pine (typical)**‡

OTHER COMMON NAME—Pacific ponderosa pine.

RANGE—Widely distributed, chiefly in mts. of Pacific Coast region, from s. B.C., s. through Wash. and Oreg. to s. Calif. and w. Nev.

**Pìnus ponderòsa** var. **arizónica** (Engelm.) Shaw **Arizona pine**‡†

†*Pinus arizonica* Engelm. in Rothr., Wheeler, U.S. Geogr. Surv. West 100th Merid. Rep. 6: 260. 1878.

‡*Pinus ponderosa* var. *arizonica* (Engelm.) Shaw, Pines Mex. 24, pl. 4, pl. 17, fig. 4. 1909.

DERIVATION—Of Arizona, where it was discovered.

OTHER COMMON NAMES—Arizona ponderosa pine, yellow pine, Arizona yellow pine.

RANGE—Mts. of extreme sw. N. Mex., se. Ariz., and n. Mex. (Son. and Chih. to S.L.P. and Tamps.).

**Pìnus ponderòsa** var. **scopulòrum** Engelm.
**Rocky Mountain ponderosa pine**

*Pinus brachyptera* Engelm. in Wisliz., Mem. Tour North. Mex. 89. 1848.
*Pinus ponderosa* var. *scopulorum* Engelm. in Wats., Bot. Calif. 2: 126. 1879.
*Pinus scopulorum* (Engelm.) Lemm., Gard. and Forest 10: 183. 1897.

DERIVATION—Of the rocks, apparently referring to the Rocky Mountains.

OTHER COMMON NAMES—interior ponderosa pine, Black Hills ponderosa pine.

RANGE—Widely distributed chiefly in Rocky Mts., from sw. N. Dak., Mont., and Idaho, s. to Ariz., and e. to Trans-Pecos Tex., n. to N. Mex., extreme nw. Okla., Colo., w. and n. Nebr., and w. S. Dak. Also in n. Mex. (Son. and Sin. to S.L.P. and Tamps.).

**Pìnus púngens** Lamb. **Table Mountain pine**‡†

*Pinus pungens* Lamb., Ann. Bot. 2: 198. 1805.

DERIVATION—Sharp-point, from the peculiar, stout, hooked spines on the cones.

OTHER COMMON NAMES—hickory pine, mountain pine†, prickly pine.

RANGE—Appalachian Mt. region from Pa. sw. to e. W. Va., Va., nw.

S.C., ne. Ga., and e. Tenn.. Also local in N.J. and Del. Atlas vol. 1, map 66-E.

REFERENCE—Zobel, Donald B. Factors affecting the distribution of *Pinus pungens*, an Appalachian endemic. Ecol. Monogr. 39: 303-333, illus. 1969.

**Pinus quadrifolia** Parl. ex Sudw. **Parry pinyon**‡†

†*Pinus parryana* Engelm., Am. J. Sci. Arts, Ser. 2, 34: 322. 1862. Non *P. parryana* Gordon, Pinetum 202. 1858.

*Pinus quadrifolia* Parry ex Parl. in A. DC., Prodr. 16(2): 302. 1868; as synonym.

‡*Pinus quadrifolia* Parl. ex Sudw., U.S. Dep. Agric. Div. For. Bull. 14: 17. 1897.

*Pinus cembroides* var. *parryana* Voss, Dtsch. Gartenrat Beil. 123. 1904 (not seen). Mitt. Dtsch. Dendrol. Ges. 16: 95. 1907 [1908]; "*cembrodes*."

*Pinus juarezensis* Lanner, Southwest. Nat. 19: 75, fig. 2. 1974.

DERIVATION—Four-leaf, the needles commonly 4 in a bundle.

OTHER COMMON NAMES—four-needle pinyon, pinyon, nut pine, "Parry pinyon pine."

RANGE—Rare and local in mts. of s. Calif. (Riverside and San Diego Cos.). Also in n. B. Cal. Norte, Mex. Atlas vol. 1, map 67-W.

REFERENCE—Lanner, Ronald L. A new pine from Baja California and the hybrid origin of Pinus quadrifolia. Southwest. Nat. 19: 75-95, illus. 1974.

HYBRIDIZES WITH: *Pinus monophylla*.

***Pinus radiata** D. Don **Monterey pine**‡†

‡†*Pinus radiata* D. Don, Trans. Linn. Soc. Lond. 17: 442. 1836.

*Pinus insignis* Dougl. ex Loud., Arb. Frut. Brit. 4: 2265, fig. 2170-2172. 1838.

DERIVATION—Radiate, or rayed, referring to markings on the cone scales.

OTHER COMMON NAME—insignis pine.

RANGE—Rare at 3 localities on coast of c. Calif. (San Mateo, Santa Cruz, Monterey, and San Luis Obispo Cos.). Also var. on Guadalupe Is., Mex. Common in forest plantations in s. hemisphere. Atlas vol. 1, map 68-W.

HYBRIDIZES WITH: *Pinus attentuata* (*P.* ×*attenuradiata* Stockwell & Righter).

*Pinus reflexa*, see **P. strobiformis**

*Pinus remorata*, see **P. muricata**

***Pinus resinosa** Ait. **red pine**‡

‡†*Pinus resinosa* Ait., Hort. Kew. 3: 367. 1789.

DERIVATION—Resinous.

OTHER COMMON NAME—Norway pine‡.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., s. Que., and Maine, w. to c. Ont., and se. Man., s. to se. Minn., and e. to Wis., Mich., s. Ont., n. Pa., n. N.J., Conn., and Mass. Also local in n. Ill., e. W. Va., and Nfld. Atlas vol. 1, maps 69-N, 69-E.

***Pinus rigida** Mill. **pitch pine**‡†

‡†*Pinus rigida* Mill., Gard. Dict. ed. 8, *Pinus* No. 10. 1768.

DERIVATION—Rigid, or stiff, referring to the cone scales.

RANGE—S. Maine w. to N.Y., N.J., and Pa., and sw. mostly in mts., to s. Ohio, Ky., e. Tenn., n. Ga., and nw. S.C. Also local in extreme s. Que. and extreme se. Ont. Atlas vol. 1, map 71-E.

REFERENCE—Smouse, Peter E., and LeRoy C. Saylor. Studies of the Pinus rigida-serotina complex. I. A study of geographic variation. Ann. Mo. Bot. Gard. 60: 174-191, illus. 1973.

HYBRIDIZES WITH: *Pinus echinata*, *P. serotina*, *P. taeda* (*P.* ×*rigitaeda*)

***Pinus sabiniana** Dougl. **Digger pine‡††**

‡††*Pinus sabiniana* Dougl. ex D. Don in Lamb., Descr. Genus Pinus ed. 3 (8°), v. 2, unnumbered p. between p. 144 and p. 145, pl. 80. 1832. Dougl., Trans. Linn. Soc. Lond. 16: 749. 1833.

DERIVATION—Named by David Douglas in compliment to his friend and patron, Joseph Sabine (1770-1837), secretary of Horticultural Society of London, who was an attorney as well as naturalist.

OTHER COMMON NAMES—bull pine, gray pine.

RANGE—Foothills and mts. from n. Calif. s. in Coast Ranges and Sierra Nev. to s. Calif. Atlas vol. 1, map 70-W.

***Pinus serótina** Michx. **pond pine‡††**

‡*Pinus serotina* Michx., Fl. Bor.-Am. 2: 205. 1803.

*Pinus* (r.) *serotina* Michx. ex Loud., Arb. Frut. Brit. 4: 2242, fig. 2127-2130. 1838; as sp., not new var.

†*Pinus rigida* var. *serotina* (Michx.) Loud. ex Hoopes, Book Evergreens 120. 1868.

*Pinus rigida* ssp. *serotina* (Michx.) Clausen, Torreya 39: 126. 1939.

DERIVATION—Late, referring to the cones which remain closed on the trees a few years before opening to release the seeds.

OTHER COMMON NAMES—marsh pine, pocosin pine.

RANGE—Coastal Plain from s. N.J. and Del. s. to c. and nw. Fla. and c. Ala. Atlas vol. 1, map 74-E; vol. 5, map 9.

REFERENCE—See **Pinus rigida**

HYBRIDIZES WITH: *Pinus echinata*, *P. rigida*, *P. taeda*.

***Pinus strobiformis** Engelm. **southwestern white pine**

‡*Pinus flexilis* var. γ *reflexa* Engelm. in Rothr., Wheeler Rep. U.S. Geogr. Surv. 6: 258. 1878.

†*Pinus strobiformis* Engelm. in Wisliz., Mem. Tour North. Mex. 102. 1848.

*Pinus reflexa* (Engelm.) Engelm., Bot. Gaz. 7: 4. 1882.

*Pinus ayacahuite* Ehrenb. var. *strobiformis* Sarg. ex Lemm., Handb. West-Am. Conebearers. ed. 2, 4. 1892.

*Pinus ayacahuite* var. *reflexa* (Engelm.) Voss, Mitt. Dtsch. Dendrol. Ges. 16: 92. 1907 [1908].

*Pinus ayacahuite* var. *brachyptera* Shaw, Pines Mex. 11, pl. 6. 1909.

DERIVATION—With the shape or form of *Pinus strobus* L., a related species.

OTHER COMMON NAMES—Mexican white pine†, border white pine, border limber pine, pino enano (Spanish).

RANGE—Mts. of Trans-Pecos Tex. to c. N. Mex. and e.c. and se. Ariz. Also mts. of n. Mex. (Son and Chih. to Sin., Dgo., S.L.P., and Tamps.). Atlas vol. 1, maps 72-W, 72-N.

REFERENCES—Andresen, John W., and Raphael J. Steinhoff. The taxonomy of Pinus flexilis and Pinus strobiformis. Phytologia 22: 57–70. 1971.

Steinhoff, Rafael J., and J. W. Andresen. Geographic variation in Pinus flexilis and Pinus strobiformis and its bearing on their taxonomic status. Silvae Genet. 20: 159–167. 1971.

This species of the Mexican border region was treated as a variety in the 1953 checklist.

HYBRIDIZES WITH: *Pinus flexilis*.

***Pinus strobus** L. **eastern white pine‡**

‡††*Pinus strobus* L., Sp. Pl. 1001. 1753.

*Strobus strobus* (L.) Small, Flora Southeast. U.S. 29, 1326. 1903.

*Pinus strobus* var. *chiapensis* Martínez, Mex. Univ. Nac. Inst. Biol. An. 11: 81, fig. 19-22. 1940.

*Pinus chiapensis* (Martínez) Andresen, Phytologia 10:417. 1964.

DERIVATION—Latin word for pine cone, related to Greek *strobos*, whirling around, and *strobilos*, pine cone; according to some authors, the ancient name of an incense-bearing tree.

OTHER COMMON NAMES—white pine, northern white pine†, northern pine, soft pine, Weymouth pine.

RANGE—Nfld., Anticosti Is., and Gaspé Pen. of Que., w. to c. and w. Ont. and extreme se. Man., s. to se. Minn., and ne. Iowa, and e. to n. Ill., Ohio, Pa., and N.J., and s., mostly in mts., to n. Ga. and nw. S.C. Also local in w. Ky., w. Tenn., and Del. Also var. in mts. of s. Mex. (Ver. to Gro., Oax., and Chis.) and Guatemala. Atlas vol. 1, maps 73-N, 73-E.

Represented in U.S. by the typical variety, *Pinus strobus* var. *strobus*. Var. *chiapensis* Martínez (*P. chiapensis* (Martínez) Andresen) Chiapas white pine, is native in mountains of s. Mex. and Guatemala.

**PÌNUS SYLVÉSTRIS** L. SCOTCH PINE‡

‡*Pinus sylvestris* L., Sp. Pl. 1000. 1753.

DERIVATION—Of forests.

OTHER COMMON NAME—Scots pine.

RANGE—Extensively planted and naturalized locally in se. Can. and ne. U.S. from Maine sw. to N.Y., Del., Pa., Ohio, and Iowa. Native, with vars., across Eurasia, s. to Turkey; the most widely distributed species of the genus.

REFERENCE—York, Harlan H., and E. W. Littlefield. The naturalization of Scotch pine, northeastern Oneida County, N. Y. J. For. 40: 552-559, illus. 1942.

***Pìnus taèda** L. **loblolly pine‡†**

‡†*Pinus taeda* L., Sp. Pl. 1000. 1753.

DERIVATION—Ancient name of resinous pines.

OTHER COMMON NAMES—oldfield pine, shortleaf pine, North Carolina pine.

RANGE—Coastal Plain and Piedmont from s. N.J. and Del. s. to c. Fla. and w. to e. Tex., and n. in Miss. Valley to extreme se. Okla., c. Ark., and s. Tenn. Atlas vol. 1, map 75-E; vol. 5, map 10.

HYBRIDIZES WITH: *Pinus echinata*, *P. elliottii*, *P. palustris* (*P.* ×*sondereggeri* H. H. Chapm.), *P. rigida* (*P.* ×*rigitaeda*), *P. serotina*.

**Pìnus torreyàna** Parry ex Carr. **Torrey pine‡†**

‡†*Pinus torreyana* Parry ex Carr., Traité Gén. Conif. 326. 1855.

DERIVATION—John Torrey (1796-1873), botanist of Columbia University, who named many new species of southwestern plants and who sent specimens of this species to France in 1853.

OTHER COMMON NAMES—Del Mar pine, Soledad pine.

RANGE—Very rare and local on coast of s. Calif. (San Diego Co.) and Santa Rosa Is. Atlas vol. 1, map 76-W.

***Pìnus virginiàna** Mill. **Virginia pine‡†**

‡†*Pinus virginiana* Mill., Gard. Dict. ed. 8, *Pinus* No. 9. 1768.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—scrub pine, Jersey pine.

RANGE—Se. N.Y. (Long Is.) and N.J., w. to Pa., c. Ohio, and s. Ind., s. to w. Ky., w. Tenn., and ne. Miss., and e. to c. Ala., n. Ga., n. S.C., and Va. Atlas vol. 1, map 77-E.

**Pìnus washoénsis** Mason & Stockwell **Washoe pine‡**

‡†*Pinus washoensis* Mason & Stockwell, Madroño 8: 62. 1945.

DERIVATION—The name commemorates the Washoe Indians who hunted in this forest.

RANGE—Rare and local in mts. of w. Nev. (Washoe Co.) and ne. Calif. Atlas vol. 1, map 78-W.

**Piscídia** L. (Family Leguminosae) **fishpoison-tree**

†*Ichyomethia* P. Br., Civ. Nat. Hist. Jam. 296. 1756; *nom. rejic.*
‡*Piscidia* L., Syst. Nat. ed. 10, 1155, 1376. 1759; *nom. cons.*

DERIVATION—From Latin, fish and kill, in reference to the use of the foliage and bark in stupefying fish.

OTHER COMMON NAME—fishfuddletree.

REFERENCE—Rudd, Velva E. A synopsis of the genus Piscidia (Leguminosae). Phytologia 18: 473-499, illus. 1969.

NUMBER OF SPECIES: Native trees (s. Fla.), 1 (also in West Indies, Mex., and C. Am.); West Indies, additional species, 4, incl. 1 also in P.R. and V.I. and from Mex. to n. S. Am.; Mex., additional, 2, incl. 1 also in C. Am.; total, 7.

**Piscídia piscípula** (L) Sarg. **Florida fishpoison-tree‡**

*Erythrina piscipula* L., Sp. Pl. 707. 1753.
‡*Piscidia piscipula* (L.) Sarg., Gard. and Forest 4: 436. 1891.
†*Ichthyomethia piscipula* (L.) Hitchc., Gard. and Forest 4: 472. 1891.

DERIVATION—Fish-catching.

OTHER COMMON NAMES—Jamaica-dogwood†, Florida fishfuddletree.

RANGE—Coasts of s. Fla. incl. Fla. Keys, n. on e. coast to Dade Co. and on w. coast to Lee Co. Bahamas, Cuba, Jamaica, and Haiti. Also e. and s. Mex. (Tamps. to Oax., Chis., Yuc., and Q. Roo), Belize, Guatemala, and Honduras (islands). Atlas vol. 5, map 229.

*Pisonia*, see also **Guapira**

**Pisònia** L. (Family Nyctaginaceae) **pisonia**

‡*Pisonia* L., Sp. Pl. 1026. 1753; Gen. Pl. ed. 5, 451. 1754.

DERIVATION—Willem Pison (1611-78), Dutch physician and naturalist who traveled in Brazil.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; native woody vines (s. Fla.), 1 (also in P.R. and V.I.); P.R., 2 (1 also in V.I.); Hawaii, 3; others in tropical Am., Pacific islands, New Zealand, and Australia; total, tropics, about 25.

**Pisònia rotundàta** Griseb. **pisonia‡**

‡*Pisonia rotundata* Griseb., Cat. Pl. Cub. 283. 1866.

DERIVATION—Rounded, from the shape of the leaves.

OTHER COMMON NAME—roundleaf pisonia.

RANGE—S. Fla., local on Lower Fla. Keys only, not on mainland. Bahamas and Cuba. Atlas vol. 5, map 230.

**Pistàcia** L. (Family Anacardiaceae) **pistache**

‡†*Pistacia* L., Sp. Pl. 1025. 1753; Gen. Pl. ed. 5, 450. 1754.

DERIVATION—From the Greek *pistake*, or *pistakia*, pistache, and ultimately from ancient Persian *pistah*, pistache nut.

NUMBER OF SPECIES: Native trees, 1 (also in ne. Mex.); Mex., 1 additional (also in Guatemala); Eurasia (Mediterranean region to e. Asia and Malaysia and in Canary Is.), about 8; total, about 10.

**Pistàcia texàna** Swingle **Texas pistache‡†**

‡†*Pistacia texana* Swingle, J. Arnold Arbor. 2: 107. 1920.

DERIVATION—Of Texas.

OTHER COMMON NAMES—American pistachio, wild pistachio, lentisco (Spanish).

RANGE—Local in s. Tex. (Bexar to Val Verde Co.) and ne. Mex. (Coah., N.L., and Tamps.). Atlas vol. 3, map 108.

Closely related to *Pistacia mexicana* H.B.K., Mexican pistache, from c. Mex. to Guatemala, and by some authors united as a synonym.

**Pithecellòbium** Mart. (Family Leguminosae) **blackbead**

*Zygia* P. Br., Civ. Nat. Hist. Jam. 279, pl. 22, fig. 3. 1756; *nom. rejic.*

*Pithecellobium* Mart., Hort. Reg. Man. 188. 1829; *nom. nud.*
‡†*Pithecellobium* Mart., Flora 20(2) (Beibl. 8): 114. 1837; "*Pithecollobium*"; *nom. cons.*
*Havardia* Small, Bull. N.Y. Bot. Gard. 2: 92. 1901.
*Ebenopsis* Britton & Rose, No. Am. Fl. 23: 33. 1928.

DERIVATION—Greek ape's earring, from a Brazilian common name, referring to the coiled pods of some species.

REFERENCES—Elias, Thomas S. J. Arnold Arbor. 55: 115-118. 1974.
Isely, Duane. Madroño 21: 282-287. 1972.
Isely, Duane. Mem. N.Y. Bot. Gard. 25(1): 112-116, 145, illus. 1973.

The variant spelling "*Pithecolobium*" was used in the 1927 checklist.

NUMBER OF SPECIES: Native trees (s. Fla. and s. Tex.), 4, incl. 1 also in P.R. and V.I.; P.R. and V.I., 1 additional; total, tropics, 150-200.

**Pithecellòbium flexicaùle** (Benth.) Coult. **ebony blackbead‡**

*Acacia flexicaulis* Benth., Hook. Lond. J. Bot. 1: 505. 1842.
*Pithecellobium flexicaule* (Benth.) Coult., Bot. Gaz. 15: 270. 1890; "*Pithecolobium*"; *nom. provisor.*
‡†*Pithecellobium flexicaule* (Benth.) Coult., U.S. Dep. Agric., Contrib. U.S. Natl. Herb. 2: 101. 1891; "*Pithecolobium.*"
*Ebenopsis flexicaulis* (Benth.) Britton & Rose, No. Am. Fl. 23: 33. 1928.

DERIVATION—Flexible-stem.

OTHER COMMON NAMES—Texas-ebony†, ébano (Spanish).

RANGE—S. Tex. and e. Mex. (Tamps. w. to Coah., s. to S.L.P. and n. Ver. and in Yuc.). Atlas vol. 3, maps 110-N, 110-SW.

**Pithecellòbium guadalupénse** (Pers.) Chapm. **Guadeloupe blackbead‡**

*Mimosa guadalupensis* Pers., Synops. Pl. 2: 262. 1806.
‡*Pithecellobium guadalupense* (Pers.) Chapm., Fl. South. U.S. 116. 1960; "*Pithecolobium.*"
*Pithecellobium keyense* Britton in Britton & Rose, No. Am. Fl. 23: 22. 1928.

DERIVATION—Of Guadeloupe, the West Indian island where it was discovered.

OTHER COMMON NAMES—blackbead, rams-horn, catclaw.

RANGE—Coasts of s. Fla. incl. Fla. Keys w. to Marquesas Key, n. on e. coast to Palm Beach Co. and on w. coast to Lee Co. Bahamas, Cuba, Guadeloupe, and se. Mex. (Yuc.). Atlas vol. 5, map 231.

REFERENCE—Gillis, William T. Rhodora 76: 87. 1974.

**Pithecellòbium pállens** (Benth.) Standl. **huajillo‡†**

*Calliandra pallens* Benth., Hook. Lond. J. Bot. 5: 102. 1846.
†*Pithecellobium brevifolium* Benth. in Gray, Pl. Wright. 1: 67. 1852; "*Pithecolobium.*"
*Harvardia brevifolia* (Benth.) Small, Bull. N.Y. Bot. Gard. 2: 92. 1901.
*Harvardia pallens* (Benth.) Britton & Rose, No. Am. Fl. 23: 42. 1928.
‡*Pithecellobium pallens* (Benth.) Standl., Yale Univ., School For., Trop. Woods 34: 39. 1933; "*Pithecolobium.*"

DERIVATION—Pale, referring to the foliage.

OTHER COMMON NAME—tenaza (Spanish).

RANGE—S. Tex. and ne. Mex. (Tamps. w. to Coah., s. to S.L.P. and n. Ver.). Atlas vol. 3, maps 111-N, 111-SW.

**Pithecellòbium unguis-càti** (L.) Benth. **catclaw blackbead‡**

*Mimosa unguis-cati* L., Sp. Pl. 517. 1753; "*Unguis cati.*"
‡†*Pithecellobium unguis-cati* (L.) Benth., Hook. Lond. J. Bot. 3: 200. 1844; "*Pithecolobium.*"

DERIVATION—Latin cat and claw, from the paired spines at base of the leaves.

OTHER COMMON NAMES—Florida catclaw†, catclaw, blackbead.

RANGE—Coasts of s. Fla. incl. Fla. Keys, n. on w. coast to Lee Co. From Bahamas through West Indies incl. P.R. and V.I. Also Mex.

(Tamps. to Yuc. and in Sin.), Venezuela, and Guyana. Atlas vol. 5, map 232.

*Pityothamnus*, see **Asimina**

**Plànera** J. F. Gmel. (Family Ulmaceae) **water-elm**

‡†*Planera* J. F. Gmel., Syst. Nat. ed. 13, 2: 150. 1791.

DERIVATION—Johann Jakob Planer (1743-89), German botanist and professor of medicine at Erfurt.

OTHER COMMON NAME—planertree.

NUMBER OF SPECIES: 1.

**Plànera aquática** J. F. Gmel. **water-elm**

*Anonymos aquatica* Walt., Fl. Carol. 230. 1788; "*aquatic*"; *nom. illegit.*

‡†*Planera aquatica* J. F. Gmel., Syst. Nat. ed. 13, 2: 150. 1791.

DERIVATION—Aquatic, from the habitat in swamp forests.

OTHER COMMON NAME—planertree‡†.

RANGE—Coastal Plain from se. N.C. to n. Fla. and w. to e. Tex., and n. in Miss. Valley to se. Okla., Ark., se. Mo., s. Ill., w. Ky., and w. Tenn. Atlas vol. 4, map 94; vol. 5, map 100.

**Plátanus** L. (Family Platanaceae) **sycamore**

‡†*Platanus* L., Sp. Pl. 999. 1753; Gen. Pl. ed. 5, 433. 1754.

DERIVATION—The classical Latin and Greek name of *Platanus orientalis* L., oriental planetree, from the Greek word for broad, referring to the leaves.

OTHER COMMON NAMES—planetree, buttonwood.

NUMBER OF SPECIES: Native trees, 3 (also in Mex.); Mex., additional species, about 4, incl. 1 also in Guatemala; Eurasia, 2; total, about 9.

REFERENCES—Ernst, Wallace R. J. Arnold Arbor. 44: 206-210. 1963.

Hsiao, Ju-Ying. A numerical taxonomic study of the genus Platanus based on morphological and phenolic characters. Am. J. Bot. 60: 678-684. 1973.

***Plátanus occidentàlis** L. **sycamore†**

*Platanus occidentalis* L., Sp. Pl. 999. 1753.

*Platanus glabrata* Fern., Proc. Am. Acad. Arts Sci. 36: 493. 1901.

†*Platanus occidentalis* var. *glabrata* (Fern.) Sarg., Bot. Gaz. 67: 230. 1919.

DERIVATION—Western, referring to the western hemisphere.

OTHER COMMON NAMES—planetree, buttonwood, American sycamore‡, buttonball-tree, American planetree.

RANGE—Sw. Maine w. to N.Y., extreme s. Ont., c. Mich., s. Wis., Iowa, and extreme e. Nebr., s. to e. Kans., e. Okla., and s. c. Tex., and e. to nw. Fla. and se. Ga. Also in mts. of ne. Mex. (Coah., N.L., Tamps., and S.L.P.). Atlas vol. 1, maps 147-W, 147-E, 147-N; vol. 5, map 101.

***Plátanus racemòsa** Nutt. **California sycamore‡†**

*Platanus racemosa* Nutt. ex Audubon, Birds Am. 4: pl. 362. 1837; "*racemosus*"; *nom. nud.*

‡†*Platanus racemosa* Nutt., No. Am. Sylva 1: 47, pl. 15. 1842; "*racemosus.*"

*Platanus californica* Benth., Bot. Voy. Sulphur 54. 1844.

DERIVATION—With flowers in racemes, referring to the flower heads along the axis.

OTHER COMMON NAMES—western sycamore, California planetree, aliso (Spanish).

RANGE—N. to s. Calif. and n. B. Cal., Mex. Atlas vol. 3, map 112.

**Plátanus wrìghtii** Wats. **Arizona sycamore‡†**

‡†*Platanus wrightii* Wats., Proc. Am. Acad. Arts Sci. 10: 349. 1875.

*Platanus racemosa* Nutt. var. *wrightii* (Wats.) L. Benson, Am. J. Bot. 30: 237. 1943.

DERIVATION—Charles Wright (1811-86), United States botanical collec-

tor, who obtained the type while collecting many specimens in the Southwest in 1851.

OTHER COMMON NAMES—Arizona planetree, álamo (Spanish).

RANGE—Sw. N. Mex., Ariz., and nw. Mex. (Son., Chih., and Sin.). Atlas vol. 3, map 113.

*Platycladus*, see **Thuja**
*Poinciana*, see **Caesalpinia**

PONCÌRUS Raf. (Family Rutaceae) TRIFOLIATE-ORANGE‡

‡*Poncirus* Raf., Sylva Tellur. 143. 1838.

DERIVATION—From the French name of a variety of citron.

REFERENCES—See **Citrus**

PONCÌRUS TRIFOLIÀTA (L.) Raf. TRIFOLIATE-ORANGE‡

*Citrus trifoliata* L., Sp. Pl. ed. 2, 1101. 1763.
‡*Poncirus trifoliata* (L.) Raf., Sylva Tellur. 143. 1838.

DERIVATION—Three-leaved, from the 3 leaflets.

OTHER COMMON NAMES—bitter-orange, hardy-orange.

RANGE—Persistent after cultivation, escaped, and naturalized from Ga. and Fla. to Tex., according to Small (Man. Southeast. Fl. 760. 1933). Occasionally escaped in e. Texas, according to Correll and Johnston (Man. Vasc. Pl. Tex. 907. 1970). Native of c. and n. China but widely cultivated elsewhere.

*Poponax*, see **Acacia**

**Pópulus** L. (Family Salicaceae) **cottonwood; poplar**

‡†*Populus* L., Sp. Pl. 1034. 1753; Gen. Pl. ed. 5, 456. 1754.

DERIVATION—The classical Latin name.

REFERENCES—Brayshaw, T. C. Native poplars of southern Alberta and their hybrids. Can. Dep. For. Publ. 1109, 40 p., illus. 1966.

Eckenwalder, James E. North American cottonwoods (Populus, Salicaceae) of Sections Abaso and Aigeiros. J. Arnold Arbor. 58: 193-208, illus. 1977.

Pourtet, Jean. The poplar—its place in the world. Unasylva 5: 55-59. 1951.

Smith, E. Chalmers. A study of cytology and speciation in the genus Populus L. J. Arnold Arbor. 24: 275-304, illus. 1943.

Sudworth, George B. (ed. and annotated by W. A. Dayton). Poplars, principal tree willows, and walnuts of the Rocky Mountain region. U.S. Dep. Agric. Tech. Bull. 420, 111 p., illus. 1934.

NUMBER OF SPECIES: Native trees, 8, incl. 3 n. to Alaska and 4 also in Mex.; naturalized trees, 1; Mex., 2 additional; Eurasia and n. Africa, about 25; total, n. temperate, about 35.

A few kinds of cultivated cottonwoods and poplars should be mentioned here, as they are often listed as introduced trees, sometimes also as naturalized. These cultivated variations are clones, rather than species, being propagated vegetatively and perhaps derived from a single distinctive individual, such as a hybrid. As the sexes are separate in *Populus*, the individual trees of one clone all belong to the same sex and thus may not produce seeds. These introduced trees often escape from cultivation by spreading vigorously from root sprouts, especially after removal of parent trunk, and may be long persistent or become established locally on old home sites and roadsides. However, without seeds the trees cannot migrate far and cannot establish themselves naturally in forests as naturalized species.

BINOMIALS OF NATURAL INTERSPECIFIC HYBRIDS:

*Pópulus* ×*acuminàta* Rydb. (*P. angustifolia* × *deltoides*)

*Pópulus ×andréwsii* Sarg., see *P. ×acuminata*
*Pópulus ×bárnesii*, see *P. ×smithii*
*Pópulus ×bernárdii* Boivin (*P. deltoides* × *tremuloides*)
*Pópulus ×bràyshawii* Boivin (*P. angustifolia* × *balsamifera*)
*Pópulus ×dutíllyi* Lepage (*P. balsamifera* × *tremuloides*)
*Pópulus ×gileadénsis* Rouleau, see note under **P. balsamifera**
*Pópulus ×heimbúrgeri* Boivin (*P. alba* × *tremuloides*)
*Pópulus ×jáckii* Sarg. (*P. balsamifera* × *deltoides*)
*Pópulus ×párryi* Sarg. (*P. fremontii* × *trichocarpa*)
*Pópulus ×polygonifòlia* Bernard (*P. balsamifera* × *deltoides* × *tremuloides*)
*Pópulus ×rouleauiàna* Boivin (*P. alba* × *grandidentata*)
*Pópulus ×sénnii* Boivin (*P. angustifolia* × *tremuloides*)
*Pópulus ×smíthii* Boivin (*P. grandidentata* × *tremuloides*)

‡PÓPULUS ×CANADÉNSIS Moench (Verz. Ausl. Bäume Weissenst. 81. 1785; *P. ×eugenei* Simon-Louis, *P. ×euramericana* Guinier, *P. deltoides* × *nigra* L.) Carolina poplar†, includes hybrid clones originating in different places. It is cultivated across U.S. and in s. Can. and has escaped locally.

‡PÓPULUS ×CANÉSCENS (Ait.) Sm. (Fl. Brit. 3: 1080. 1804; *P. alba* × *tremula* L.), gray poplar‡, of Europe and Asia, is a hybrid of white poplar and European aspen. It has escaped from cultivation locally in the Northeast. The clone curly poplar is prized for veneers.

‡†PÓPULUS NÌGRA L. (Sp. Pl. 1034. 1753), black poplar‡†, of Europe and Asia, likewise is planted and has escaped. ‡*Populus nigra* var. *italica* Muenchh. (Hausvater 5: 230. 1770), Lombardy poplar‡, is a clone widely cultivated almost throughout U.S. and in s. Can. and locally escaped.

PÓPULUS ÁLBA L. WHITE POPLAR‡†

‡†*Populus alba* L., Sp. Pl. 1034. 1753.

DERIVATION—White, referring to the lower leaf surfaces.

OTHER COMMON NAME—álamo blanco (Spanish).

RANGE—Planted for shade in s. Can. and across continental U.S. Persistent, spreading from roots, escaping from cultivation, and becoming naturalized along roadsides and borders of fields. Native of Europe and Asia.

Accepted in the 1927 checklist and mentioned in a note in the 1953 checklist. Silver poplar and Boleana poplar are clones.

HYBRIDIZES WITH: *Populus grandidentata* (*P. ×rouleauiana* Boivin); *P. tremuloides* (*P. ×heimburgeri* Boivin).

*Populus angulata*, see **P. deltoides**

**Pópulus angustifòlia** James **narrowleaf cottonwood‡†**

‡†*Populus angustifolia* James, Exped. Rocky Mts. 1: 497. 1823.

DERIVATION—Narrowleaf.

OTHER COMMON NAMES—black cottonwood, mountain cottonwood, narrowleaf poplar, álamo (Spanish).

RANGE—Mts from extreme sw. Sask., s. Alta., and Mont., s. to sw. Oreg. and Calif., e. to Trans-Pecos Tex., and n. to nw. Nebr., and w. S. Dak. (Black Hills). Also in n. Mex. (ne. Son. and nw. Chih.). Atlas vol. 3, map 114.

HYBRIDIZES WITH: *Populus balsamifera* (*P. ×brayshawii* Boivin); P. *deltoides* (P. *×acuminata* Rydb.); *P. fremontii*: *P. tremuloides* (*P. ×sennii* Boivin).

*Populus arizonica*, see **P. fremontii** var. **mesetae**
*Populus balsamifera*, see also **P. deltoides**

***Pópulus balsamífera** L. **balsam poplar**‡†
‡†*Populus balsamifera* L., Sp. Pl. 1034. 1753; in part.
*Populus tacamahacca* Mill., Gard. Dict. ed. 8, *Populus* No. 5. 1768.
*Populus candicans* Ait., Hort. Kew. 3: 406. 1789.
*Populus balsamifera* var. *candicans* (Ait.) Gray, Bot. North. U.S. ed. 2, 419. 1856.
†*Populus balsamifera* var. *subcordata* Hylander, Fören. Dendrol. Parkv. Årsb. Lustgarden 111. 1945.
*Populus balsamifera* var. *fernaldiana* Rouleau, Rhodora 50: 234. 1948.

DERIVATION—Balsam-bearing, referring to the odor of balsam; the buds are resinous and fragrant.

OTHER COMMON NAMES—balm, balm-of-Gilead, bam, tacamahac, hackmatack, cottonwood, heartleaf balsam poplar‡.

RANGE—Widespread across n. N. Am. along n. limit of trees from Nfld., Labr., and n. Que., w. to Hudson Bay, nw. Mack., and nw. Alaska, s. to sw. Alaska, incl. Kodiak Is., ne end of se. Alaska, and n. and e. B.C., e. to se. Sask., n. and e. N. Dak., ne. S. Dak., Wis., nw. Ind., Mich., s. Ont., N.Y., and Maine. Also local in w. mts. s. to ne. Oreg., Idaho, extreme n. Utah., c. Colo., extreme nw. Nebr., and Black Hills of S. Dak. and Wyo. Local in e. U.S. s. to n. Iowa, ne. Ohio, Pa., n. W. Va., extreme w. Md., and extreme nw. Conn., and extinct in n. Del. Atlas vol. 1, maps 148-N, 148-W, 148-E; vol. 2, map 15.

REFERENCES—Redman, Kenneth. Nomenclature confusion in the case of the balsam poplar or tacamahac. J. Am. Pharm. Assoc., Sci. Ed. 31: 220-223, illus. 1942.

Rouleau, Ernest. Populus balsamifera of Linnaeus not a nomen ambiguum. Rhodora 48: 103-110. 1946.

Rouleau, Ernest. Two new names in Populus. Rhodora 50: 233-236. 1948.

Rouleau, Ernest. Populus: a correction. Rhodora 51: 149-150. 1949.

Viereck, Leslie A., and Joan M. Foote. The status of Populus balsamifera and P. trichocarpa in Alaska. Can. Field-Nat. 84: 169-173. 1970.

The name *Populus balsamifera* L., by which this species has long been known, was used also after 1919 for *P. deltoides* Marsh., eastern cottonwood. Farwell (Rhodora 21: 101-102. 1919) and Sargent (J. Arnold Arbor. 1: 62-63. 1919) in making this change adopted *P. tacamahacca* Mill. for balsam poplar. Application of the name *P. balsamifera* to two different species led to confusion. Rouleau (Rhodora 48: 10-110. 1946) showed that *P. balsamifera* must be retained for the major element of Linnaeus' composite species, balsam poplar, instead of eastern cottonwood.

Balm-of-Gilead poplar (balm-of-Gilead), an ornamental tree widely planted in northeastern United States and southeastern Canada, spreads by sprouts and persists or escapes. It is a clone or hybrid of this species and has been designated as *Populus* ×*gileadensis* Rouleau (Rhodora 50: 235. 1948; as *P. balsamifera* × *deltoides* var. *missouriensis* Henry).

HYBRIDIZES WITH: *Populus angustifolia* (*P.* ×*brayshawii* Boivin); *P. deltoides* (*P.* ×*jackii* Sarg.); *P. deltoides* × *tremuloides* (*P.* ×*polygonifolia* Bernard); *P. tremuloides* (*P.* ×*dutillyi* Lepage); *P. trichocarpa*.

*Populus canadensis*, see note under **Populus**
*Populus candicans*, see **P. balsamifera**
*Populus canescens*, see note under **Populus**

***Pópulus deltoìdes** Bartr. ex Marsh. **eastern cottonwood**‡†
*Populus balsamifera* L., Sp. Pl. 1034. 1753; in part.

‡†*Populus deltoides* Bartr. ex Marsh., Arbustr. Am. 106. 1785; "*deltoide*."
*Populus caroliniensis* Moench, Verz. Ausl. Bäume Weissenst. 81. 1785.
*Populus virginiana* Foug., Mém. Agric. Paris 1786: 87. 1787.
?*Populus angulata* Ait., Hort. Kew. 3: 407. 1789.
?*Populus deltoides* var. *angulata* (Ait.) Sarg., Trees and Shrubs 2: 212. 1913 (Aug.); "*deltoidea*."
‡†*Populus palmeri* Sarg., Bot. Gaz. 67: 211. 1919.

DERIVATION—Deltoid, or triangular, from the leaf shape.

OTHER COMMON NAMES—cottonwood, southern cottonwood, Carolina poplar, eastern poplar, necklace poplar, álamo (Spanish).

RANGE—Sw. N.H., Vt., N.Y., and extreme s. Que., w. to s. Ont., c. Mich., n. Wis., c. Minn., N. Dak., sw. Man., s. Sask., and s. Alta., s. to Mont., e. Wyo., e. Colo., extreme ne. N. Mex., and nw. and c. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, maps 149-W, 149-E; vol. 5, map 102.

REFERENCES—See under **Populus balsamifera**

This species has been known also as *Populus balsamifera*, the name used here for balsam poplar. Rouleau (Rhodora 48: 103-110. 1946) concluded that *P. balsamifera* must be retained for the major element of the original species, balsam poplar. Thus, *P. deltoides* remains the scientific name of eastern cottonwood.

‡†*Populus palmeri* Sarg., Palmer cottonwood‡, has been united as a synonym by Donovan S. Correll (Fl. Tex. 3: 399-401. 1961).

HYBRIDIZES WITH: *Populus angustifolia* (*P.* ×*acuminata* Rydb.); *P. balsamifera* (*P.* ×*jackii* Sarg.); *P. balsamifera* × *tremuloides* (*P.* ×*polygonifolia* Bernard); *P. tremuloides* (*P.* ×*bernardii* Boivin).

**Pópulus deltoìdes** Bartr. ex Marsh. var. **deltoides**
**eastern cottonwood (typical)**

RANGE—Sw. N.H., Vt., N.Y., and extreme s. Que., w. to s. Ont., c. Mich., n. Wis., c. Minn., N. Dak., and sw. Man., s. to e. S. Dak., Nebr., and c. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, maps 149-W, 149-E.

**Pópulus deltoìdes** var. **occidentàlis** Rydb. **plains cottonwood‡**
*Populus monilifera* Ait., Hort. Kew. 3: 406. 1789.
*Populus deltoides occidentalis* Rydb., Mem. N.Y. Bot. Gard. 1: 15. 1900.
‡†*Populus sargentii* Dode, Bull. Soc. Hist. Nat. Autun 18: 198, pl. 11, fig. 46. 1905; Extr. Monog. Ined. Populus 40, pl. 11, fig. 46. 1905.
*Populus occidentalis* (Rydb.) Britton ex Rydb., Fl. Colo. 91. 1906.
*Populus deltoides* var. *monilifera* (Ait.) Henry, Gard. Chron. Ser. 3, 56: 2, fig. 4. 1914.
†*Populus texana* Sarg., Bot. Gaz. 67: 211. 1919.
*Populus sargentii* var. *texana* (Sarg.) Correll, Wrightia 2: 47. 1960.
*Populus deltoides* ssp. *monilifera* (Ait.) Eckenwalder, J. Arnold Arbor. 58: 204. 1977.

DERIVATION—Western.

OTHER COMMON NAMES—cottonwood†, Texas cottonwood, northern cottonwood.

RANGE—N. Dak. and sw. Man., w. to s. Sask. and s. Alta., s. to Mont., e. Wyo., e. Colo., extreme ne. N. Mex., and nw. Tex., e. to Okla., and n. to S. Dak. Atlas vol. 1, maps 149-W, 149-E.

***Pópulus fremóntii** Wats. **Fremont cottonwood‡**
‡†*Populus fremontii* Wats., Proc. Am. Acad. Arts Sci. 10: 350. 1875.

DERIVATION—Named for its discoverer, General John Charles Frémont (1813-90), politician, soldier, and explorer of western United States.

OTHER COMMON NAMES—cottonwood†, álamo (Spanish).

RANGE—S. and w. Colo., w. to e. and s. Utah, s. and w. Nev., and n. to s. Calif., and e. to Ariz., N. Mex., and Trans-Pecos Tex. Also in nw. Mex. (n. B. Cal. Norte, n. Son., and n. Chih., and reported from S.L.P.). Atlas vol. 1, map 150-W.

REFERENCE—Johnston, Ivan M. J. Arnold Arbor. 25: 434-435. 1944.

HYBRIDIZES WITH: *Populus angustifolia*; *P. trichocarpa* (*P.* ×*parryi* Sarg.).

**Pópulus fremóntii** Wats. var. **fremóntii Fremont cottonwood (typical)**‡

RANGE—W. Colo. w. to e. and s. Utah, s. and w. Nev., and n. to s. Calif., and e. to Ariz. and sw. N. Mex. Also in nw. Mex. (n. B. Cal. Norte and n. Son.).

**Pópulus fremóntii** var. **mesétae** (Eckenwalder) Little **meseta cottonwood**

*Populus fremontii* ssp. *mesetae* Eckenwalder, J. Arnold Arbor. 58: 201, fig. 1977.
*Populus fremontii* var. *mesetae* (Eckenwalder) Little, Phytologia 42: 220 1979.

DERIVATION—From Meseta Central of Mexico.

OTHER COMMON NAMES—Arizona cottonwood†, chopo (Spanish).

RANGE—Sw. and Trans-Pecos Tex., extreme sw. N. Mex., and Ariz., also n. Mex. (Chih. se. to Dgo. and N.L.). Atlas vol. 3, map 115 (as *Populus arizonica* Sarg.).

This cottonwood was included under *Populus fremontii* in the 1953 checklist but was cited as †*Populus arizonica* Sarg., in the 1927 checklist and Atlas. Eckenwalder (1977) showed that the latter name was misapplied and proposed a new name.

**Pópulus fremóntii** var. **wislizèni** Wats. **Rio Grande cottonwood**‡

‡*Populus fremontii* var. (?) *wislizeni* Wats., Am. J. Sci. Arts. Ser. 3. 15: 136. 1878.
†*Populus wislizeni* (Wats.) Sarg., Silva No. Am. 14: 71, pl. 732. 1902.
*Populus deltoides* ssp. *wislizeni* (Wats.) Eckenwalder, J. Arnold Arbor. 58: 205, fig. 1977; "*wislizenii*."

DERIVATION—Named for its discoverer, Friedrich Adolph Wislizenus (1810-1889), German-born physician of St. Louis, Mo. who made an important plant collection on a trip to northern Mexico in 1846-47.

OTHER COMMON NAMES—Wislizenus cottonwood, valley cottonwood, cottonwood†; álamo, alamillo (Spanish).

RANGE—S. Colo., se. Utah, N. Mex., and Trans-Pecos Tex. Also in nw. Mex. (Chih. and reported from S.L.P.).

***Pópulus grandidentàta** Michx. **bigtooth aspen**‡

‡†*Populus grandidentata* Michx., Fl. Bor.-Am. 2: 243. 1803.

DERIVATION—Big-tooth, describing the leaf margins.

OTHER COMMON NAMES—largetooth aspen†, aspen, poplar, popple.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., and Gaspé Pen. of Que., w. to w. Ont. and se. Man., s. to Minn., Iowa, and extreme ne. Mo., and e. to s. Ill., Ky., Va., and Del. Also local in w. N.C. and nw. Tenn. Atlas vol. 1, maps 152-N, 152-E.

REFERENCES—See also **Populus tremuloides**

Little, Elbert L., Jr., Kenneth A. Brinkman, and A. L. McComb. Two natural Iowa hybrid poplars. For. Sci. 3: 253-262, illus. 1957.

HYBRIDIZES WITH: *Populus alba* (*P.* ×*rouleauiana* Boivin); *P. tremuloides* (*P.* ×*smithii* Boivin, *P.* ×*barnesii* W. H. Wagner).

***Pópulus heterophýlla** L. **swamp cottonwood**‡†

‡†*Populus heterophylla* L., Sp. Pl. 1034. 1753.

DERIVATION—Various-leaved.

OTHER COMMON NAMES—black cottonwood, river cottonwood, cottonwood, downy poplar, swamp poplar.

RANGE—Coastal Plain from Conn., Long Is., and N.J., s. to extreme e. Ga., and from nw. Fla. w. to e. La., and n. in Miss. Valley to se. Mo., w. Ky., s. Ill., Ind., Ohio, and s. Mich. Atlas vol. 1, map 151-E; vol. 5, map 103.

*Pópulus hinckleyâna* Correll (Wrightia 2: 45, fig. 8. 1960), Hinckley cottonwood, named as a rare local species from Davis Mts., Tex., has been reduced to the hybrid *Populus angustifolia* ×*fremontii* by James E. Eckenwalder (Syst. Bot. 3: 238. 1979). He reported it from Utah to n. Mex. (Chih.). Atlas vol. 3, map 116.

*Populus monilifera*, see **P. deltoides** var. **occidentalis**
*Populus nigra*, see note under **Populus**
*Populus palmeri*, see **P. deltoides**
*Populus sargentii*, see **P. deltoides** var. **occidentalis**
*Populus tacamahacca*, see **P. balsamifera**
*Populus texana*, see **P. deltoides** var. **occidentalis**

***Pópulus tremuloìdes** Michx. **quaking aspen‡**

‡†*Populus tremuloides* Michx., Fl. Bor.-Am. 2: 243. 1803.
*Populus aurea* Tidestr., Am. Midl. Nat. 2: 35, fig. 3-7. 1911.
†*Populus tremuloides* [var.] *aurea* (Tidestr.) Daniels, Mo. Univ. Stud., Sci. Ser., 2(2) (Fl. Boulder, Colo.): 98, 265. 1911.
*Populus tremuloides* var. *aurea* Daniels ex Sarg., Man. Trees No. Am. ed. 2, 121. 1922.

DERIVATION—Like *Populus tremula* L., European aspen, from Latin trembling.

OTHER COMMON NAMES—trembling aspen, aspen†, golden aspen, golden trembling aspen, mountain aspen, quaking asp, trembling poplar, poplar, popple; álamo blanco, álamo temblón (Spanish).

RANGE—Very widespread across n. N. Amer. from Nfld., Labr., and w. Que., w. near n. limit of trees to nw. Mack. and nw. Alaska, s. to sw. Alaska, e. to Yukon and B. C., s. mostly in mts. from Wash. to s. Calif., s. Ariz., Trans-Pecos Tex., and n. Nebr., and from Iowa and ne. Mo. e. to W. Va., w. and n. Va., Pa., and N. J. Also mts. of n. Mex. (n. B. Cal. Norte and Son. to Dgo., N.L., s. to Gto.). The most widely distributed tree species in N. Am. Atlas vol. 1, maps 154-W, 154-E, 154-N.

REFERENCES—Barnes, Burton V. Hybrid aspens in the Lower Peninsula of Michigan. Rhodora 63: 311-324, illus. 1961.

Marie-Victorin, Frère. Les variations laurentiennes du Populus tremuloides et du P. grandidentata. Montreal Univ. Lab. Bot. Contrib. 16, 16 p., illus. 1930.

HYBRIDIZES WITH: *Populus alba* (*P.* ×*heimburgeri* Boivin); *P. angustifolia* (*P.* ×*sennii* Boivin); *P. balsamifera* (*P.* ×*dutillyi* Lepage); *P. balsamifera* × *deltoides* (*P.* ×*polygonifolia* Barnard); *P. deltoides* (*P.* ×*bernardii* Boivin); *P. grandidentata* (*P.* ×*smithii* Boivin, *P.* ×*barnesii* W. H. Wagner).

***Pópulus trichocárpa** Torr. & Gray **black cottonwood‡†**

‡†*Populus trichocarpa* Torr. & Gray in Hook., Icon. Pl. 9 (New Ser.): pl. 878. 1852.
*Populus hastata* Dode, Bull. Soc. Hist. Nat. Autun 18: 222, pl. 12, fig. 105. 1905; Extr. Monogr. Inéd. Populus 64, pl. 12, fig. 105. 1905.
*Populus trichocarpa* f. *ingrata* Jeps., Fl. Calif. 1: 346. 1909.
†*Populus trichocarpa* var. *hastata* (Dode) Henry in Elwes & Henry, Trees G. B. Irel. 7: 1837. 1913; *nom. provisor.*
*Populus trichocarpa* var. *ingrata* (Jeps.) Parish, Pl. World 20: 210. 1917.
*Populus trichocarpa* ssp. *hastata* Dode, Bull. Soc. Dendrol. France 44: 80. 1922; *nom. nud.* Validated by Gray Herbarium Card-index Issue 182.
*Populus balsamifera* ssp. *trichocarpa* (Torr. & Gray) Brayshaw, Can. Field-Nat. 79: 95. 1965.
*Populus balsamifera* ssp. *trichocarpa* var. *hastata* (Dode) Brayshaw, Can. Field-Nat. 79: 95. 1965.

DERIVATION—Hairy-fruit, describing the seed capsules.

OTHER COMMON NAMES—cottonwood, balsam cottonwood, western balsam poplar, California poplar.

RANGE—Pacific Coast region mostly, from s. Alaska (Kodiak Is. and

Kenai Pen.), se. Alaska, and n. B.C., se. to n. Calif. and in Coast Ranges and Sierra Nev. to s. Calif., e. in mts. of c. Nev. and n. Utah, and n. in mts. to c. Mont. and extreme sw. Alta. Also local in nw. Wyo. and sw. N. Dak. Also Santa Cruz, Santa Rosa, and Santa Catalina Is., and mts. of n. B. Cal. Norte. Atlas vol. 1, maps 153-W, 153-N.

REFERENCES—Brayshaw, T.C. The status of the black cottonwood (Populus trichocarpa Torrey & Gray). Can. Field-Nat. 79: 91-95, illus. 1965.

Hultén, Eric. Ark. Bot. 7: 36-37. 1968.

HYBRIDIZES WITH: *Populus balsamifera*; *P. fremontii* (*P.* ×*parryi*).

*Populus virginiana*, see **P. deltoides**
*Populus wislizeni*, see **P. fremontii** var. **wislizeni**
*Porliera*, see **Guaiacum angustifolium**

‡POUTÈRIA CAMPECHIÀNA (H.B.K.) Baehni (Candollea 9: 398. 1942; *P. campechiana* var. *nervosa* (A. DC.) Baehni, Candollea 9: 401. 1942; †*Lucuma nervosa* A. DC.; Family Sapotaceae), canistel‡ (eggfruit-tree), has escaped from cultivation on Fla. Keys but apparently is not naturalized. Native from s. Mex. (Yuc. to Tab., Ver. and Gro. s.) s. to S. Am. Also cultivated elsewhere for the edible fruit. References (also for next species)—Small, John K. Man. Southeast. Fl. 1032, fig. 1933. Cronquist, Arthur. Lloydia 9: 278-282. 1946. Long, Robert W., and Olga Lakela. Fl. Trop. Fla. 682. 1971. Wood, C. E., Jr., and R. B. Channell. J. Arnold Arbor. 41: 11-12. 1960.

‡POUTÈRIA DOMINIGÉNSIS (Gaertn. f.) Baehni (Candollea 9: 402. 1942; *Lucuma dominigensis* Gaertn. f.), Dominican pouteria, of Bahamas, Cuba, and Hispaniola, has been recorded also as rare in s. Fla., apparently as an escape.

**Prosòpis** L. (Family Leguminosae) **mesquite**
‡†*Prosopis* L., Syst. Nat. ed. 12, 2: 293. 1767; Mant. Pl. 10, 68. 1767.
*Prosopis* sect. *Strombocarpa* Benth., J. Bot. 4: 351. 1842.
*Strombocarpa* (Benth.) Gray, Pl. Wright 1: 60. 1852.

DERIVATION—Ancient Greek plant name, used by Dioscorides apparently for burdock.

OTHER COMMON NAME—mezquite (Spanish).

REFERENCES—Benson, Lyman. The mesquites and screwbeans of the United States. Am. J. Bot. 28: 748-754, illus. 1941.

Benson, Lyman. Typification of Prosopis odorata Torr. and Frem. Madroño 15: 53-54. 1959.

Burkart, Arturo. A monograph of the genus Prosopis (Leguminosae subfam. Mimosoideae). J. Arnold Arbor. 57: 219-249, 450-525, illus. 1976.

Isely, Duane. Legumes of the U.S. VI. Calliandra, Pithecellobium, Prosopis. Madroño 21: 273-298. 1972.

Isely, Duane, Mem. N.Y. Bot. Gard. 25(1): 116-122, 146. 1973.

Johnston, Marshall C. The North American mesquites, Prosopis sect. Algarobia (Leguminosae). Brittonia 14: 72-90, illus. 1962.

NUMBER OF SPECIES: Native trees, 3; native shrubs, 1; total, trees and shrubs, mostly of warm dry regions of New World, including 3 of sw. Asia and Africa, about 45.

The native tree mesquites formerly referred to ‡†*Prosopis juliflora* (Sw.) DC. are classed here in 2 species (1 with 2 varieties), following monographs by Johnston (1962), Isely (1972, 1973), and Burkart (1976). That species, as now defined, is native from Mex. (Sin.) s. to Peru and Brazil. The native tree species are *P. glandulosa* Torr., honey mesquite, and *P. velutina* Woot., velvet mesquite.

**Prosòpis glandulòsa** Torr. **honey mesquite‡†**

*Prosopis glandulosa* Torr., Ann. N.Y. Lyc. Nat. Hist. 2: 192, pl. 2. 1828.

‡†*Prosopis juliflora* var. *glandulosa* (Torr.) Cockerell, N. Mex. Agric. Exp. Stn. Bull. 15: 58. 1895.

*Prosopis chilensis glandulosa* (Torr.) Standl. U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 23: 1658. 1926.

DERIVATION—Glandular; the petioles with gland at base.

RANGE—E. Tex. and sw. Okla., w. to nw. Ariz., extreme sw. Utah, s. Nev., and s. Calif. Also s. in n. Mex. (B. Cal. and Son. e. to Tamps.). Naturalized n. to Kans. and se. Colo. Atlas vol. 3, maps 118-N, 118-SW (as *Prosopis juliflora*, in part).

**Prosòpis glandulòsa** Torr. var. **glandulòsa** **honey mesquite (typical)**

RANGE—E. Tex. and sw. Okla., w. to e. N. Mex., and s. to ne. Mex. (Coah. e. to Tamps.). Naturalized n. to Kans. and se. Colo.

**Prosòpis glandulòsa** var. **torreyàna** (L. Benson) M. C. Johnst. **western honey mesquite‡†**

*Prosopis odorata* Torr. & Frém in Frém., Rep. Explor. Exped. Rocky Mts. 313, pl. 1. 1845; in part.

‡*Prosopis juliflora* var. *torreyana* L. Benson, Am. J. Bot. 28: 751, fig. 4. 1941.

*Prosopis glandulosa* var. *torreyana* (L. Benson) M. C. Johnst., Brittonia 14: 82. 1962.

DERIVATION—John Torrey (1796-1873), botanist of Columbia University, one of the first to study *Prosopis* in the United States.

OTHER COMMON NAME—Torrey mesquite.

RANGE—Trans-Pecos Tex. w. to s. N. Mex., se. and w. Ariz., extreme sw. Utah, s. Nev., and s. Calif. Also s. in n. Mex. (B. Cal., Son., and Chih.).

**Prosòpis pubéscens** Benth. **screwbean mesquite‡†**

†*Prosopis odorata* Torr. & Frém., Rep. Explor. Exped. Rocky Mts. 313, pl. 1. 1845; in part.

‡*Prosopis pubescens* Benth., Hook. Lond. J. Bot. 5: 82. 1846.

*Strombocarpa pubescens* (Benth.) Gray, Pl. Wright. 1: 60. 1852.

*Strombocarpa odorata* (Torr. & Frém.) Torr. in Sitgreaves, Rep. Exped. Zuni Colo. Rivers 158. 1853.

DERIVATION—Pubescent, or finely hairy, referring to the foliage and twigs.

OTHER COMMON NAMES—screwbean, tornillo (Spanish).

RANGE—Trans-Pecos Tex., N. Mex., Ariz., extreme sw. Utah, s. Nev., and se. Calif. Also adjacent Mex. (n. B. Cal. to n. Coah.). Atlas vol. 3, map 117.

REFERENCE—Benson, Lyman. Typification of Prosopis odorata Torr. & Frem. (Leguminosae). Madroño 15: 53-54. 1959.

**Prosòpis velùtina** Woot. **velvet mesquite‡**

*Prosopis velutina* Woot., Bull. Torrey Bot. Club 25: 456. 1898.

‡†*Prosopis juliflora* var. *velutina* (Woot.) Sarg., Silva No. Am. 13: 15, pl. 628. 1902.

*Prosopis chilensis velutina* (Woot.) Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 23: 1658. 1926.

DERIVATION—Velvety, from the finely haired velvety foliage, twigs, and pods.

OTHER COMMON NAME—mesquite†.

RANGE—Extreme sw. N. Mex., s. and c. Ariz., and nw. Mex. (Son.). Atlas vol. 3, maps 118-N, 118-SW (as *Prosopis juliflora*, in part).

**Prùnus** L. (Family Rosaceae) **cherry; plum**

‡†*Prunus* L., Sp. Pl. 473. 1753; Gen. Pl. ed. 5, 213. 1754.

†*Amygdalus* L., Sp. Pl. 472. 1753; Gen. Pl. ed. 5, 212. 1754.

*Padus* Mill., Gard. Dict. Abridged. ed. 4, v. 3, p. [1]. 1754.

*Laurocerasus* Duhamel, Traité Arbr. Arbust. 1: 345, pl. 133, fig. 1755; "*Laurocerasus*."

*Cerasus* Adans., Fam. Pl. 2: 305. 1763.

DERIVATION—The classical Latin name of the plum tree.

REFERENCES—Groh, Herbert, and Harold A. Senn. Prunus in eastern Canada. Can. J. Res. Sect. C, Bot. Sci. 18: 318-346, illus. 1940.

Robertson, Kenneth R. J. Arnold Arbor. 55: 654-662, illus. 1974.

Wight, W. F. Native American species of Prunus. U.S. Dep. Agric. Bull. 179, 75 p., illus. 1915.

NUMBER OF SPECIES: Native trees, 18 (1 also in West Indies incl. P.R. and S. Am., and 5 also in Mex.); native shrubs, about 15, naturalized trees, 5; P.R., 2; total, widespread, especially n. temperate, also tropical, 200-400.

*Prunus alabamensis*, see **P. serotina** var. **alabamensis**

**Prùnus alleghaniénsis** Porter **Allegheny plum‡**

‡†*Prunus alleghaniensis* Porter, Bot. Gaz. 2: 85. 1877.

DERIVATION—Of the Allegheny Mountains, discovered in Pennsylvania.

OTHER COMMON NAMES—sloe plum, sloe, Allegheny sloe†, northern sloe.

RANGE—Mts. from e. Pa. s. to e. W. Va., also local in ne. Tenn. and in Conn. Atlas vol. 4, map 96.

**Prùnus americàna** Marsh. **American plum‡**

‡†*Prunus americana* Marsh., Arbustr. Am. 111. 1785.

DERIVATION—American.

OTHER COMMON NAMES—red plum, river plum, wild plum†, yellow plum, ciruela (Spanish).

RANGE—Widespread from N. H. and Vt. w. to N.Y., s. Ont., n. Mich., Minn., s. Man., se. Sask., and Mont., s. in mts. to N. Mex. and in e. from Okla. to ne. Fla. Atlas vol. 3, maps 119-NW, 119-SW; vol. 4, maps 95-NE, 95-SE; vol. 5, map 104.

HYBRIDIZES WITH: *Prunus angustifolia* (*P.* ×*orthosepala* Koehne).

**Prùnus angustifòlia** Marsh. **Chickasaw plum‡†**

‡†*Prunus angustifolia* Marsh., Arbustr. Am. 111. 1785.

DERIVATION—Narrow-leaf.

OTHER COMMON NAME—sand plum.

RANGE—Mo. w. to Kans., s. Nebr., and extreme se. Colo., s. to extreme e. N. Mex., Tex., and La. Also naturalized e. to c. Fla. and n. to N.J., W. Va., s. Ohio, and Ill. Extensively naturalized and spread by Indians in prehistoric times. Atlas vol. 3, map 120; vol. 4, map 97; vol. 5, map 105.

The original native distribution is not accurately known but probably was c. Tex. and Okla., according to Sargent (Man. Trees No. Am. ed. 2 corr., 570. 1926). Nearly two centuries ago, William Bartram (Travels N. S. Car. Ga. Fla. 57. 1791) wrote that he never saw the Chickasaw plum wild in the forests but always in old deserted Indian plantations. He supposed that it was brought from the Southwest beyond the Mississippi by the Chickasaws.

HYBRIDIZES WITH: *Prunus americana* (*P.* ×*orthosepala* Koehne).

*Prunus arkansana*, see **P. mexicana**

*Prunus australis*, see **P. serotina** var. **alabamensis**

PRÙNUS ÀVIUM (L.) L. MAZZARD‡

*Prunus cerasus* [var.] *avium* L., Sp. Pl. 474. 1753.

‡†*Prunus avium* (L.) L., Flora Suec. ed. 2, 165. 1755.

DERIVATION—Of birds.

OTHER COMMON NAMES—mazzard cherry, sweet cherry‡, gean.

RANGE—Escaped from cultivation in se. Can. and ne. U.S. from N.S. and Me. s. to n. Fla. and w., and from Wash. to Calif., and naturalized locally. Native of Europe and Asia.

**Prùnus caroliniàna** (Mill.) Ait. **Carolina laurelcherry‡**

*Padus caroliniana* Mill., Gard. Dict. ed. 8, *Padus* No. 6. 1768.
‡†*Prunus caroliniana* (Mill.) Ait., Hort. Kew. 2: 163. 1789.
*Laurocerasus caroliniana* (Mill.) M. J. Roem., Fam. Nat. Regn. Veg. Synops. Monog. 3: 90. 1847.

DERIVATION—Of Carolina.

OTHER COMMON NAMES—laurel cherry†, cherry-laurel, Carolina cherry, mock-orange, wild-peach.

RANGE—Coastal Plain from se. N.C. to c. Fla. and w. to e. Tex. Planted in Calif. and escaped. Also introduced in Bermuda. Atlas vol. 4, map 98; vol. 5, map 106.

PRÙNUS CÉRASUS L. SOUR CHERRY ‡†

‡†*Prunus cerasus* L., Sp. Pl. 474. 1753.

DERIVATION—Classical Latin and Greek name of the cherry, which was brought into Europe from Crimea, or the Chersonese (ancient Cerasus).

OTHER COMMON NAMES—Morello cherry, pie cherry.

RANGE—Escaped from cultivation in se. Can. and e. U.S. from P.E.I., N.S., and N. Engl., w. to Mich., s. to Mo., and e. to n. Fla., and in nw. U.S., and naturalized locally. Cultivated in w. Asia and se. Europe since ancient times and perhaps of hybrid origin from *Prunus avium* L., mazzard or sweet cherry.

*Prunus crenulata*, see **P. emarginata**
*Prunus cuthbertii*, see **P. serotina** var. **alabamensis**
*Prunus demissa*, see **P. virginiana**

PRÙNUS DOMÉSTICA L. GARDEN PLUM‡

‡†*Prunus domestica* L., Sp. Pl. 475. 1753.

DERIVATION—Domesticated, long cultivated for the edible plums.

OTHER COMMON NAMES—plum, Damson plum†.

RANGE—Escaped from cultivation in se. Can. and ne. and nw. U.S. and naturalized locally. Native of w. Asia and Europe.

*Prùnus doméstica* var. *insititia* (L.) Fiori & Paoletti (Fl. Anal. Ital. 1: 558. 1898; ‡*P. insititia* L.), bullace plum‡, of similar distribution, is treated here as a variety, not a separate species.

**Prùnus emarginàta** Dougl. ex Eaton **bitter cherry‡†**

*Cerasus emarginata* Dougl. ex Hook., Fl. Bor.-Am. 1: 169. 1832.
*Cerasus mollis* Dougl. ex Hook., Fl. Bor.-Am. 1: 169. 1832.
‡†*Prunus emarginata* Dougl. ex Eaton, Man. Bot. No. Am. ed. 7, 463. 1836.
*Prunus emarginata* var. *mollis* (Dougl.) Brewer in Brewer & Wats., Bot. Calif. 1: 167. 1876.
*Cerasus crenulata* Greene, Proc. Biol. Soc. Wash. 18: 56. 1905.
*Prunus crenulata* (Greene) Tidestrom in Dayton, Proc. Biol. Soc. Wash. 40: 119. 1927.
*Prunus emarginata* var. *crenulata* (Greene) Kearney & Peebles, J. Wash. Acad. Sci. 29: 481. 1939.
*Prunus pennsylvanica* var. *mollis* (Dougl.) Boivin, Nat. Can. 93: 435. 1966.

DERIVATION—Emarginate, or having a shallow notch at apex, referring to the petals and sepals.

OTHER COMMON NAMES—quinine cherry, wild cherry.

RANGE—C. and s. B.C. and Queen Charlotte Is., and from Wash. to w. Mont. and s. to s. Calif., s. Nev., Ariz., and sw. N. Mex. Atlas vol. 3, maps 122-N, 122-W.

REFERENCE—Merrill, Elmer D., and John R. Reeder. Bartonia 24: 69. 1946.

*Prunus eximia*, see **P. serotina** var. **eximia**

**Prùnus fremóntii** Wats. **desert apricot‡**

‡*Prunus fremontii* Wats., Bot. Calif. 2: 442. 1880.

DERIVATION—General John Charles Frémont (1813-90), United States explorer who collected one of the specimens cited in the original description.

RANGE—S. Calif. and B. Cal. and B. Cal. Sur, Mex. Atlas vol. 3, map 121.

*Prunus hirsutus*, see **P. serotina** var. **alabamensis**

**Prùnus hortulàna** Bailey **hortulan plum**‡

‡†*Prunus hortulana* Bailey, Gard. and Forest 5: 90. 1892.

DERIVATION—Of gardens, because this species became noticed through work of horticulturists.

OTHER COMMON NAMES—Miner plum, wild plum, wildgoose plum†.

RANGE—Sw. Ohio to n. Ill., se. Iowa, Mo., and e. Kans., s. to ne. Okla., n. Ark., and n. Ky. Also e. Tenn. and W. Va., perhaps an escape. Atlas vol. 4, map 99.

**Prùnus ilicifòlia** (Nutt. ex Hook. & Arn.) D. Dietr. **hollyleaf cherry**‡†

*Cerasus ilicifolia* Nutt. ex Hook. & Arn., Bot. Beech. Voy. 340, pl. 83. 1840.
‡†*Prunus ilicifolia* (Nutt.) D. Dietr., Synops. Pl. 3: 43. 1842.
*Laurocerasus ilicifolia* (Nutt.) M. J. Roem., Fam. Nat. Regn. Veg. Synops. Monog. 3: 92. 1847.

DERIVATION—Hollyleaf, the leaves evergreen and spiny-toothed.

OTHER COMMON NAMES—evergreen cherry, islay (Spanish).

RANGE—Pacific Coast region from c. Calif. (Napa Co.) s. to B. Cal. and B. Cal. Sur, Mex. Also Santa Catalina and San Clemente Is. of Calif. Atlas vol. 3, map 123.

HYBRIDIZES WITH: *Prunus lyonii*.

*Prunus insititia*, see **P. domestica**
*Prunus lanata*, see **P. nigra**

**Prùnus lyònii** (Eastw.) Sarg. **Catalina cherry**‡†

*Prunus occidentalis* W. S. Lyon, Bot. Gaz. 11: 202, (333). 1886. Non *P. occidentalis* Sw., Nov. Gen. Sp. Prodr. 80. 1788.
*Prunus ilicifolia* var. *occidentalis* [Lyon] Brandegee, Proc. Calif. Acad. Sci., Ser. 2, 1: 209. 1888.
*Cerasus lyoni* Eastw., Calif. Acad. Sci. Occas. Pap. 9(Handb. Trees Calif.): 54. 1905.
‡†*Prunus lyonii* (Eastw.) Sarg., Publ. Arnold Arbor. No. 4 (Pl. Wilson.), 1: 74. 1911.
*Prunus ilicifolia* ssp. *lyonii* (Eastw.) Raven, Aliso 5: 325. 1963.

DERIVATION—William Scrugham Lyon (1852-1916), United States horticulturist and forester, who discovered this species and first named it.

RANGE—Santa Rosa, Santa Cruz, Anacapa, Santa Catalina, and San Clemente Is. of Calif. Also local in B. Cal. Sur, Mex. Atlas vol. 3, map 124.

Also regarded as a variety, *Prunus ilicifolia* var. *occidentalis* Brandegee.

HYBRIDIZES WITH: *Prunus ilicifolia*.

PRÙNUS MAHÂLEB L. MAHALEB CHERRY‡†

‡†*Prunus mahaleb* L., Sp. Pl. 474. 1753.

DERIVATION—The Arabic name.

OTHER COMMON NAMES—perfumed cherry, St. Lucie cherry, mahaleb.

RANGE—Escaped from cultivation in se. Can. and ne. and nw. U.S., from s. Ont. and N. Engl. sw. to Del., Ind. and Kans., also Ida. and Wash. to Calif., and naturalized locally. Native of Europe and w. Asia.

*Prunus melanocarpa*, see **P. virginiana**

**Prùnus mexicàna** Wats. **Mexican plum**‡†

‡†*Prunus mexicana* Wats., Proc. Am. Acad. Arts Sci. 17: 353. 1882.
*Prunus arkansana* Sarg., Trees and Shrubs 2: 157, pl. 165. 1911.
*Prunus palmeri* Sarg., Trees and Shrubs 2: 247, pl. 192. 1913.

DERIVATION—Of Mexico.

OTHER COMMON NAMES—bigtree plum, inch plum‡.

RANGE—S. Ohio and Ky., w. to n. Mo., sw. Iowa, n. Nebr., and se. S. Dak., s. to c. and s. Tex., and e. to Ala. Also ne. Mex. (Coah. and N.L.). Atlas vol. 4, maps 100-N, 100-SE.

REFERENCES—See **Prunus nigra**

The name ‡*Prunus americana* var. *lanata* has been misapplied to this species, according to Shinners (1956). Nomenclaturally, that name is a synonym of *P. nigra*.

**Prùnus munsoniàna** Wight & Hedr. **wildgoose plum‡†**

‡†*Prunus munsoniana* Wight & Hedr., N.Y. Agric. Exp. Stn. Rep. 1910, pt. 2 (Plums of N.Y.): 88, illus. 1911.

DERIVATION—Thomas Volney Munson (1843-1913), United States nurseryman and specialist on grape culture.

OTHER COMMON NAME—Munson plum.

RANGE—Sw. Ohio and Ky., w. to s. Ill. n. Mo., and se. Kans., s. to c. Tex., and e. to n. La., Miss., and e. Tenn. Also naturalized e. to Ga. Atlas vol. 4, map 101.

**Prùnus myrtifòlia** (L.) Urban **West Indies cherry**

*Celastrus myrtifolius* L., Sp. Pl. 196. 1753.

‡†*Prunus myrtifolia* (L.) Urban, Symb. Ant. 5: 93. 1904.

*Laurocerasus myrtifolia* (L.) Britton in Britton & Shafer, No. Am. Trees 510, fig. 472. 1908.

DERIVATION—Myrtle-leaf.

OTHER COMMON NAMES—West Indian cherry†, myrtle laurelcherry‡, laurelcherry.

RANGE—Rare in s. Fla. (Dade Co.) and reported from Upper Fla. Keys. From Bahamas through West Indies incl. P.R. Also Venezuela to Surinam, Brazil, and Argentina. Atlas vol. 5, map 233.

**Prùnus nìgra** Ait. **Canada plum‡†**

‡†*Prunus nigra* Ait., Hort. Kew 2: 165. 1789.

*Prunus americana ß mollis* Torr. & Gray, Fl. No. Am. 1: 407. 1840.

*Prunus americana* var. *nigra* (Ait.) Waugh, Vt. Agric. Exp. Stn. Bull. 53: 58, 60. 1896.

*Prunus americana lanata* Sudw., U.S. Div. For. Bull. 14: 237. 1897.

†*Prunus lanata* (Sudw.) Mackenzie & Bush, Man. Fl. Jackson Co., Mo. 109. 1902.

DERIVATION—Black, referring to the dark branches.

OTHER COMMON NAMES—horse plum, red plum, wild plum.

RANGE—Maine and s. Que., w. to s. Ont., n. Mich., n. Minn., and se. Man., and s. to ne. Iowa, Ill., n. Ohio, N.Y., and Conn. Also s. N.B. and introduced in N.S. Atlas vol. 4, map 102.

REFERENCES—Bush, Benjamin Franklin. The identity of Prunus lanata M. & B. Am. Midl. Nat. 16: 254. 1935.

Shinners, Lloyd H. Prunus americana var. lanata a synonym of P. nigra. Rhodora 58: 330-331. 1956.

*Prunus occidentalis*, see **P. lyonii**

‡PRÙNUS PÀDUS L. (Sp. Pl. 473. 1923), European bird-cherry‡, a small tree native of Eurasia, has spread locally from cultivation in se. Can. and ne. U.S. Bayard Long (Naturalized occurrence of Prunus padus in America. Rhodora 25: 169-177. 1923) recorded it as naturalized in several places in the vicnity of Philadelphia, Pa., mostly around old estates.

*Prunus palmeri*, see **P. mexicana**

**Prùnus pensylvánica** L. f. **pin cherry‡†**

‡†*Prunus pensylvanica* L. f., Suppl. Pl. ed. 13, 252. 1781.

DERIVATION—Of Pennsylvania.

OTHER COMMON NAMES—fire cherry, wild red cherry, northern pin cherry, pigeon cherry, bird cherry.

RANGE—Nfld. and Labr. w. across Can. to s. Mack. and B.C., s. in Rocky Mts. to Mont. and Colo., Black Hills and s. in e. from S. Dak. to Ill., Pa., and N.J. and in Appalachian Mts. to n. Ga. and e. Tenn. Atlas vol. 3, maps 125-N, 125-NW; vol. 4, maps 103-N, 103-NE.

PRŪNUS PÉRSICA Batsch PEACH‡†

†*Amygdalus persica* L., Sp. Pl. 472. 1753.

‡*Prunus persica* Batsch, Beytr. Entw. Pragm. Gesch. Naturr. 30. 1801.

DERIVATION—Persian; also an old generic name for peach.

OTHER COMMON NAMES—common peach, nectarine, durazno (Spanish).

RANGE—Cultivated fruit tree, escaped from cultivation from Mass. and s. Ont. w. to Mich., s. to e. Tex., and e. to Fla., and in Calif. and naturalized locally, mostly in se. U.S. Native of China.

*Prunus rufula*, see **P. serotina** var. **rufula**

***Prùnus serótina** Ehrh. **black cherry‡†**

*Prunus virginiana* L., Sp. Pl. 473. 1753; in part.

*Padus virginiana* (L.) Mill., Gard. Dict. ed. 8, *Padus* No. 3. 1768; in part.

‡†*Prunus serotina* Ehrh., Beitr. Naturk. 3: 20. 1788.

*Padus serotina* Borkh., Archiv für Bot. (Römer) 1(2): 38. 1797.

DERIVATION—Late, referring to the relatively late-maturing fruit.

OTHER COMMON NAMES—wild black cherry, rum cherry, mountain black cherry†, wild cherry.

RANGE—N.S., N.B., and Maine, w. to s. Que., s. Ont., n. Mich., and e. Minn., s. to Iowa, extreme e. Nebr., e. Okla, and e. Tex., and e. to c. Fla. Also vars. in c. Tex. (Edwards Plateau) and mts. from Trans-Pecos Tex. w. to c. Ariz., s. in Mex. (Son. to Tamps., s. to Oax. and Chis.) to Guatemala. Also s. B. Cal. Sur and Revillagigedo Is. Atlas vol. 1, maps 155-N, 155-W, 155-E; vol. 5, map 107.

REFERENCE—McVaugh, Rogers. A revision of the North American black cherries (Prunus serotina Ehrh., and relatives). Brittonia 7: 279-315. 1951.

Besides the varieties listed below, another variety, *Prùnus serótina* var. *salicifòlia* (H.B.K.) Koehne (*P. serotina* ssp. *capuli* (Cav.) McVaugh; *P. capuli* Cav.), capulin black cherry (capulín), is native from c. Mex. (Gto. and Jal.) se. to Guatemala and is naturalized in nw. S. Am. from Venezuela to Bolivia.

**Prùnus serótina** Ehrh. var. **serótina** **black cherry (typical)‡**

RANGE—N.S., N.B., and Maine, w. to s. Que., s. Ont., n. Mich., and e. Minn., s. to Iowa, extreme e. Nebr., e. Okla., and e. Tex., and e. to c. Fla.

**Prùnus serótina** var. **alabaménsis** (Mohr) Little **Alabama black cherry‡**

*Prunus hirsutus* Ell., Sketch Bot. S.-C. Ga. 1: 541. 1821.

†*Prunus alabamensis* Mohr, Bull. Torrey Bot. Club 26: 118. 1899.

†*Prunus cuthbertii* Small, Bull. Torrey Bot. Club 28: 290. 1901.

†*Prunus australis* Beadle, Biltmore Bot. Studies 1: 162. 1902.

*Padus alabamensis* (Mohr) Small, Fl. Southeast. U.S. 574, 1331. 1903.

*Prunus serotina* [f.] 6 *alabamensis* Schneid. ex Schwerin, Mitt. Dtsch. Dendrol. Ges. 15: 3. 1906 [1907].

*Prunus serotina* ssp. *hirsuta* (Ell.) McVaugh, Brittonia 7: 299. 1951.

‡*Prunus serotina* var. *alabamensis* (Mohr) Little, Phytologia 4: 309. 1953.

DERIVATION—Of Alabama.

OTHER COMMON NAMES—southeastern black cherry, Alabama chokecherry, Beadle chokecherry, Alabama cherry†.

RANGE—E. Ga. w. to ne. Ala. and s. to nw. Fla. Also local in S.C. and N.C.

**Prùnus serótina** var. **eximia** (Small) Little **escarpment cherry**‡

*Prunus eximia* Small, Torreya 1: 146. 1901.
*Padus eximia* (Small) Small, Fl. Southeast. U.S. 573, 1331. 1903.
*Prunus serotina* ssp. *eximia* (Small) McVaugh, Brittonia 7: 302. 1951.
‡*Prunus serotina* var. *eximia* (Small) Little, Phytologia 4: 309. 1953.

DERIVATION—Distinguished, or extraordinary.

OTHER COMMON NAME—Edwards Plateau cherry.

RANGE—Edwards Plateau region in c. Tex.

**Prùnus serótina** var. **rufula** (Woot. & Standl.) McVaugh **southwestern black cherry**‡

*Prunus salicifolia* H.B.K. var. *acutifolia* Wats., Proc. Am. Acad. Arts Sci. 22: 411. 1887; *nom. provisor.*
*Padus rufula* Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 132. 1913.
*Padus virens* Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Her. 16: 133. 1913.
†*Prunus virens* (Woot. & Standl.) Shreve, Carnegie Inst. Wash. Publ. 217: 43. 1915.
†*Prunus virens* var. *rufula* (Woot. & Standl.) Sarg., J. Arnold Arbor. 2: 117. 1920.
*Prunus rufula* (Woot. & Standl.) Tidestr., Proc. Biol. Soc. Wash. 48: 39. 1935.
*Prunus parksii* Cory, Rhodora 45: 326. 1943.
*Prunus serotina* ssp. *virens* (Woot. & Standl.) McVaugh, Brittonia 7: 303. 1951.
*Prunus serotina* ssp. *virens* var. *virens* (Woot. & Standl.) McVaugh, Brittonia 7: 305. 1951.
(‡) *Prunus serotina* ssp. *virens* var. *rufula* (Woot. & Standl.) McVaugh, Brittonia 7: 307. 1951.

DERIVATION—Slightly reddish, referring to the rusty brown hairs on the young twigs, petioles, and midribs of leaves.

OTHER COMMON NAMES—Gila chokecherry, Chisos wild cherry, southwestern chokecherry†, capulín (Spanish).

RANGE—Mts. from Trans-Pecos Tex. w. to c. Ariz., s. to n. and c. Mex. (Son. to Tamps., s. to Gto. and Jal.).

‡†PRÙNUS SPINÒSA L. (Sp. 475. 1753), sloe‡†, blackthorn‡, an ornamental shrub or rarely small tree, has escaped from cultivation locally in se. Can. and ne. and nw. U.S. However, it apparently is not naturalized, as reported in the 1927 and 1953 checklists. Native of Europe, n. Africa, and w. Asia.

**Prùnus subcordàta** Benth. **Klamath plum**‡

‡†*Prunus subcordata* Benth., Pl. Hartw. 308. 1848.

DERIVATION—Somewhat cordate or heart-shaped, referring to the leaves.

OTHER COMMON NAMES—Sierra plum, Pacific plum†, western plum, wild plum.

RANGE—W. and s. Oreg. and s. to c. Calif. in Coast Range and Sierra Nev. Atlas vol. 3, map 126.

**Prùnus umbellàta** Ell. **flatwoods plum**‡

‡†*Prunus umbellata* Ell., Sketch Bot. S.-C. Ga. 1: 541. 1821.

DERIVATION—With umbels, referring to the flower clusters.

OTHER COMMON NAMES—hog plum, sloe, black sloe†.

RANGE—Coastal Plain chiefly, from s. N.C. s. to c. Fla., w. to e. Tex., and n. to s. Ark. Atlas vol. 4, map 105; vol. 5, map 108.

*Prunus virens*, see **P. serotina** var. **rufula**

***Prùnus virginiàna** L. **chokecherry**†

‡†*Prunus virginiana* L., Sp. Pl. 473. 1753; in part.
*Padus virginiana* (L.) Mill., Gard. Dict. ed. 8, *Padus* No. 3. 1768; in part.

*Cerasus demissa* Nutt. in Torr. & Gray, Fl. No. Am. 1: 411. 1840.
*Prunus demissa* (Nutt.) D. Dietr., Synops. Pl. 3: 43. 1842.
†*Prunus virginiana* var. *demissa* (Nutt.) Torr. in Wilkes, U.S. Explor. Exped. 17: 284. 1874.
*Cerasus demissa* var. *melanocarpa* A. Nels., Bot. Gaz. 34: 25. 1902.
*Prunus melanocarpa* (A. Nels.) Rydb., Bull. Torrey Bot. Club 33: 143. 1906.
*Prunus demissa* var. *melanocarpa* A. Nels. ex Koehne, Mitt. Dtsch. Dendrol. Ges. 20: 231. 1911.
†*Prunus virginiana* var. *melanocarpa* (A. Nels.) Sarg., J. Arnold Arbor. 2: 117. 1920.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—common chokecherry‡, black chokecherry, California chokecherry, eastern chokecherry, western chokecherry†, capulín (Spanish).

RANGE—Nfld., N.S., and s. Que., w. across Can. to s. Mackenzie and n. B.C., s. from Wash. to s. Calif., e. to Trans-Pecos and nw. Tex., Mo., and N.J., and s. in Appalachian Mts. to w. N.C. and e. Tenn. Atlas vol. 3, maps 127-N, 127-NW; vol. 4, maps 104-N, 104-NE.

REFERENCE—Benson Lyman. Plant taxonomy 297-302, illus. (map). 1962.

Three varieties have been distinguished by some authors: var. *virginiàna*, e. U.S.; var. *melanocàrpa* (A. Nels.) Sarg., w. U.S.; and var. *demíssa* (Nutt.) Torr., Pacific Coast region.

**Pseudophoènix** H. Wendl. ex Sarg. (Family Palmae) **buccaneer-palm**
‡†*Pseudophoenix* H. Wendl. ex Sarg., Bot. Gaz. 11: 314. 1886; *nom provis.* (?). H. Wendl. ex Sarg., Gard. and Forest 1: 352, fig. 55, 56. 1888.
*Pseudophoenix* H. Wendl. & Drude in Drude, in Engler & Prantl, Nat. Pflanzenfam. 2(3): 64. 1887.

DERIVATION—False *Phoenix* or false date palm, from the resemblance to the palm genus *Phoenix* L.

OTHER COMMON NAME—cherrypalm‡.

REFERENCES—Bailey, L. H. The Pseudophoenix puzzle. Gentes Herbarum 4: 276-284, illus. 1939.

Ledin, R. Bruce, Stanley C. Kiem, and Robert W. Read. Pseudophoenix and Florida. Principes 3: 23-39, illus. 1959.

Read, Robert W. Some notes on Pseudophoenix and a key to the species. Principes 13: 77-79, illus. 1959.

Read, Robert W. A study of Pseudophoenix (Palmae). Gentes Herbarum 10: 169-213, illus. 1968.

NUMBER OF SPECIES: Native trees (s. Fla.), 1, also in West Indies (incl. Mona of P.R., extinct?), se. Mex., and Belize; Hispaniola, additional, 3; total, 4.

**Pseudophoènix sargéntii** H. Wendl. ex Sarg. **buccaneer-palm**
‡*Pseudophoenix sargentii* H. Wendl. ex Sarg., Bot. Gaz. 11: 314. 1886; *nom. provis.* (?). H. Wendl. ex Sarg., Gard. and Forest 1: 352, fig. 55, 56. 1888.

DERIVATION—In honor of its discoverer, Charles Sprague Sargent (1841-1927), United States dendrologist, founder and director of the Arnold Arboretum of Harvard University and author of the 14-volume Silva of North America.

OTHER COMMON NAMES—Florida cherrypalm‡, Sargent cherrypalm, Sargent-palm, hog cabbage-palm†.

RANGE—Very rare on 3 Upper Fla. Keys, absent from s. Fla. mainland (almost extinct except in cultivation). Bahamas, Cuba, Navassa, Hispaniola, Saona, Mona of P.R. (extinct?), and Dominica. Also se. Mex. (Yuc. and Q. Roo) and Belize (Ambergris Cay). Atlas vol. 5, map 234.

The rarest native palm. Florida plants may be designated as var. *sargentii*, the typical variety, when 2 additional varieties are distinguished.

**Pseudotsùga** Carr. (Family Pinaceae) **Douglas-fir**

‡†*Pseudotsuga* Carr., Traité Gén. Conif. ed. 2, 256. 1867.

DERIVATION—False hemlock; from Greek *pseudo-*, false, and Japanese *tsuga*, hemlock, referring to the relationship to *Tsuga* (Endl.) Carr.

REFERENCE—Little, Elbert L., Jr. The genus Pseudotsuga (Douglas-fir) in North America. Leafl. West. Bot. 6: 181-198. 1952.

NUMBER OF SPECIES: Native trees, 2; e. Asia (China to Japan), 5; total, 7.

**Pseudotsùga macrocárpa** (Vasey) Mayr **bigcone Douglas-fir‡**

*Abies douglasii* var. *macrocarpa* Torr. in Ives, Rep. Colo. R. pt. 4: 28. 1860; *nom. nud.*

*Abies macrocarpa* Vasey, Gard. Monthly and Hort. 18: 21. 1876 (Jan.).

‡†*Pseudotsuga macrocarpa* [Vasey] Mayr, Wald. Nordam. 278, pl. 6, 8, 9. 1890.

DERIVATION—Large-fruit, referring to the very large cones.

OTHER COMMON NAMES—bigcone-spruce†, hemlock.

RANGE—Mts. of s. Calif. Atlas vol. 1, map 79-W.

***Pseudotsùga menzièsii** (Mirb.) Franco **Douglas-fir‡†**

*Pinus taxifolia* Lamb., Descr. Genus Pinus 1: 51, pl. 33. 1803. Non *P. taxifolia* Salisb., Prodr. 399. 1796.

*Abies taxifolia* [(Lamb.)] Poir. in Lam., Encycl. Méth. Bot. 6: 523. [1805.] Non *Abies taxifolia* Mus. ex Du Tour, Nouv. Dict. Hist. Nat. 20: 114. 1803; *nom. illegit.* Nec *Abies taxifolia* Desf., Tabl. École Bot. Mus. Nat. 206. 1804.

*Abies menziesii* Mirb., Paris Mus. Hist. Nat. Mem. 13: 63, 70. 1825; "*Menziezii.*"

*Pseudotsuga taxifolia* (Lamb.) Britton, Trans. N.Y. Acad. Sci. 8: 74. 1889.

†*Pseudotsuga taxifolia* (Poir.) Britton ex Sudw., U.S. Dep. Agric. Div. For. Bull. 14: 46. 1897.

‡*Pseudotsuga menziesii* (Mirb.) Franco, De Conif. Duar. Nom. 4. 1950; Bol. Soc. Broteriana (Coimbra), Ser. 2, 24: 74. 1950.

DERIVATION—Named for Archibald Menzies (1754-1842), Scotch physician and naturalist, who discovered it in 1793 at Nootka Sound on Vancouver Is., B.C.

OTHER COMMON NAMES—red-fir, Oregon-pine, Douglas-spruce, pino real colorado (Spanish).

RANGE—C. B.C., s. in Pacific Coast region through Wash. and Oreg. to c. coastal Calif. and in Sierra Nev. to c. Calif. and w. Nev., and s. in Rocky Mt. region from sw. Alta., Idaho, and Mont. to e. Nev., se. Ariz., s. N. Mex., and Trans-Pecos Tex. Also local in mts. of n. and c. Mex. (Son., Chih., Dgo., Zac., Coah., N.L., Hgo., and Pue.). Atlas vol. 1, maps 80-W, 80-N.

REFERENCES—Boivin, Bernardo. Pseudotsuga menziesii (Mirbel) Franco versus Pseudotsuga taxifolia (Poiret) Britton. Bol. Soc. Broteriana (Coimbra), Sér. 2, 28: 63-64. 1954.

Franco, João do Amaral. Cedrus libanensis et Pseudotsuga menziesii. Bol. Soc. Broteriana (Coimbra), Sér. 2, 24: 73-76. 1950.

Franco, João do Amaral. Bol. Soc. Broteriana (Coimbra), Sèr. 2, 25:206. 1951.

Franco, João do Amaral. On the legitimacy of the combination Pseudotsuga menziesii (Mirb.) Franco. Bol. Soc. Broteriana (Coimbra), Sér. 2, 28: 115-116. 1954.

Gleason, H. A. Pedanticism runs amuck. Rhodora 57: 332-335. 1955.

Krajina, Vladimir J. A summary of the nomenclature of Douglas-fir, Pseudotsuga menziesii. Madroño 13: 265-267. 1956.

Ross, R. Homonyms, nomina nuda, and the Douglas-fir. Taxon 5: 43-46. 1956.

Shinners, Lloyd H. Pseudotsuga and pseudo-science. Taxon 5: 43-46. 1956.

Stafleu, F. A. Pseudotsuga menziesii versus Pseudotsuga taxifolia. Taxon 5: 19, 38-39. 1956.

*Pseudotsuga menziesii* has become widely adopted after its acceptance in the 1953 checklist. This combination was proposed by Franco (1950) in accord with the International Code of Botanical Nomenclature (ICBN), as amended in 1935.

**Pseudotsùga menzièsii** (Mirb.) Franco var. **menzièsii** **coast Douglas-fir**

*Pseudotsuga douglasii* [var.] *viridis* Schwerin, Mitt. Dtsch. Dendrol. Ges. 76: 257. 1907 [1908].

*Pseudotsuga menziesii* var. *viridis* (Schwerin) Franco, Bol. Soc. Broteriana (Coimbra), Sér. 2, 24: 77. 1950.

OTHER COMMON NAMES—Douglas-fir (typical)‡, Oregon Douglas-fir, Oregon-pine.

RANGE—Pacific Coast region from sw. B.C. s. through w. Wash. and w. Oreg. to c. coastal Calif. and in Sierra Nev. to c. Calif. and w. Nev. Atlas vol. 1, maps 80-W, 80-N.

**Pseudotsùga menzièsii** var. **glaùca** (Beissn.) Franco

**Rocky Mountain Douglas-fir**

*Tsuga douglasii* var. *glauca* Beissn. in Jäger & Beissn., Ziergeh. Gärt. Park. ed. 2, 446. 1884 (not seen; seen in ed. 3, 446. 1889).

*Pseudotsuga douglasii* var. *glauca* Mayr, Wald. Nordam. 307, pl. 6. 1890.

*Pseudotsuga taxifolia* [var.] *glauca* (Beissn.) Sudw. U.S. Dep. Agric. For. Bull. 14: 48. 1897.

*Pseudotsuga glauca* Mayr, Mitt. Dtsch. Dendrol. Ges. 1901: 57. 1901 (not seen; seen in ed. 2, 10: 319. 1910.).

*Pseudotsuga douglasii* [var.] *caesia* Schwerin, Mitt. Dtsch. Dendrol. Ges. 16: 257. 1907 [1908].

*Pseudotsuga taxifolia* B. *caesia* (Schwerin) Ascherson & Graebner, Syn. Mitteleur. Fl. ed. 2, 1: 287. 1913.

*Pseudotsuga taxifolia* ssp. *glauca* (Mayr) Schwerin, Mitt. Dtsch. Dendrol. Ges. 33: 91. 1923.

*Pseudotsuga menziesii* var. *caesia* (Schwerin) Franco, Bol. Soc. Broteriana (Coimbra), Sér. 2, 24: 77. 1950.

‡*Pseudotsuga menziesii* var. *glauca* (Mayr) Franco, Bol. Soc. Broteriana (Coimbra), Sér. 2, 24: 77. 1950.

DERIVATION—Glaucous, or covered with a bloom, referring to the blue-green foliage.

OTHER COMMON NAMES—inland Douglas-fir, interior Douglas-fir, Colorado Douglas-fir, blue Douglas-fir, pino real colorado (Spanish).

RANGE—Rocky Mt. region from sw. Alta. and c. B.C. s. in mts. from e. Wash., Idaho, and Mont. to e. Nev., se. Ariz., s. N. Mex., and Trans-Pecos Tex. Also local in mts. of n. and c. Mex. (Son., Chih., Dgo., Zac., Coah., N.L., Hgo., and Pue.). Atlas vol. 1, maps 80-W, 80-N.

REFERENCE—Frothingham, E. H. Douglas fir: a study of the Pacific Coast and Rocky Mountain forms. U.S. Dep. Agric. Forest Serv. Circ. 150, 38 p., illus. 1909.

**Psídium** L. (Family Myrtaceae) **guava**

‡*Psidium* L., Sp. Pl. 470. 1753; Gen. Pl. ed. 5, 211. 1754.

*Mosiera* Small, Man. Southeast. Fl. 936, 1506. 1933.

DERIVATION—A late Latin name for the pomegranate, employed by Linnaeus as a generic name for guava, after rejecting Tournefort's earlier *Guacaja*.

REFERENCES—See also **Eugenia**

McVaugh, Rogers. Tropical American Myrtaceae, II. 8. Psidium L. Delimitation of the genus. Fieldiana: Botany 29: 512-529, illus. 1963.

NUMBER OF SPECIES: Native shrubs and small trees (s. Fla.), 1; naturalized trees (s. Fla.), 1; P.R., 2, incl. 1. in V.I.; total, trees and shrubs, tropical Am., about 150.

PSÍDIUM GUAJÀVA L. GUAVA

‡*Psidium guajava* L., Sp. Pl. 470. 1753.

DERIVATION—From the Spanish name guayaba.

OTHER COMMON NAMES—common guava‡, guayaba.

RANGE—Cultivated for the edible fruits and commonly naturalized in s. Fla. incl. Fla. Keys, and planted in Calif. Native of tropical Am., probably from s. Mex. to S. Am., the range greatly extended through cultivation in tropical and subtropical regions of the world. Naturalized n. to Bermuda, through West Indies incl. P.R. and V.I., and s. to Brazil, and in Hawaii.

**Psídium lóngipes** (Berg) McVaugh **long-stalk stopper**

‡†*Eugenia longipes* Berg, Linnaea 27: 150. 1856.
*Myrtus verrucosa* Berg, Linnaea 27: 405. 1854.
‡†*Eugenia bahamensis* Kiaersk., Bot. Tidsskr. 17: 266, pl. 8A, fig. 4. 1890.
*Anamomis bahamensis* (Kiaersk.) Britton in Small, Fl. Fla. Keys 104, 155. 1913.
*Anamomis longipes* (Berg) Britton in Small, Fl. Miami 132. 1913.
*Myrtus bahamensis* (Kiaersk.) Urban, Ark. Bot. 21A(5): 18. 1927.
*Mosiera bahamensis* (Kiaersk.) Small, Man. Southeast Fl. 937, 1506. 1933.
*Mosiera longipes* (Berg) Small, Man. Southeast Fl. 937, 1506. 1933.
*Psidium longipes* (Berg) McVaugh, J. Arnold Arbor. 54: 312. 1973.

DERIVATION—Long-stalk (with long foot), referring to the flower stalks.

OTHER COMMON NAMES—Bahama eugenia‡, trailing eugenia‡, stopper†.

REFERENCE—McVaugh, Rogers. J. Arnold Arbor. 54: 312-314. 1973.

RANGE—Local in s. Fla. (Dade Co.) incl. Lower Fla. Keys, Bahamas and Lesser Antilles (var.). Atlas vol. 5, map 235.

A shrub, often creeping, reported to become a small tree (Small, Man. Southeast. Fl. 937. 1933; Long and Lakela, Fl. Trop. Fla. 646. 1971). Mentioned in notes in 1927 and 1953 checklists. Represented in s. Fla. and Bahamas by the typical variety, var. *longipes*.

*Psorothamnus*, see **Dalea**

‡†*Psychòtria* L. (Family Rubiaceae), balsamo (wild-coffee), is omitted as a shrub without definite records as a tree. This tropical genus of shrubs and small trees is represented in continental U.S. by 3 species in Fla. Two species were accepted in previous checklists: ‡*Psychotria ligustrifòlia* (Northrop) Millsp., Bahama balsamo‡, of s. Fla. including Upper Fla. Keys, and †*Psychòtria nervòsa* Sw. (‡*Ps. undata* Jacq.), Seminole balsamo‡, of n. to s. Fla. including Fla. Keys. Both are tropical species of the West Indies reaching their northern limits in Fla. Apparently they are not reported as trees elsewhere within their broad ranges, for example, in P.R. Reference—Burch, Derek, Richard P. Wunderlin, and Daniel B. Ward. Contributions to the flora of Florida—9, Psychotria (Rubiaceae). Castanea 40: 273-279. 1975.

**Ptèlea** L. (Family Rutaceae) **hoptree**

‡†*Ptelea* L., Sp. Pl. 118. 1753; Gen. Pl. ed. 5, 54. 1754.

DERIVATION—The classical Greek name of elm, applied by Linnaeus to this genus with similar fruit.

REFERENCE—Bailey, Virginia Long. Revision of the genus Ptelea (Rutaceae). Brittonia 14: 1-45, illus. 1962.

NUMBER OF SPECIES: Native trees, 2 (1 also in Mex.); Mex., additional shrubs, 1; total, 3.

**Ptèlea crenulàta** Greene **California hoptree**

*Ptelea crenulata* Greene, Pittonia 1: 216. 1888.
*Ptelea baldwinii* Torr. & Gray var. *crenulata* (Greene) Jeps., Fl. West. Middle Calif. 249. 1901.

DERIVATION—Crenulate, wavy with small teeth, referring to the leaf margin.

RANGE—N. and c. Calif., inner Coast Ranges and foothills of Sierra Nev. Atlas vol. 3, map 129.

Added here as a shrub or small tree to 16 ft (5 m) high.

**Ptèlea trifoliàta** L. **common hoptree‡**

‡†*Ptelea trifoliata* L., Sp. Pl. 118. 1753.
†*Ptelea trifoliata ß mollis* Torr. & Gray, Fl. No. Am. 1: 680. 1840.
‡*Ptelea angustifolia* Benth., Pl. Hartw. 9. 1839.
‡*Ptelea pallida* Greene, U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 10: 70. 1906.

DERIVATION—Three-leaf, from the 3 leaflets.

OTHER COMMON NAMES—hoptree†, wafer-ash, narrowleaf hoptree, western hoptree, paleleaf hoptree, skunkbush, cola de zorrillo (Spanish).

RANGE—N.J. and w. N.Y., w. to extreme s. Ont., e. Mich., s. Wis., se. Iowa, e. Kans., and in mts. to s. Colo. and s. Utah, s. to Ariz., Tex., and s. Fla. Local in s. Que., perhaps introduced. Also Mex. (ne. Son. e. to Tamps., s. to Gro. and Oax.). Atlas vol. 3, maps 128-N, 128-SW; vol. 4, maps 106-N, 106-NE, 106-SE; vol. 5, map 109.

REFERENCE—Bailey, Virginia L., Shirley B. Herlin, and Harold E. Bailey. Ptelea trifoliata ssp. trifoliata (Rutaceae) in deciduous forest regions of eastern North America. Brittonia 22: 346-358, illus. 1970.

This widespread variable species contains many intergrading geographical varieties. Virginia Long Bailey (1962) distinguished 4 subspecies further divided into 8 varieties, also in Mexico a fifth subspecies with 2 additional varieties.

‡†PÙNICA GRANÀTUM L. (Sp. Pl. 472. 1753; Family Punicaceae; Pomegranate Family), pomegranate‡†, is omitted here as apparently not naturalized and usually not a tree. Planted for ornament and fruit across s. U.S. from Md. to Fla. and w. to Calif. Persistent after cultivation in Fla. and escaped (Long and Lakela, Fl. Trop. Fla. 635. 1971). Also in Hawaii, P.R., and V.I. Native of s. Asia and widely planted in tropical and subtropical regions.

*Pyrus*, see also **Malus** and **Sorbus**

PŸRUS L. (Family Rosaceae) PEAR

‡†*Pyrus* L., Sp. Pl. 479. 1753; Gen. Pl. ed. 5, 214. 1754.

DERIVATION—Classical Latin name of the pear tree.

PŸRUS COMMÙNIS L. PEAR‡†

‡†*Pyrus communis* L., Sp. Pl. 479. 1753.

DERIVATION—Common.

OTHER COMMON NAMES—common pear, pera (Spanish).

RANGE—Persistent after cultivation, escaped, and naturalized locally in various parts of the U.S. from Maine to Mo., Tex., and Fla. and in nw. U.S. Native of Europe and Asia.

**Quércus** L. (Family Fagaceae) **oak**

‡†*Quercus* L., Sp. Pl. 994. 1753; Gen. Pl. ed. 5, 431. 1754.
*Erythrobalanus* (Oerst.) O. Schwarz, Notizbl. [Berlin] Bot. Gard. Mus. 13: 4, 8. 1936; Repert. Sp. Nov. Regni Veg. Sonderbeih. D, 1: 35. 1936.

DERIVATION—The classical Latin name of oaks; said to be from Celtic fine and tree.

*Quercus*, oak, is the largest genus of native trees. This Checklist accepts 58 species, also 1 naturalized, and 9 varieties in addition to 7 typical varieties. A few named species have been reduced to varieties or hybrids.

About 10 additional native species are omitted as shrubs. For example, a few species of large trees have close relatives that are shrubs, often dwarf. These extreme variations in size are maintained as separate

species, even though intermediates or hybrids may occur. Examples are: *Quercus chrysolepis* Liebm., canyon live oak, and *Q. vaccinifolia* Kellogg, huckleberry oak; *Q. muehlenbergii* Engelm., chinkapin oak, and *Q. prinoides* Willd., dwarf chinkapin oak; and *Q. virginiana* Mill., live oak, and *Q. minima* (Sarg.) Small, dwarf live oak.

Many regional and State publications for identification are available. Selected references cited here contain additional information.

REFERENCES—Burger, William C. The species concept in Quercus. Taxon 24: 45-50. 1975.

Billings, W. D. A bud and twig key to the southeastern arborescent oaks. J. For. 34: 475-476. 1936.

Camus, A. Les Chênes. Monographie du genre Quercus. 3 v., illus. 1934-54. (Atlas of 3 v. (folio). 1934-48.) (*In* Encyclopèdie Economique de Sylviculture, v. 6-8.)

Coker, William C., and Henry R. Totten. Trees of the southeastern States, ed. 3. 419 p., illus. 1945. *Quercus*, p. 110-153, illus.

Dyal, Sarah C. A key to the species of oaks of eastern North America based on foliage and twig characters. Rhodora 38: 53-63, illus. 1936.

Elias, Thomas S. The genera of Fagaceae in the southeastern United States. J. Arnold Arbor. 52: 159-195, illus. 1971.

Jensen, Richard J. Numerical analysis of the scarlet oak complex (Quercus subgen. Erythrobalanus) in the eastern United States: relationships above the species level. Syst. Bot. 2: 122-133, illus. 1977.

Li, Hui-Lin, and Ju-Ying Hsiao. A preliminary study of the chemosystematics of American oaks: phenolic characters of leaves. Bartonia 42: 5-13, illus. 1974.

Muller, Cornelius H. The problem of genera and subgenera in the oaks. Chron. Bot. 7: 12-14. 1942.

Muller, Cornelius H. The oaks of Texas. Contrib. Tex. Res. Found. 1: 21-311, illus. 1951.

Muller, Cornelius H., and Rogers McVaugh. The oaks (Quercus) described by Née (1801), and by Humboldt & Bonpland (1809), with comments on related species. Contrib. Univ. Mich. Herb. 9: 507-722, illus. 1972.

Palmer, Ernest J. The red oak complex in the United States. Am. Midl. Nat. 27: 732-740, illus. 1942.

Tillson, A. H., and Muller, C.H. Anatomical and taxonomic approaches to segregation in American Quercus. Am. J. Bot. 29: 523-529, illus. 1942.

Trelease, William. The American oaks. Mem. Natl. Acad. Sci. 20, 255 pp., illus. 1924.

Vines, Robert A. Trees, shrubs and woody vines of the Southwest. 1104 p., illus. 1960. (*Quercus*, p. 147-198, illus.)

Williams, Simon. Secondary vascular tissues of the oaks indigenous to the United States. I-III. Bull. Torrey Bot. Club 66: 353-365, illus. 1939; 69: 1-10, 115-129, illus. 1942.

NUMBER OF SPECIES: Native trees, about 58 (incl. 10 also in Can.); native shrubs, about 10; naturalized trees, 1; Mex., about 125 (incl. 21 also in U.S.); C. Am., about 45 (incl. about 20 also in Mex.); Colombia, about 5; Cuba, 1 (var. of sp. also in Mex. and C. Am.); total, New World, about 200; Eurasia and n. Africa, about 300; total, about 500.

HYBRIDS—Numerous interspecific hybrids have been distinguished in *Quercus*, and the list continues to expand. Nearly all have been designated further by binomials. However, the hybrid origin generally has not been confirmed by experiment, and in a few instances the parentage is in doubt. Several hybrids were named first as species but were reduced

afterwards. One binomial is sufficient to include all crosses from different varieties of the same two parent species and to embrace all intermediate individuals not better identified under a parental name. Varietal names of natural hybrids are unnecessary. However, hybrids in cultivation may be named as cultivated varieties (cultivars).

The article on interspecific hybrids in *Quercus* in North America by Palmer in 1948 (cited below under References) was followed, with minor exceptions, in the 1953 checklist. He accepted about 70 binomials. Nine others were listed doubtfully, some from incomplete specimens or of questioned parentage. Also, he mentioned 15 others by formulas, mostly based upon specimens without fruit and thus inadequate for positive identification or naming. As only 1 binomial was from Mexico, it seems likely that other named species from that country may be reduced later to hybrids.

Names and citations of 12 binomials published afterwards for interspecific hybrids in *Quercus* are included in Appendix 3. Five were by Kendall Laughlin and 3 by John M. Tucker, who reduced 2 other species to hybrids. Also, a binomial for a cross involving 3 species has been proposed by Paul M. Thomson. Many interspecific hybrids in this genus have been the subject of detailed studies, some cited here and in the 1953 checklist.

In this revision, hybrids are mentioned under both parent species, as in the 1953 checklist, floras, manuals, and similar references. Also, binomials of hybrids are together in a third place, a separate alphabetical list. but are not cited alphabetically with species as previously. Hybrids with a few shrub species have been included, though partly not reaching tree size.

Binominals of 86 hybrids in *Quercus* are listed below. Additional information for most, including citations, any synonyms, ranges, and any common names, is in the 1953 checklist. About 20 other interspecific hybrids without binomials, compiled from Palmer and published floras, are indicated under both parents.

These binomials mentioned in the 1953 checklist as doubtfully authenticated hybrids, according to Palmer, have been omitted: †*Quercus* ×*benderi* Baenitz, *Q.* ×*burnetensis* Little, †*Q.* ×*cocksii* Sarg., and †*Q. oviedoensis* Sarg., †*Q.* ×*richteri* Baenitz, †*Q. venulosa* Ashe (not (Eichwald) Eichwald). A few other binomials cited earlier as synonyms have not been repeated. The binomial ‡*Quercus* ×*joorii* Trel., proposed for the hybrid *Q. falcata* × *shumardii*, is a synonym of *Q. falcata*, according to C. H. Muller (Tex. Res. Found. Contrib. 1: 103. 1951).

*Quércus* ×*alvordiàna* Eastw. (Calif. Acad. Sci. Occas. Pap. 9: 48, pl. 27, fig. 4. 1905), Alvord oak, represents the hybrid *Q. douglasii* × *turbinella*, according to John M. Tucker in 1952 and others. The name originally was proposed as a species and had been reduced to a variety of a shrubby species as ‡†*Q. dumosa* var. *alvordiana* (Eastw.) Jeps. These hybrid populations are so conspicuous in the vegetation in parts of southern California that they have been mapped separately as *Q.* ×*alvordiana* by Griffin and Critchfield (37; map 68). Another hybrid of wider distribution in California is *Q.* ×*moreha* Kellogg (*Q. kelloggi* × *wislizeni*), oracle oak.

‡†*Quércus undulàta* Torr. (Ann. Lyc. Nat. Hist. N.Y. 2: 248, pl. 4. 1828), wavyleaf oak, has been rejected. Tucker in 1961 concluded that this name had been applied to a variable complex involving hybridization in different parts of the Southwest of *Quercus gambelii* with 6 other species: *Q. arizonica*, *Q. grisea*, *Q. havardii*, *Q. mohriana*, *Q. muehlenbergii*, and *Q. turbinella*. For the most frequent and widespread hybrids

the available binomial (originally a species) is *Q.* ×*pauciloba* Rydb. (Bull. N.Y. Bot. Gard. 2: 215, pl. 30, fig. 2. 1901; *Q. gambelii* × *turbinella*).

Four interspecific hybrids of *Quercus robur* L., English oak, a cultivated species also naturalized locally, have been added, though apparently rare.

REFERENCES ON HYBRIDS—Benson, Lyman, Edwin A. Phillips, Patricia Ann Wilder, et al. Evolutionary sorting of characters in a hybrid swarm. I. Direction of slope. Am. J. Bot. 54: 1017-1026, illus. 1967.

Bray, J.R. A note on hybridization between Quercus macrocarpa Michx. and Quercus bicolor Willd. in Wisconsin. Can. J. Bot. 38: 601-604, illus. 1960.

Brophy, William B., and Dennis R. Parnell. Hybridization between Quercus agrifolia and Q. wislizenii (Fagaceae). Madroño 22: 290-302, illus. 1974.

Cooperrider, Miwako. Introgressive hybridization between Quercus marilandica and Q. velutina in Iowa. Am. J. Bot. 44: 804-810, illus. 1957.

Hardin, James W. Hybridization and introgression in Quercus alba. J. Arnold Arbor. 56: 336-363, illus. 1975.

Maze, Jack. Past hybridization between Quercus macrocarpa and Quercus gambelii. Brittonia 20: 321-333, illus. 1968.

Muller, Cornelius H. Ecological control of hybridization in Quercus: a factor in the mechanism of evolution. Evolution 6: 147-161, illus. 1952.

Palmer, Ernest J. Hybrid oaks of North America. J. Arnold Arbor. 29: 1-48. 1948.

Silliman, Frances E., and Robert S. Leisner. An analysis of a colony of hybrid oaks. Am. J. Bot. 45: 730-736, illus. 1958.

Thomson, Paul M. Quercus ×introgressa, a new hybrid oak. Rhodora 79: 453-464, illus. 1977.

Tucker, John M. Evolution of the Californian oak Quercus alvordiana. Evolution 6: 162-180, illus. 1952.

Tucker, John M. Taxonomic interrelationships in the Quercus dumosa complex. Madroño 11: 234-251, illus. 1952.

Tucker, John M. Two new oak hybrids from California. Madroño 12: 119-127. 1953.

Tucker, John M. Studies in the Quercus undulata complex. I. A preliminary statement. Am. J. Bot. 48: 202-208, illus. 1961.

Tucker, John M., Walter P. Cottam, and Rudy Drobnick. Studies in the Quercus undulata complex. II. The contribution of Quercus turbinella. Am. J. Bot. 48: 329-339, illus. 1961.

BINOMIALS OF INTERSPECIFIC HYBRIDS: *Quércus* ×*alvordiàna* Eastw. (*Q. douglasii* ×*turbinella*; ‡†*Q. dumosa* var. *alvordiàna* (Eastw.) Jeps; Tucker, Madroño 11: 250, fig. 3. 1952), Alvord oak‡

‡*Quércus* ×*ánceps* Palmer, non Korth., see *Q.* ×*palmeriana* A. Camus

‡*Quércus* ×*asheàna* Little *(Q. incana* × *laevis)*

†*Quercus* ×*áshei* Trel., non Sterrett, see *Q.* ×*asheana* Little

‡†*Quércus* ×*atlántica* Ashe *(Q. incana* × *laurifolia)*

‡†*Quércus* ×*bèadlei* Trel. *(Q. alba* × *michauxii)*

‡†*Quércus* ×*beaumontiàna* Sarg. *(Q. falcata* × *laurifolia)*

‡†*Quércus* ×*bebbiàna* Schneid. *(Q. alba* × *macrocarpa)*

‡*Quércus* ×*bernardiénsis* W. Wolf *(Q. prinus* × *stellata)*

*Quércus* ×*bimundòrum* Palmer, J. Arnold Arbor. 29: 18. 1948 *(Q. alba* × *robur)*

‡†*Quércus* ×*blufftonénsis* Trel. *(Q. falcata* × *laevis)*

‡†*Quércus* ×*brittonii* W. T. Davis *(Q. ilicifolia* × *marilandica)*

‡†*Quércus* ×*búshii* Sarg. *(Q. marilandica* × *velutina)*
‡†*Quércus* ×*bỳarsii* Sudw. *(Q. macrocarpa* × *michauxii)*
‡†*Quércus* ×*caduca* Trel. *(Q. incana* × *nigra)*
*Quércus* ×*caesariénsis* Moldenke *(Q. falcata* × *ilicifolia)*
‡*Quércus* ×*capèsii* W. Wolf *(Q. nigra* × *phellos)*
†*Quércus* ×*carolinénsis* Trel., non Muenchh., see *Q.* ×*cravensis* Little
*Quércus* ×*columnàris* Laughlin *(Q. palustris* × *rubra)*
‡†*Quércus* ×*cómptoniae* Sarg. *(Q. lyrata* × *virginiana)*
‡*Quércus* ×*cravenénsis* Little *(Q. incana* × *marilandica)*
‡†*Quércus* ×*dèamii* Trel. *(Q. macrocarpa* × *muehlenbergii)*
‡†*Quércus* ×*demarèi* Ashe *(Q. nigra* × *velutina)*
*Quércus* ×*discrèta* Laughlin *(Q. shumardii* × *velutina)*
*Quércus* ×*diversilòba* Tharp ex A. Camus (*Q. laurifolia* × *marilandica)*
‡*Quércus* ×*egglestònii* Trel. *(Q. imbricaria* × *shumardii)*
‡*Quércus* ×*eplíngii* C. H. Muller *(Q. douglasii* × *garryana)*
‡†*Quércus* ×*exácta* Trel. *(Q. imbricaria* × *palustris)*
‡†*Quércus* ×*fáxonii* Trel. *(Q. alba* × *prinoides)*
‡*Quércus* ×*fernáldii* Trel. *(Q. ilicifolia* × *rubra)*
‡†*Quércus* ×*fernòwii* Trel. *(Q. alba* × *stellata)*
‡*Quércus* ×*filiàlis* Little *(Q. phellos* × *velutina)*
*Quércus* ×*fontàna* Laughlin *(Q. coccinea* × *velutina)*
‡*Quércus* ×*gánderi* C. B. Wolf *(Q. agrifolia* × *kelloggii)*
‡*Quércus* ×*garlandènsis* Palmer *(Q. falcata* × *nigra)*
‡†*Quércus* ×*gíffordii* Trel. *(Q. ilicifolia* × *phellos)*
‡†*Quércus* ×*guadalupénsis* Sarg. *(Q. macrocarpa* × *stellata)*
‡†*Quércus* ×*harbisónii* Sarg. *(Q. stellata* × *virginiana)*
‡†*Quércus* ×*hàstingsii* Sarg. *(Q. marilandica* × *shumardii)*
‡†*Quércus* ×*hawkínsiae* Sudw. *(Q. rubra* × *velutina)*
‡†*Quércus* ×*heterophýlla* Michx. f. *(Q. phellos* × *rubra*; non *Q. heterophylla* Lam.), Bartram oak‡†
†*Quércus* ×*híllii* Trel., see *Q.* ×*schuettei* Trel.
*Quércus* ×*howéllii* Tucker *(Q. dumosa* × *garryana)*
‡*Quércus* ×*humidícola* Palmer *(Q. bicolor* × *lyrata)*
‡*Quércus* ×*incónstans* Palmer *(Q. gravesii* × *hypoleucoides)*
*Quércus* ×*introgréssa* P. M. Thomson *(Q. bicolor* × *(Q. muehlenbergii* × *prinoides))*
‡†*Quércus* ×*jackiàna* Schneid. *(Q. alba* × *bicolor)*
‡†*Quércus* ×*jolonénsis* Sarg. *(Q. douglasii* × *lobata)*
‡†*Quércus* ×*leàna* Nutt. *(Q. imbricaria* × *velutina)*
*Quércus* ×*lòwellii* Sarg., see *Q.* ×*fernaldii* Trel.
‡†*Quércus* ×*ludoviciàna* Sarg. *(Q. falcata* × *phellos)*
‡†*Quércus* ×*macnabiàna* Sudw. *(Q. durandii* × *stellata)*
*Quércus* ×*mahlòni* Palmer, see *Q.* ×*macnabiana* Sudw.
*Quércus* ×*megalèia* Laughlin *(Q. lyrata* × *macrocarpa)*
‡†*Quércus* ×*mellichámpii* Trel. *(Q. laevis* × *laurifolia)*
‡†*Quércus* ×*móreha* Kellogg *(Q. kelloggii* × *wislizeni)*, oracle oak‡
‡*Quércus* ×*moultonénsis* Ashe *(Q. phellos* × *shumardii)*
*Quércus* ×*múnzii* Tucker *(Q. lobata* × *turbinella)*
‡*Quércus* ×*mutábilis* Palmer & Steyerm. *(Q. palustris* × *shumardii)*
‡†*Quércus* ×*neopálmeri* Sudw. ex Palmer *(Q. nigra* × *shumardii)*
‡*Quércus* ×*neo-thárpii* A. Camus *(Q. minima* × *stellata)*
*Quércus* ×*nessiàna* Palmer *(Q. bicolor* × *virginiana)*
‡†*Quércus* ×*organénsis* Trel. *(Q. arizonica* × *grisea)*
‡†*Quércus* ×*palaeolithícola* Trel. *(Q. ellipsoidalis* × *velutina)*
*Quércus* ×*palmeriàna* A. Camus (Q. *falcata* × *imbricaria)*

*Quércus* ×*paucilòba* Rydb. (*Q. gambelii* × *turbinella*; Tucker, Cottam & Drobnick, Am. J. Bot. 48: 329, 338. 1961)
*Quércus* ×*pinetòrum* Moldenke, see *Q.* ×*wildenowiana* (Dippel) Zabel
‡†*Quércus* ×*podophýlla* Trel. (*Q. incana* × *velutina*)
†*Quércus* ×*pòrteri* Trel., see *Q.* ×*hawkinsiae* Sudw.
‡†*Quércus* ×*rèhderi* Trel. (*Q. ilicifolia* × *velutina*)
*Quércus* ×*ripària* Laughlin (*Q. rubra* × *shumardii*)
‡†*Quércus* ×*robbínsii* Trel. (*Q. coccinea* × *ilicifolia*)
‡*Quércus* ×*robústa* C. H. Muller (*Q. emoryi* × *gravesii*)
*Quércus* ×*rólfsii* Small (*Q. chapmanii* × *minima*)
‡†*Quércus* ×*rúdkinii* Britton (*Q. marilandica* × *phellos*)
‡†*Quércus* ×*runcinàta* (A. DC.) Engelm. (*Q. imbricaria* × *rubra*)
*Quércus* ×*sargéntii* Rehd. (Mitt. Dtsch. Dendrol. Ges. 1915 (24): 215. [1916]; *Q. prinus* × *robur*)
‡†*Quércus* ×*saúlii* Schneid. (*Q. alba* × *prinus*)
‡†*Quércus* ×*schochiàna* Dieck ex Palmer (*Q. palustris* × *phellos*)
‡*Quércus* ×*schuéttei* Trel. (*Q. bicolor* × *macrocarpa*)
‡†*Quércus* ×*smállii* Trel. (*Q. georgiana* × *marilandica*)
‡*Quércus* ×*stelloides* Palmer (*Q. prinoides* × *stellata*)
‡†*Quércus* ×*stérilis* Trel. ex Palmer (*Q. marilandica* × *nigra*)
‡*Quércus* ×*sterréttii* Trel. (*Q. lyrata* × *stellata*)
*Quércus* ×*subconvéxa* Tucker (*Q. durata* × *garryana*)
†*Quércus* ×*subfalcàta* Trel., non Friedrich, see *Q.* ×*ludoviciana* Sarg.
‡†*Quércus* ×*subíntegra* Trel. (*Q. falcata incana*)
*Quércus* ×*sublaurifólia* Trel. ex Palmer, see *Q.* ×*atlantica* Ashe
‡*Quércus* ×*substellàta* Trel. (*Q. bicolor* ×*stellata*)
‡*Quércus* ×*tharpii* C. H. Muller (*Q. emoryi* × *graciliformis*)
*Quércus* ×*tóttenii* Melvin (*Q. lyrata* × *michauxii*)
‡*Quércus* ×*tównei* Palmer (*Q. dumosa* × *lobata*)
‡†*Quércus* ×*tridentàta* (A. DC.) Engelm. (*Q. imbricaria* × *marilandica*)
‡*Quércus* ×*vàga* Palmer & Steyerm. (*Q. palustris* × *velutina*)
‡†*Quércus* ×*walteràna* Ashe (*Q. laevis* × *nigra*)
‡†*Quércus* ×*willdenowiàna* (Dippel) Zabel (*Q. falcata* × *velutina*)
*Quercus acuminata*, see **Q. muehlenbergii**

***Quércus agrifòlia** Née **coast live oak**†

‡†*Quercus agrifolia* Née, An. Cienc. Nat. [Madrid] 3: 271. 1801.
*Quercus oxyadenia* Torr. in Sitgreaves, Rep. Exped. Zuni Colo. Rivers 172, pl. 17. 1853.
*Quercus agrifolia* var. *oxyadenia* (Torr.) J. T. Howell, Madroño 2: 38. 1931.

DERIVATION—Perhaps a printer's mistake for *aquifolia*, hollyleaf, or *acrifolia*, sharp-leaf; literally field-leaf.

OTHER COMMON NAMES—California live oak‡, encina (Spanish).

RANGE—Coast Ranges mostly, from c. to s. Calif. incl. Santa Cruz and Santa Rosa Is. Also mts. of n. B. Cal. Norte, Mex. Atlas vol. 1, map 156-W.

HYBRIDIZES WITH: *Quercus kelloggii* (*Q.* ×*ganderi* C. B. Wolf); *Q. wislizeni*.

*Quercus ajoensis*, see **Q. turbinella** var. **ajoensis**

***Quércus álba** L. **white oak**‡†

‡†*Quercus alba* L., Sp. Pl. 996. 1753.

DERIVATION—White, from the light colored bark.

OTHER COMMON NAME—stave oak.

RANGE—Sw. Maine and extreme s. Que., w. to s. Ont., c. Mich., n. Wis., and se. Minn., s. to w. Iowa, extreme e. Kans., e. Okla., and e. Tex., and e. to n. Fla. and Ga. Also extinct in se. Nebr. Atlas vol. 1, map 157-E; vol. 5, map 110.

REFERENCE—Baranski, Michael J. An analysis of variation within white oak (Quercus alba L.). N.C. Agric. Exp. Stn. Tech. Bull. 236, 176 p., illus. 1975.

HYBRIDIZES WITH: *Quercus bicolor* (*Q.* ×*jackiana* Schneid.); *Q. durandii*; *Q. lyrata*; *Q. macrocarpa* (*Q.* ×*bebbiana* Schneid.); *Q. michauxii* (*Q.* ×*beadlei* Trel. ex Palmer); *Q. muehlenbergii*; *Q. prinoides* (*Q.* ×*faxonii* Trel.); *Q. prinus* (*Q.* ×*saulii* Schneid.); *Q. robur* (*Q.* ×*bimundorum* Palmer); *Q. stellata* (*Q.* ×*fernowii* Trel.).

*Quercus* ×*alvordiana*, see note under **Quercus** hybrids
*Quercus annulata*, see **Q. durandii**

***Quércus arizónica** Sarg. **Arizona white oak**‡†

‡†*Quercus arizonica* Sarg., Gard. and Forest 8: 92. 1985.
*Quercus endemica* C. H. Muller, Am. Midl. Nat. 18: 846. 1937.

DERIVATION—Of Arizona.

OTHER COMMON NAMES—Arizona oak, roble (Spanish).

RANGE—Mts. of Trans-Pecos Tex., s. N. Mex., and Ariz. Also n. Mex. (Son., Chih, and Dgo.). Atlas vol. 3, map 131.

HYBRIDIZES WITH: *Quercus gambelii*; *Q. grisea* (*Q.* ×*organensis* Trel.).

**Quércus arkansána** Sarg. **Arkansas oak**‡

‡†*Quercus arkansana* Sarg., Trees and Shrubs 2: 121, pl. 152. 1911.
*Quercus* ×*caput-rivuli* Ashe, Rhodora 25: 179. 1923.

DERIVATION—Named for Arkansas, where it was discovered at Fulton, Hempstead County.

OTHER COMMON NAMES—Arkansas water oak, water oak†.

RANGE—Coastal Plain, chiefly, in sw. Ga., nw. Fla., Ala., se. La., and sw. Ark. Atlas vol. 4, map 107; vol. 5, map 111.

REFERENCE—Palmer, Ernest J. Is *Quercus arkansana* a hybrid? J. Arnold Arbor. 6: 195-200. 1925.

*Quercus ashei*, see **Q. stellata**
*Quercus austrina*, see **Q. durandii**

***Quércus bìcolor** Willd. **swamp white oak**‡†

*Quercus prinus* ß *Quercus platanoides* Lam., Encyl. Méth. Bot. 1: 720. 1785.
‡†*Quercus bicolor* Willd. in Mühl. & Willd., Neue Schr. Gesell. Naturf. Freunde Berlin 3: 396. 1801.

DERIVATION—Two-color, referring to leaves, which are whitish beneath. Other pronunciation—*Quércus bícolor*.

RANGE—Sw. Maine w. to N.Y., extreme s. Que., extreme s. Ont., c. Mich., n. Wis., and se. Minn., s. to Iowa and Mo., and e. to Ky., Tenn., Va., and N.J. Also local in N.C. and ne. Kans. and extinct in se. Nebr. Atlas vol. 1, map 159-E.

HYBRIDIZES WITH: *Quercus alba* (*Q.* ×*jackiana* Schneid.); *Q. lyrata* (*Q.* ×*humidicola* Palmer); *Q. macrocarpa* (*Q.* ×*schuettei* Trel.); *Q. muehlenbergii* × *prinoides* (*Q.* ×*introgressa* P. M. Thomson); *Q. prinus*; *Q. robur*; *Q. stellata* (*Q.* ×*substellata* Trel.); *Q. virginiana* (*Q.* ×*nessiana* Palmer).

*Quercus borealis*, see **Q. rubra**
*Quercus boyntonii*, see **Q. stellata**
*Quercus breviloba*, see **Q. durandii** var. **breviloba**
*Quercus brevilobata*, see **Q. durandii** var. **breviloba**
*Quercus californica*, see **Q. kelloggii**
*Quercus* ×*caput-rivuli*, see **Q. arkansana**
*Quercus castanea*, see **Q. muehlenbergii**
*Quercus catesbaei*, see **Q. laevis**

**Quércus chápmanii** Sarg. **Chapman oak**‡

*Quercus obtusiloba* Michx. var. *parvifolia* Chapm., Fl. South. U.S. 423. 1860.
‡†*Quercus chapmanii* Sarg., Gard. and Forest 8: 93. 1895; "*chapmani*."

*Quercus virginiana* var. *pygmaea* Sarg., Bot. Gaz. 65: 449. 1918.
*Quercus pygmea* (Sarg.) Ashe, Bull. Torrey Bot. Club 55: 465. 1928.

DERIVATION—Named for Alvan Wentworth Chapman (1809-99), physician and botanist of Apalachicola, Fla., and author of Flora of the Southern United States, who first distinguished and named this oak.

OTHER COMMON NAMES—Chapman white oak†, scrub oak.

RANGE—Coastal Plain from extreme s. S.C. and se. Ga. to s. and nw. Fla. and s. Ala. Atlas vol. 4, map 108; vol. 5, map 112.

HYBRIDIZES WITH: *Quercus minima* (*Q.* ×*rolfsii* Small).

*Quercus chesosensis*, see **Q. gravesii**

***Quércus chrysólepis** Liebm. **canyon live oak**‡†

‡†*Quercus chrysolepis* Liebm., Forhandl. Overs. Dansk. Vidensk. Selsk. 1854: 173. 1854.
*Quercus wilcoxii* Rydb., Bull. N.Y. Bot. Gard. 2: 227, pl. 33, fig. 3-4. 1901.

DERIVATION—Golden-scale, referring to the yellowish acorn cups. Other pronunciation—*Quércus chrysolépis*.

OTHER COMMON NAMES—canyon oak, goldcup oak, live oak, maul oak, white live oak.

RANGE—Mts. mostly, from sw. Oreg. s. through Coast Ranges and Sierra Nev. to s. Calif. Local in mts. of w. Nev. and w. and c. Ariz. Also mts. of n. B. Cal. Norte, Mex. Atlas vol. 1, map 158-W.

REFERENCE—See **Q. dunnii**

*Quércus vaccinifòlia* Kellogg, huckleberry oak† (†*Q. chrysolepis* var. *vaccinifolia* (Kellogg) Engelm.), is a low shrub formerly included in this species. Range—Sw. Oreg. to c. Calif.

*Quercus cinerea*, see **Q. incana**

***Quércus coccínea** Muenchh. **scarlet oak**‡†

‡†*Quercus coccinea* Muenchh., Hausvater 5: 254. 1770.
†*Quercus* ×*richteri* Baenitz, Allg. Bot. Ztschr. 9: 85. 1903; *Q. rubra* × *palustris*.

DERIVATION—Scarlet, referring to the brilliant fall coloring.

OTHER COMMON NAMES—black oak, Spanish oak.

RANGE—Sw. Maine w. to N.Y., Ohio, s. Mich., and Ind., s. to s. Ill., se. Mo., and c. Miss., e. to s. Ala. and sw. Ga., and n. mostly w. of Coastal Plain to Va. Atlas vol. 1, map 161-E.

HYBRIDIZES WITH: *Quercus ilicifolia* (*Q.* ×*robbinsii* Trel.); *Q. palustris*; *Q. velutina* (*Q.* ×*fontana* Laughlin).

*Quercus diversicolor*, see **Q. rugosa**

***Quércus douglásii** Hook. & Arn. **blue oak**‡†

‡†*Quercus douglasii* Hook. & Arn., Bot. Beech. Voy. 391. 1840.

DERIVATION—Named for its discoverer, David Douglas (1798-1834), Scotch botanical explorer.

OTHER COMMON NAMES—California blue oak†, iron oak, mountain white oak, mountain oak.

RANGE—N. to s. Calif. mostly in foothills of Coast Ranges and Sierra Nev. Atlas vol. 1, map 160-W.

HYBRIDIZES WITH: *Q. garryana* (*Q.* ×*eplingii* C. H. Muller); *Q. lobata* (*Q.* ×*jolonensis* Sarg.); *Q. turbinella* (*Q.* ×*alvordiana* Eastw.).

*Quercus drummondii*, see **Q. stellata** var. **margaretta**

‡†*Quércus dumòsa* Nutt. (No. Am. Sylva 1: 7. 1842), California scrub oak‡†, of Calif. and n. B. Cal., Mex., is omitted here as a shrub. It may become a small tree, often when growing with hybrids of tree species. Two tree varieties in the 1953 checklist have been removed. Var. *macdonaldii* (Greene) Jeps., has been raised to a species or hybrid, Q.

*macdonaldii* Greene, McDonald oak. Var. *alvordiana* (Eastw.) Jeps., is now accepted as a hybrid, *Q.* ×*alvordiana* Eastw., Alvord oak. Reference—See **Q. turbinella**

**Quércus dúnnii** Kellogg **Dunn oak**

*Quercus chrysolepis* subsp. *Q. palmeri* Engelm., Trans. Acad. Sci. St. Louis 3: 393, 388. 1877.
*Quercus dunnii* Kellogg, Pac. Rural Press 17: 371. 1879 (June 7); "*dunni*"; *nom. provisor.*?
*Quercus palmeri* (Engelm.) Engelm. in Wats., Bot. Calif. 2: 97. 1879 (Oct. 1).
*Quercus dunnii* Kellogg ex Curran, Bull. Calif. Acad. Sci. 1: 146. 1885.
‡†*Quercus chrysolepis* var. *palmeri* (Engelm.) Sarg., Silva No. Am. 8: 107. 1895.

DERIVATION—George Washington Dunn (1814-1905), of California, who collected the type specimen in Baja California.

OTHER COMMON NAME—Palmer oak‡.

RANGE—Mts. of extreme sw. N. Mex., Ariz., and s. Calif., and adjacent Mex. (n. B. Cal. and extreme nw. Chih.). Atlas vol. 3, map 132.

REFERENCE—Tucker, John M., and Horace S. Haskell. Quercus dunnii and Q. chrysolepis in Arizona. Brittonia 12: 196-219, illus. 1960.

**Quércus durándii** Buckl. **Durand oak‡**

?*Quercus sinuata* Walt., Fl. Carol. 235. 1788; *nom. dubium.*
‡†*Quercus durandii* Buckl., Proc. Acad. Nat. Sci. Phila. [v. 12] 1860: 445. 1860.
†*Quercus austrina* Small, Fl. Southeast. U.S. 353, 1329. 1903.
*Quercus durandii* var. *austrina* (Small) Palmer, Am. Midl. Nat. 33: 518, fig. 2. 1945.

DERIVATION—Named in honor of Elias Magloire Durand (1794-1873), pharamacist and botanist of Philadelphia.

OTHER COMMON NAMES—bluff oak, Durand white oak†, white oak.

RANGE—Coastal Plain chiefly, from N.C. to n. Fla. and w. to s. and c. Tex., and n. to s. Okla. and sw. Ark. Also ne. Mex. (Coah. and Tamps.). Atlas vol. 4, map 109; vol. 5, map 113.

REFERENCE—Palmer, Ernest J. Quercus durandii and its allies. Am. Midl. Nat. 33: 514-519, illus. 1945.

HYBRIDIZES WITH: *Quercus alba*; *Q. lyrata*; *Q. stellata* (*Q.* ×*macnabiana* Sudw.); *Q. virginiana*.

**Quércus durándii** Buckl. var. **durándii** **Durand oak (typical)‡**

RANGE—Coastal Plain chiefly, from N.C. to n. Fla. and w. to c. and s. Tex. and sw. Ark.

**Quércus durándii** var. **brevilòba** (Torr.) Palmer **Bigelow oak‡**

‡*Quercus obtusifolia* var. ? *breviloba* Torr., U.S. Mex. Bound. Surv. Bot. 206. 1859.
†*Quercus annulata* Buckl., Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 445. 1860. Non *Q. annulata* J. E. Smith in Rees, Cycl. 29: *Quercus* No. 22. 1814(?). Nec. *Q. annulata* Korthals, Verhand. Nederland. Overz. Bezitt. Bot. 213. 1839-42 [1841?].
*Quercus san-sabeana* Buckl. ex Young, Fl. Tex. 507. 1873.
*Quercus brevilobata* Sarg., Gard. and Forest 8: 93. 1895.
*Quercus breviloba* (Torr.) Sarg., Silva No. Am. 8: 71, pl. 384. 1895.
*Quercus sinuata* var. *breviloba* (Torr.) C. H. Muller in Johnst., J. Arnold Arbor. 25: 439. 1944.
‡*Quercus durandii* var. *breviloba* (Torr.) Palmer, Am. Midl. Nat. 33: 516, fig. 3. 1945.

DERIVATION—Short-lobe, referring to the leaves.

OTHER COMMON NAMES—scrub oak, shin oak†, white oak.

RANGE—S. Okla. (Arbuckle Mts.) and c. Tex. (Edwards Plateau). Also ne. Mex. (Coah. and Tamps.).

***Quércus ellipsoidàlis** E. J. Hill **northern pin oak‡**

‡†*Quercus ellipsoidalis* E. J. Hill, Bot. Gaz. 27: 204, pl. 2, 3. 1899.

DERIVATION—Ellipsoidal, referring to the shape of the acorns.

OTHER COMMON NAMES—black oak, jack oak†, Hills oak.

RANGE—Mich., Wis., Minn., sw. Ont., and extreme sw. N. Dak., s. to

Iowa and extreme n. Mo., and e. to n. Ill., n. Ind., and extreme nw. Ohio. Atlas vol. 1, map 163-E.

REFERENCE—Wadmond, S. C. The Quercus ellipsoidalis—Quercus coccinea complex. Trans. Wis. Acad. Sci. Arts Lett. 28: 197-203, illus. 1933.

HYBRIDIZES WITH: *Quercus rubra*; *Q. velutina* (*Q.* ×*palaeolithicola* Trel.).

***Quércus émoryi** Torr. **Emory oak**‡†

‡†*Quercus emoryi* Torr. in Emory, Notes Mil. Reconn. Ft. Leav. Calif. 151, pl. 9. 1848.

DERIVATION—Named for its discoverer, Lt. Col. William Hemsley Emory (1811-87), leader of two military and scientific expeditions in the Southwest and a Major General in the Civil War.

OTHER COMMON NAMES—black oak, blackjack oak; bellota, roble negro (Spanish).

RANGE—Mts. of Trans-Pecos Tex., sw. N. Mex., and se. and c. Ariz. Also mts. of nw. Mex. (ne. Son., Chih., and n. Dgo.). Atlas vol. 1, map 162-W.

HYBRIDIZES WITH: *Quercus graciliformis* (*Q.* ×*tharpii* C. H. Muller); *Q. gravesii* (*Q* ×*robusta* C. H. Muller).

*Quercus endemica*, see **Q. arizonica**

**Quércus engelmánnii** Greene **Engelmann oak**‡

‡†*Quercus engelmannii* Greene in Kellogg & Greene, Illus. West Am. Oaks 33, pl. 9, fig. 3, pl. 15, fig. 2, 3, pl. 17. 1889; "*engelmanni*."

DERIVATION—Named in memory of George Engelmann (1809-84), United States physician and botanist of German birth, who studied this species and who monographed the oaks and other groups.

OTHER COMMON NAMES—evergreen white oak†, mesa oak.

RANGE—Sw. Calif. and Santa Catalina Is. only. Atlas vol. 3 map 133.

HYBRIDIZES WITH: *Quercus dumosa*; *Q. lobata*.

***Quércus falcàta** Michx. **southern red oak**‡†

†*Quercus rubra* L., Sp. Pl. 996. 1753; in part.
*Quercus nigra* var. *digitata* Marsh., Arbustr. Am. 121. 1785.
‡*Quercus falcata* Michx., Hist. Chênes Am. Sept., *Quercus* No. 16, pl. 28. 1801.
‡*Quercus* ×*joorii* Trel., Mem. Natl. Acad. Sci. 20: 15. 1924.

DERIVATION—Sickle-shape.

OTHER COMMON NAMES—Spanish oak, water oak, red oak.

RANGE—Long Is. (N.Y.), N.J., se. Pa., and Md., w. to W. Va., s. Ohio, s. Ill., s. Mo., and e. Okla., s. to e. Tex., and e. to n. Fla. Atlas vol. 1, map 165-E; vol. 5, map 114.

REFERENCES—See also **Quercus rubra**

Ware, Stewart. The morphological varieties of southern red oak. J. Tenn. Acad. Sci. 42: 29-36, illus. 1967.

Some authors since 1915, including the 1927 checklist, adopted for southern red oak the name *Quercus rubra*, which was restored for northern red oak by Fernald (Gray's Man. Bot. ed. 8, 546. 1950) and others.

HYBRIDIZES WITH: *Quercus ilicifolia* (*Q.* ×*caesariensis* Moldenke); *Q. imbricaria* (*Q.* ×*anceps* Palmer); *Q. incana* (*Q.* ×*subintegra* Trel.); *Q. laevis* (*Q.* ×*blufftonensis* Trel.); *Q. laurifolia* (*Q.* ×*beaumontiana* Sarg.); *Q. marilandica*; *Q. nigra* (*Q.* ×*garlandensis* Palmer); *Q. phellos* (*Q.* ×*ludoviciana* Sarg.); *Q. velutina* (*Q.* ×*wildenowiana* (Dippel) Zabel, *Q.* ×*pinetorum* Moldenke).

**Quércus falcàta** Michx. var. **falcàta** **southern red oak (typical)**‡

RANGE—Same as sp. Atlas vol. 1, map 165-E.

**Quércus falcàta** var. **pagodifòlia** Ell. **cherrybark oak**‡

‡*Quercus falcata* var. *pagodifolia* Ell., Sketch Bot. S.-C. Ga. 2: 605. 1824; "*pagodaefolia*."

*Quercus pagoda* Raf., Alsogr. Am. 23. 1838.

*Quercus pagodifolia* (Ell.) Ashe, Bot. Gaz. 24: 375. 1897; "*pagodaefolia*."

*Quercus rubra* [var.] *pagodifolia* (Ell.) Ashe, Proc. Soc. Am. For. 11: 90. 1916; "*pagodaefolia*"; *nom. provis.*

†*Quercus rubra* var. *pagodifolia* (Ell.) Ashe ex Sarg., Bot. Gaz. 65: 427. 1918; "*pagodaefolia*."

DERIVATION—Leaves like a pagoda.

OTHER COMMON NAMES—bottomland red oak, red oak, swamp red oak†, swamp Spanish oak, Elliott oak.

RANGE—Coastal Plain from se. Va. sw. to nw. Fla. and e. Tex., and n. in Miss. Valley to extreme se. Okla., se. Mo., s. Ill., and sw. Ind. Atlas vol. 1, map 165-E.

*Quercus fusiformis*, see **Q. virginiana**

***Quércus gàmbelii** Nutt. **Gambel oak**‡

‡*Quercus gambelii* Nutt., Proc. Acad. Nat. Sci. Phila., Phila. 4:22. 1848.

*Quercus stellata* Wangenh. δ *utahensis* A. DC., Prodr. 16(2): 22. 1864.

†*Quercus utahensis* (A. DC.) Rydb., Bull. N.Y. Bot. Gard. 2: 202, pl. 25, fig. 2. 1901.

DERIVATION—Named for its discoverer, William Gambel (1821-49), American naturalist who made an important collection of plants and birds in the southern Rocky Mountains in 1844.

OTHER COMMON NAMES—Rocky Mountain white oak†, Utah white oak, white oak, encino (Spanish).

RANGE—Mts. mostly, from Colo. and extreme s. Wyo., w. to Utah and s. Nev., s. to se. Ariz., s. N. Mex., Trans-Pecos Tex., and extreme nw. Okla. Also mts. of n. border of Mex. (ne. Son., n. Chih., and n. Coah.). Atlas vol. 1, map 164-W.

REFERENCE—Reveal, James L., and Virginia S. Spevak. Taxon 16: 413. 1967.

The known northern limit in northern Utah is only about 30 miles (48 km) south of the Idaho border. The latter is the only one of the 48 contiguous States which has no native species of oak (*Quercus*).

HYBRIDIZES WITH: *Quercus douglasii* (*Q.* ×*eplingii* C. H. Muller); *Q. dumosa* (*Q.* ×*howelii* Tucker); *Q. durata* (*Q.* ×*subconvexa* Tucker).

***Quércus garryàna** Dougl. ex Hook. **Oregon white oak**‡†

‡†*Quercus garryana* Dougl. ex Hook., Fl. Bor.-Am. 2: 159. 1839.

DERIVATION—Named in honor of Nicholas Garry (1781?-1856), secretary and later deputy governor of the Hudson Bay Company, who aided David Douglas in his botanical explorations in the Northwest.

OTHER COMMON NAMES—Garry oak, Oregon, oak, post oak, white oak, Brewer oak, shin oak.

RANGE—Mts. mostly, Pacific Coast region from sw. B.C. incl. s. Vancouver Is., s. to w. Wash., w. Oreg., and in Coast Ranges and Sierra Nev. to c. Calif. The only native oak in Wash. and B.C. Atlas vol. 1, map 166-W.

HYBRIDIZES WITH: *Quercus douglasii* (*Q.* ×*eplingii* C. H. Muller); *Q. dumosa* (*Q.* ×*howellii* Tucker); *Q. durata* (*Q.* ×*subconvexa* Tucker).

*Quercus geminata*, see **Q. virginiana**

**Quércus georgìana** M. A. Curtis **Georgia oak**‡†

‡†*Quercus georgiana* M. A. Curtis, Am. J. Sci. Arts, Ser. 2, 7: 408. 1849.

DERIVATION—Georgia; where it was discovered.

RANGE—Rare and local in S.C., n. Ga., and n. Ala. Atlas vol. 4, map 110.

HYBRIDIZES WITH: *Quercus marilandica* (*Q.* ×*smallii* Trel.).

**Quércus glaucoìdes** Mart. & Gal. **Lacey oak**‡†

*Quercus glaucoides* Mart. & Gal., Bull. Acad. Brux. 10(2): 209. 1843.

‡†*Quercus laceyi* Small, Bull. Torrey Bot. Club 28: 358. 1901.

*Quercus breviloba* subsp. *laceyi* (Small) A. Camus, Chênes 2: 680. 1939; Atlas 2: pl. 215, fig. 14-17. 1936.

DERIVATION—Appearing to be coated with a grayish bloom.

OTHER COMMON NAMES—rock oak, canyon oak, smoky oak.

RANGE—C. Tex. (Edwards Plateau) and ne. Mex. (Coah., N.L., and Tamps.). Atlas vol. 3, map 134.

‡†*Quercus laceyi* Small, of Tex. and ne. Mex. has been united with *Q. glaucoides* Mart. & Gal., also of ne. Mex., by Muller (in Correll and Johnston, Man. Vasc. Pl. Tex. 474. 1970.)

**Quércus graciliformis** C. H. Muller **Chisos oak**‡

‡*Quercus graciliformis* C. H. Muller, Torreya 34: 120. 1934; "C. H. Mueller."

DERIVATION—Slender form, from the long slender flexible branches.

RANGE—Chisos Mts., of Trans-Pecos Tex. and n. Coah. (Sierra del Carmen), Mex., only. Atlas vol. 3, map 135.

Closely related to *Quercus canbyi* Trel. and treated also as a northern variation of that Mexican species.

HYBRIDIZES WITH: *Quercus emoryi* (*Q.* ×*tharpii* C. H. Muller).

**Quércus gràvesii** Sudw. **Graves oak**‡†

*Quercus coccinea* var. *? microcarpa* Torr., U.S. Mex. Bound. Surv. Bot. 2: 206. 1859.

*Quercus texana* Buckl. var. *chesosensis* Sarg., Bot. Gaz. 65: 423. 1918.

‡†*Quercus gravesii* Sudw., U.S. Dep. Agric. Misc. Circ. 92: 86. 1927.

*Quercus chesosensis* (Sarg.) C. H. Muller, Am. Midl. Nat. 18: 850. 1937.

DERIVATION—Henry Solon Graves (1871-1950), second chief of the U.S. Department of Agriculture, Forest Service, and afterwards dean of Yale University School of Forestry.

OTHER COMMON NAME—Chisos red oak.

RANGE—Mts. of Trans-Pecos Tex. and Coah., Mex., only. Atlas vol. 3, map 136.

Closely related to *Quercus shumardii* var. *texana*, Texas oak.

HYBRIDIZES WITH: *Quercus emoryi* (*Q.* ×*robusta* C. H. Muller); *Q. hypoleucoides* (*Q.* ×*inconstans* Palmer).

**Quércus grísea** Liebm. **gray oak**‡

‡*Quercus grisea* Liebm., Overs. Danske Vidensk. Selsk. Forhandl. 1854: 171. 1854.

DERIVATION—Gray.

RANGE—Mts. of sw. and Trans-Pecos Tex. w. to N. Mex. and Ariz. Also n. Mex. (ne. Son. e. to Coah., s. to Zac. and Ags.). Atlas vol. 3, map 137.

HYBRIDIZES WITH: *Q. arizonica* (*Q.* ×*organensis* Trel.); *Q. gambelii*; *Q. mohriana*.

**Quércus havárdii** Rydb. **Havard oak**‡

‡*Quercus havardii* Rydb., Bull. N.Y. Bot. Gard. 2: 213, pl. 29, fig. 2. 1901; "*havardi*" except in key.

DERIVATION—Valéry Havard (1846-1927), United States Army surgeon of French birth, who collected plants in Texas and other States while stationed at Army posts.

OTHER COMMON NAMES—shin oak, shinnery oak, Havard shin oak.

RANGE—Southern Great Plains of w. Okla., w. Tex., and se. N. Mex. Atlas vol. 3, map 138.

Generally a very low shrub growing in dense masses but also becoming

a small tree, according to C. H. Muller (Tex. Res. Found. Contrib. 1: 53. 1951; Correll and Johnston, Man. Vasc. Pl. Tex. 477-478. 1970). The trees may be hybrids with tree species.

HYBRIDIZES WITH: *Quercus gambelii*; *Q. mohriana*; *Q. stellata*.

*Quercus hemisphaerica*, see **Q. laurifolia**
*Quercus hypoleuca*, see **Q. hypoleucoides**

**Quércus hypoleucòides** A. Camus **silverleaf oak**‡

†*Quercus hypoleuca* Engelm., Trans. Acad. Sci. St. Louis 3: 384. 1876. Non *Q. hypoleuca* Miq., Fl. Ind. Bot. 1 (1): 869. 1855.

‡*Quercus hypoleucoides* A. Camus, Paris Mus. d'Hist. Nat. Bull. Sér. 2, 4: 124. 1932.

DERIVATION—A renaming of the homonym *Quercus hypoleuca*. Like *Q. hypoleuca*, which in turn means white underneath, referring to the leaves.

OTHER COMMON NAME—white-leaf oak†.

RANGE—Davis Mts. of Trans-Pecos Tex. and mts. of sw. N. Mex. and se. Ariz. Also n. Mex. (ne. Son., Chih., n. Coah., and n. Dgo.). Atlas vol. 3, map 139.

HYBRIDIZES WITH: *Quercus gravesii* (*Q.* ×*inconstans* Palmer); *Q. shumardii*.

**Quércus ilicifòlia** Wangenh. **bear oak**‡†

*Quercus rubra nana* Marsh., Arbustr. Am. 123. 1785.

‡†*Quercus ilicifolia* Wangenh., Beytr. Teutsch. Holzger. Forstwiss. Nordam. Holz. 79, pl. 6, fig. 17. 1787; "*illicifolia*."

DERIVATION—Holly-leaf.

OTHER COMMON NAME—scrub oak.

RANGE—S. Maine w. to N.Y., s. to Pa., Md., and Del., and in mts. to e. W. Va., sw. Va., and w. N.C. Atlas vol. 4, map 111.

HYBRIDIZES WITH: *Quercus coccinea* (*Q.* ×*robbinsii* Trel.); *Q. falcata* (*Q.* ×*caesariensis* Moldenke); *Q. marilandica* (*Q.* ×*brittonii* W. T. Davis); *Q. phellos* (*Q.* ×*giffordii* Trel.); *Q. rubra* (*Q.* ×*fernaldii* Trel.); *Q. velutina* (*Q.* ×*rehderi* Trel.).

***Quércus imbricària** Michx. **shingle oak**‡†

‡†*Quercus imbricaria* Michx., Hist. Chênes Am. Sept., *Quercus* No. 9, pl. 15, 16. 1801.

*Erythrobalanus imbricaria* (Michx.) W. Schwarz, Notizbl. [Berlin] Bot. Gard. Mus. 13: 5, fig. 1. 1936; Repert. Sp. Nov. Regni Veg. Sonderbeih. D, 1: 24, fig. 1. 1936. O. Schwarz ex Hill & Salisb., Index Kew. Suppl. 10: 88. 1947.

DERIVATION—Overlapping, referring to the use of the wood by early settlers for shingles, as the common name also indicates.

OTHER COMMON NAME—laurel oak.

RANGE—Pa. w. to s. Mich., n. Ill., and s. Iowa, s. to e. Kans. and Ark., and e. to Tenn., N.C., Md., and Del. Also local in La. and Ala. Atlas vol. 4, map 112.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*anceps* Palmer); *Q. marilandica* (*Q.* ×*tridentata* (A. DC.) Engelm.); *Q. palustris* (*Q.* ×*exacta* Trel.); *Q. rubra* (*Q.* ×*runcinata* (A. DC.) Engelm.); *Q. shumardii* (*Q.* ×*egglestonii* Trel.); *Q. velutina* (*Q.* ×*leana* Nutt.).

**Quércus incàna** Bartr. **bluejack oak**‡†

*Quercus phellos* ß *brevifolia* Lam., Encycl. Méth. Bot. 1: 722. 1785.

‡*Quercus incana* Bartr., Travels No. So. Car. Ga, Fla. 378. 1791.

†*Quercus cinerea* Michx., Hist. Chênes Am. Sept., *Quercus* No. 8, pl. 14. 1801.

DERIVATION—Hoary, referring to the lower leaf surfaces.

OTHER COMMON NAMES—cinnamon oak, sandjack, bluejack, shin oak, turkey oak, upland willow oak.

RANGE—Coastal Plain from se. Va. to c. Fla. and w. to La. and e. and c.

Tex., and n. to se. Okla. and sw. Ark. Atlas vol. 4, map 113; vol. 5, map 115.

REFERENCES—Fernald, M. L. Rhodora 46: 44-45. 1944.

Harper, Francis. Quercus incana Bartram. Bartonia 22: 3. 1943.

Merrill, E. D. In defense of the validity of William Bartram's binomials. Bartonia 23: 10-35. 1945.

Rickett, H.W. Legitimacy of names in Bartram's "Travels." Rhodora 46: 389-391. 1944.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*subintegra* Trel.); *Q. laevis* (*Q.* ×*asheana* Little); *Q. laurifolia* (*Q.* ×*atlantica* Ashe); *Q. marilandica* (*Q.* ×*cravenensis* Little); *Q. nigra* (*Q.* ×*caduca* Trel.); *Q. phellos*; *Q. velutina* (*Q.* ×*podophylla* Trel.).

*Quercus* ×*joorii*, see **Q. falcata**

***Quércus kellóggii** Newb. **California black oak**‡††

*Quercus tinctoria* Bartr. var. *californica* Torr., U.S. Rep. Explor. Surv. Miss. Pac. 4(1): 138. 1856.

‡††*Quercus kelloggii* Newb., U.S. Rep. Explor. Surv. Miss. Pac. 6(3): 28, 89, fig. 6. 1857.

*Quercus californica* (Torr.) Cooper, Smithson. Inst. Rep. 1858: 261. 1859.

DERIVATION—Albert Kellogg (1813-87), physician and botanist of California, who later prepared drawings for Illustrations of West American Oaks (Kellogg and Greene 1889-90).

OTHER COMMON NAMES—black oak, Kellogg oak.

RANGE—Mts. mostly, from sw. Oreg. s. in Coast Ranges and Sierra Nev. to s. Calif. (San Diego Co.). Atlas vol. 1, map 167-W.

HYBRIDIZES WITH: *Quercus agrifolia* (*Q.* ×*ganderi* C. B. Wolf); *Q. wislizeni* (*Q.* ×*moreha* Kellogg).

*Quercus laceyi*, see **Q. glaucoides**

***Quércus laèvis** Walt. **turkey oak**‡††

‡*Quercus laevis* Walt., Fl. Carol. 234. 1788.

†*Quercus catesbaei* Michx., Hist. Chênes Am. Sept., *Quercus* No. 17, pl. 29, 30. 1801.

DERIVATION—Smooth, referring to the leaves (which, however, are not wholly hairless).

OTHER COMMON NAMES—Catesby oak, scrub oak.

RANGE—Coastal Plain from se. Va. to c. Fla. and w. to se. La. Atlas vol. 4, map 114; vol. 5, map 116.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*blufftonensis* Trel.); *Q. incana* (*Q.* ×*asheana* Little); *Q. laurifolia* (*Q.* ×*mellichampii* Trel.); *Q. nigra* (*Q.* ×*walteriana* Ashe).

***Quércus laurifòlia** Michx. **laurel oak**‡††

*Quercus hemisphaerica* Bartr., Travels No. So. Car. Ga. Fla. 309, 320, etc. 1791; *nom. nud.*

‡††*Quercus laurifolia* Michx., Hist. Chênes Am. Sept., *Quercus* No. 10, pl. 17. 1801.

†*Quercus laurifolia* [var.] *hybrida* Michx., Hist. Chênes Am. Sept., *Quercus* No. 10, pl. 18. 1801.

*Quercus phellos* ß *maritima* Michx., Hist. Chênes Am. Sept., *Quercus* No. 7, pl. 13, fig. 3. 1801.

*Quercus maritima* (Michx.) Willd., Sp. Pl. 4(1): 424. 1805. Non *Quercus maritima* Bartr., Travels No. So. Car. Ga. Fla. 164. 1791.

*Quercus hemisphaerica* Bartr. ex Willd., Sp. Pl. 4(1): 443. 1805.

*Quercus laurifolia* ß *obtusa* Willd., Sp. Pl. 4(1): 428. 1805.

*Quercus rhombifolia* Riddell, New Orleans Med. Surg. J. 9: 614. 1853.

*Quercus phellos* var. *laurifolia* Chapm., Fl. South. U.S. 420. 1860.

†*Quercus obtusa* (Willd.) Ashe, Torreya 18: 72. 1918 (May 8).

*Quercus rhombica* Sarg., Bot. Gaz. 65: 430. 1918 (May 15).

*Quercus laurifolia* var. *rhombica* (Sarg.) Trel., Mem. Natl. Acad. Sci. 20: 157. 1924.

*Quercus hemisphaerica* var. *maritima* (Michx.) C. H. Muller, Am. Midl. Nat. 65: 35. 1961.

DERIVATION—Laurel-leaf.

OTHER COMMON NAMES—Darlington oak, diamond-leaf oak, swamp laurel oak, laurel-leaf oak, water oak†, obtusa oak.

RANGE—Coastal Plain from se. Va. to s. Fla., w. to se. Tex., and n. locally to s. Ark. and s. Tenn. Atlas vol. 1, map 168-E; vol. 5, map 117.

REFERENCES—Burk, C. John. An evaluation of three hybrid-containing oak populations on the North Carolina Outer Banks. J. Elisha Mitchell Sci. Soc. 78: 18-21. 1962.

Burk, C. John. The hybrid nature of Quercus laurifolia. J. Elisha Mitchell Sci. Soc. 79: 159-163. 1963.

Fernald, M. L. The identity of Quercus laurifolia (plates 1031-1036). Rhodora 48: 137-145, illus. 1946.

Muller, Cornelius H. Tex. Res. Found. Contrib. 1: 85-88, pl. 69-71. 1951.

In the 1927 checklist *Quercus obtusa* was accepted as a distinct species, though Trelease (Natl. Acad. Sci. Mem. 20: 157. 1924) had regarded it as a variety. Fernald (Gray's Man. Bot. Ed. 8, 549-550, fig. 931, 935. 1950) used *Q. laurifolia* Michx. in place of *Q. obtusa* and adopted *Q. hemisphaerica* Bartr. for *Q. laurifolia*, as explained in the reference cited above. However, Palmer (J. Arnold Arbor. 29: 1-48. 1948) did not accept those changes. Muller's (1951) union of all these variations under a single species, *Q. laurifolia* is a simplified solution to the confused nomenclature and has been adopted here as well as in the 1953 checklist. Afterwards however, Muller (in Correll and Johnston, Man. Vasc. Pl. Tex. 486-487. 1970) distinguished both species.

Burk (1962, 1963) concluded that *Quercus laurifolia* is of hybrid origin.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*beaumontiana* Sarg.); *Q. incana* (*Q.* ×*atlantica* Ashe); *Q. laevis* (*Q.* ×*mellichampii* Trel.); *Q. marilandica* (*Q.* ×*diversiloba* Tharp ex A. Camus).

***Quércus lobàta** Née — **valley oak**

‡†*Quercus lobata* Née, An. Cienc. Nat. [Madrid] 3: 277. 1801.

DERIVATION—Lobed, referring to the leaves.

OTHER COMMON NAMES—valley white oak†, California white oak‡, water oak, weeping oak, white oak, roble (Spanish).

RANGE—N. to s. Calif., in valleys and foothills. Also Santa Cruz and Santa Catalina Is. Atlas vol. 1, map 170-W.

HYBRIDIZES WITH: *Quercus douglasii* (*Q.* ×*jolonensis* Sarg.); *Q. dumosa* (*Q.* ×*townei* Palmer); *Q. turbinella* (*Q.* ×*munzii* Tucker).

***Quércus lyràta** Walt. — **overcup oak‡†**

‡†*Quercus lyrata* Walt., Fl. Carol. 235. 1788.

DERIVATION—Lyre-shape, referring to the leaves.

OTHER COMMON NAMES—swamp post oak, swamp white oak, water white oak.

RANGE—Coastal Plain from Del. and e. Md. to Ga. and nw. Fla., w. to e. Tex., and n. in Miss. Valley to extreme se. Okla., se. Mo., s. Ill., sw. Ind., and w. Ky. Atlas vol. 1, map 169-E; vol. 5, map 118.

HYBRIDIZES WITH: *Quercus alba*; *Q. bicolor* (*Q.* ×*humidicola* Palmer); *Q. durandii*; *Q. macrocarpa* (*Q.* ×*megaleia* Laughlin); *Q.* ×*michauxii* (*Q.* ×*tottenii* Melvin); *Q. stellata* (*Q.* ×*sterrettii* Trel.); *Q. virginiana* (*Q.* ×*comptoniae* Sarg.).

**Quércus macdónaldii** Greene — **McDonald oak‡**

*Quercus macdonaldii* Greene in Kellogg & Greene, Illus. West Am. Oaks 25. 1889; 73, pl. 34. 1890; "*macdonaldi*."

‡*Quercus dumosa* var. *macdonaldii* (Greene) Jeps., Man. Fl. Pl. Calif. 274. 1923.

*Quercus dumosa* subsp. *macdonaldi* (Greene) A. Camus, Chênes 2: 470. 1939; Atlas 2: 68. 1936.

DERIVATION—Capt. James M. McDonald, who financed the publication of Kellogg and Greene's volume, Illustrations of West American Oaks.

OTHER COMMON NAME—island scrub oak.

REFERENCES—See **Q. turbinella**

RANGE—Santa Rosa, Santa Cruz, and Santa Catalina Is. of s. Calif. only. Absent from mainland. Atlas vol. 3, map 140.

Possibly the hybrid *Quercus dumosa* × *lobata*, according to Munz (Fl. So. Calif. 481. 1974). If so, the name replaces *Q.* ×*townei* Palmer.

***Quércus macrocárpa** Michx. **bur oak**‡†

‡†*Quercus macrocarpa* Michx., Hist. Chênes Am. Sept. *Quercus* No. 2, pl. 2, 3. 1801.
*Quercus mandanensis* Rydb., Brittonia 1: 86. 1931.

DERIVATION—Large-fruit.

OTHER COMMON NAMES—blue oak, mossycup oak, mossy-overcup oak, scrub oak.

RANGE—S. N.B., c. Maine, Vt., and s. Que., w. to s. and w. Ont., s. Man., and extreme se. Sask., s. to N. Dak., extreme se. Mont., ne. Wyo., S. Dak., c. Nebr., w. Okla., and c. and se. Tex., and ne. to Ark., c. Tenn., W. Va., Md., Pa., and Conn. Also local in La. and Ala. Atlas vol. 1, maps 172-W, 172-E.

HYBRIDIZES WITH: *Quercus alba* (*Q.* ×*bebbiana* Schneid.); *Q. bicolor* (*Q.* ×*schuettei* Trel.); *Q. gambelii*; *Q. lyrata* (*Q.* ×*megaleia* Laughlin); *Q. michauxii* (*Q.* ×*byarsii* Sudw.); *Q. muehlenbergii* (*Q.* ×*deamii* Trel.); *Q. robur*; *Q. stellata* (*Q.* ×*guadalupensis* Sarg.); *Q. virginiana*.

*Quercus mandanensis*, see **Q. macrocarpa**
*Quercus margaretta*, see **Q. stellata**

***Quércus marilándica** Muenchh. **blackjack oak**‡†

‡†*Quercus marilandica* Muenchh., Hausvater 5: 253. 1770.

DERIVATION—Of Maryland.

OTHER COMMON NAMES—blackjack, barren oak, black oak, jack oak.

RANGE—Long Is. (N.Y.) and N.J., w. to se. Pa., Md., s. Ohio, s. Ind., c. Ill., and s. Iowa, s. to e. Kans., w. Okla., and c. and se. Tex., and e. to nw. Fla. and Ga. Also local in s. Mich. Atlas vol. 1, map 171-E; vol. 5, map 119.

HYBRIDIZES WITH: *Quercus falcata*; *Q. georgiana* (*Q.* ×*smallii* Trel.); *Q. ilicifolia* (*Q.* ×*brittonii* W. T. Davis); *Q. imbricaria* (*Q.* ×*tridentata* (A. DC.) Engelm.); *Q. incana* (*Q.* ×*cravenensis* Little); *Q. nigra* (*Q.* ×*sterilis* Trel.); *Q. phellos* (*Q.* ×*rudkinii* Britton); *Q. rubra*; *Q. shumardii* (*Q.* ×*hastingsii* Sarg.); *Q. velutina* (*Q.* ×*bushii* Sarg.); *Q. laurifolia* (*Q.* ×*diversiloba* Tharp ex A. Camus).

*Quercus maritima*, see **Q. laurifolia**
*Quercus maxima*, see **Q. rubra**

***Quércus michaùxii** Nutt. **swamp chestnut oak**‡†

†*Quercus prinus* L., Sp. Pl. 995. 1753; in part.
‡*Quercus michauxii* Nutt., Gen. No. Am. Pl. 2: 215. 1818.

DERIVATION—François André Michaux (1770-1855), French botanist who prepared a classic illustrated 3-volume work on the trees of eastern United States and Canada and who described this species as a variety.

OTHER COMMON NAMES—basket oak, cow oak.

RANGE—Coastal Plain from N.J. and extreme e. Pa., s. to n. Fla., and w. to e. Tex., and n. in Miss. Valley to extreme se. Okla., Ark., se. Mo., s. Ill., s. Ind. and locally to se. Ky. and e. Tenn. Atlas vol. 1, map 174-E; vol. 5, map 120.

REFERENCES—See **Quercus prinus**

HYBRIDIZES WITH: *Quercus alba* (*Q.* ×*beadlei* Trel. ex Palmer); *Q. lyrata* (*Q.* ×*tottenii* Melvin); *Q. macrocarpa* (*Q.* ×*byarsii* Sudw.).

*Quercus minima*, see note under **Q. virginiana**
*Quercus minor*, see **Q. stellata**
*Quercus mississippiensis*, see **Q. stellata**

**Quércus mohriàna** Buckl. ex Rydb. **Mohr oak**‡†

‡†*Quercus mohriana* Buckl. ex Rydb., Bull. N.Y. Bot. Gard. 2: 219, pl. 31, fig. 1, 2. 1901.

DERIVATION—Charles Mohr (1824-1901), German-born manufacturing druggist and botanist of Alabama.

OTHER COMMON NAMES—shin oak†, scrub oak.

RANGE—W. Okla., c., w., and Trans-Pecos Tex., and ne. N. Mex.; also ne. Mex. (n. Coah.). Atlas vol. 3, map 141.

HYBRIDIZES WITH: *Quercus gambelii*; *Q. grisea*; *Q. havardii*; *Q. stellata*.

*Quercus montana*, see **Q. prinus**

***Quércus muehlenbérgii** Engelm. **chinkapin oak**‡†

*Quercus castanea* Muhl., Neue Schr. Gesell. Naturf. Freunde Berlin 3: 397. 1801 (after April). Non *Quercus castanea* Née, An. Cienc. Nat. [Madrid] 3: 276. 1801 (March).

*Quercus prinus* [var.] *acuminata* Michx., Hist Chênes Am. Sept. *Quercus* No. 5, pl. 8. 1801

*Quercus acuminata* (Michx.) Sarg., Silva No. Am. 8: 55, pl. 377. 1895. Non *Quercus acuminata* Roxb., Fl. Ind. 3: 636. 1832.

‡†*Quercus muehlenbergii* Engelm., Trans. Acad. Sci. St. Louis 3: 391. 1877; "*mühlenbergii*."

*Quercus prinoides* Willd. var. *acuminata* (Michx.) Gleason, Phytologia 4: 23. 1952.

DERIVATION—Gotthilf Henry Ernst Muhlenberg (1753-1815), minister and botanist of Pennsylvania, who first named this species.

OTHER COMMON NAMES—chestnut oak, yellow chestnut oak, rock chestnut oak, rock oak, yellow oak. (The spelling chinquapin oak is also in use for this name of American Indian origin.)

RANGE—W. Vt. and N.Y. w. to s. Ont., s. Mich., s. Wis., extreme se. Minn., and Iowa, s. to se. Nebr., e. Kans., w. Okla., and c. Tex., e. to nw. Fla., and n. mostly in mts. to Pa. and w. Conn. Also local in mts. of se. N. Mex., Trans-Pecos Tex., and ne. Mex. (N.L. and Tamps.). Atlas vol. 1, maps 173-W, 173-E; vol. 5, map 124.

This species intergrades or hybridizes with *Quercus prinoides* Willd., dwarf chinkapin oak, and has been united as a variety by a few authors. That species is omitted here as a clump-forming shrub, usually low but rarely treelike.

HYBRIDIZES WITH: *Quercus alba*; *Q. bicolor* × *prinoides* (*Q.* ×*introgressa* P. M. Thomson); *Q. gambelii*; *Q. macrocarpa* (*Q.* ×*deamii* Trel.); *Q. prinoides*.

**Quércus myrtifòlia** Willd. **myrtle oak**‡†

‡†*Quercus myrtifolia* Willd., Sp. Pl. ed. 4, 4(1): 424. 1805.

DERIVATION—Myrtle-leaf.

OTHER COMMON NAME—scrub oak.

RANGE—Coastal Plain from s. S.C. to s. Fla. and w. to s. Miss. Atlas vol. 4, map 115; vol. 5, map 121.

***Quércus nìgra** L. **water oak**‡†

‡†*Quercus nigra* L., Sp. Pl. 995. 1753.

DERIVATION—Black.

OTHER COMMON NAMES—possum oak, spotted oak.

RANGE—Coastal Plain from s. N.J. and Del. s. to s. Fla. and w. to e. Tex., and n. in Miss. Valley to se. Okla., Ark., se. Mo., and w. and s. Tenn. Atlas vol. 1, map 175-E; vol. 5, map 122.

REFERENCE—Wolf, W. Notes on foliar dimorphism in Quercus nigra L. Am. Midl. Nat. 33: 794. 1945.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*garlandensis* Palmer); *Q. incana* (*Q.* ×*caduca* Trel.); *Q. laevis* (*Q.* ×*walteriana* Ashe); *Q. marilandica* (*Q.* ×*sterilis* Trel.); *Q. phellos* (*Q.* ×*capesii* W. Wolf); *Q. shumardii* (*Q.* ×*neopalmeri* Sudw.); *Q. velutina* (*Q.* ×*demarei* Ashe).

***Quércus nuttállii** Palmer **Nuttall oak**‡†

‡*Quercus nuttallii* Palmer, J. Arnold Arbor. 8: 52. 1927.
*Quercus nuttallii* var. *cachensis* Palmer, J. Arnold Arbor. 18: 136, fig. 2. 1937.
*Quercus palustris* f. *nuttallii* (Palmer) C. H. Muller, Am. Midl. Nat. 27: 478. 1942.

DERIVATION—Thomas Nuttall (1789-1859), British-American botanist and ornithologist.

OTHER COMMON NAMES—red oak, Red River oak, pin oak.

RANGE—Coastal Plain from Ala. w. to se. Tex., n. in Miss. Valley to Ark., se. Okla., se. Mo., and w. Tenn. Atlas vol. 1, map 176-E.

HYBRIDIZES WITH: *Quercus shumardii*.

***Quércus oblongifólia** Torr. **Mexican blue oak**‡†

‡†*Quercus oblongifolia* Torr., in Sitgreaves Rep. Expl. Zuni Colo. Rivers 173, pl. 19. 1853; pl. 19, "*oblongifolius*."

DERIVATION—Oblong-leaf.

RANGE—Mts. of extreme sw. N. Mex. and se. Ariz. and n. Mex. (B. Cal. Sur, Son., Dgo., Chih., and Coah.). Atlas vol. 3, map 142.

**Quércus oglethorpénsis** Duncan **Oglethorpe oak**‡

‡*Quercus oglethorpensis* Duncan, Am. Midl. Nat. 24: 756. 1940.

DERIVATION—From Oglethorpe County, Ga., where this oak is most abundant, and indirectly honoring James Edward Oglethorpe (1696-1785), English general and founder of the colony of Georgia.

RANGE—Local in w. S.C. (Edgefield, Greenwood, McCormick, and Saluda Cos.) and ne. Ga. (Elbert, Greene, Oglethorpe, and Wilkes Cos.) Atlas vol. 4, map 116.

REFERENCE—Duncan, Wilbur H. Quercus oglethorpensis—range extensions and phylogenetic relationships. Lloydia 13: 243-248, illus. 1950.

*Quercus obtusa*, see **Q. laurifolia**
*Quercus oleoides*, see note under **Q. virginiana**
*Quercus oxyadenia*, see **Q. agrifolia**
*Quercus pagoda*, see **Q. falcata** var. **pagodifolia**
*Quercus pagodaefolia*, see **Q. falcata** var. **pagodifolia.**
*Quercus palmeri*, see **Q. dunnii**

***Quércus palústris** Muenchh. **pin oak**‡†

‡†*Quercus palustris* Muenchh., Hausvater 5: 253. 1770.

DERIVATION—Of marshes.

OTHER COMMON NAMES—swamp oak, water oak, swamp Spanish oak, Spanish oak.

RANGE—R. I., Mass., and Vt., w. to extreme s. Ont., s. Mich., n. Ill., and Iowa, s. to Mo., e. Kans., and ne. Okla., and e. to c. Ark., Tenn., c. N.C., and Va. Also extinct in c. S.C. Atlas vol. 1, map 177-E.

HYBRIDIZES WITH: *Quercus coccinea*; *Q. imbricaria* (*Q.* ×*exacta* Trel.); *Q. phellos* (*Q.* ×*schochiana* Dieck); *Q. rubra* (*Q.* ×*columnaris* Laughlin); *Q. shumardii* (*Q.* ×*mutabilis* Palmer & Steyerm.); *Q. velutina* (*Q.* ×*vaga* Palmer & Steyerm.).

***Quércus phéllos** L. **willow oak**‡†

‡†*Quercus phellos* L., Sp. Pl. 944. 1753.

DERIVATION—The ancient Greek name of *Quercus suber* L., cork oak.

OTHER COMMON NAMES—pin oak, peach oak, swamp willow oak.

RANGE—Coastal Plain from N.J. and se. Pa. s. to Ga. and n. Fla., w. to e. Tex., and n. in Miss. Valley to se. Okla., Ark., se. Mo., s. Ill., w. and s.

Ky., and e. Tenn. Atlas vol. 1, map 178-E; vol. 5, map 123.

HYBRIDIZES WITH: *Quercus falcata* (*Q.* ×*ludoviciana* Sarg.); *Q. ilicifolia* (*Q.* ×*giffordii* Trel.); *Q. incana*; *Q. marilandica* (*Q.* ×*rudkinii* Britton); *Q. nigra* (*Q.* ×*capesii* W. Wolf); *Q. palustris* (*Q.* ×*schociana* Dieck); *Q. rubra* (*Q.* ×*heterophylla* Michx. f.); *Q. shumardii* (*Q.* ×*moultonensis* Ashe); *Q. velutina* (*Q.* ×*filialis* Little.)

‡†*Quércus prinoìdes* Willd. (in Muhl. & Willd., Neue Schr. Ges. Naturf. Freunde Berlin 3: 397. 1801), dwarf chinkapin oak‡†, is omitted here as a clump-forming shrub, usually low but rarely treelike. Intergrades or hybridizes with *Q. muehlenbergii* Engelm., chinkapin oak, which has been united as a variety by a few authors. Range—N.H. and Mass., w. to se. Nebr., s. to c. Okla., and e. to n. Ala. and N.C.

*Quercus prinoides*, see also **Q. muehlenbergii**

***Quércus prìnus** L. **chestnut oak‡†**

‡*Quercus prinus* L., Sp., Pl. 995. 1753; in part.
†*Quercus montana* Willd., Sp. Pl. ed. 4, 4(1): 440. 1805.

DERIVATION—The classical Greek name of a European oak.

OTHER COMMON NAMES—rock chestnut oak, rock oak, tanbark oak.

RANGE—Sw. Maine w. to N.Y., extreme s. Ont., se. Mich., s. Ind., and s. Ill., s. to ne. Miss., and e. to c. Ala., c. Ga., and Del., mostly w. of Coastal Plain. Atlas vol. 1, map 179-E.

REFERENCES—Bernard, John M., and David E. Fairbrothers. Bull. Torrey Bot. Club 94: 433–438, illus. 1967.

Fernald, M. L. Types of some American trees. J. Arnold Arbor. 27: 386-394, illus. 1946.

Hardin, James W. J. Arnold Arbor. 56: 351-352. 1975.

Palmer, Ernest J. Quercus prinus Linnaeus. Am. Midl. Nat. 29: 783-784. 1943.

Sargent, C. S. Three of Clayton's oaks in the British Museum. Rhodora 17: 39-40. 1915.

Svenson, H. K. On the descriptive method of Linnaeus. Rhodora 47: 273-302, 363-388, illus. 1945.

*Quercus prinus* has been restored for chestnut oak, following Fernald (Gray's Man. Bot. ed. 8, 544-545. 1950) and universal usage before 1915. However, some authors, including the 1927 checklist, have applied *Q. prinus* to swamp chestnut oak and have adopted *Q. montana* for this species. One solution would be to reject *Q. prinus* as widely and persistently used for a taxon not including the type (ICBN Art. 69) and to accept *Q. montana* for this species, chestnut oak.

HYBRIDIZES WITH: *Quercus alba* (*Q.* ×*saulii* Schneid.); *Q. bicolor*; *Q. robur* (*Q.* ×*sargentii* Rehd.); *Q. stellata* (*Q.* ×*bernardiensis* W. Wolf).

*Quercus prinus*, see also **Q. michauxii**

**Quércus púngens** Liebm. **sandpaper oak‡**

‡*Quercus pungens* Liebm., Forhandl. Overs. Danske Vidensk. Selsk. 1854: 171. 1854.
*Quercus undulata* var. *pungens* (Liebm.) Engelm., Trans. Acad. Sci. St. Louis 3: 392. 1877.

DERIVATION—Pricking or piercing, referring to the spiny-toothed leaves.

OTHER COMMON NAME—scrub oak.

RANGE—C. Tex. (Edwards Plateau) and w. mostly in mts. to Trans-Pecos Tex., s. N. Mex., and se. Ariz. Also in n. Mex. (Chih. to Tamps.). Atlas vol. 3, map 144.

**Quércus púngens** Liebm. var. **púngens** **sandpaper oak (typical)‡**

RANGE—Same as sp.

**Quércus pungens** var. **vaseyàna** (Buckl.) C. H. Muller **Vasey oak‡**

‡†*Quercus vaseyana* Buckl., Bull. Torrey Bot. Club 10: 91. 1883.

*Quercus undulata vaseyana* (Buckl.) Rydb., Bull. N.Y. Bot. Gard. 2: 218, pl. 30, fig. 5. 1902.

*Quercus pungens* var. *vaseyana* (Buckl.) C. H. Muller, Contrib. Tex. Res. Found. 1: 70, pl. 46. 1951.

DERIVATION—George Vasey (1822-93), botanist of the United States Department of Agriculture.

OTHER COMMON NAME—shin oak†.

RANGE—C. Tex. (Edwards Plateau) and Trans-Pecos Tex. Also in ne. Mex. (Coah. to Tamps.).

*Quercus pygmea*, see **Q. chapmanii**
*Quercus reticulata*, see **Q. rugosa**
*Quercus rhombica*, see **Q. laurifolia**
*Quercus rhombifolia*, see **Q. laurifolia**
*Quercus* ×*richteri*, see **Q. coccinea**

QUÉRCUS RÒBUR L. ENGLISH OAK‡

‡*Quercus robur* L., Sp. Pl. 996. 1753.

DERIVATION—Ancient Latin name, connoting the strength of the wood.

RANGE—Escaping from cultivation and naturalized locally in se. Can. from N.S. w. and in ne. U.S. from New. Engl. w. and s. Native of Europe, n. Africa, and w. Asia.

HYBRIDIZES WITH: *Q. alba* (*Q.* ×*bimundorum* Palmer); *Q. bicolor*; *Q. macrocarpa*; *Q. prinus* (*Q.* ×*sargentii* Rehd.).

*Quercus rubra*, see also **Q. falcata**

***Quércus rùbra** L. **northern red oak‡†**

‡*Quercus rubra* L., Sp. Pl. 996. 1753; in part.

*Quercus rubra* L. emend. Du Roi, Harbk. Baumz. Nordam. 2: 265, pl. 5, fig. 2. 1772.

*Quercus rubra maxima* Marsh., Arbustr. Am. 122. 1785.

†*Quercus borealis* Michx. f., No. Am. Sylva 1: 98. 1817.

*Quercus rubra* var. *borealis* (Michx. f.) Farwell, Ann. Rep. Mich. Acad. Sci. 6: 206. 1904.

*Quercus maxima* (Marsh.) Ashe, Proc. Soc. Am. For. 11: 90. 1916.

*Quercus borealis* [var.] *maxima* (Marsh.) Ashe, Proc. Soc. Am. For. 11: 90. 1916 (after Jan. 22); *nom. provisor.*

†*Quercus borealis* var. *maxima* (Marsh.) Sarg., Rhodora 18: 48. 1916 (March 13).

*Quercus americana* Valck. Suringar, Leyden Rijks Herb. Meded. 56: 12. 1928; *nom. provisor.*

*Erythrobalanus rubra* (L.) O. Schwarz, Notizbl. [Berlin] Bot. Gard. Mus. 13: 4, fig. 1. 1936; Repert. Sp. Nov. Regni Veg. Sonderbeih. D, 1: 24, fig. 1. 1936. O. Schwarz ex Hill & Salisb., Index Kew. Suppl. 10: 88. 1947.

DERIVATION—Red.

OTHER COMMON NAMES—red oak†, common red oak, gray oak, eastern red oak, mountain red oak.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., and Gaspé Pen. of Que., w. to s. and w. Ont. and Minn., s. to e. Nebr. and e. Okla., and e. to Ark., s. Ala., Ga., and N.C. Also local in sw. La. The only native oak extending ne. to N.S. Atlas vol. 1, maps 180-N, 180-E.

REFERENCES—Fernald, M. L. Types of some American trees. J. Arnold Arbor. 27: 386-394, illus. 1946.

Rehder, Alfred. Quercus rubra Linnaeus. J. Arnold Arbor. 19: 283-284. 1938.

Sargent, C. S. The name of the red oak. Rhodora 18: 45-48. 1916.

Svenson, H. K. Quercus rubra once more. Rhodora 41: 521-524. 1939.

Svenson, H. K. On the descriptive method of Linnaeus. Rhodora 47: 273-302, 363-388, illus. 1945.

Valckenier Suringar, J. Leyden Rijks Herb. Meded. 56: 10-13, 64, illus. 1928.

*Quercus rubra* has been restored for the northern red oak, following Fernald (Gray's Man. Bot. Ed. 8, 546,548. 1950) and universal usage before 1915. Some authors after that date, including the 1927 checklist, applied *Q. rubra* to the southern red oak and adopted *Q. borealis* for the northern red oak. Others rejected *Q. rubra* as a *nomen ambiguum* because of the confused usage for two species and took up *Q. falcata* for the southern red oak. *Q. rubra* L. was a composite species of red oaks and was first typified as the northern red oak by Du Roi.

HYBRIDIZES WITH: *Quercus ellipsoidalis*; *Q. ilicifolia* (*Q.* ×*fernaldii* Trel.); *Q. imbricaria* (*Q.* ×*runcinata* (A. DC.) Engelm.); *Q. marilandica*; *Q. palustris* (*Q.* ×*columnaris* Laughlin); *Q. phellos* (*Q.* ×*heterophylla* Michx. f.); *Q. shumardii* (*Q.* ×*riparia* Laughlin); *Q. velutina* (*Q.* ×*hawkinsiae* Sudw.).

**Quércus rugòsa** Née **netleaf oak**‡†

*Quercus rugosa* Née, An. Cienc. Nat. [Madrid] 3: 275. 1801.
‡†*Quercus reticulata* Humb. & Bonpl., Pl. Aequin. 2: 40, pl. 86. 1809.
*Quercus diversicolor* Trel., Mem. Natl. Acad. Sci. 20: 73, pl. 92, 93. 1924.

DERIVATION—Rugose or wrinkled, referring to the leaves.

RANGE—Mts. of Trans-Pecos Tex., sw. N. Mex., and s. and c. Ariz., also s. to s. Mex. (s. B. Cal. Sur to Son. and N.L., s. to Oax. and Chis.). Atlas vol. 3, maps 143-N, 143-SW.

REFERENCE—Muller, Cornelius H., and Rogers McVaugh. Contrib. Univ. Mich. Herb. 9: 519-520. 1972.

*Quercus san-sabeana*, see **Q. durandii**
*Quercus schneckii*, see **Q. shumardii**
*Quercus shrevei*, see **Q. wislizeni**

***Quércus shumárdii** Buckl. **Shumard oak**‡

‡†*Quercus shumardii* Buckl., Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 444. 1860.
*Quercus schneckii* Britton in Rydb., Bull. N.Y. Bot. Gard. 2: 230. 1901.
†*Quercus shumardii* var. *schneckii* (Britton) Sarg., Bot. Gaz. 65: 425. 1918.
*Quercus shumardii* var. *acerifolia* Palmer, J. Arnold Arbor. 8: 54. 1927.

DERIVATION—Benjamin Franklin Shumard (1820-69), State geologist of Texas.

OTHER COMMON NAMES—spotted oak, Schneck oak, Schneck red oak†, Shumard red oak†, southern red oak, swamp red oak.

RANGE—Coastal Plain mostly, from N.C. to n. Fla. and w. to c. Tex., n. in Miss. Valley to c. Okla., e. Kans., Mo., s. Ill., Ind., w. and s. Ohio, Ky., and Tenn. Also local n. to s. Mich., s. Pa., and Md. Atlas vol. 1, maps 181-W, 181-E; vol. 5, map 125.

HYBRIDIZES WITH: *Quercus hypoleucoides*; *Q. imbricaria* (*Q.* ×*egglestonii* Trel.); *Q. marilandica* (*Q.* ×*hastingsii* Sarg.); *Q. nigra* (*Q.* ×*neopalmeri* Sudw.); *Q. nuttallii*; *Q. palustris* (*Q.* ×*mutabilis* Palmer & Steyerm.); *Q. phellos* (*Q.* ×*moultonensis* Ashe); *Q. rubra* (*Q.* ×*riparia* Laughlin); *Q. velutina* (*Q.* ×*discreta* Laughlin).

**Quércus shumárdii** Buckl. var. **shumárdii** **Shumard oak (typical)**‡

RANGE—Same as sp. except w. to e. Tex. Atlas vol. 1, map 181-E.

**Quércus shumárdii** var. **texàna** (Buckl.) Ashe **Texas oak**‡†

†*Quercus texana* Buckl., Proc. Acad. Nat. Sci. Phila. 1860 [v. 12]: 444. 1860.
*Quercus rubra* var. *texana* (Buckl.) Buckl., Proc. Acad. Nat. Sci. Phila. 1881 [v. 33]: 123. 1881.
‡*Quercus shumardii* var. *texana* Buckl.) Ashe, Charleston Mus. Bull. 14: 9. 1918; *nom. provis.* Validated by Gray Herbarium Card-Index, Issue No. 78.

DERIVATION—Of Texas.

OTHER COMMON NAMES—Texas red oak, Spanish oak, spotted oak.

RANGE—C. Tex. including Edwards Plateau and s. Okla. (Arbuckle Mts.). Atlas vol. 1, maps 181-W. 181-E.

*Quercus similis*, see **Q. stellata** var. **paludosa**
*Quercus sinuata*, see **Q. durandii**

***Quércus stellàta** Wangenh. **post oak‡†**

*Quercus alba minor* Marsh., Arbustr. Am. 120. 1785.
‡†*Quercus stellata* Wangenh., Beytr. Teutsch. Holzger. Fortwiss. Anpflanz. Nordam. Holz. 78, pl. 6, fig. 15. 1787.
*Quercus minor* (Marsh.) Sarg., Gard. and Forest 2: 471. 1889.

DERIVATION—Starred, the leaves described as 5-lobed and star-shaped.

OTHER COMMON NAME—iron oak.

RANGE—Se. Mass., R.I., s. Conn., and extreme se. N.Y. (incl. Long Is.), w. to se. Pa., W. Va., c. Ohio, s. Ind., c. Ill., se. Iowa, and n. Mo., s. to e. Kans., w. Okla., and nw. and c. Tex., and e. to c. Fla. Atlas vol. 1, maps 182-W, 182-E; vol. 5, map 126.

REFERENCE—Tucker, John M., and Cornelius H. Muller. A revaluation of the derivation of Quercus margaretta from Quercus gambelii. Evolution 12: 1-17, illus. 1958.

HYBRIDIZES WITH: *Quercus alba* (*Q.* ×*fernowii* Trel.); *Q. bicolor* (*Q.* ×*substellata* Trel.); *Q. durandii* (*Q.* ×*macnabiana* Sudw.); *Q. havardii*; *Q. lyrata* (*Q.* ×*sterrettii* Trel.); *Q. macrocarpa* (*Q.* ×*guadalupensis* Sarg.); *Q. minima* (*Q.* ×*neo-tharpii* A. Camus); *Q. mohriana*; *Q. prinoides* (*Q.* ×*stelloides* Palmer); *Q. prinus* (*Q.* ×*bernardiensis* W. Wolf); *Q. virginiana* (*Q.* ×*harbisonii* Sarg.).

**Quércus stellàta** Wangenh. var. **stellàta** **post oak (typical)‡**

RANGE—Almost same as sp.

**Quércus stellàta** var. **margarétta** (Ashe) Sarg. **sand post oak‡**

?*Quercus drummondii* Liebm., Forhandl. Overs. Danske Vidensk. Selsk. 1854: 170. 1854.
*Quercus minor* var. *margaretta* Ashe, J. Elisha Mitchell Sci. Soc. 11: 94. 1894.
*Quercus boyntonii* Beadle, Biltmore Bot. Stud. 1: 47. 1901; "*boyntoni*."
*Quercus margaretta* Ashe ex Small, Fl. Southeast. U.S. 355. 1903.
‡†*Quercus stellata* var. *margaretta* (Ashe) Sarg., Trees and Shrubs 2: 219, pl. 185. 1913.
†*Quercus stellata* var. *araniosa* Sarg., Bot. Gaz. 65: 441. 1918.
†*Quercus stellata* var. *boyntonii* (Beadle) Sarg., Bot. Gaz. 65: 437. 1918.

DERIVATION—Named in 1894 for Margaret Henry Wilcox, later Mrs. William Willard Ashe.

OTHER COMMON NAMES—dwarf post oak, post oak†, runner oak, scrubby post oak.

RANGE—Se. Va. w. to Mo. and e. Okla., s. to c. Tex., and e. to c. Fla. Also local ne. to se. Mass.

**Quércus stellàta** var. **paludòsa** Sarg. **Delta post oak‡**

*Quercus stellata* var. *paludosa* Sarg., Bot. Gaz. 65: 441. 1918.
†*Quercus stellata* var. *attenuata* Sarg., Bot. Gaz. 65: 438. 1918.
*Quercus ashei* Sterrett, J. Elisha Mitchell Sci. Soc. 37: 178. 1922.
*Quercus similis* Ashe, J. Elisha Mitchell Sci. Soc. 40: 43. 1924.
†*Quercus stellata similis* (Ashe) Sudw., U.S. Dep. Agric. Misc. Circ. 92: 107. 1927.
*Quercus mississippiensis* Ashe, Torreya 31: 39. 1931.
‡*Quercus stellata* var. *mississippiensis* (Ashe) Little, Phytologia 4: 305. 1953.

DERIVATION—Growing in marshy places.

OTHER COMMON NAMES—bottom-land post oak, Mississippi Valley oak, yellow oak.

RANGE—Miss. R. Valley in bottom lands of w. Miss., se. Ark., and La. and w. to e. Tex.

As *Quercus mississippiensis*, this oak was included in the list of important bottom-land hardwoods of the lower Mississippi Valley by John A. Putnam (Management of bottomland hardwoods. U.S. Dep. Agric. For. Serv., South. For. Exp. Stn. Occas. Pap. 116, 60 p. 1951). The oldest

varietal name is accepted here to replace var. *mississippiensis* of the 1953 checklist.

*Quercus subturbinella*, see **Q. turbinella**

**Quércus tardifòlia** C. H. Muller **lateleaf oak**

*Quercus tardifolia* C. H. Muller, Bull. Torrey Bot. Club 63: 154. 1936.

DERIVATION—Late-leaf, the new (evergreen) leaves appearing in July.

RANGE—Known only from Chisos Mts., s. Brewster Co., Trans-Pecos Texas. Atlas vol. 3, map 136 (with *Q. gravesii*).

This very rare species related to *Q. gravesii* Sudw. was mentioned in a note in the 1953 checklist. The mature fruit is unknown.

*Quercus texana*, see **Q. shumardii** var. **texana**

**Quércus tomentélla** Engelm. **island live oak‡†**

‡†*Quercus tomentella* Engelm., Trans. Acad. Sci. St. Louis 3: 393. 1877.

DERIVATION—Minutely tomentose, referring to the finely hairy twigs and young leaves.

OTHER COMMON NAME—island oak.

RANGE—Santa Rosa, Santa Cruz, Anacapa, Santa Catalina, and San Clemente Is. of s. Calif. and Guadalupe Is. of B. Cal., Mex., only. Atlas vol. 3, map 145.

The rarest oak species of California, absent from the mainland.

**Quércus toùmeyi** Sarg. **Toumey oak‡†**

‡†*Quercus toumeyi* Sarg., Gard and Forest 8: 92, fig. 13, 14. 1895.

DERIVATION—Named for its discoverer, James William Toumey (1865-1932), United States forester and botanist.

RANGE—Mts. of extreme sw. N. Mex., se. Ariz., and ne. Son. and w. Chih., Mex. Atlas vol. 3, map 146.

**Quércus turbinélla** Greene **turbinella oak**

‡*Quercus turbinella* Greene in Kellogg & Greene, Illus. West Am. Oaks 37. 1889; 59, pl. 27. 1890.
*Quercus dumosa* var. *turbinella* (Greene) Jeps., Silva Calif. 218. 1910.
*Quercus subturbinella* Trel., Mem. Natl. Acad. Sci. 20: 95, pl. 153. 1924.
*Quercus turbinella* ssp. *californica* J. M. Tucker, Madroño 11: 240. 1952.

DERIVATION—Like a little top, referring to the acorns.

OTHER COMMON NAMES—shrub live oak‡, scrub oak, encino (Spanish).

RANGE—Mts. from sw. Colo. to s. Utah, s. Nev., s. Calif., Ariz., N. Mex., and nw. Trans-Pecos Tex. Also B. Cal. and n. B. Cal. Sur, Mex. Atlas vol. 3, maps 147, 130 (as *Quercus ajoensis*).

REFERENCE—Tucker, John M. Taxonomic interrelationships in the Quercus dumosa complex. Madroño 11: 234-252, illus. 1952.

HYBRIDIZES WITH: *Quercus douglasii* (*Q.* ×*alvordiana* Eastw.); *Q. dumosa*; *Q. gambelii* (*Q.* ×*pauciloba* Rydb.); *Q. lobata* (*Q.* ×*munzii* Tucker).

**Quércus turbinélla** Greene var. **turbinélla** **turbinella oak (typical)**

RANGE—Almost same as sp. except not in B. Cal. Sur. Atlas vol. 3, map 147.

**Quércus turbinélla** var. **ajoénsis** (C. H. Muller) Little **Ajo oak**

*Quercus ajoensis* C. H. Muller, Madroño 12: 140, fig. 1. 1954.
*Quercus turbinella* ssp. *ajoensis* (C. H. Muller) Felger & Lowe, J. Ariz. Acad. Sci. 6: 83. 1970.
*Quercus turbinella* var. *ajoensis* (C. H. Muller), Little, Phytologia 42: 221. 1979.

DERIVATION—Ajo Mountains, Arizona, the type locality; from Spanish, garlic.

RANGE—Sw. Ariz. and n. B. Cal. Sur, Mex. Atlas vol. 3, map 130 (as *Quercus ajoensis*).

A tree species named after publication of the 1953 checklist, related to *Quercus turbinella*, turbinella oak. Afterwards reduced to a subspecies and variety.

‡†*Quercus undulata*, see note under **Quercus**, hybrids
*Quercus utahensis*, see **Q. gambelii**
*Quercus vaccinifolia*, see note under **Q. chrysolepis**
*Quercus vaseyana*, see **Q. pungens** var. **vaseyana**

***Quércus velùtina** Lam. **black oak**‡†

‡†*Quercus velutina* Lam., Encycl. Méth. Bot. 1: 721. 1785.

DERIVATION—Velvety, referring to the young leaves.

OTHER COMMON NAMES—yellow oak, quercitron oak, quercitron, yellow-bark oak, smooth-bark oak†.

RANGE—Sw. Maine w. to N.Y., extreme s. Ont., c. Mich., c. Wis., se. Minn., and Iowa, w. to extreme e. Nebr., e. Kans., c. Okla., and e. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, map 183-E; vol. 5, map 127.

REFERENCE—Fernald, M. L. Types of some American trees. J. Arnold Arbor. 27: 386-394, illus. 1946.

HYBRIDIZES WITH: *Quercus coccinea* (*Q.* ×*fontana* Laughlin); *Q. ellipsoidalis* (*Q.* ×*palaeolithicola* Trel.); *Q. falcata* (*Q. falcata* (*Q.* ×*willdenowiana* (Dippel) Zabel, *Q.* ×*pinetorum* Moldenke); *Q. ilicifolia* (*Q.* ×*rehderi* Trel.); *Q. imbricaria* (*Q.* ×*leana* Nutt.); *Q. incana* (*Q.* ×*podophylla* Trel.); *Q. marilandica* (*Q.* ×*bushii* Sarg.); *Q. nigra* (*Q.* ×*demarei* Ashe); *Q. phellos* (*Q.* ×*filialis* Little); *Q. rubra* (*Q.* ×*hawkinsiae* Sudw.); *Q. shumardii* (*Q.* ×*discreta* Laughlin).

***Quércus virginiàna** Mill. **live oak**‡†

‡†*Quercus virginiana* Mill., Gard. Dict. ed. 8, *Quercus* No. 16. 1768.

DERIVATION—Of Virginia.

OTHER COMMON NAMES—Virginia live oak, encino (Spanish).

RANGE—Coastal Plain near coast from se. Va. s. to s. Ga. and s. Fla. incl. Fla. Keys, and w. to s. and c. Tex. Also local in sw. Okla. and mts. of ne. Mex. (Coah., N.L., and Tamps.). Atlas vol. 1, maps 184-N, 184-W, 184-E; vol. 5, map 128.

REFERENCES—Muller, Cornelius H. The origin of Quercus on Cuba. Rev. Soc. Cubana Bot. 12: 41-47. 1955.

Muller, Cornelius H. The live oaks of the series Virentes. Am. Midl. Nat. 65: 17-39, illus. 1961.

Muller, Cornelius H. The origin of Quercus fusiformis Small. J. Linn. Soc. Bot. 58: 1-12. 1961.

*Quércus mínima* (Sarg.) Small (*Q. virginiana* var. *dentata* (Chapm.) Sarg., *Q. virginiana* var. *minima* Sarg.), dwarf live oak, is a low shrub formerly included in this species. Range—Coastal Plain from se. N.C. to Fla. and e. Tex.

*Quércus oleoìdes* Schlecht. & Cham. var. *sagreàna* (Nutt.) C. H. Muller (*Q. virginiana* var. *sagreana* (Nutt.) Trel.), Cuban oak, has been treated also as a variety of this species and was included in the range in the 1953 checklist and Atlas vol. 1, map 184-N. The only representative of the genus in the West Indies is now regarded as a variety of a species of Mex. and C. Am. Range—Local in w. Cuba.

HYBRIDIZES WITH: *Quercus bicolor* (*Q.* ×*nessiana* Palmer); *Q. durandii*; *Q. lyrata* (*Q.* ×*comptoniae* Sarg.); *Q. macrocarpa*; *Q. minima*; *Q. stellata* (*Q.* ×*harbisonii* Sarg.).

**Quércus virginiàna** Mill. var. **virginiàna** **live oak (typical)‡**

RANGE—Coastal Plain near coast from se. Va. s. to s. Ga. and s. Fla. incl. Fla. Keys, and w. to s. Tex.

**Quércus virginiàna** var. **fusifórmis** (Small) Sarg. **Texas live oak**

*Quercus fusiformis* Small, Bull. Torrey Bot. Club 23: 357. 1901.
‡*Quercus virginiana* var. *fusiformis* (Small) Sarg., Bot. Gaz. 65: 448. 1918.
*Quercus oleoides* Schlecht. & Cham. var. *quaterna* C. H. Muller, Contrib. Tex. Res. Found. 1: 76, pl. 54, 55. 1951.

DERIVATION—Spindle-shape, from the slender or switchlike branches.

OTHER COMMON NAMES—live oak, scrub live oak.

RANGE—C. Tex. incl. Edwards Plateau. Also local in sw. Okla. (Wichita Mts.) and mts. of ne. Mex. (Coah., N.L., and Tamps.).

**Quércus virginiàna** var. **geminàta** (Small) Sarg. **sand live oak‡**

*Quercus geminata* Small, Bull. Torrey Bot. Club 24: 438. 1897.
†*Quercus virginiana* var. *geminata* (Small) Sarg., Bot. Gaz. 65: 445. 1918.

DERIVATION—Paired or twin, the acorns usually 2 at end of stalk.

RANGE—Coastal Plain especially on sand near coast, from se. N.C. to s. Fla., w. to Miss. and se. La.

This variety was referred in the 1953 checklist to ‡*Quercus virginiana* var. *maritima* (Michx.) Sarg. However, that name is now applied to a variety of *Q. laurifolia*.

*Quercus wilcoxii*, see **Q. chrysolepis**

**Quércus wislizèni** A. DC. **interior live oak‡**

‡†*Quercus wislizeni* A. DC. in DC., Prodr. 16(2): 67. 1864.
*Quercus wislizeni* var. *frutescens* Engelm., Trans. Acad. Sci. St. Louis 3: 396. 1877.
?*Quercus shrevei* C. H. Muller, Am. Midl. Nat. 19: 587. 1938.

DERIVATION—Named for its discoverer, Friedrich Adolph Wislizenus (1810-89), German-born physician of St. Louis, Mo., who collected plants in Southwestern United States and Northern Mexico.

OTHER COMMON NAMES—highland live oak†, Sierra live oak.

RANGE—N. to s. Calif., mostly in foothills of Sierra Nev. and inner Coast Ranges, and n. B. Cal., Mex. Atlas vol. 3, map 148.

HYBRIDIZES WITH: *Quercus agrifolia*; *Q. kelloggii* (*Q.* ×*moreha* Kellogg).

**Rapànea** Aubl. (Family Myrsinaceae) **rapanea**

‡†*Rapanea* Aubl., Hist. Pl. Guiane Franç. 1: 121, pl. 46. 1775.

DERIVATION—From the native name of *Rapanea guianensis* Aubl. in French Guiana.

REFERENCE—Stearn, William Thomas. A synopsis of Jamaican Myrsinaceae. Bull. Brit. Mus. Nat. Hist. Bot. 4: 143-178, illus. 1969.

Some recent authors have united this genus with *Myrsine* L.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R., 2 (1 also in V.I.); Hawaii, about 20; total, widespread in tropical and subtropical zones, 150-200.

**Rapànea punctàta** (Lam.) Lundell **Florida rapanea**

*Sideroxylum punctatum* Lam., Tabl. Encyc. Méth. Bot. 2: 42. 1794.
*Bumelia punctata* (Lam.) Roem. & Schult., Syst. Veg. ed. nov. [16] 4: 498. 1819.
*Myrsine floridana* A. DC., Trans. Linn. Soc. Lond. 17: 107. 1834.
*Myrsine punctata* (Lam.) Stearn, Bull. Brit. Mus. Nat. Hist. 4: 177. 1969. Non *Myrsine punctata* (Lév.) Wilbur, Pac. Sci. 19: 522. 1965.
*Rapanea punctata* (Lam.) Lundell, Wrightia 4: 121. 1969.

DERIVATION—Marked with dots, minute glands on leaves and other parts.

OTHER COMMON NAME—myrsine.

REFERENCE—Gillis, William T. Rhodora 76: 103-104. 1974.

RANGE—C. and s. Fla. incl. Fla. Keys, n. on e. coast to Volusia Co. and on w. coast to Levy Co. Also Bahamas and Cuba. Atlas vol. 5, map 236.

Formerly included in ‡*R. guianensis* Aubl., Guiana rapanea‡, a related species of S. Am.

**Reynòsia** Griseb. (Family Rhamnaceae) **darling-plum**

‡†*Reynosia* Griseb., Cat. Pl. Cub. 33. 1866.

DERIVATION—Alvaro Reynoso (1830-88), Cuban chemist and agriculturist.

NUMBER OF SPECIES: Native trees (Fla. Keys), 1; P.R., 3, including 2 also in V.I.; total, West Indies and Fla., about 15.

**Reynòsia septentrionàlis** Urban **darling-plum‡**

‡†*Reynosia septentrionalis* Urban, Symb. Ant. 1: 356. 1899.

DERIVATION—Northern; the northernmost representative of this West Indian genus.

OTHER COMMON NAME—red-ironwood†.

RANGE—Through Fla. Keys, not on s. Fla. mainland. Bahamas and Cuba. Atlas vol. 5, map 237.

**Rhámnus** L. (Family Rhamnaceae) **buckthorn**

‡†*Rhamnus* L., Sp. Pl. 193. 1753; Gen. Pl. ed. 5, 89. 1754.

*Frangula* Mill., Gard. Dict. Abr. ed. 4, v. 1. 1754.

DERIVATION—The ancient Greek name.

REFERENCES—Grubov, V. I. [Monographic survey of the genus Rhamnus L. s. l. (Russian)] Acta Inst. Bot. Komarov Acad. Sci. URSS Ser. 1, Syst. 8: 242-423, illus. 1949.

Wolf, Carl B. The North American species of Rhamnus. Rancho Santa Ana Bot. Gard. Monogr., Bot. Ser. 1, 136 p., illus. 1938.

NUMBER OF SPECIES: Native trees, 5; naturalized trees, 2; native shrubs, 4; P.R., shrubs, 1; total, mostly n. temperate, also s. to S. Am. and in S. Africa, 100-150.

**Rhámnus betulifòlia** Greene **birchleaf buckthorn‡**

‡*Rhamnus betulifolia* Greene, Pittonia 3: 16. 1896; "*betulaefolia*."

*Rhamnus purshiana* DC. var. *betulifolia* (Greene) Cory, Rhodora 38: 407. 1936: "*betualaefolia*."

*Rhamnus betulifolia* var. *obovata* Kearney & Peebles, J. Wash. Acad. Sci. 29: 486. 1939: "*betulaefolia*."

*Frangula betulifolia* (Greene) Grubov, Act. Inst. Bot. Komarov. Acad. Sci. URSS Ser. 1, 8: 268. 1949.

DERIVATION—With leaves like *Betula*, or birchleaf.

RANGE—Mts. from Trans-Pecos Tex. w. to s. N. Mex., Ariz., s Utah, and s. Nev. Also in n. Mex. (e. Son., Chih., and Dgo. e. to Tamps.). Atlas vol. 3, map 149.

**Rhámnus califórnica** Eschsch. **California buckthorn‡**

‡*Rhamnus californica* Eschsch., Mem. Acad. Sci. St. Pétersb. 10: 285. 1823.

*Rhamnus tomentella* Benth., Pl. Hartw. 303. 1848.

*Frangula californica* (Eschsch.) Gray, Gen. Fl. Am. Bor.-or. Illus. 2: 178. 1849.

*Rhamnus cuspidata* Greene, Leaflets 1: 64. 1904.

*Rhamnus ursina* Greene, Leaflets 1: 63. 1904.

*Rhamnus californica* ssp. *tomentella* (Benth.) C. B. Wolf, Rancho Santa Ana Bot. Gard. Mongr., Bot. Ser. 1: 70, fig. 2-m-q, 3-h, 5-d, 27. 1938.

*Rhamnus californica* ssp. *cuspidata* (Greene) C. B. Wolf, Rancho Santa Ana Bot. Gard. Monogr., Bot. Ser. 1: 72, fig. 28, 29. 1938.

*Rhamnus californica* ssp. *ursina* (Greene) C. B. Wolf, Rancho Santa Ana Bot. Gard. Monogr., Bot. Ser. 1: 74, fig. 5 e-f, 30. 1938.

‡*Rhamnus californica* var. *ursina* (Greene) McCinn, Illus. Man. Calif. Shrubs 329. 1939.

DERIVATION—Of California.

OTHER COMMON NAMES—coffeeberry, California coffeeberry, coast coffeeberry, Sierra coffeeberry, pigeonberry.

RANGE—Mts. mainly, from sw. N. Mex. w. to se. and c. Ariz., s. Nev.,

and Calif., n. to extreme sw. Oreg. Also n. B. Cal. Atlas vol. 3, map 151.

Generally a shrub but sometimes a small tree. Five varieties or subspecies, mostly shrubby, have been named.

**Rhámnus caroliniàna** Walt. **Carolina buckthorn‡**

‡†*Rhamnus caroliniana* Walt., Fl. Carol. 101. 1788; "*carolinianus.*"
*Frangula caroliniana* (Walt.) Gray, Gen. Fl. Am. Bor-or. Illus. 2: 178, pl. 167. 1849.
*Rhamnus caroliniana* var. *mollis* Fern., Rhodora 12: 79. 1910.

DERIVATION—Of Carolina.

OTHER COMMON NAMES—Indian-cherry, tree buckthorn, yellow buckthorn†, yellowwood.

RANGE—Extreme s. Ohio w. to s. Ill. and c. Mo., s. to e. Okla. and c. and e. Tex., e. to c. Fla., and n. to c. S.C. and sw. Va. Also ne. Mex. (Tamps. and N.L.). Atlas vol. 4, maps 117-N, 117-SE; vol. 5, map 129.

RHÁMNUS CATHÁRTICA L. EUROPEAN BUCKTHORN‡

‡*Rhamnus cathartica* L., Sp. Pl. 193. 1753; "*catharticus.*"

DERIVATION—Cathartic; the fruit has been used in medicine.

OTHER COMMON NAMES—common buckthorn, European waythorn.

RANGE—Escaped from cultivation and naturalized locally from N.S. w. to Maine, extreme s. Que., s. Ont., Ohio, s. Wisc., and N. Dak., s. to ne. Kans. and Mo., and e. to N.C. Native of Europe and Asia. A shrub or sometimes a small tree.

**Rhámnus crocea** Nutt. **hollyleaf buckthorn**

‡†*Rhamnus crocea* Nutt. in Torr. & Gray, Fl. No. Am. 1: 261. 1838.
*Rhamnus ilicifolia* Kellogg, Proc. Calif. Acad. Sci. 2: 37. 1863; "*ilicifolius.*"
‡†*Rhamnus crocea* var. *ilicifolia* (Kellogg) Greene, Fl. Franciscana 79. 1891.
*Rhamnus pirifolia* Greene, Pittonia 3: 15. 1896.
*Rhamnus crocea* ssp. *ilicifolia* (Kellogg) C. B. Wolf, Rancho Santa Ana Bot. Gard. Monogr., Bot. Ser. 1: 39, fig. 1 h-o, 2 g-l, 12. 1938.
*Rhamnus crocea* ssp. *pirifolia* (Greene) C. B. Wolf, Rancho Santa Ana Bot. Gard. Monogr., Bot. Ser. 1: 45, fig. 4 c, 13-16. 1938.
‡*Rhamnus crocea* var. *pirifolia* (Greene) Little, Am. Midl. Nat. 33: 496. 1945.

DERIVATION—Saffron yellow, from the color of the stigmas of the genus *Crocus*, crocus.

OTHER COMMON NAMES—California redberry, redberry, redberry buckthorn, great redberry buckthorn, island redberry buckthorn‡, buckthorn†, coffeeberry.

RANGE—N. Calif. s. in Coast Ranges and foothills of Sierra Nev. to s. Calif. including Channel Is. and e. to e. Ariz. Also nw. Mex. s. to Guadalupe Is., n. B. Cal. Sur, and ne. Son. Atlas vol. 3, maps 150-NW, 150-SW.

Generally a shrub but sometimes a small tree. Four varieties or subspecies, partly shrubby, have been named.

RHÁMNUS FRÂNGULA L. GLOSSY BUCKTHORN‡

‡*Rhamnus frangula* L., Sp. Pl. 193. 1753.
*Frangula alnus* Mill., Gard. Dict. ed. 8, *Frangula* No. 1. 1768.

DERIVATION—An old name (and still the official drug name) for this species.

OTHER COMMON NAME—alder buckthorn.

RANGE—Escaped from cultivation and naturalized locally from N.S. w. to s. Que., Maine, s. Ont., s. Man., and Minn., s. to Ill., and e. to Ohio and N.J. Native in Europe, w. Asia, and n. Africa.

A shrub or small tree to 20 ft (6 m) high. Spreading very rapidly and likely to become obnoxious, according to Fernald (Gray's Man. Bot. ed. 8, 933. 1950).

***Rhamnus purshiana** DC. **cascara buckthorn‡**

‡†*Rhamnus purshiana* DC., Prodr. 2: 25. 1825; "*purshianus*."
*Frangula purshiana* (DC.) Cooper, U.S. Rep. Expl. Miss. Pac. 12: 29, 57. 1856.

DERIVATION—Frederick Pursh (1774-1820), United States botanist of German parentage, who first published a description of this species in his Flora Americae Septentrionalis (1814).

OTHER COMMON NAMES—cascara†, cascara sagrada, bearberry, chittam, coffeetree.

RANGE—Pacific Coast region from sw. B.C. incl. Vancouver Is., s. to w. Wash., w. Oreg., and n. Calif. in Coast Ranges and Sierra Nev. Also Rocky Mt. region of se. B.C., e. Wash., n. Idaho, and w. Mont. Atlas vol. 1, maps 185-W, 185-N.

**Rhizóphora** L. (Family Rhizophoraceae) **mangrove**

‡†*Rhizophora* L., Sp. Pl. 443. 1753; Gen. Pl. ed. 5, 202. 1754.

DERIVATION—From Greek, root-bearing, referring to the prominent, arching prop roots.

OTHER COMMON NAME—red mangrove.

REFERENCES—Breteler, F. J. The Atlantic species of Rhizophora. Acta Bot. Neerland. 18: 434-441, illus. 1969.

Hou, D. A review of the genus Rhizophora with special reference to the Pacific species. Blumea 10: 625-634. 1960.

Salvoza, Felipe M. Rhizophora. Philippine Univ. Nat. Appl. Sci. Bull. 5: 179-255, illus. 1936.

NUMBER OF SPECIES: Native trees (s. to n. Fla., shores), 1, also P.R. and V.I. and shores of tropical Am. and w. Africa; total, tropical shores, about 5.

***Rhizóphora mángle** L. **mangrove‡†**

‡†*Rhizophora mangle* L., Sp. Pl. 443. 1753.
*Rhizophora mangle* var. *samoensis* Hochr., Candollea 2: 447. 1925.
*Rhizophora samoensis* (Hochr.) Salvoza, Philippine Univ. Nat. Appl. Sci. Bull. 5: 220, pl. 6. 1936.

DERIVATION—The Spanish common name of mangrove.

OTHER COMMON NAME—red mangrove. (The name red mangrove distinguishes this common species from other mangroves: black-, white-, and button-.)

RANGE—Silt shores of coasts and islands of n. to s. Fla. incl. Fla. Keys w. to Marquesas Key and Dry Tortugas, n. on e. coast to Flagler Co. and on w. coast to Cedar Keys, Levy Co., and at Piney Is., Wakulla Co., local n. and not hardy. Also widely distributed on coasts of tropical Am. from Bermuda and Bahamas through West Indies incl. P.R. and V.I. From n. Mex. (Tamps., Son., and B. Cal. Norte) s. on Atlantic Coast to Brazil and on Pacific Coast to Ecuador incl. Galápagos Is. and nw. Peru. Also on coasts of w. Africa and in Melanesia and Polynesia. Atlas vol. 1, maps 186-N, 186-E; vol. 5, map 238.

**Rhododéndron** L. (Family Ericaceae) **rhododendron; azalea**

‡†*Rhododendron* L., Sp. Pl. 392. 1753; Gen. Pl. ed. 5, 185. 1754; "*Rhododendrum*."
*Azalea* L., Sp. Pl. 150. 1753; Gen. Pl. ed. 5, 75. 1754.
*Hymenanthes* Blume, Bijdr. Fl. Nederl. Indië 862. 1826.

DERIVATION—From Greek, rose tree; there is some controversy as to whether the name was used for oleander, *Nerium oleander* L., or for rhododendron.

REFERENCES—Bowers, Clement Gray. Rhododendrons and azaleas: their origins, cultivation and development. ed. 2, 525 p., illus. 1960.

Rhododendron Society. J. B. Stevenson, ed. The species of Rhododendron. 861 p., illus. 1930.

Wood, Carroll E., Jr. J. Arnold. Arbor. 42: 30-38, illus. 1961.

NUMBER OF SPECIES: Native trees, 3; native shrubs, about 20 (mostly in Southeast, incl. 2 in Alaska; no others in New World); total, shrubs and trees, mostly n. temperate (a few in Europe), centering in e. and se. Asia, especially Himalayas, to s. China and Japan, s. on high mts. to Malaysia and Australia, 600-800.

**Rhododéndron catawbiénse** Michx. **Catawba rhododendron**‡†

‡†*Rhododendron catawbiense* Michx., Fl. Bor.-Am. 1: 258. 1803.

DERIVATION—From Catawba River, N.C.

OTHER COMMON NAMES—mountain-rosebay, purple rhododendron, purple-laurel.

RANGE—Mts. and Piedmont from w. Va., s. W. Va., and e. Ky., s. to e. Tenn., ne. Ala. n. Ga., nw. S.C., and c. N.C. Atlas vol. 4, map 118.

HYBRIDIZES WITH: *Rhododendron maximum* (*R.* ×*wellesleyanum* Waterer ex Rehd.).

**Rhododéndron macrophýllum** D. Don ex G. Don **Pacific rhododendron**‡

‡*Rhododendron macrophyllum* D. Don ex G. Don, Gen. Syst. Gard. Bot. 3: 843. 1834.
*Rhododendron californicum* Hook., Curtis' Bot. Mag. 81: No. 4863, pl. 4863. 1855.

DERIVATION—Large-leaf (literally long-leaf).

OTHER COMMON NAMES—California rosebay, California rhododendron, coast rhododendron, west coast rhododendron.

RANGE—Pacific Coast region from sw. B.C. and w. Wash. s. to w. Oreg. and w.c. Calif. Atlas vol. 3, map 152.

**Rhododéndron máximum** L. **rosebay rhododendron**‡

‡†*Rhododendron maximum* L., Sp. Pl. 392. 1753.

DERIVATION—Largest; the largest native rhododendron, though not the largest in the genus.

OTHER COMMON NAMES—rosebay, great-laurel, great rhododendron†, white rhododendron.

RANGE—W. Maine to Vt. and w. N.Y., s. mostly in mts. to s. Ohio, e. Ky., e. Tenn., n. Ga., nw. S.C., w. N.C., and N.J. Extinct in s. Ont. Reported from N.S. in 1877 but not found there afterwards. Atlas vol. 4, map 119.

REFERENCE—Iltis, Hugh H. Studies in Virginia plants. II. Rhododendron maximum in the Virginia coastal plain and its distribution in North America. Castanea 21: 114-124, illus. 1956.

RHODOMÝRTUS (DC.) Hassk. DOWNY-MYRTLE

*Myrtus* sect. *Rhodomyrtus* DC., Prodr. 3: 240. 1828.
*Rhodomyrtus* Reichenb., Dtsch. Bot. Herbarienbuch Nom. Gen. Pl. 177. 1841; *nom. nud.*
*Rhodomyrtus* (DC.) Hassk., Flora 25(2), Beibl. 1: 35. 1842.

DERIVATION—From Greek, rose and myrtle, a myrtle with rose-colored flowers.

REFERENCE—McVaugh, Rogers. Taxon 5: 145. 1956.

RHODOMÝRTUS TOMENTÔSA (Ait.) Hassk. DOWNY-MYRTLE

*Myrtus tomentosa* Ait., Hort. Kew 2: 159. 1789.
*Rhodomyrtus tomentosus* (Ait.) Hassk., Flora 25(2), Beibl. 1: 35. 1842.

DERIVATION—With short hairs, referring to leaves and stems.

OTHER COMMON NAME—hill-gooseberry.

RANGE—Naturalized in s. Fla., forming thickets on ridges along Gulf Coast in Collier, Lee, and Manatee Cos. Native of eastern Asia and Australia.

REFERENCES—Long, Robert W., and Olga Lakela. A flora of tropical Florida 641. 1971.
Morton, Julia F. Proc. Fla. State Hort. Soc. 89: 350. 1976.
Wilson, Kenneth A. J. Arnold Arbor. 41: 278. 1960.

This ornamental with edible fruits has escaped from cultivation and has become naturalized in s. Fla. and is added here. Usually a shrub, this species becomes a small tree 20 ft (6 m) high, according to Frank C. Craighead, Sr.

*Rhoeidium*, see **Rhus**

*Rhus*, see also **Cotinus** and **Toxicodendron**

**Rhus** L. (Family Anacardiaceae) **sumac**

‡†*Rhus* L., Sp. Pl. 265. 1753; Gen. Pl. ed. 5, 129. 1754.
*Schmaltzia* Desv., J. Bot. Appl. Agr. Pharm. Med. Arts 1: 229. 1813; *nom. illegit.*
*Lobadium* Raf., Am. Mon. Mag. Crit. Rev. 4: 375. 1819.
*Schmaltzia* Desv. ex Small, Fl. Southeast. U.S. 727. 1903.
*Rhoeidium* Greene, Leafl. Bot. Obs. Crit. 1: 143. 1905.
*Malosma* Nutt. ex Abrams, Fl. Los Angeles [ed. 3] 220. 1917.
*Schmaltzia* Desv. emend. Barkley & Reed, Am. Midl. Nat. 24: 647, 672. 1940.

DERIVATION—The classical Greek and Latin name of the type species, Sicilian sumac, *Rhus coriaria* L. Other pronunciation—*Rhūs*.

REFERENCES—Barkley, Fred Alexander. A monographic study of Rhus and its immediate allies in North and Central America, including the West Indies. Ann. Mo. Bot. Gard. 24: 265-498, illus. 1937.

Barkley, Fred A. Schmaltzia. Am. Midl. Nat. 24: 647-665. 1940.

Brizicky, George K. The genera of Anacardiaceae in the southeastern United States. J. Arnold Arbor. 43: 359-375. 1962.

Brizicky, George K. Taxonomic and nomenclatural notes on the genus Rhus (Anacardiaceae). J. Arnold Arbor. 44: 60-80. 1963.

NUMBER OF SPECIES: Native trees, 11 (3 also in Can.); native shrubs, 3 (2 also in Can.); Mex., about 20 (incl. 9 also in U.S.; also shrubs, about 15); C. Am. (Guatemala to Costa Rica, 2 (also shrubs 2, all in Mex.); Cuba, 1 (also in U.S.); New World, native trees, about 25 (also shrubs, about 20); total, trees and shrubs, mostly warm temperate and subtropical, including Eurasia and Africa, about 150.

**Rhus choriophylla** Woot. & Standl. **Mearns sumac‡**

‡*Rhus choriophylla* Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 146. 1913.

DERIVATION—Separated leaves, perhaps referring to the compound leaves.

OTHER COMMON NAMES—New Mexico evergreen sumac, tough-leaf sumac.

RANGE—Trans-Pecos Tex., s. N. Mex., se. Ariz., and adjacent Mex. (ne. Son. and n. Chih.). Atlas vol. 3, map 153.

Closely related to *Rhus virens* Lindh. ex Gray and perhaps only a variety of that species.

**Rhus copallina** L. **shining sumac‡**

‡†*Rhus copallina* L., Sp. Pl. 266. 1753; "*Copallinum*."
*Rhus copallina α latifolia* Engler in A. & C. DC., Monogr. Phaner. 4: 384. 1883.

DERIVATION—From copal, a Mexican Indian name for a white resin; it was thought that this species furnished the copal of commerce.

OTHER COMMON NAMES—dwarf sumac†, winged sumac, wing-rib sumac, flameleaf sumac.

RANGE—Sw. Maine w. to N.Y., s. Ont., c. Mich., and c. Wis., s. to se. Iowa, extreme se. Nebr., e. Kans., c. Okla., and c. Tex., e. to s. Fla. (not Fla. Keys). Also w. Cuba. Atlas vol. 4, maps 120-NE, 120-SE; vol. 5, map 130.

REFERENCES—Dayton, William A. Rhodora 54: 79. 1952.

Fernald, M. L., and Ludlow Griscom. Variations of Rhus copallina. Rhodora 37: 167-168. 1935.

**Rhus copallina** L. var. **copallina** **shining sumac (typical)‡**

RANGE—Sw. Maine w. to N.Y., s. Ont., c. Mich., and c. Wis., s. to se. Iowa, extreme se. Nebr., e. Kans., c. Okla., and c. Tex., e. to Fla.

**Rhus copallina** var. **leucántha** (Jacq.) DC. **southern sumac**

*Rhus leucantha* Jacq., Pl. Rar. Hort. Schoenbr. 3: 50, pl. 342. 1798.
‡†*Rhus copallina* var. *leucantha* (Jacq.) DC., Prodr. 2: 68. 1825.
*Schmaltzia obtusifolia* Small, Fl. Southeast. U.S. 729, 1334. 1903.
*Rhus obtusifolia* (Small) Small, Fl. Miami 112. 1913.
*Rhus copallina* var. *obtusifolia* (Small) Fern. & Griscom, Rhodora 37: 168. 1935.

DERIVATION—White-flower.

OTHER COMMON NAME—dwarf sumac†.

RANGE—Coastal Plain chiefly, from S.C. to s. Fla. (not Fla. Keys) and w. to s. Miss. Also w. Cuba.

**Rhus glàbra** L. **smooth sumac‡**

‡*Rhus glabra* L., Sp. Pl. 265. 1753.
*Rhus glabra* var. *occidentalis* Torr. in Wilkes U.S. Explor. Exped. 17: 257. 1874.
*Rhus glabra* var. *borealis* Britton, Man. Fl. North. States Can. 601. 1901.
*Rhus occidentalis* (Torr.) Blankinship, Mont. Agr. Col. Sci. Stud. Bot. 1: 86. 1905.
*Rhus borealis* Greene, Proc. Wash. Acad. Sci. 8: 188. 1906.

DERIVATION—Glabrous, or hairless.

OTHER COMMON NAMES—scarlet sumac, common sumac, Rocky Mountain sumac, red sumac.

RANGE—Very widely distributed in all 48 contiguous States (only 2 localities in Nev. and collected only once in Calif.). C. Maine w. to extreme s. Que., s. Ont., n. Minn., e. N. Dak., Man., and e. Sask., s. to nw. and c. Tex., and e. to nw. Fla. Also scattered and mostly in mts. in w. from s. B.C. and w. Wash. s. to se. Ariz. and s. N. Mex. Also local in n. Mex. (Son., Chih., and Tamps.). Atlas vol. 3, maps 155-NW, 155-SW; vol. 4, maps 121-NE, 121-SE; vol. 5, map 131.

HYBRIDIZES WITH: *Rhus typhina* (*R.* ×*pulvinata* Greene).

**Rhus integrifòlia** (Nutt.) Benth. & Hook. f. ex Brewer & Wats. **lemonade sumac‡**

*Styphonia integrifolia* Nutt. in Torr. & Gray, Fl. No. Am. 1: 220. 1838.
*Styphonia serrata* Nutt. in Torr. & Gray, Fl. No. Am. 1; 220. 1838.
‡†*Rhus integrifolia* (Nutt.) Benth. & Hook. f. ex Brewer & Wats., Bot. Calif. 1: 110. 1876.
†*Rhus integrifolia* ß *serrata* (Nutt.) Engler in A. DC. & C. DC., Monogr. Phaner. 4: 388. 1883.

DERIVATION—Entire leaf; the variation with spiny-toothed leaves was named as a different species.

OTHER COMMON NAMES—mahogany sumac†, lemonade-berry.

RANGE—Coastal s. Calif. incl. San Miguel, Santa Cruz, Santa Catalina, and San Clemente Is. Also B. Cal. incl. Cedros Is. and outer Islet s. Guadalupe Is. Atlas vol. 3, map 154.

Young, David A. Taxonomic and nomenclatural notes on Rhus integrifolia and Rhus ovata (Anacardiaceae). Madroño 22: 286-289. 1974.

Young, David A. Introgressive hybridization in two southern California species of Rhus (Anacardiaceae). Brittonia 26: 241-255, illus. 1974.

HYBRIDIZES WITH: *Rhus ovata*.

**Rhus keárneyi** Barkley **Kearney sumac‡**

‡*Rhus kearneyi* Barkley, Ann. Mo. Bot. Gard. 24: 363, fig. 15, pl. 19, fig. 2. 1937.

DERIVATION—Thomas H. Kearney (1874-1956), botanist of the United States Department of Agriculture and co-author of Arizona Flora, who collected the type specimen in 1930.

RANGE—Extreme sw. Ariz. (Tinajas Altas Mts., Yuma Co.) and mts. of B. Cal. and B. Cal Sur. Atlas vol. 3, map 156.

Two subspecies have been named from Baja California, Mexico.

**Rhus lanceolata** (Gray) Britton **prairie sumac‡**

†*Rhus copallina* var. *lanceolata* Gray, Boston J. Nat. Hist. 6: 158. 1850.
‡*Rhus lanceolata* (Gray) Britton in Britton & Shafer, No. Am. Trees 606. 1908.

DERIVATION—Lanceolate, or lance-shaped, describing the leaflets.

OTHER COMMON NAMES—dwarf sumac†, prairie shining sumac, prairie flameleaf sumac, Texan sumac.

RANGE—S. Okla. (Arbuckle Mts.) and from e. Tex. to nw. and Trans-Pecos Tex. and s. N. Mex. Also in ne. Mex. (Coah. to Tamps. and Pue.). Atlas vol. 3, maps 158-N, 158-SW.

**Rhus laurina** Nutt. **laurel sumac‡†**

‡†*Rhus laurina* Nutt. in Torr. & Gray, Fl. No. Am. 1: 219. 1838.
*Malosma laurina* Nutt. ex Abrams, Fl. Los Angeles [ed. 3] 220. 1917.

DERIVATION—Like *Laurus*, laurel.

RANGE—Coastal s. Calif. including Santa Catalina and San Clemente Is., s. to B. Cal. Sur including Cedros and Guadalupe Is. Atlas vol. 3, map 157.

*Rhus leucantha*, see **R. copallina** var. **leucantha**

**Rhus microphylla** Engelm. **littleleaf sumac‡**

‡*Rhus microphylla* Engelm. in Gray, Smithson. Contrib. (Pl. Wright. 1) 3(5): 31. 1852.
*Rhoeidium microphyllum* (Engelm.) Greene, Leafl. Bot. Obs. Crit. 1: 143. 1905.

OTHER COMMON NAMES—desert sumac, small-leaf sumac, scrub sumac.

RANGE—S. to nw. Tex. and extreme sw. Okla., w. to c. N. Mex. and se. Ariz. Also in n. Mex. (ne. Son. and Chih. to Tamps. and Gto.). Atlas vol. 3, map 159.

Added here as a shrub rarely becoming a small tree to about 16 ft (5 m) high in Texas (Correll and Johnston, Man. Vasc. Pl. Tex. 991. 1970). Mentioned in a note in the 1953 checklist.

**Rhus ovata** Wats. **sugar sumac‡**

‡*Rhus ovata* Wats., Proc. Am. Acad. Arts Sci. 20: 358. 1885.
*Neostyphonia ovata* (Wats.) Abrams, Bull. N.Y. Bot. Gard. 6: 403. 1910.

DERIVATION—Ovate, referring to the broad leaves.

OTHER COMMON NAMES—sugarbush, chaparral sumac, bush-laurel, mountain-laurel.

RANGE—Mts. of c. Ariz. and s. Calif. incl. Santa Cruz and Catalina Is., and s. to n. B. Cal., Mex. Atlas vol. 3, map 160.

HYBRIDIZES WITH: *Rhus integrifolia* (*R. ovata* var. *traskiae* Barkley).

**Rhus typhina** L. **staghorn sumac‡†**

‡†*Rhus typhina* L. in L. & Torner, Cent. I. Pl. 14. 1756; Amoen. Acad. 4: 311. 1759; "*typhinum*."

DERIVATION—Like *Typha*, or cattail, referring to the hairy twigs.

OTHER COMMON NAME—velvet sumac.

RANGE—N.S. (Cape Breton Is.), P.E.I., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., and n. Minn., s. to c. Iowa, c. Ill., w. Tenn., n. Ala., e. to n. Ga. and nw. S.C., and n. to Md. and N.J. Atlas vol. 4, maps 122-N, 122-NE.

HYBRIDIZES WITH: *Rhus glabra* (*R.* ×*pulvinata* Greene).

**Rhus virens** Lindh. ex Gray **evergreen sumac**

*Rhus virens* Lindh. ex Gray, Bost. J. Nat. Hist. (Pl. Lindh. II) 6: 159. 1850.
*Rhus sempervirens* Scheele, Linnaea 23: 566. 1850.

DERIVATION—Green, referring to the evergreen foliage.

OTHER COMMON NAMES—tobacco sumac, lentisco (Spanish).

RANGE—Edwards Plateau of c. Tex. w. to Trans-Pecos Tex. and se. N. Mex., and s. to ne. Mex. (ne. Chih., Coah., and N.L.).

Added here as rarely a small tree to 17 ft (5 m) high in Tex., slightly taller in Mex. Commonly a shrub less than 10 ft (3 m) high.

RÍCINUS L. (Family Euphorbiaceae) CASTORBEAN

‡*Ricinus* L., Sp. Pl. 1007. 1753; Gen. Pl. ed. 5, 437. 1754.

DERIVATION—The classical Latin name, the same as that of the Mediterranean sheep tick, from the resemblance of the seed.

RÍCINUS COMMÙNIS L. CASTORBEAN‡

‡*Ricinus communis* L., Sp. Pl. 1007. 1753.

DERIVATION—Common.

OTHER COMMON NAMES—castor-oil-plant, higuerilla (Spanish).

RANGE—Naturalized as a shrub or small tree in subtropical parts of s. U.S. in Fla., s. Tex., Ariz., and s. Calif. Also escaped from cultivation as an annual herb northward. Hawaii, P.R., and V.I. Native of Africa but widely planted and naturalized in tropical regions.

**Robínia** L. (Family Leguminosae) **locust**

‡†*Robinia* L., Sp. Pl. 722. 1753; Gen. Pl. ed. 5, 322. 1754.

DERIVATION—Jean Robin (1550-1629) and his son Vespasian Robin (1579-1662), herbalists to kings of France and who first cultivated locust in Europe.

NUMBER OF SPECIES: Native trees, 4 (1 also in Mex.); native shrubs in se. U.S., 5 or fewer; Mex., 1 additional; total, about 10.

**Robínia kélseyi** Hutch. **Kelsey locust‡**

*Robinia kelseyi* Cowell in Bailey, Cycl. Am. Hort. 4: 1538. 1902; *nom. subnud.*

‡*Robinia kelseyi* Hort. ex Hutch., Bot. Mag. 134: pl. 8213. 1908.

DERIVATION—Named for its discoverer, Harlan Page Kelsey (1872-1959), United States horticulturist and nurseryman, who introduced it into cultivation in 1901.

REFERENCE—Dayton, William A. Kelsey locust, Robinia kelseyi Hort. ex Hutchins. Am. Midl. Nat. 30: 504-509, illus. 1943.

RANGE—Local in mts. of w. N.C., e. Tenn., and extreme se Ky. Atlas vol. 4, map 123.

HYBRIDIZES WITH: *Robinia pseudoacacia* (*R.* ×*slavinii* Rehd.).

**Robínia neomexicàna** Gray **New Mexico locust**

‡†*Robinia neomexicana* Gray, Mem. Am. Acad. Arts. Sci., New Ser., 5: 314. 1855; "*Neo-Mexicana.*"

†*Robinia neomexicana* var. *luxurians* Dieck ex Goeze, Gard. Chron., Ser. 3, 12: 669. 1892.

?*Robinia rusbyi* Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 140. 1913.

*Robinia luxurians* Schneid. in Silva & Schneid., Uns. Freil.-Laubh. ed. 2, 357, fig. 417. 1922.

DERIVATION—Of New Mexico, where it was first collected.

OTHER COMMON NAMES—New Mexican locust‡†, southwestern locust†, hojalito (Spanish).

RANGE—Mts. from s. and c. Colo. w. to sw. Utah and se. Nev., s. to se. Ariz., s. N. Mex., and Trans-Pecos Tex. Also n. Mex. (ne. Son.). Atlas vol. 3, map 162.

HYBRIDIZES WITH: *Robinia pseudoacacia* (*R.* ×*holdtii* Beissn.).

***Robínia pseudoacàcia** L. **black locust‡†**

‡†*Robinia pseudoacacia* L., Sp. Pl. 722. 1753; "*Pseudo Acacia.*"

DERIVATION—Old generic name, meaning false *Acacia*.

OTHER COMMON NAMES—yellow locust, locust.

RANGE—Native in Appalachian Mt. region from c. Pa. and s. Ohio, s. to ne. Ala., n. Ga., and nw. S.C., and in Ozark Mt. region of s. Ill., s. Mo., Ark., and e. Okla. Also local in s. Ind. Original range not accurately known. Widely planted, escaped, and naturalized from Maine to Calif. and in s. Can. Atlas vol. 1, map 187-E.

A clone of unknown origin, ‡*Robinia pseudoacàcia* var. *rectíssima* Raber (U.S. Dep. Agric. Circ. 379: 7, pl. 1-4, 6. 1936), shipmast locust‡, has become established from cultivation in Mass., N.Y., and N.J., and perhaps elsewhere.

HYBRIDIZES WITH: *Robinia hispida* L. (*R.* ×*margaretta* Ashe); *R. kelseyi* (*R.* ×*slavinii* Rehd.); *R. neomexicana* (*R.* ×*holdtii* Beissn.); *R. viscosa* (*R.* ×*ambigua* Poir.).

**Robínia viscòsa** Vent. **clammy locust‡†**

‡†*Robinia viscosa* Vent., Descr. Pl. Jard. Cels, No. 4, pl. 4. 1800.
*Robinia hartwigii* Koehne, Mitt. Dtsch. Dendrol. Ges. 22: 1. 1913.
‡*Robinia viscosa* var. *hartwigii* (Koehne) Ashe, J. Elisha Mitchell Sci. Soc. 37: 175. 1922; "*hardwegii*."

DERIVATION—Sticky, referring to the glandular hairs of twigs, petioles, and pods.

RANGE—Mts. and Piedmont from w. Va. sw. to extreme se. Ky., w. N.C., c. S.C., e. Tenn., and c. Ala. Also naturalized ne. to Maine and se. Can. Atlas vol. 4, map 124.

HYBRIDIZES WITH: *Robinia pseudoacacia* (*R.* ×*ambigua* Poir.).

**Roystònea** O. F. Cook (Family Palmae) **royalpalm**

‡†*Roystonea* O. F. Cook, Science, New Ser. 12: 479. 1900.

DERIVATION—In honor of General Roy Stone (1836-1905), United States Army engineer who rendered outstanding service to Puerto Rico at the time of the Spanish-American War.

REFERENCES—Bailey, L. H. The royal palms—preliminary survey. Gentes Herbarum 3: 341-387, illus. 1935.

Bailey, L. H., and H. E. Moore, Jr. Royal palms: Roystonea—new enumeration. Gentes Herbarum 8: 114-134, illus. 1949.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R. and V.I., 1; total, tropical Am., 6.

**Roystònea elàta** (Bartr.) F. Harper **Florida royalpalm‡**

*Palma elata* Bartr., Travels No. So. Car. Ga. Fla. iv (Contents). 1791; descr. on p. 115-116; "Elate"; "*elata*" on p. 90, 94, 141.
*Oreodoxa regia* H. B. K., Nov. Gen. Sp. 1: 305 [fol. 244]. 1816.
†*Roystonea regia* (H.B.K.) O. F. Cook, Science, New Ser. 12: 479. 1900.
*Roystonea floridana* O. F. Cook, Bull. Torrey Bot. Club 28: 554. 1901.
‡*Roystonea elata* (Bartr.) F. Harper, Proc. Biol. Soc. Wash. 59: 29. 1946.

DERIVATION—Elevated, or tall.

OTHER COMMON NAMES—Cuban royalpalm; royalpalm†.

RANGE—Rare and local in s. Fla. (Dade, Monroe, and Collier Cos. but not on Fla. Keys). Formerly n. to St. Johns River in c. Fla. but extinct northward except in cultivation. Also Cuba. Introduced in P.R. and V.I. but not common. Atlas vol. 5, map 239.

†*Roystonea regia* (H.B.K.) O. F. Cook, Cuban royalpalm, of Cuba, has been united with this species.

*Rufacer*, see **Acer**

**Sàbal** Adans. (Family Palmae) **palmetto**

‡†*Sabal* Adans., Fam. Pl. 2: 495, 599. 1763.
*Inodes* O. F. Cook, Bull. Torrey Bot. Club 28: 529. 1901.

DERIVATION—Name unexplained by its author, possibly American Indian.

REFERENCES—Bailey, L. H. American palmettoes. Gentes Herbarum 3: 273-339, illus. 1934.

Bailey, L. H. Revision of the American palmettoes. Gentes Herbarum 6: 365-459, illus. 1944.

One additional shrub species, *Sabal etonia* Swingle ex Nash (Bull. Torrey Bot. Club 23: 99. 1896), etonia palmetto (scrub palmetto), is

native only in c. Fla. The only other native palm that does not reach tree size is *Rhapidophyllum hystrix* (Pursh) H. Wendl. & Drude (Bot. Ztg. 34: 804. 1876), needlepalm (dwarf saw-palmetto), a creeping shrub of the Coastal Plain from Ga. and Fla. to Miss.

NUMBER OF SPECIES: Native trees, 3; native shrubs, 1; P.R., 1; total, tropical Am., 14.

**Sàbal mexicàna** Mart. **Mexican palmetto**

*Sabal mexicana* Mart., Hist. Nat. Palm. 3: 246. 1838; 1: pl. S, pl. V, fig. 197, 245-250. 1845.
*Inodes texana* O. F. Cook, Bull. Torrey Bot. Club 28: 534. 1901.
‡†*Sabal texana* (O. F. Cook) Becc., Webbia 2: 20, 78. 1907.

DERIVATION—Of Mexico.

OTHER COMMON NAMES—Texas palmetto‡†, Rio Grande palmetto, Victoria palmetto, palmetto, palma de mícharos (Spanish).

RANGE—Extreme s. Tex. (Cameron Co.). Also Mex. (Tamps. w. to Jal., s. to Oax.), Guatemala, El Salvador, and nw. Nicaragua. Atlas vol. 3, maps 161-N, 161-SW.

This Mexican species includes ‡†*Sabal texana* (O. F. Cook) Becc., Texas palmetto‡†, of extreme s. Tex.

**Sàbal mìnor** (Jacq.) Pers. **dwarf palmetto**

*Corypha minor* Jacq., Hort. Bot. Vindob. 3: 8, pl. 8. 1776.
*Sabal minor* (Jacq.) Pers., Synops. Pl. 1: 399. 1805.
*Chamaerops louisiana* Darby, Geog. Descr. La. 194, 205, 206, 216. 1816; *nom. subnud.*
*Sabal deeringiana* Small, Torreya 26: 34. 1926.
‡*Sabal louisiana* (Darby) Bomhard, J. Wash. Acad. Sci. 25: 44. 1935.

DERIVATION—Smaller.

OTHER COMMON NAMES—Louisiana palmetto‡, bush palmetto, bluestem.

RANGE—Coastal Plain from ne. N.C. s. to s. Fla., and w. to e. and c. Tex., and n. to extreme se. Okla. and s. Ark. Atlas vol. 4, map 125; vol. 5, map 132. The northernmost New World palm, to Lat. 36° N. in ne. N.C.

REFERENCES—Bomhard, Miriam L. Sabal louisiana, the correct name for the polymorphic palmetto of Louisiana. J. Wash. Acad. Sci. 25: 25-44. 1935.

Bomhard, Miriam L. Distribution and character of *Sabal louisiana*. J. Wash. Acad. Sci. 33: 170-182, illus. 1943.

This species, formerly omitted as a shrub, includes ‡*Sabal louisiana* (Darby) Bomhard, Louisiana palmetto‡, a name applied to plants with trunks.

***Sàbal palmétto** (Walt.) Lodd. ex J. A. & J. H. Schult. **cabbage palmetto‡†**

*Corypha palmetto* Walt., Fl. Car. 119. 1788.
‡†*Sabal palmetto* (Walt.) Lodd. ex J. A. & J. H. Schult., Syst. Veget. 7: 1487. 1830.
*Sabal jamesiana* Small, J. N.Y. Bot. Gard. 28: 182, fig. 1. 1927.

DERIVATION—From the Spanish common name palmito, a small palm.

OTHER COMMON NAMES—Carolina palmetto, common palmetto, palmetto, cabbage-palm.

RANGE—Coastal Plain near coast from se. N.C. (Cape Fear, local at Cape Hatteras) s. to s. Fla. incl. Fla. Keys, and w. to nw. Fla. (St. Andrews Bay in Bay Co.). Atlas vol. 1, map 188-E; vol. 5, map 133.

*Sabina*, see **Juniperus**
*Saccharodendron*, see **Acer**

**Sàlix** L. (Family Salicaceae) **willow**

‡†*Salix* L., Sp. Pl. 1015. 1753; Gen. Pl. ed. 5, 447. 1754.

DERIVATION—The classical Latin name.

OTHER COMMON NAME—sauce (Spanish).

In number of species, *Salix*, willow, is one of the largest genera of native woody plants of continental United States. Apparently it ranks first, if the hundreds of minor variations named in *Rubus*, blackberry, and *Crataegus*, hawthorn, are reduced to varieties and synonyms. Also, in number of native tree species, *Salix* ranks among the 5 largest genera.

About 90 species of *Salix*, willow, are distinguished in continental United States including Alaska, Most are shrubs, some merely dwarf creeping plants of arctic tundra or alpine summits. Others become small to large trees, sometimes rarely.

It is difficult to draw the line between a tree and a shrub in this genus. Some willows with several trunks from the same root system reach a large size and are regarded as trees. Those species recorded as trees and having the minimum dimensions, even though with several trunks, have been accepted. Rare individuals of additional shrubby species may become treelike or trees also.

In the 1953 checklist, acknowledgment was made to Carleton Roy Ball (1873-1958), of the United States Department of Agriculture, who in addition to his official administrative work was a specialist on this genus. He examined the manuscript of *Salix* and made many helpful suggestions. Also, he contributed the ranges, based upon detailed notes from his large herbarium, now deposited in the Herbarium of the National Arboretum (NA) in Washington, D.C.

In this revision, as before, it has not seemed practicable to distinguish varieties of *Salix*. However, varietal names in common use are cited in synonymy under their respective species. Most of the numerous named varieties are based on minor differences, such as degree of hairiness of foliage and twigs and the shape of leaves.

Natural hybrids of *Salix* are found but sparingly, according to Ball. However, various supposed crosses have been reported. Ball designated interspecific hybrids by formulas with the parent most closely resembled cited first. Often the identity of one parent is uncertain. If a hybrid should possibly cross with a third species, one species would scarcely be recognizable, he stated.

A detailed list of more than 50 hybrids among the North American willows, mostly shrubby, was prepared by Schneider (1922). Some hybrids, including several observed afterwards, have been recorded formally as binomials.

This conservative compilation accepts 27 native tree species of *Salix* (without varieties) for continental United States including Alaska. All were accepted in the recent synopsis of North American species of *Salix* by Dorn (1976). However, his treatment retained one species cited here as a synonym. These 2 native tree species included in the total are widespread in Alaska but absent from contiguous United States (the Lower 48): *Salix alaxensis* (Anderss.) Cov., feltleaf willow, and *Salix arbusculoides* Anderss., littletree willow. Canada apparently has no additional tree willows.

Eleven of the 38 native tree species of *Salix* accepted in the 1953 checklist have been omitted as synonyms, varieties, or shrubs, as explained below. Preparation of species distribution maps for Atlas of United States Trees stressed the desirability of uniting species with intergrading forms and overlapping ranges.

The 5 reductions which follow have been made by authors of floras or monographs in species accepted in the 1953 checklist. *Salix exigua* Nutt., sandbar willow (coyote willow), includes *S. interior* Rowlee as a variety or synonym. *Salix hookerana* Barratt, Hooker willow, of the

Pacific Coast from B.C. to nw. Calif. takes in *S. amplifolia* Cov., Yakutat willow, of se. Alaska as a synonym. *Salix lasiandra* Benth., Pacific willow, adds *S. caudata* (Nutt.) Heller, whiplash willow, as a variety or synonym. *Salix nigra* Marsh., black willow, includes as a variety or synonym the western segregate *S. gooddingii* Ball, Goodding willow. *Salix sitchensis* Sanson, Sitka willow, has as a synonym *S. coulteri* Anderss., Coulter willow, which was treated as a form in the 1927 checklist.

Also, *Salix bonplandiana* H.B.K., Bonpland willow, includes *S. laevigata* Bebb, red willow, as a synonym, according to the recent synopsis by Dorn (1976, p. 2775).

Thirteen additional shrubby species are mentioned in notes. Five species added to the 1953 checklist as rarely becoming small trees are better regarded as shrubs and are omitted, as explained in notes. They are: ‡*Salix ligulifolia* (Ball) Ball, strapleaf willow‡; ‡*S. lutea* Nutt., yellow willow‡; ‡*S. melanopsis* Nutt., dusky willow‡; *S. monticola* Bebb (‡*S. padophylla* Rybd.), park willow; and *S. rigida* Muhl. (replacing ‡*S. eriocephala* Michx.), heartleaf willow.

Five other species rarely reach tree size in Alaska and have been accepted in references on the trees of that State (Viereck and Little *132, 133, 134*). They are: *Salix barclayi* Anderss., Barclay willow; *S. glauca* L., grayleaf willow; *S. myrtillifolia* Anderss. (*S. novae-angliae* Anderss.), tall blueberry willow; *S. planifolia* Pursh (*S. planifolia* ssp. *pulchra* (Cham.) Argus), diamondleaf willow; and *S. richardsonii* Hook. (*S. lanata* ssp. *richardsonii* (Hook.) A. Skvortz.), Richardson willow. All except the last extend south in mountains to other western States.

Also, these 3 are reported to become small trees: *Salix glaucophylloides* Fern., blueleaf willow; *S. maccalliana* Rowlee, McCall willow (in note in 1953 checklist); S. *serissima* (Bailey) Fern., autumn willow.

Four naturalized tree species of *Salix* have been retained here. Several other introduced species are reported in manuals as shrubs or small trees occasionally escaping from cultivation. *Salix pentandra* L., laurel willow, introduced from Europe, apparently is not naturalized.

REFERENCES—Descriptive floras and manuals are listed under References (p. 25) and not repeated here.

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Argus, George W. The genus Salix in Alaska and the Yukon. Can. Natl. Mus. Publ. Bot. 2, 279 p., illus. 1973.

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Ball, Carleton R. The willows of the southern States. Castanea 3: 1-9. 1938.

Ball, Carleton R. *Salix*, p. 339-392. *In* Lundell, Cyrus Longworth. Flora of Texas, v. 3. 1961.

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Dorn, Robert D. A systematic study of Salix section Cordatae in North America. Can. J. Bot. 53: 1491-1522, illus. 1975.

Dorn, Robert D. A synopsis of American *Salix*. Can. J. Bot. 54: 2769-2789. 1976.

Dorn, Robert D. Willows of the Rocky Mountain states. Rhodora 79: 390-429. 1977.

Fernald, M. L. Difficulties in North American *Salix*. Rhodora 48: 13-16, 27-40, 41-49, illus. 1946.

Froiland, Sven G. The genus *Salix* (willows) in the Black Hills of South Dakota. U.S. Dep. Agric. Tech. Bull. 1269, 75 p., illus. 1962.

Massey, A. B., and Carleton R. Ball. The willows of Virginia. Va. Polytech. Inst. Bull. 37(9), 31 p., illus. 1944.

Porter, C. L. A flora of Wyoming: part V, subclass II. Dicotyledoneae, 25. Salicaceae. Univ. Wyo. Agric. Exp. Stn. Res. J. 14: 7-24. 1967. (*Salix* by George W. Argus, p. 7-20.)

Raup, Hugh M. The willows of the Hudson Bay region and the Labrador Peninsula. Sargentia 4: 81-127, illus. 1943.

Raup, Hugh M. The willows of boreal western America. Harvard Univ., Contrib. Gray Herb., 185, 95 p., illus. 1959.

Schneider, Camillo. Notes on American Willows. XII. J. Arnold Arbor. 3: 61-125. 1922. (b. Some remarks on the hybrids hitherto observed among the American willows. p. 78-84.)

Smith, Ernest C. The willows of Colorado. Am. Midl. Nat. 27: 217-252, illus. 1942.

Sudworth, George B. (ed. and annotated by W. A. Dayton). Poplars, principal tree willows, and walnuts of the Rocky Mountain region. U.S. Dep. Agric. Tech. Bull. 420, 111 p., illus. 1934.

NUMBER OF SPECIES: Native trees (including 2 in Alaska but not in other States), about 27; naturalized trees, 4; native shrubs, about 60 (12 mentioned in notes), including about 25 in Alaska (also a few confined to Can.); Mex. (incl. 6 also in U.S.), about 15; Guatemala (incl. 2 also in U.S.), 3; Cuba, 1 (also in U.S.); S. Am. (in mts. to Chile), 1; New World total, about 100; total, mostly n. temperate and arctic zones, shrubs and trees, about 300-400.

BINOMIALS OF TREE INTERSPECIFIC HYBRIDS:

*Sàlix* ×*beschélii* Boivin (*S. bebbiana* × *discolor*)
*Sàlix* ×*delnorténsis* Schneid. (*S. lasiolepis* × *sitchensis*)
*Sàlix* ×*glatfélteri* Schneid. (*S. amygdaloides* × *nigra*)
*Sàlix* ×*hankensónii* Dode (*S. alba* × *nigra*)
*Sàlix* ×*jésupii* Fern. (*S. alba* × *lucida*)
*Sàlix* ×*neo-fòrbesii* Toepffer (*S. petiolaris* × *sericea*)
*Sàlix* ×*rùbens* Schrank (*S. alba* × *fragilis*)
*Sàlix* ×*schnèideri* Boivin (*S. lucida* × *nigra*)

**Sàlix alaxénsis** (Anderss.) Cov. **feltleaf willow**‡†

*Salix speciosa* β *alaxensis* Anderss. in A. DC., Prodr. 16(2): 275. 1868.
‡†*Salix alaxensis* (Anderss.) Cov.. Proc. Wash. Acad. Sci. 2: 280. 1900.
*Salix alaxensis* var. *longistylis* (Rydb.) Schneid., J. Arnold Arbor. 1: 225. 1920.

DERIVATION—Of Alaska, from an old Russian spelling, Alaxa.

RANGE—Nw. Can. from Keewatin on nw. side of Hudson Bay w. to n. Yukon and almost throughout Alaska, and se. to c. B.C. and sw. Alta. Local in extreme n. Que. Also in ne. Asia. Not in contiguous U.S. Atlas vol. 2, map 18; vol. 3, 163-N.

SÀLIX ÁLBA L. WHITE WILLOW‡

‡†*Salix alba* L., Sp. Pl. 1021. 1753.

DERIVATION—White, referring to the white-silky leaves.

OTHER COMMON NAME—European white willow†.

RANGE—Escaped from cultivation and naturalized from N.S. and Maine

w. to s. Ont. and N. Dak., s. to S. Dak. and Mo., and e. to Ga. and N.C. Local in Colo. Native from Europe and n. Africa to c. Asia.

HYBRIDIZES WITH: *Salix babylonica*; *S. fragilis* (*S.* ×*rubens* Schrank); *S. lucida* (*S.* ×*jesupii* Fern.); *S. nigra* (*S.* ×*hankensonii* Dode).

*Salix amphibia*, see **S. caroliniana**

*Salix amplifolia*, see **S. hookerana**

***Sàlix amygdaloìdes** Anderss. **peachleaf willow**‡†

‡†*Salix amygdaloides* Anderss., Öfvers. Förh. Sven. Vetensk. Akad. 15: 114. 1858. Proc. Am. Acad. Arts Sci. 4: 53 (Salic. Bor.-Am. 8). 1858.

*Salix wrightii* Anderss., Öfvers. Förh. Sven. Vetensk. Akad. 15: 115. 1858. Proc. Am. Acad. Arts Sci. 4: 55 (Salic. Bor.-Am. 9). 1858.

†*Salix amygdaloides* var. *wrightii* (Anderss.) Schneid., Bot. Gaz. 65: 14. 1918.

DERIVATION—Resembling *Salix amygdalina* L., almondleaf willow, of Europe and Asia; from *Amygdalus*, peach, referring to the leaf shape.

OTHER COMMON NAMES—almond willow, peach willow, southwestern peach willow, Wright willow.

RANGE—Extreme s. Que. and N.Y., and s. Ont. w. to c. Mich., Minn., sw. Ont., Man., c. Sask., s. Alta., and se. B.C., s. to se. Wash., ne. Oreg., Idaho, ne. Nev., n. and e. Utah, ne. Ariz., and Trans-Pecos Tex., and e. to nw. Tex., nw. Okla., Mo., Ill., Ky., Ohio, and nw. Pa. Also n. border of n. Mex. (Chih.). Atlas vol. 1, maps 189-W, 189-E, 189-N.

HYBRIDIZES WITH: *Salix caroliniana*; *S. nigra* (*S.* ×*glatfelteri* Schneid.).

**Sàlix arbusculoìdes** Anderss. **littletree willow**‡

‡*Salix arbusculoides* Anderss., Handl. Sven. Vetensk. Akad. 6(1): 147, pl. 8, fig. 81. 1867.

DERIVATION—Like a little tree.

RANGE—Nw. Can. from Keewatin on nw. side of Hudson Bay w. to n. Yukon and nw. Alaska, s. to sw. and s. Alaska, and e. to c. B.C. and c. Man. Not in contiguous U.S. Atlas vol. 2, map 19; vol. 3, map 164-N.

*Salix astatulana*, see **S. floridana**

SÀLIX BABYLÓNICA L. WEEPING WILLOW‡

‡†*Salix babylonica* L., Sp. Pl. 1017. 1753.

DERIVATION—Of Babylon, a Chinese willow mistaken for the willowlike Euphrates poplar, *Populus euphratica* Oliv.

OTHER COMMON NAMES—Babylon weeping willow†, Napoleon willow.

RANGE—Escaped from cultivation and naturalized locally from s. Que., s. Ont., and Vt., sw. to Mo., and e. to Ga. and S.C. Native of China.

HYBRIDIZES WITH: *Salix alba*; *S. fragilis*.

*Salix balsamifera*, see **S. pyrifolia**

*Sàlix bárclayi* Anderss. (Öfvers. Förh. Sven. Vetensk. Akad. 15: 125. 1858), Barclay willow, a thicket-forming shrub, rarely becomes treelike and 10-20 ft (3-6 m) in height in Alaska. Range—Sw. and c. Alaska, se. in s. and se. Alaska to Yukon and along Pacific Coast to Wash., and e. to n. Idaho, Mont., and Alta. Atlas vol. 2, map 20.

**Sàlix bebbiàna** Sarg. **Bebb willow**‡

*Salix rostrata* Richards. in Franklin, Narr. J. Polar Sea 753. 1823. Non *Salix rostrata* Thuillier, Fl. Paris, ed. 2, 516. 1799.

‡†*Salix bebbiana* Sarg., Gard. and Forest 8: 463. 1895.

*Salix vagans* l. *rostrata* Anderss., Handl. Sven. Vetensk. Akad. 6(1): 87. 1867.

*Salix perrostrata* Rydb. in Britton & Rydb., Bull. N.Y. Bot. Gard. 2: 163. 1901.

*Salix rostrata* Richards. var. *luxurians* Fern., Rhodora 9: 223. 1907.

*Salix rostrata* var. *capreifolia* Fern., Rhodora 16: 177. 1914.

*Salix rostrata* var. *projecta* Fern., Rhodora 16: 178. 1914.

*Salix bebbiana* var. *perrostrata* (Rydb.) Schneid., J. Arnold Arbor. 2: 71. 1920.

*Salix bebbiana* var. *projecta* (Fern.) Schneid., J. Arnold Arbor. 3: 75. 1922.

*Salix bebbiana* var. *capreifolia* (Fern.) Fern., Rhodora 26: 123. 1924.

*Salix bebbiana* var. *luxurians* (Fern.) Fern., Rhodora 26: 122. 1924.
*Salix depressa* L. ssp. *rostrata* (Anderss.) Hiitonen, Memo. Soc. Faun. Fl. Fenn. 25: 82. 1950.
*Salix starkeana* Willd. ssp. *bebbiana* (Sarg.) Youngberg, Rhodora 72: 549. 1970.

DERIVATION—Michael Schuck Bebb (1833-95), United States specialist on willows.

OTHER COMMON NAMES—beak willow, long-beak willow, diamond willow.

RANGE—Widespread from Nfld. and Labr. w. across Can. to Hudson Bay, Yukon, and c. and sw. Alaska, s. to B.C. and in mts. from Wash. to c. Ariz. s. N. Mex., and nw. Nebr., and s. in ne. from Iowa e. to Ind., Pa., Md., and N.J. Also ne. Asia. Atlas vol. 2, map 21; vol. 3, maps 165-N, 165-NW, 165-SW; vol. 4, maps 127-N, 127-NE.

REFERENCES—Cronquist, Arthur. On the nomenclature of *Salix bebbiana* Sarg. Rhodora 73: 558-559. 1971.

Youngberg, Alv Dan. Salix starkeana in North America. Rhodora 72: 548-550. 1970.

HYBRIDIZES WITH: *Salix discolor* (*S.* ×*beschelii* Boivin); *S. petiolaris*.

**Sàlix bonplandiàna** H.B.K. **Bonpland willow‡**

‡*Salix bonplandiana* H.B.K., Nov. Gen. Sp. 2: 20, pl. 101, 102. 1817.
‡†*Salix laevigata* Bebb, Am. Nat. 8: 202. 1874.

DERIVATION—In honor of its discoverer, Aimée Bonpland (1773-1858), French botanist who with Alexander von Humboldt made important collections of plants in Mexico and other Spanish regions in the New World.

OTHER COMMON NAMES—Toumey willow, red willow‡†, polished willow.

RANGE—Sw. Utah w. to w. Nev. and n. Calif., s. to s. Calif., and e. to se. Ariz. and extreme sw. N. Mex. Mex. (B. Cal. and Son. e. to Coah., s. to Jal., Oax., and Chis.) and Guatemala. Atlas, vol. 3, maps 166-N and 166-SW; also including map 176 (as *Salix laevigata*).

‡†*Salix laevigata* Bebb, red willow‡†, has been united as a synonym by Dorn (1976, p. 2775). The problem of distinguishing both species was noted earlier by Standley and Steyermark (Fl. Guatemala. Fieldiana: Bot. 24(3): 344-345. 1952).

HYBRIDIZES WITH: *Salix lasiandra*; *S. nigra*.

**Sàlix caroliniàna** Michx. **Coastal Plain willow‡**

‡*Salix caroliniana* Michx., Fl. Bor.-Am. 2: 226. 1803.
†*Salix longipes* Shuttlew. ex Anderss., Öfvers. Förh. Sven. Vetensk. Akad. 15: 114. 1858. Proc Am. Acad. Arts Sci. 4: 53 (Salic. Bor.-Am. 7). 1858.
*Salix nigra* var. *wardi* Bebb in Ward, U.S. Natl. Mus. Bull. 22: 114. 1881.
*Salix occidentalis* var. *longipes* (Anderss.) Bebb, Garden and Forest 8: 363. 1895.
*Salix wardi* (Bebb) Bebb, Gard. and Forest 8: 363. 1895.
*Salix amphibia* Small, Fl. Miami 61, 200. 1913.
†*Salix longipes* var. *wardii* (Bebb) Schneid., Bot. Gaz. 65: 22. 1918.
†*Salix harbisonii* Schneid., J. Arnold Arbor. 1: 29. 1919; "*harbisoni*."

DERIVATION—Of Carolina.

OTHER COMMON NAMES—Ward willow, southern willow, Harbison willow†.

RANGE—S. Pa. w. to n. Mo. and extreme se. Nebr., s. to e. Kans., s. Okla., and c. Tex., e. to s. Fla. incl. Fla. Keys, and in Coastal Plain to se. Va. Also Cuba. Atlas vol. 4, map 126; vol. 5, map 134.

HYBRIDIZES WITH: *Salix amygdaloides*; *S. nigra*; *S. rigida*; *S. sericea*.

*Salix caudata*, see **S. lasiandra**
*Salix chapmanii*, see **S. floridana**
*Salix coulteri*, see **S. sitchensis**
*Salix depressa*, see **S. bebbiana**

**Sàlix díscolor** Muhl. **pussy willow‡†**

?*Salix eriocephala* Michx., Fl. Bor.-Am. 2: 225. 1803 (March).
‡†*Salix discolor* Muhl. in Muhl. & Willd., Neue Schr. Gesell. Naturf. Freunde Berlin 4: 234, pl. 6, fig. 1. 1803.

DERIVATION—Of different colors, referring to the leaves, which are bright green above and whitish beneath.

OTHER COMMON NAMES—glaucous willow, silvery pussy willow.

RANGE—Nfld. and Labr. w. across Can. to n. B.C., s. in w. mts. to Idaho, Mont., n. Wyo. and Black Hills of S. Dak., also from N. Dak. s. to Iowa, extreme ne. Mo. and s. Ill., and e. to N.J. and s. in mts. to e. Ky. and e. Tenn. Atlas vol. 3, maps 167-N, 167-W; vol. 4, maps 128-N, 128-NE.

*Salix eriocephala* Michx. has priority and may be the same, according to Dorn (1976, p. 2780).

HYBRIDIZES WITH: *Salix bebbiana* (*S.* ×*beschelii* Boivin); *S. pyrifolia*.

*Salix eriocephala*, see notes under **S. discolor** and **S. rigida**

**Sàlix exígua** Nutt. **sandbar willow**†

†*Salix longifolia* Muhl. in Muhl. & Willd., Neue Schr. Gesell. Naturf. Freunde Berlin 4: 238, p. 6, fig. 6. 1803. Non *S. longifolia* Lam., Fl. Franç. 2: 232. 1778.
‡†*Salix exigua* Nutt., No. Am. Silva 1: 75. 1843.
*Salix longifolia angustissima* Anderss., Öfvers. Förh. Sven. Vetensk. Akad. 15: 116. 1858.
†*Salix longifolia* var. *angustissima* Anderss., Proc. Am. Acad. Arts Sci. 4: 56. 1858.
*Salix longifolia* [subsp.?] **pedicellata* Anderss., Handl. Svenska Ventensk. Akad. 6(1): 55. 1867.
†*Salix longifolia* β *pedicellata* Anderss. in DC., Prodr. 16(2): 214. 1868. (Spelled "*pedunculata*" in 1927 checklist.)
*Salix fluviatilis* var. *exigua* (Nutt.) Sarg., Silva No. Am. 9: 124. 1896.
‡*Salix interior* Rowlee, Bull. Torrey Bot. Club 27: 253, pl.9, fig. 12-13. 1900.
*Salix interior wheeleri* Rowlee, Bull. Torrey Bot. Club 27: 253, pl. 9, fig. 14. 1900.
*Salix stenophylla* Rydb., Bull. Torrey Bot. Club 28: 271. 1901.
*Salix exigua* var. *stenophylla* (Rydb.) Scheid., Bot. Gaz. 65: 25. 1918.
*Salix interior* [var.] *pedicellata* (Anderss.) Ball, Can. Field Nat. 40: 175. 1926.
*Salix interior angustissima* (Anderss.) Dayton in Sudw., U.S. Dep. Agric. Tech. Bull. 420: 78. 1934.
*Salix interior* var. *exterior* Fern., Rhodora 48: 38. 1946.
*Salix exigua* ssp. *interior* (Rowlee) Cronq., Vasc. Pl. Pac. NW. 2: 51. 1964.
*Salix fluviatilis* var. *sericans* (Nees) Boivin, Nat. Can. 93: 436. 1966.

DERIVATION—Scanty, hence small-size.

OTHER COMMON NAMES—coyote willow‡, acequia willow, basket willow, gray sandbar willow, narrowleaf willow, slender willow, silvery desert willow, taray (Spanish).

RANGE—Widespread from e. Que. and N.B., w. across Can. to c. Man., Mack., Yukon, and c. Alaska, s. to B.C., Wash., and s. Calif., and e. to Trans-Pecos and s. Tex., s. La., w. Tenn., Ky., and Va. Also across n. Mex. (B. Cal. e. to Tamps.). Atlas vol. 3, maps 168-NW, 168-SW, 168-N; vol. 4, maps 129-NE, 129-SE, 129-N; vol. 2, map 24 (as *S. interior*).

‡*Sàlix intèrior* Rowlee, sandbar willow‡, has been united as a variety or synonym (Dorn 1976, p. 2776). The two intergrading willows differ mainly in hairiness of foliage and in leaf margin and could not be mapped separately.

**Sàlix floridàna** Chapm. **Florida willow**‡

‡*Salix floridana* Chapm., Fl. South. U.S. 430. 1860.
*Salix chapmanii* Small, Man. Southeast. Flora 414, 1504. 1933.
*Salix astatulana* Murrill & Palmer, J. Arnold Arbor. 22: 580, illus. 1941.

DERIVATION—Of Florida.

RANGE—Rare, s. Ga. to nw. and c. Fla. Atlas vol. 4, map 130; vol. 5, map 135.

REFERENCES—Ball, Carleton R. *Salix floridana* Chapman, a valid species. J. Arnold Arbor. 24: 103-106, illus. 1943.

Murrill, W. A. *Salix floridana* Chapman, not valid. Q. J. Fla. Acad. Sci. 10(4): —. 1948.

**Sàlix fluviátilis** Nutt. **river willow‡**

‡*Salix fluviatilis* Nutt., No. Am. Sylva 1: 73. 1843.

DERIVATION—Of rivers.

OTHER COMMON NAME—sandbar willow.

RANGE—Sw. Wash. and nw. Oreg. only. Atlas vol. 3, map 169.

SÀLIX FRÁGILIS L. CRACK WILLOW‡

‡*Salix fragilis* L., Sp. Pl. 1017. 1753.

DERIVATION—Fragile, referring to the brittle, easily broken twigs.

OTHER COMMON NAMES—brittle willow, snap willow.

RANGE—Escaped from cultivation and naturalized from Nfld. and N.S., w. to Maine, s. Ont., Minn., and S. Dak., s. to Kans., and e. to Va. Native of Eurasia.

HYBRIDIZES WITH: *Salix alba* (*S.* ×*rubens* Schrank).

**Sàlix geyeràna** Anderss. **Geyer willow‡**

‡*Salix geyerana* Anderss., Öfvers. Förh. Sven. Vetensk. Akad. 15: 122. 1858. Proc. Am. Acad. Arts Sci. 4: 63 (Salic. Bor.-Am. 17). 1858; "*geyeriana*."

*Salix geyeriana* var. *meleina* J. K. Henry, Fl. South. B.C. 98. 1915.

DERIVATION—Honoring Karl Andreas Geyer (1809-53), who collected plants on a journey from Missouri to the Pacific in 1843-44.

OTHER COMMON NAME—silver willow.

RANGE—Mts. from c. Mont. w. to s. B.C. incl. Vancouver Is. and Wash., s. in Calif. to Sierra Nev. and White Mts. (Mono Co.), e. to c. Ariz., and n. to Colo. and e. Wyo. Atlas vol. 3, map 170.

*Sàlix glaùca* L. (Sp. Pl. 1019. 1753), grayleaf willow, rarely becomes a small tree to 20 ft (6 m) high and 5 in (12.5 cm) in trunk diameter in Alaska. Range—Nearly throughout Alaska, s. to s. B.C. and in Rocky Mts. in n. N. Mex., and e. across Can. from Alta. to Que., Labr., and Nfld. Also in n. Eurasia. Atlas vol. 2, map 22.

*Sàlix glaucophylloìdes* Fern. (Rhodora 16: 173. 1914), blueleaf willow, is a shrub or small tree to 16 ft (5 m) high, according to Fernald (Gray's Man. Bot. ed. 8, 511-512. 1950) and Dorn (Can. J. Bot. 53: 1511-1512. 1975). Range—Nfld. and Que., w. to Ont. (James Bay), s. to Wis. and ne. Ill., and e. to Pa. and Maine.

*Salix gooddingii*, see **S. nigra**

*Salix gracilis*, see **S. petiolaris**

*Salix harbisonii*, see **S. caroliniana**

**Sàlix hindsiàna** Benth. **Hinds willow‡**

‡*Salix hindsiana* Benth., Pl. Hartw. 335. 1857.

*Salix macrostachya* var. *leucodendroides* Rowlee, Bull. Torrey Bot. Club 27: 250, pl. 9, fig. 6. 1900.

*Salix sessilifolia* var. *leucodendroides* (Rowlee) Schneid., Bot. Gaz. 65: 26. 1918.

*Salix hindsiana* [var.] *leucodendroides* (Rowlee) Schneid. ex Ball in Abrams, Illus. Fl. Pacif. States 1: 491. 1923; *nom. provisor.*

*Salix hindsiana* var. *leucodendroides* (Rowlee) Ball, Madroño 6: 232. 1942.

*Salix fluviatilis* var. *sericans* f. *hindsiana* (Benth.) Boivin, Nat. Can. 93: 436. 1966.

DERIVATION—In honor of Richard Brinsley Hinds (1812-47), British physician and botanist who collected plant specimens along the western coast of America on a surveying expedition with the ship *Sulphur* in 1836-42.

OTHER COMMON NAMES—sandbar willow, valley willow.

RANGE—Sw. Oreg., Calif., and nw. B. Cal., Mex. Atlas vol. 3, map 171.

**Sàlix hookeràna** Barratt **Hooker willow‡**

‡†*Salix hookerana* Barratt in Hook., Fl. Bor.-Am. 2: 145, pl. 180. 1839; "*hookeriana*."

‡†*Salix amplifolia* Cov., Proc. Wash. Acad. Sci. 2: 282, pl. 15. 1900.

DERIVATION—William Jackson Hooker (1785-1865), British botanist, in whose work, Flora Boreali-Americana, the description was published.

OTHER COMMON NAMES—coast willow, Yakutat willow‡, bigleaf willow†.

RANGE—Pacific coast region, local in s. and se. Alaska and Queen Charlotte Is. (Moresby Is.) and from extreme sw. B.C. including Vancouver Is. and Puget Sound region of w. Wash. s. to nw. Calif. Reported also from e. Siberia. Atlas vol. 2, map 23; vol. 3, maps 172-N, 172-W.

*Salix interior*, see **S. exigua**
*Salix laevigata*, see **S. bonplandiana**
*Salix lanata*, see **S. richardsonii**

**Sàlix lasiándra** Benth. **Pacific willow‡**

‡†*Salix lasiandra* Benth., Pl. Hartw. 335. 1857.
*Salix pentandra ß caudata* Nutt., No. Am. Sylva 1: 61, pl. 18. 1843.
†*Salix lasiandra* var. *caudata* (Nutt.) Sudw., Bull. Torrey Bot. Club 20: 43. 1893.
‡*Salix caudata* (Nutt.) Heller, Muhlenbergia 2: 186. 1906.

DERIVATION—With shaggy-hairy stamens.

OTHER COMMON NAMES—whiplash willow‡, black willow, red willow, western black willow†, yellow willow, caudate willow.

RANGE—C. and se. Alaska e. to Sask. and s. mostly in mts. to Black Hills of S. Dak., s. N. Mex., and s. Calif. Atlas vol. 2, map 26; vol. 3, maps 173-N, 173-W.

HYBRIDIZES WITH: *Salix bonplandiana*.

**Sàlix lasiolépis** Benth. **arroyo willow‡**

‡†*Salix lasiolepis* Benth., Pl. Hartw. 335. 1857 (Feb.).
*Salix bigelovii* Torr., Rep. Explor. Surv. Miss. Pac. 4(5): 139. 1857 (Sept. or Aug.).
*Salix lasiolepis* var. *bigelovii* Bebb in Wats., Bot. Calif. 2: 86. 1879.
*Salix sandbergii* Rydb., Bull. Torrey Bot. Club 39: 304. 1912.
*Salix lasiolepis* var. *sandbergii* (Rydb.) Ball, J. Wash. Acad. Sci. 29: 448. 1938.
*Salix lasiolepis* var. *bracelinae* Ball, J. Wash. Acad. Sci. 40: 331. 1950.

DERIVATION—Shaggy-scale, referring to the white-hairy scales of the flowers.

OTHER COMMON NAME—white willow†.

RANGE—Idaho and Wash., s. to s. Calif., and e. to se. Ariz. and w. Tex. Also in n. Mex. (n. B. Cal. and ne. Son., e. to n. Dgo. and Coah.). Atlas vol. 3, maps 174-NW, 174-SW.

HYBRIDIZES WITH: *Salix sitchensis* (*S.* ×*delnortensis* Schneid.).

‡*Sàlix ligulifòlia* (Ball) Ball ex E. C. Smith (Am. Midl. Nat. 27: 236. 1942), strapleaf willow‡, added to the 1953 checklist, is omitted as a shrub only rarely attaining tree size. It has been treated also as a variety, *S. rigida* var. *ligulifolia* (Ball) Argus. Range—Black Hills of S. Dak. and se. Wyo., w. to s. Utah, w. Nev., and sw. Oreg., s. to c. Calif., and e. to Ariz. and N. Mex.

*Salix longifolia*, see **S. exigua**
*Salix longipes*, see **S. caroliniana**

**Sàlix lùcida** Muhl. **shining willow‡**

‡†*Salix lucida* Muhl. in Muhl. & Willd., Neue Schr. Gesell. Naturf. Freunde Berlin 4: 239, pl. 6, fig. 7. 1803.

DERIVATION—Shining, referring to the leaves and twigs.

OTHER COMMON NAME—shiny willow†.

RANGE—Nfld. and Labr. w. to n. Ont., n. Man., and e. Sask., s. to n. N. Dak., Black Hills of S. Dak., and n. Iowa, and e. to c. Ohio, Pa., and N.J. Also local in W. Va., sw. Va., Md., and Del. Atlas vol. 4, maps 131-N, 131-NE.

HYBRIDIZES WITH: *Salix alba* (*S.* ×*jesupii* Fern.); *S. nigra* (*S.* ×*schneideri* Boivin).

‡*Sàlix lùtea* Nutt. (No. Am. Sylva 1: 63, pl. 19. 1943), yellow willow‡, added to the 1953 checklist, is omitted as a shrub only rarely attaining tree size. Range—Man. and Sask., w. to n. Alta., sw. Mack., s. Yukon, and e. B.C., s. to Wash. and Oreg. e. of Cascades and to s. Calif., e. to Ariz. and N. Mex., and n. to e. Nebr. and e. N. Dak. Also n. Ont.

‡*Sàlix maccallìana* Rowlee (Bull. Torrey Bot. Club 34: 158. 1907), McCall willow, is a shrub of Canada which doubtfully may also become a small tree, according to Carleton R. Ball. Range—S. Man. and Sask., w. to B.C., and local at Lake Mistassini, Que.

**Sàlix mackenzieàna** (Hook.) Barratt ex Anderss. **Mackenzie willow‡**

*Salix cordata* γ *mackenzieana* Hook., Fl. Bor.-Am. 2: 149. 1838.
*Salix mackenzieana* Barratt ex Hook., Fl. Bor.-Am. 2: 149. 1838; as synonym.
‡†*Salix mackenzieana* (Hook.) Barratt ex Anderss., Handl. Sven. Vetensk. Akad. 6(1): 160. 1867; "*mackenziana.*"
*Salix* ×*mackenzieana* Barratt ex Anderss. in DC., Prodr. 16(2): 252. 1868, "*mackenziana*"; as *S. cordata* × *rostrata?*
*Salix mackenzieana* var. *macrogemma* Ball in Piper & Beattie, Fl. Northwest Coast 116. 1915; "*mackenziana.*"
*Salix rigida* var. *mackenzieana* (Hook.) Cronq., Vasc. Pl. Pacif. NW. 2: 63. 1964.

DERIVATION—In honor of Alexander Mackenzie (1755?-1820), Scotch fur trader and explorer in Canada; the type was collected along the Mackenzie River, which he discovered.

RANGE—S. Mack. and se. Yukon, s. to B.C. incl. Vancouver Is. and in mts. from Wash. to Sierra Nev. in c. Calif., e. to n. Utah and w. Wyo., and n. to Alta. and nw. Sask. Atlas vol. 3, maps 175-N, 175-W.

This willow has been reduced also to a variety or synonym of the shrubby species *Salix rigida* Muhl., heartleaf willow.

‡*Sàlix melanópsis* Nutt. (No. Am. Sylva 1: 78, pl. 21. 1843), dusky willow‡, accepted in the 1953 checklist, is omitted as a shrub only rarely attaining tree size. It is closely related to *S. exigua* Nutt. and has been treated as a subspecies, *S. exigua* ssp. *melanopsis* (Nutt.) Cronq. Range—S. Alta. and s. B.C., s. to Wash., Oreg., and s. Calif., and e. to Utah, w. Wyo., and w. Mont.

*Sàlix monticola* Bebb ex Coult. (Man. Rocky Mt. Reg. 336. 1885), park willow (mountain willow), replaces ‡*S. padophylla* Rydb., serviceberry willow‡, of the 1953 checklist, but is omitted as a shrub only rarely attaining tree size. Range—Hudson Bay, Ont., and Sask., w. to n. Alta., Mackenzie, Yukon, and c. interior Alaska, s. to Oreg., and e. to Idaho, Colo., and Black Hills of S. Dak. Atlas vol. 2, map 27.

*Sàlix myrtillifòlia* Anderss. (Proc. Am. Acad. Arts Sci. 4: 74. 1858; *S. novae-angliae* Anderss.), tall blueberry willow, an erect shrub, rarely becomes treelike and 20 ft (6 m) tall in Alaska. Range—Local along rivers in interior Alaska, e. to Yukon and Mack., s. to Sask. and B.C. and in mts. to s. Utah and n. Calif. Atlas vol. 2, map 28 (as *Salix novae-angliae* Anderss.).

***Sàlix nìgra** Marsh. **black willow‡†**

‡†*Salix nigra* Marsh., Arbustr. Am. 139. 1785.
*Salix falcata* Pursh, Fl. Am. Sept. 2: 614. 1814.
*Salix nigra* var. *falcata* (Pursh) Torr., Fl. N.-Y. 2: 209. 1843.
*Salix nigra* var. *vallicola* Dudley in Abrams, Fl. Los Angeles 100. 1904.
‡†*Salix gooddingii* Ball, Bot. Gaz. 40: 376, pl. 12, fig. 1-2. 1905; "*gooddingi.*" Bot. Gaz. 72: 227-235, fig. 2-4. 1921.
†*Salix nigra* var. *altissima* Sarg., Trees and Shrubs 2: 216. 1913.
†*Salix nigra* var. *lindheimerii* Schneid., Bot. Gaz. 65: 9. 1918.
*Salix gooddingii* var. *variabilis* Ball, J. Wash. Acad. Sci. 40: 324. 1950.

DERIVATION—Black, perhaps from the dark brown to blackish bark.

OTHER COMMON NAMES—swamp willow, Goodding willow‡, western black willow, southwestern black willow, Dudley willow†, sauz (Spanish).

RANGE—S. N.B. and c. Maine, w. to extreme s. Que., extreme s. Ont., c. Mich., n. Wis., se. Minn., and e. Nebr., s. to w. Okla. and nw. and s. Tex., and e. to nw. Fla. and Ga. Also a w. variation from Trans-Pecos Tex. w. to s. N. Mex., Ariz., s. Utah, s. Nev., and from s. to n. Calif. Local in n. Mex. (extreme ne. B. Cal. Norte, Son., and Sin., e. to Dgo. and Tamps.). Atlas vol. 1, maps 190-N, 190-W, 190-E (omits w. variation); vol. 3, maps 177-N, 177-NW, 177-SW; vol. 5, map 136.

REFERENCE—Ball, Carleton R. Salix gooddingii Ball and its glabrous-capsuled variety. J. Wash. Acad. Sci. 40: 324-329. 1950.

‡†*Sàlix goóddingii* Ball, Goodding willow‡, of southwestern United States and adjacent Mexico, has been united as a western variation of this species. However, Dorn (1976, p. 2775) accepted both, citing differences in chemistry.

HYBRIDIZES WITH: *Salix alba* (*S.* ×*hankensonii* Dode); *S. amygdaloides* (*S.* ×*glatfelteri* Schneid.); *S. bonplandiana*; *S. caroliniana*; *S. lucida* (*S.* ×*schneideri* Boivin).

*Salix novae-angliae*, see **S. myrtillifolia**
*Salix padophylla*, see **S. monticola**

**Sàlix pellìta** Anderss. ex Schneid. **satiny willow**

*Salix chlorophylla* [subsp.?] **S. pellita* Anderss., Handl. Sven. Vetensk. Akad. 6(1): 139, pl. 7, fig. 72. 1867; in part.
*Salix chlorophylla* ß *pellita* Anderss. in A. DC., Prodr. 16(2): 244. 1868; in part.
‡*Salix pellita* Anderss. ex Schneid., J. Arnold Arbor. 1: 82. 1919.

DERIVATION—Of skins.

RANGE—Nfld. and Labr., w. to c. Que., n. Ont., c. and n. Man., and e. Sask., s. locally to n. Minn., n. Mich., w. N.Y., Vt., N.H., Maine, and N.S. Atlas vol. 4, maps 132-N, 132-NE.

*Salix pentandra*, see note under **Salix**
*Salix perrostrata*, see **S. bebbiana**

**Sàlix petiolàris** J. E. Sm. **meadow willow‡**

‡*Salix petiolaris* J. E. Sm., Trans. Linn. Soc. Lond. 6: 122 1802.
*Salix gracilis* Anderss., Öfvers. Förh. Sven. Ventensk. Akad. 127. 1858. Proc. Am. Acad. Arts Sci. 4: 67 (Salic. Bor.-Am.). 1858.

DERIVATION—Petioled.

OTHER COMMON NAME—slender willow.

RANGE—N.B., s. Que., and Maine, w. to s. Ont., c. Man., n. Alta., Mack., and e. B.C., and s. to N. Dak., Black Hills of S. Dak., Nebr., and Colo., and e. to Iowa, Ind., Pa., and N.J. Also local in sw. Va. Atlas vol. 3, maps 178-N, 178-NW; vol. 4, maps 133-N, 133-NE.

REFERENCES—Ball, Carleton R. Salix petiolaris J. E. Smith: American, not British. Bull. Torrey Bot. Club 75: 178-187. 1948.
Fernald, M. L. Rhodora 48: 46-48. 1946.
Fernald, M. L. Rhodora 51: 7. 1949.

HYBRIDIZES WITH: *Salix bebbiana*; *S. sericea* (*S.* ×*neo-forbesii* Toepffer).

*Sàlix planifòlia* Pursh (Fl. Am. Sept. 2: 611. 1814), diamondleaf willow, an erect much branched shrub, rarely becomes a tree 15 ft (4.5 m) tall in Alaska. This Alaska variation has been distinguished as *S. planifolia* ssp. *pulchra* (Cham.) Argus. Range—Almost throughout Alaska, e. to n. Yukon and nw. Mack., s. to n. B.C., also in ne Asia. Atlas vol. 2, map 29.

SÀLIX PURPÙREA L. (Sp. Pl. 1017. 1753), purple-osier willow (basket willow), has been recorded as a tree rarely to 37 ft (11.3 m) tall in Mich. Generally a shrub 3-10 ft (1-3 m) high. Range—Escaped from cultivation and perhaps naturalized locally, Nfld. and Que., w. to Ont., s. to Wis. and Iowa, and e. to Va. Native of Eurasia and n. Africa and introduced for basket-making.

**Sàlix pyrifòlia** Anderss. **balsam willow‡†**

*Salix cordata* ß *balsamifera* Hook., Fl. Bor.-Am. 2: 149. 1838.
*Salix balsamifera* Barratt ex Hook., Fl. Bor.-Am. 2: 149. 1838; as synonym.
‡†*Salix pyrifolia* Anderss., Handl. Sven. Vetensk. Akad. 6(1): 162, pl. 8, fig. 93. 1867. Non *Salix pyrifolia* Schleicher, Cat. Pl. Helvet. Ed. 3, 26. 1815; *nom. nud.*
*Salix balsamifera* Barratt ex Bebb, Bot. Gaz. 4: 190. 1879.

DERIVATION—Pear-leaf.

OTHER COMMON NAME—bog willow.

RANGE—Nfld. and Labr., w. to s. Que., c. Ont., n. Sask., n. Alta., s. Mack., and Yukon, s. to e. B.C., and e. to s. Man., c. Minn., Wis., Mich., n. N.Y., Maine, and N.S. Atlas vol. 4, maps 134-N, 134-NE.

HYBRIDIZES WITH: *Salix discolor*.

*Sàlix richardsónii* Hook. (Fl. Bor.-Am. 2: 147. 1838; *Salix lanata* L.: in part), Richardson willow, a clump-forming shrub, rarely becomes a small tree to 20 ft (6 m) tall in Alaska. The Alaska variation has been distinguished also as *S. lanata* ssp. *richardsonii* (Hook.) A. Skvortz. Range—Nearly through Alaska except sw., s., and se., e. across n. Can. to Baffin Is., s. to nw. Hudson Bay, and w. to B.C. Not in contiguous U.S. Atlas vol. 2, map 25 (as *Salix lanata* L. ssp. *richardsonii* (Hook.) A. Skvortz.).

*Sàlix rígida* Muhl. (in Muhl. & Willd., Neue Schr. Gesell. Naturf. Freunde Berlin 4: 236, pl. 6, fig. 4. 1803), heartleaf willow, replaces ‡*S. eriocephala* Michx., Missouri River willow‡, of the 1953 checklist, but is omitted as a shrub of se. Can. and ne. U.S. The latter, which has priority, may be the same, according to Dorn (1976, p. 2782). Western tree records may refer to *S. lutea* Nutt., yellow willow, in part.

**Sàlix scouleràna** Barratt ex Hook. **Scouler willow‡**

‡†*Salix scoulerana* Barratt ex Hook., Fl. Bor.-Am. 2: 145. 1838; "*scouleriana*."

DERIVATION—From its discoverer, John Scouler (1804-71), Scotch naturalist and physician who made collections of plants on the northwest coast of North America in 1825-27.

OTHER COMMON NAMES—black willow, fire willow, mountain willow†, Nuttall willow.

RANGE—Nw. Can. from Man. w. to Yukon and c. and sw. Alaska, se. along coast to s. Calif., e. in mts. to s. N. Mex., and n. to Black Hills of S. Dak. and c. Mont. Atlas vol. 2, map 31; vol. 3, maps 179-N, 179-W.

**Sàlix sericea** Marsh. **silky willow‡**

‡*Salix sericea* Marsh., Arbustr. Am. 140. 1785.

DERIVATION—Silky, referring especially to the young leaves.

OTHER COMMON NAME—satin willow.

RANGE—C. N.S., N.B., and Maine, w. to N.Y., s. Ont., n. Mich., Wis., and extreme se. Minn., s. to e. Iowa and n. Ark., and e. to n. Ala., n. Ga., and S.C. Atlas vol. 4, maps 135-N, 135-NE.

HYBRIDIZES WITH: *Salix nigra*; *S. petiolaris* (*S.* ×*neo-forbesii* Toepffer); *S. rigida* (*S.* ×*myricoides* (Muhl.) Carey).

*Sàlix seríssima* (Bailey) Fern. (Rhodora 6: 6. 1903), autumn willow, has been recorded rarely as a tree to 38 ft (11.6 m) tall in Mich. Generally

a shrub 3-13 ft. (1-4 m) high. Range—Nfld. and Que., w. to Alta., s. to Mont., and e. to N. Dak., Minn., Ind., Pa., and N.J., also local in S. Dak. and Colo.

**Sàlix sessilifòlia** Nutt. **northwest willow**‡

‡†*Salix sessilifolia* Nutt., No. Am. Sylva 1: 68. 1843.

DERIVATION—Sessile-leaf.

OTHER COMMON NAMES—velvet willow, sandbar willow†, soft-leaf willow.

RANGE—Extreme s. B.C. incl. s. Vancouver Is., Wash., and w. Oreg. Atlas vol. 3, map 180.

**Sàlix sitchénsis** Sanson ex Bong. **Sitka willow**‡

‡†*Salix sitchensis* Sanson ex Bong., Acad. Imp. Sci. St. Pétersbourg Mém., Sér. 6, Math. Phys. Nat. 2: 162. 1832.

‡*Salix coulteri* Anderss., Overs. Förh. Sven. Vetensk. Akad. 15: 119. 1858. Proc. Am. Acad. Arts Sci. 4: 58 (Salic. Bor.-Am.). 1858.

*Salix sitchensis* var. *coulteri* Jeps., Man. Fl. Calif. 265. 1923.

DERIVATION—Of Sitka, in southeastern Alaska, where it was first collected.

OTHER COMMON NAMES—silky willow†, Coulter willow‡, velvet willow.

RANGE—Pacific Coast region from sw. Alaska including Kodiak Is. se. to se. Alaska, B.C. including Queen Charlotte and Vancouver Is., Wash., and c. Calif., and e. in mts. to e. Oreg., w. Mont., and c. Alta. Also ne. Asia. Atlas vol. 2, map 32; vol. 3, maps 182-N, 182-W.

REFERENCE—Crovello, Theodore J. A numerical taxonomic study of the genus Salix, section Sitchenses. Univ. Calif. Publ. Bot. 44, 61 p., illus. 1968.

HYBRIDIZES WITH: *Salix lasiolepis* (*S.* ×*delnortensis* Schneid.).

*Salix starkeana*, see **S. bebbiana**

**Sàlix taxifòlia** H.B.K. **yewleaf willow**‡†

‡†*Salix taxifolia* H.B.K., Nov. Gen. Sp. 2: 22. 1817.

DERIVATION—Yew-leaf, the leaves very small and narrow.

OTHER COMMON NAME—yew willow.

RANGE—Trans-Pecos Tex., N. Mex., and se. Ariz. Also s. through Mex. (ne. Son. and s. B. Cal., e. to Tamps., and s. to Oax. and Chis.) to Guatemala. Atlas vol. 3, maps 183-N, 183-SW.

**Sàlix tràcyi** Ball **Tracy willow**‡

‡*Salix tracyi* Ball, Univ. Calif. Publ. Bot. 17: 403, pl. 69, 70. 1934.

DERIVATION—Named for its discoverer, Joseph Prince Tracy (1879-1953), land title specialist and botanist of Eureka, Calif.

RANGE—Pacific Coast region of extreme sw. Oreg. and nw. Calif. only. Atlas vol. 3, map 181.

SÀLIX VIMINÀLIS L. BASKET WILLOW

‡*Salix viminalis* L., Sp. Pl. 1021. 1753.

DERIVATION—Of osiers, withes, or flexible twigs, referring to the use in basketry and wickerwork.

OTHER COMMON NAMES—osier, common osier, silky osier.

RANGE—Escaped from cultivation and naturalized locally from Nfld., Que., and N.S. to New Engl. and other ne. States. Native of Eurasia.

*Salix wardii*, see **S. caroliniana**
*Salix wrightii*, see **S. amygdaloides**

**Sambùcus** L. (Family Caprifoliaceae) **elder**

‡†*Sambucus* L., Sp. Pl. 269. 1753; Gen. Pl. ed. 5, 130. 1754.

DERIVATION—The classical Latin name; believed to be from the Greek name of a stringed musical instrument made of the wood.

OTHER COMMON NAME—elderberry.

REFERENCE—Ferguson, I. K. J. Arnold Arbor. 47: 33-41, illus. 1966.

NUMBER OF SPECIES: Native trees, 5; native shrubs, 2; total, mostly shrubs, also a few trees and herbs (mainly in temperate and subtropical regions, s. in mts. to S. Am., about 30.

**Sambucus callicarpa** Greene **Pacific red elder**

*Sambucus pubens* Michx. γ *arborescens* Torr. & Gray, Fl. No. Am. 2: 13. 1841.
*Sambucus racemosa* L. var. *arborescens* (Torr. & Gray) Gray, Syn. Fl. No. Am. 1(2): 8. 1884.
‡*Sambucus callicarpa* Greene, Fl. Franciscana 342. 1892.
*Sambucus racemosa* L. var. *callicarpa* (Greene) Jeps., Fl. West Mid. Calif. 411. 1901.

DERIVATION—Beautiful-fruit, from the red berries.

OTHER COMMON NAMES—coast red elder, redberry elder†, red elderberry.

RANGE—Pacific Coast region from sw. Alaska including Kodiak Is. se. to se. Alaska, w. B.C. incl. Queen Charlotte and Vancouver Is., w. Wash., and nw. and w.c. Calif. (San Mateo Co.). Atlas vol. 2, map 81; vol. 3, maps 184-N, 184-W.

Regarded by some authors as a variety of *Sambucus pubens* Michx., scarlet elder, of Canada and Eastern United States and of *S. racemosa* L., European red elder. Additional shrub varieties have been named.

HYBRIDIZES WITH: *Sambucus cerulea*.

**Sambucus canadensis** L. **American elder‡**

‡*Sambucus canadensis* L., Sp. Pl. 269. 1753.

DERIVATION—Of Canada.

OTHER COMMON NAMES—common elder, blackberry elder.

RANGE—N.S. (Cape Breton Is.), P.E.I., N.B., s. Que., and Maine, w. to s. Ont., n. Mich., n. Minn., and se. Man., s. to e. N. Dak., w. Kans., and nw., c., and s. Tex., and e. to s. Fla. Also introduced in West Indies incl. P.R. and V.I. and in C. Am. Atlas vol. 4, maps 136-NE, 136-SE, 136-N; vol. 5, map 137.

REFERENCE—D'Arcy, W. G. Ann. Mo. Bot. Gard. 60: 159-163, illus. 1973.

The southern variation has been regarded as a separate species, ‡†*Sambucus simpsonii* Rehd., Florida elder‡†.

**Sambucus canadensis** L. var. **canadensis** **American elder (typical)**

RANGE—Almost same as sp. except absent from Gulf Coast from s. La. to Fla. and not introduced beyond.

**Sambucus canadensis** var. **laciniata** Gray **Florida elder‡†**

*Sambucus canadensis* var. *laciniata* Gray, Syn. Fl. No. Am. 1(2): 9. 1884.
*Sambucus intermedia* Carr. *insularis* Schwer., Mitt. Dtsch. Dendrol. Ges. 18: 38. 1909.
‡†*Sambucus simpsonii* Rehd. in Sarg., Trees and Shrubs 2: 187, pl. 175. 1911.

DERIVATION—Laciniate, slashed or cut into narrow lobes referring to the leaflets.

OTHER COMMON NAMES—Gulf elder, southern elder.

RANGE—Coastal Plain from s. Ga. s. to s. Fla. and w. to s. La. Also introduced in West Indies incl. P.R. and V.I. and in C. Am.

**Sambucus cerulea** Raf. **blue elder**

†*Sambucus cerulea* Raf., Alsogr. Am. 48. 1838; *nom. subnud.*
‡*Sambucus glauca* Nutt. in Torr. & Gray, Fl. No. Am. 2: 13. 1841.
*Sambucus neo-mexicana* Woot., Bull. Torrey Bot. Club 25: 309. 1898.
*Sambucus caerulea* var. *neomexicana* (Woot.) Rehd., Mitt. Dtsch. Dendrol. Ges. 24: 228. 1915 [1916].

DERIVATION—Latin sky-blue, the color of the fruits.

OTHER COMMON NAMES—blueberry elder‡†, blue elderberry, New Mexico elder.

RANGE—S. B.C. incl. Vancouver Is., s. along Pacific coast from Wash. to s. Calif., e. in mts. to se. Ariz., s. N. Mex., and Trans-Pecos Tex., and n. to se. Colo., Wyo., and w. Mont. Also nw. Mex. (B. Cal. and Son.). Atlas vol. 3, maps 185-NW, 185-SW (as *Sambucus glauca* Nutt.).

REFERENCE—Little, Elbert L., Jr. Am. Midl. Nat. 33: 506-507. 1945.
Sargent, Charles Sprague. Silva No. Am. 5: 91-92. 1893.

†*Sambucus cerulea* Raf. is accepted here in accordance with current usage. In the 1953 checklist that name was rejected as very briefly and inadequately described without specimens.

HYBRIDIZES WITH: *Sambucus callicarpa.*

*Sambucus glauca*, see **S. cerulea**

‡*Sambùcus melanocárpa* Gray, blackbead elder‡, is omitted here as a shrub. Trees in nw. Oreg. formerly placed in this species were referred to the hybrid *Sambucus callicarpa* × *cerulea* (*glauca*) by Morton E. Peck (Leafl. West. Bot. 7: 188–189. 1954). This shrub has been treated also as a variety of *S. callicarpa* Greene. Range—Mts. from c. Mont. w. to sw. Alta. and se. B.C., s. to Wash., Oreg., and e.c. Calif., e. to s. Nev., s. Ariz., and N. Mex., and n. to Black Hills of S. Dak. Atlas vol. 3, map 187.

**Sambùcus mexicàna** Presl **Mexican elder‡**

‡*Sambucus mexicana* Presl in DC., Prodr. 4: 322. 1830.
†*Sambucus coerulea* var. *arizonica* Sarg., Man. Trees No. Am. ed. 2, 885, fig. 778. 1922.
*Sambucus caerulea* var. *mexicana* (Presl) L. Benson, Am. J. Bot. 30: 240. 1943.

DERIVATION—Of Mexico.

OTHER COMMON NAMES—Arizona elder, desert elderberry; saúco, tapiro (Spanish).

RANGE—Mts. of sw. N Mex., w. to c. Ariz., s. and w. Nev., and n. Calif., s. to coast of c. and s. Calif., incl. Santa Cruz, Santa Catalina, and San Clemente Is. Also s. in Mex. (B. Cal. e. to Tamps., s. to Oax. and Chis.). C. Am. from Guatemala to Costa Rica, perhaps introduced. Atlas vol. 3, map 186-N, 186-W.

*Sambucus neo-mexicana*, see **S. cerulea**
*Sambucus pubens*, see **S. callicarpa**
*Sambucus racemosa*, see **S. callicarpa**
*Sambucus simpsonii*, see **S. canadensis**

**Sambùcus velùtina** Durand & Hilgard **velvet elder‡**

‡*Sambucus velutina* Durand & Hilgard, J. Acad. Nat. Sci. Phila., Ser. 2, 3: 39. 1855 (preprinted 1854).
†*Sambucus cerulea velutina* (Durand & Hilgard) Schwer., Mitt. Dtsch. Dendrol. Ges. 18: 37. 1909.
*Sambucus glauca* var. *velutina* (Durand & Hilgard) I. M. Johnst., Pl. World 22: 118. 1919.

DERIVATION—Velvety, referring to the hairy leaves.

OTHER COMMON NAMES—Velvet-leaf elder†.

RANGE—Mts. from w. Nev. and Sierra Nev. of n. Calif. to s. Calif. Local in Hualpai Mts. of nw. Ariz. Atlas vol. 3, map 188.

Regarded also as a variation of *Sambucus mexicana* Presl (Munz, Calif. Fl. 1047. 1959).

**Sapíndus** L. (Family Sapindaceae) **soapberry**

‡†*Sapindus* L., Sp. Pl. 367. 1753; Gen. Pl. ed. 5, 171. 1754.

DERIVATION—From Latin *sapo*, soap and *indicus*, Indian, referring to the use of the berries in the West Indies as a soap substitute.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 44: 470-472. 1963.
Radlkofer, L. Sapindus. Pflanzenreich 98a (IV. 165): 630-668. 1932.

NUMBER OF SPECIES: Native trees, 2 (1 widespread in tropical Am. including P.R. and V.I. and in Hawaii and other Pacific islands); Hawaii 1 additional; Oceania, 3; e. and se. Asia, 6; total, mostly tropical, about 12.

**Sapíndus drúmmondii** Hook. & Arn. **western soapberry**‡†

‡†*Sapindus drummondii* Hook. & Arn., Bot. Beechey Voy. 281. 1838; "*drummondi*."
*Sapindus saponaria* var. *drummondi* (Hook. & Arn.) L. Benson, Am. J. Bot. 30: 239. 1943.

DERIVATION—Thomas Drummond (1780-1835), Scotch botanical explorer in North America.

OTHER COMMON NAMES—wild chinatree, cherioni, jaboncillo (Spanish).

RANGE—Sw. Mo. w. to Kans. and se. Colo., s. to c. and s. Ariz., e. to Trans-Pecos and s. Tex. and La. Also in n. Mex. (Son., Chih., Coah., and Tamps.). Atlas vol. 3, map 189; vol. 4, map 138.

**Sapíndus saponària** L. **wingleaf soapberry**‡†

‡†*Sapindus saponaria* L., Sp. Pl. 367. 1753.
‡†*Sapindus marginatus* Willd., Enum. Pl. Hort. Berol. 432. 1809.
*Sapindus manatensis* Shuttleworth ex Radlk., Sitzb. Math.-Phys. Akad. Muench. 8: 318. 1878.

DERIVATION—Of soap; the fruits containing saponin have been used as a soap substitute.

OTHER COMMON NAMES—Florida soapberry‡, southern soapberry, Mexican soapberry, wild chinatree.

RANGE—S. Fla. incl. Fla. Keys, n. mainly along coasts to Broward, Collier, and Lee Cos., scattered and local n. to n. Fla. Also 2 coastal localities in e. Ga. Range extended n. by cultivation, partly by prehistoric Indians. Widespread in tropical Am. From Bahamas through West Indies incl. P.R. and V.I. Also from n. Mex. (Tamps. to Son. and B. Cal. Sur) s. to Brazil, Paraguay, Argentina, Peru, and Ecuador incl. Galápagos Is. Native also in Hawaii and other Pacific Is. Range extended into Old World tropics by cultivation. Atlas vol. 4, map 139; vol. 5, map 240.

This species and *Dodonaea viscosa* Jacq., hopbush, a shrubby tree of the same family, are the only tree species native both in Hawaii and in continental United States.

**Sàpium** P. Br. (Family Euphorbiaceae) **sapium**

‡†*Sapium* P. Br., Civ. Nat. Hist. Jam. 338. 1756.
*Triadica* Lour., Fl. Cochinch. 610. 1790.

DERIVATION—From the Latin name of a resinous pine or fir tree.

OTHER COMMON NAME—milktree.

REFERENCES—Jablonski, E. Notes on neotropical Euphorbiaceae. 3. Synopsis of Caribbean Sapium. Phytologia 16: 393-434, illus. 1968.
Webster, Grady L. J. Arnold Arbor. 48: 391-393. 1967.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; naturalized trees, 1; P.R., 2; V.I., 1; total, tropical and subtropical, mostly New World, about 100.

**Sàpium biloculàre** (Wats.) Pax **jumping-bean sapium**‡

*Sebastiana* (?) *bilocularis* Wats., Proc. Am. Acad. Arts Sci. 20: 374. 1885.
‡*Sapium biloculare* (Wats.) Pax, Pflanzenreich 52 (IV. 147. v): 221. 1912.

DERIVATION—Two-celled, referring to the fruit capsule with 2 seeds.

OTHER COMMON NAME—Mexican jumping-bean.

RANGE—Sw. Ariz. and nw. Mex. (Son. and B. Cal. Sur). Atlas vol. 3, map 190.

‡†SÀPIUM GLANDULÒSUM (L.) Morong (in Morong & Britton, Ann. N.Y. Acad. Sci. 7: 227. 1893), Brazil sapium‡ (milktree†), is omitted here as not naturalized, according to Webster (1967). It was collected once in nw. Fla. and was recorded as naturalized. Native of S. Am.

SÀPIUM SEBÍFERUM (L.) Roxb. TALLOWTREE‡†

*Croton sebiferum* L., Sp. Pl. 1004. 1753.
‡†*Sapium sebiferum* (L.) Roxb., Fl. Ind. 3: 693. 1832.
*Triadica sebifera* (L.) Small, Fla. Trees 59, 102. 1913.

DERIVATION—Bearing wax or tallow; the waxy seed coats used in making candles.

OTHER COMMON NAME—Chinese tallowtree.

RANGE—Planted as an ornamental and naturalized in Coastal Plain from s. N.C. and S.C. to n. Fla. and w. to La. and se. Tex. Native of China.

**Sássafras** T.F.L. Nees & Eberm. (Family Lauraceae) **sassafras**

‡*Sassafras* Trew, Herb. Blackw., Cent. 3, pl. 267. 1757; rejected.
†*Sassafras* T.F.L. Nees & Eberm., Handb. Med.-Pharm. Bot. 2: 418. 1831.

DERIVATION—Apparently the American Indian name, used by the Spanish and French in Florida in the middle of the sixteenth century.

REFERENCES—Dandy, J. E. Regnum Veg. 51: 8. 1967.

Keng, Hsuan. A taxonomic revision of Sassafras (Lauraceae). Q. J. Taiwan Mus. 6: 78-85, illus. 1953.

Little, Elbert L., Jr. Am. Midl. Nat. 33: 500. 1945.

Nieuwland, J. A. A. Am. Midl. Nat. 1: 221-224. 1910.

NUMBER OF SPECIES: Native trees, 1; China, 1; Taiwan, 1; total, n. temperate, 3.

***Sássafras álbidum** (Nutt.) Nees **sassafras‡†**

*Laurus sassafras* L., Sp. Pl. 371. 1753.
*Laurus albida* Nutt., Gen. No. Am. Pl. 1: 259. 1818.
*Sassafras officinale* T.F.L. Nees & Eberm., Handb. Med.-Pharm. Bot. 2: 418. 1831; "*officinalis.*"
‡*Sassafras albidum* (Nutt.) Nees, Syst. Laur. 490. 1836.
*Sassafras triloba* Raf., Autikon Bot. 85. 1840.
*Sassafras triloba* var. *mollis* Raf., Autikon Bot. 85. 1840.
Sassafras albidum var. *molle* (Raf.) Fernald, Rhodora 38: 179. 1936.

DERIVATION—Whitish.

OTHER COMMON NAME—white sassafras.

RANGE—Sw. Maine w. to N.Y., extreme s. Ont., c. Mich., n. Ill., extreme se. Iowa, and c. Mo., s. to extreme se. Kans., e. Okla., and e. Tex., and e. to c. Fla. Atlas vol. 1, map 191-E; vol. 5, map 138.

**Sàvia** Willd. (Family Euphorbiaceae) **maidenbush**

‡†*Savia* Willd., Sp. Pl. ed. 4, 4: 771. 1806.

DERIVATION—In honor of Gaetano Savi (1769-1844), professor at Pisa, Italy.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R. and V.I., 1; total, tropical, mostly West Indies, s. Brazil, and Madagascar, about 25.

**Sàvia bahaménsis** Britton **maidenbush**

‡†*Savia bahamensis* Britton, Torreya 4: 104. 1904.

DERIVATION—Of Bahama Islands, where it was discovered.

OTHER COMMON NAME—Bahama maidenbush‡.

RANGE—Local on Lower Fla. Keys and Key Largo of Upper Fla. Keys, not on mainland. Bahamas, Cuba, and Grand Cayman. Atlas vol. 5, map 241.

**Schaefferia** Jacq. (Family Celastraceae) **schaefferia**

‡†*Schaefferia* Jacq. Enum. Pl. Carib. 10. 1760.

DERIVATION—Jakob Christian Schaeffer (1718-90), German naturalist.

NUMBER OF SPECIES: Native trees (Fla. Keys), 1 (also P.R. and V.I.); native shrubs (s. Tex.), 1; total, shrubs and trees, tropical Am. from West Indies and Mex. to Uruguay and Argentina, about 15.

**Schaefferia frutescens** Jacq. **Florida-boxwood**‡†

‡†*Schaefferia frutescens* Jacq., Enum. Pl. Carib. 33, (10). 1760; "*Schaeferia*" on p. 33. Jacq., Select. Stirp. Am. 259. 1763.

DERIVATION—Shrubby, or bushy.

OTHER COMMON NAMES—yellowwood, boxwood.

RANGE—Rare on Fla. Keys. From Bahamas through West Indies incl. P.R. and V.I. Also s. Mex. (Ver.), Colombia, and Venezuela. Atlas vol. 5, map 242.

SCHINUS L. (Family Anacardiaceae) PEPPERTREE

*Schinus* L., Sp. Pl. 388. 1753; Gen. Pl. ed. 5, 184. 1754.

DERIVATION—From the classical Greek name of the mastic-tree or lentisk pistache, *Pistacia lentiscus* L., applied to the genus because of the resin of some species.

REFERENCES—Barkley, Fred A. Schinus L. Brittonia 5: 160-198, illus. 1944.

Barkley, Fred A. A study of Schinus L. Lilloa 28: 5-110. 1957.

‡SCHINUS LONGIFOLIA (Lindl.) Speg. (in Speg. & Girola, Cat. Descr. Maderas, An. Soc. Rural Argentina 1910: 413. 1910), longleaf peppertree, has been introduced into s. Texas as an ornamental shrub or small tree. Apparently it is naturalized, according to Barkley (in Lundell, Fl. Tex. 3: 92. 1943) and Correll and Johnston (Man. Vasc. Pl. Tex. 988. 1970). Planted also in Calif. Native of s. Brazil, Paraguay, Uruguay, and Argentina but widely cultivated in tropical regions.

SCHINUS MOLLE L. PEPPERTREE‡

‡*Schinus molle* L., Sp. Pl. 388. 1753.

DERIVATION—From the old Peruvian name, molle or mulli.

OTHER COMMON NAMES—California peppertree, Peru peppertree, pirul (Spanish).

RANGE—Naturalized in California, according to Munz (Calif. Flora 997. 1959), and in extreme southern Texas, according to Barkley (in Lundell, Flora Tex. 3: 92. 1943) and Correll and Johnston (Man. Vasc. Pl. Tex. 988. 1970). Planted in Ariz. and Hawaii. Native of S. Am. from s. Brazil to Peru, s. to Chile and n. Argentina. Widely cultivated and naturalized in tropical and subtropical regions.

SCHINUS TEREBINTHIFOLIA Raddi BRAZIL PEPPERTREE

*Schinus terebinthifolia* Raddi, Alc. Sp. Niov. Bras., Mem. Soc. Ital. Sci. Modena 18: 399. 1820.

DERIVATION—With leaves like terebinth, *Pistacia terebinthus* L., of the Mediterranean region.

OTHER COMMON NAMES—Christmas-berry, "Florida-holly."

RANGE—A shrub or small tree naturalized as a common weed to 20 ft (6 m) high, spreading rapidly in s. Fla. incl. Fla. Keys, also in Hawaii. Planted as an ornamental in s. Calif., s. Ariz., P.R., and V.I. Native of s. Brazil, Paraguay, and Argentina. Introduced n. to s. border of U.S. and in Old World tropics.

REFERENCE—Morton, Julia F. Pestiferous spread of many ornamental and fruit species in South Florida. Proc. Fla. State Hort. Soc. 89: 348-353. 1976.

*Schmaltzia*, see **Rhus**

**Schoepfia** Schreb. (Family Olacaceae) **graytwig**

‡*Schoepfia* Schreb., Gen. Pl. ed. 8, 1: 129. 1789.

DERIVATION—Johann David Schoepf (1752-1800), German physician and botanist, who traveled in North America and West Indies.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R., 3, including 2 also in V.I.; total, tropical Am. and Asia, 30.

**Schoèpfia chrysophylloìdes** (A. Rich.) Planch. **graytwig**
*Diplocalyx chrysophylloides* A. Rich. in Sagra, Hist. Fis. Pol. Nat. Cuba 11: 81. 1850.
‡†*Schoepfia chrysophylloides* (A. Rich.) Planch., Ann. Sci. Nat., Sér. 4, 2: 261. 1854; "*Schaepfia*."

DERIVATION—Like *Chrysophyllum*, starapple.

OTHER COMMON NAMES—whitewood†, Gulf graytwig‡.

RANGE—Rare in s. Fla. incl. Upper Fla. Keys from Long Key n., n. on e. coast to Volusia Co. and on w. coast to Pinellas Co. Also Bahamas, Cuba, Jamaica, and Hispaniola. Atlas vol. 5, map 243.

Also referred to *Schoepfia schreberi* J. G. Gmel., a related species of the Virgin Islands and Lesser Antilles and from Mex. to Venezuela.

*Sebesten*, see **Cordia**
*Senegalia*, see **Acacia**

**Sequòia** Endl. (Family Taxodiaceae) **sequoia**
‡†*Sequoia* Endl., Synops. Conif. 197. 1847; (*nom. cons.*).

DERIVATION—Commemorating Sequoyah (also spelled Sequoia), or George Guess (1770?-1843), American Indian inventor of the Cherokee alphabet. The name was unexplained by its author, an Austrian linguist as well as botanist.

REFERENCES—See **Sequoiadendron**

This genus of 1 species (also fossils) formerly in the family Pinaceae, pine family, is now placed in the segregate family Taxodiaceae, redwood family.

***Sequòia sempervírens** (D. Don) Endl. **redwood‡†**
*Taxodium sempervirens* D. Don in Lamb., Descr. Genus Pinus 2: .24.., pl. 7, fig. 1. 1824.
‡†*Sequoia sempervirens* (D. Don) Endl., Synops. Conif. 198. 1847.

DERIVATION—Evergreen. Other pronunciation—*Sequòia sempérvirens*.

OTHER COMMON NAMES—coast redwood, California redwood.

RANGE—Pacific Coast region from extreme sw. Oreg. (sw. Curry Co.) s. to c. Calif. (Monterey Co.). Atlas vol. 1, map 81-W.

This species includes the world's tallest trees, to about 368 ft (112 m) in height.

**Sequoiadéndron** Buchholz (Family Taxodiaceae) **giant sequoia**
*Sequoiadendron* Buchholz, Am. J. Bot. 26: 536. 1939.

DERIVATION—The genus *Sequoia* and the Greek word for tree; a related genus indicated by the similar spelling.

REFERENCES—Buchholz, J. T. The generic segregation of the Sequoias. Am. J. Bot. 26: 535-538. 1939.

Dayton, William A. The names of the giant sequoia. Leafl. West. Bot. 3: 209-219. 1943.

Doyle, J. Naming of the redwoods. Nature 155: 254-257. 1945.

Jones, George Neville. The botanical name of the giant Sequoia. Science 98: 406-407. 1943.

Rickett, H. W. The botanical name of the big tree. J. N.Y. Bot. Gard. 51: 15. 1950.

St. John, Harold, and R. W. Krauss. The taxonomic position and scientific name of the big tree known as Sequoia gigantea. Pac. Sci. 8: 341-358. 1954.

Schwarz, Otto, and Heinz Weide. Systematische Revision der Gattung Sequoia Endl. Rep. Sp. Nov. Regni Veg. Fedde 66: 159-192, illus. 1962.

The generic division of the long-established genus *Sequoia* is accepted here, following current usage, even on postage stamps! Thus, the

genus *Sequoia* contains only *Sequoia sempervirens*, redwood (coast redwood), and the genus *Sequoiadendron* has only *Sequoiadendron giganteum*, giant sequoia.

Both species have been called redwood. California redwood, including both, is the State tree of California. Giant sequoia remains the approved common name for *Sequoiadendron giganteum*, now excluded from the genus *Sequoia* but known also as Sierra redwood. The Sequoia National Forest and Sequoia National Park are named for this tree species, which is no longer in the genus *Sequoia*!

This segregate genus of 1 species formerly in the family Pinaceae, pine family, is now placed in the segregate family Taxodiaceae, redwood family.

*__Sequoiadéndron gigantèum__ (Lindl.) Buchholz **giant sequoia‡**

*Wellingtonia gigantea* Lindl., Gard. Chron. 1853: 820, 823. 1853.

‡†*Sequoia gigantea* (Lindl.) Decne., Bull. Sco. Bot. France 1: 70. 1854. Non *Sequoia gigantea* Endl., Synops. Conif. 198. 1847.

*Sequoia wellingtonia* Seem., Bonplandia 3: 27. 1855.

*Sequoiadendron giganteum* (Lindl.) Buchholz, Am. J. Bot. 26: 536. 1839.

DERIVATION—Giant.

OTHER COMMON NAMES—sequoia, bigtree†, Sierra redwood.

RANGE—W. slope of Sierra Nev., c. Calif. (Placer Co. to Tulare Co.), local in groves. Atlas vol. 1, map 82-W.

REFERENCE—Rundel, Phillip W. An annotated check list of the groves of Sequoiadendron giganteum in the Sierra Nevada, California. Madroño 21: 319-328. 1972.

This species includes the world's largest trees in volume and weight, several also very tall and among the largest in trunk diameter.

**Serenòa** Hook. f. (Family Palmae) **saw-palmetto**

‡*Serenoa* Hook. f. in Benth. & Hook. f., Gen. Pl. 3: 926, 1228. 1883; "*Serenaea*"; corr. to "*Serenoa*" on p. 1228.

DERIVATION—Sereno Watson (1826-1892), botanist at Harvard University and authority on the flora of North America.

REFERENCES—See Sabal.

NUMBER OF SPECIES: 1.

**Serenòa rèpens** (Bartr.) Small **saw-palmetto‡**

*Corypha repens* Bartr., Travels No. So. Car. Ga. Fla. 61. 1791.

*Chamaerops serrulata* Michx., Fl. Bor.-Am. 1: 206. 1803.

*Serenoa serrulata* (Michx.) Nicholson, Illus. Dict. Gard. 3: 423. 1887.

‡*Serenoa repens* (Bartr.) Small, J. N.Y. Bot. Gard. 23: 62. 1922.

DERIVATION—Creeping, usually shrubby with horizontal, creeping stems.

RANGE—Coastal Plain from extreme s. S.C. s. to s. Fla. incl. Fla. Keys, and w. to s. Miss. and se. La. Atlas vol. 4, map 137; vol. 5, map 139.

‡†SESBÀNIA GRANDIFLÒRA (L.) Pers. (Synops. Pl. 2: 316. 1807; Family Leguminosae), agati‡, has been recorded as an ornamental shrub or small tree naturalized locally in Key West, Fla., and was accepted in the 1953 checklist. Also introduced in Hawaii, P.R., and V.I. Native from India to East Indies, Phillipines, and n. Australia. Widely planted and occasionally naturalized through tropics.

SESBANIA PUNÍCEA (Cav.) Benth. (in Mart., Fl. Brasil. 15(1): 43. 1859; ‡*Daubentonia punicea* (Cav.) DC.), purple rattlebox‡, has escaped from cultivation and has become naturalized in se. U.S. in the Coastal Plain from N.C. to Fla. and La. and se. Tex. This ornamental, which was accepted in the 1953 checklist, is mentioned here as a shrub apparently not attaining tree size. Native from Brazil to Argentina. Reference—Reed, Clyde F. Phytologia 9: 496. 1964.

**Shephérdia** Nutt. (Family Elaeagnaceae) **buffaloberry**

‡*Shepherdia* Nutt., Gen. No. Am. Pl. 2: 240. 1818; (*nom. cons.*).

DERIVATION—John Shepherd (1764-1836), British botanist and curator of the Liverpool Botanic Garden.

REFERENCE—Nelson, Aven. Rocky Mountain Herbarium Studies. III. The Elaeagnaceae.—A mono-generic family. Am. J. Bot. 22: 681-683. 1935.

NUMBER OF SPECIES: Native trees, 1; native shrubs, 2, including 1 n. to Alaska; total, 3.

**Shephérdia argéntea** (Pursh) Nutt. **silver buffaloberry**‡

*Hippophae argentea* Pursh, Fl. Am. Sept. 1: 115. 1814.

‡*Shepherdia argentea* (Pursh) Nutt., Gen. No. Am. 2: 240. 1818.

*Elaeagnus utilis* A. Nels., Am. J. Bot. 22: 682. 1935. Non *Elaeagnus argenteus* Moench, Meth. Pl. 638. 1794.

DERIVATION—Silvery, scurfy leaves and twigs.

OTHER COMMON NAMES—thorny buffaloberry.

RANGE—S. Man. w. to s. Alta., s. mostly in mts. to se. Oreg., Nev., and e. and s. Calif., e. to extreme n. Ariz. and n. N. Mex., and n. to Nebr., nw. Iowa, and w. Minn. Atlas vol. 3, maps 191-NW, 191-SW.

*Sideroxylon*, see **Mastichodendron**

**Simaroùba** Aubl. (Family Simaroubaceae) **simarouba**

‡†*Simarouba* Aubl., Hist. Pl. Guiane Franç. 859, pl. 331, 332. 1775; *nom. cons.*

Non *Simaruba* Boehm. in Ludw., Defin. Gen. Pl., ed. Boehm. 513. 1760.

DERIVATION—From the Carib Indian name of the type species in French Guiana.

REFERENCES.—Cronquist, Arthur. Studies in the Simaroubaceae—II. The genus Simarouba. Bull. Torrey Bot. Club 71: 226-234, illus. 1944.

Nooteboom, H. P. Generic delimitation in Simaroubaceae tribus Simaroubeae and a conspectus of the genus Quassia L. Blumea 11: 509-528, illus. 1962.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R., 1; total, tropical Am., 6.

**Simaroùba glaùca** DC. **paradise-tree**‡†

‡†*Simarouba glauca* DC., Paris Mus. Hist. Nat. Ann. 17: 424. 1811; "*Simaruba*."

*Quassia glauca* (DC.) Spreng., Syst. Veg. ed. 16, 2: 319. 1825.

*Simarouba glauca* var. *latifolia* Cronquist, Bull. Torrey Bot. Club 71: 231. 1944.

DERIVATION—Glaucous, or covered with a bloom, referring to the blue-green lower surface of the leaflets.

OTHER COMMON NAME—bitterwood.

RANGE—S. Fla., local in Lower and Upper Fla. Keys, n. on e. coast to Cape Canaveral and on w. coast to Collier Co. Bahamas, Cuba, Jamacia, and Hispaniola. Also from s. Mex. (Yuc., Tab., and Oax.) s. to Panama. Atlas vol. 5, map 244.

**Solànum** L. (Family Solanceae) **nightshade**

‡†*Solanum* L., Sp. Pl. 184. 1753: Gen. Pl. ed. 5, 85. 1754.

DERIVATION—The classical Latin name for nightshade, *Solanum* spp.

REFERENCES—D'Arcy, W. G. Solanum and its close relatives in Florida. Ann. Mo. Bot. Gard. Ann. 61: 819-867. 1974.

Roe, Keith E. A revision of Solanum Sect. Brevantherum (Solanaceae) in North and Central America. Brittonia 19: 353-373, illus. 1967.

Roe, Keith E. A revision of Solanum Section Brevantherum (Solanaceae). Brittonia 24: 239-278, illus. 1972.

NUMBER OF SPECIES: Small trees, apparently native in Fla. Keys, 1;

native herbs and along s. border also shrubs, about 45; total, almost worldwide, most numerous in tropics, especially tropical Am., herbs and shrubs, sometimes small trees, more than 1,700 described species. One of the largest genera of seed plants.

**Solànum erianthum** D. Don **mullein nightshade**‡
*Solanum erianthum* D. Don, Prodr. Fl. Nepal. 96. 1825.

DERIVATION—Woolly flowered.

OTHER COMMON NAMES—potato-tree†, salvadora (Spanish).

RANGE—S. Fla. incl. Fla. Keys, n. mostly along e. coast to Volusia Co. and on w. coast to Lee Co., introduced n. Also extreme s. Tex. Widespread in tropical Am. From Bahamas through West Indies incl. P.R. and V.I. Also from n. Mex. (Tamps.) s. to Peru and Galápagos Is. Naturalized beyond and in Old World tropics from India to China and Australia. Atlas vol. 4, maps 140-N, 140-SE; vol. 5, map 245.

REFERENCE—Roe, Keith E. Solanum verbascifolium L., misidentification and misapplication. Taxon 17: 176-179. 1968.

Formerly referred to ‡†*Solanum verbascifolium* L., a misapplication. In the 1953 checklist classed as naturalized, but apparently native in Fla. Keys and introduced northward.

**Sophòra** L. (Family Leguminosae) **sophora**
‡†*Sophora* L., Sp. Pl. 373. 1754; Gen. Pl. ed. 5, 175. 1754.

DERIVATION—Latinized from Arabic *sufayra*, a tree with pea-shaped flowers and perhaps of this genus.

NUMBER OF SPECIES: Native trees, 2; native shrubs and herbs, about 5; Hawaii, native trees, 1; total, in tropical and warm temperate regions. 50-70.

**Sophòra affìnis** Torr. & Gray **Texas sophora**‡
‡†*Sophora affinis* Torr. & Gray, Fl. No. Am. 1: 390. 1840.

DERIVATION—Related.

OTHER COMMON NAMES—coralbean†, pink sophora, Eves-necklace.

RANGE—Nw. La. and sw. Ark., w. to s. Okla., and c. Tex. Atlas vol. 4, map 145.

**Sophòra secundiflòra** (Gómez Ortega) Lag. ex DC. **mescalbean**‡
*Broussonetia secundiflora* Gómez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. Dec. 61, pl. 7. 1798.
‡†*Sophora secundiflora* (Gómez Ortega) Lag. ex DC., Cat. Pl. Hort. Bot. Monsp. 148. 1813.

DERIVATION—Secund-flowering, the flowers on one side of the axis.

OTHER COMMON NAMES—coralbean, Texas-mountain-laurel; frijolito†, frijolillo (Spanish).

RANGE—C. to sw. and Trans-Pecos Texas and se. N. Mex. Also from n. to c. Mex. (Chih. to Tamps., s. to n. Oax. and Ver.). Atlas vol. 3, maps 192-N, 192-SW.

REFERENCE—Rudd, Velva E. Rhodora 70: 524, 528-530, fig. 3. 1968.

**Sórbus** L. (Family Rosaceae) **mountain-ash**
‡†*Sorbus* L., Sp. Pl. 477. 1753; Gen. Pl. ed. 5, 213. 1754.
*Pyrus* L., Sp. Pl. 479. 1753; Gen. Pl. ed. 5, 214. 1754; in part.

DERIVATION—The classical Latin name of *Sorbus domestica* L., servicetree mountain-ash of Europe.

REFERENCE—Jones, George Neville. A synopsis of the North American species of *Sorbus*. J. Arnold Arbor. 20: 1-43, illus. 1939.

NUMBER OF SPECIES: Native trees, 4, including 2 n. to Alaska and 1 var. n. to Greenland; native shrubs, 3, including 1 in w. Aleutian Is.; naturalized trees, 1; Eurasia, about 70; total, trees and shrubs, n. temperate zone, about 80.

**Sórbus americàna** Marsh. **American mountain-ash‡**

‡†*Sorbus americana* Marsh., Arbustr. Am. 145. 1785.

*Pyrus americana* DC., Prodr. 2: 637. 1825.

DERIVATION—American.

OTHER COMMON NAMES—mountain-ash†, roundwood.

RANGE—Nfld. and e. Que. w. to w. Ont., s. to ne. Minn., Wis., and n. Ill., and e. to N.Y., Pa., N.J., and s. in mts. from W. Va. and w. Va. to w. N.C., n. S.C., n. Ga., and e. Tenn. Atlas vol. 4, maps 141-N, 141-NE.

REFERENCE—Jones, George Neville. Nomenclature of American mountain-ash. Rhodora 55: 358-360. 1953.

SÓRBUS AUCUPÀRIA L. EUROPEAN MOUNTAIN-ASH‡†

‡†*Sorbus aucuparia* L., Sp. Pl. 477. 1753.

*Pyrus aucuparia* (L.) Gaertn., Fruct. Sem. Pl. 2: 45, pl. 87. 1791.

DERIVATION—Old generic name, meaning to catch birds, referring to the use of the mucilaginous fruits by fowlers in making bird lime.

OTHER COMMON NAME—rowan-tree.

RANGE—Escaped from cultivation and naturalized from Nfld. and Labr. w. across s. Can. to B.C. and se. Alaska, s. to Wash. and Calif., and e. across n. States to Minn., Iowa., Ill., Pa., and Maine. Native of Eurasia.

**Sórbus decòra** (Sarg.) Schneid. **showy mountain-ash‡**

*Pyrus americana* DC., var. *decora* Sarg., Silva No. Am. 14: 101. 1902.

*Sorbus americana* var. *decora* (Sarg.) Sarg., Man. Trees No. Am. 357, fig. 281. 1905.

‡*Sorbus decora* (Sarg.) Schneid., Bull. Herb. Boissier, Sér. 2, 6: 313. 1906.

*Sorbus americana* var. *groenlandica* Schneid., Bull. Herb. Boissier, Sér. 2, 6: 314. 1906.

*Sorbus decora* var. *groenlandica* (Schneid.) G. N. Jones, J. Arnold Arbor. 20: 30. 1939.

*Pyrus decora* (Sarg.) Hyland, Rhodora 45: 28. 1943.

*Pyrus decora* var. *groenlandica* (Schneid.) Fern., Rhodora 49: 233. 1947.

*Sorbus groenlandica* (Schneid.) A. & D. Löve, Univ. Colo. Stud., Biol. Ser. 17: 23. 1965.

DERIVATION—Showy, or ornamental, in allusion to its handsome fruit.

RANGE—S. Greenland, Nfld., and Labr., w. to n. Que. and w. Ont., s. to n. Minn., Wis., and ne. Iowa, e. to n. Ind., ne. Ohio, N.Y., Conn., and Mass. Atlas vol. 4, map 142-N, 142-NE.

**Sórbus scopulìna** Greene **Greene mountain-ash**

*Sorbus scoupulina* Greene, Pittonia 4: 130. 1900.

*Sorbus cascadensis* G. N. Jones, Univ. Wash. Publ. Biol. 7: 174. 1938.

*Sorbus scopulina* var. *cascadensis* (G. N. Jones) C. L. Hitchc., Vasc. Pl. Pacif. Northwest 3: 189. 1961.

*Pyrus scopulina* (Greene) Longyear, Trees Shrubs Rocky Mt. Reg. 152. 1927.

*Sorbus andersonii* G. N. Jones, Rhodora 47: 220. 1945; "*andersoni*."

DERIVATION—Of the rocks.

OTHER COMMON NAME—western mountain-ash.

RANGE—W., s., and se. Alaska, Yukon, and sw. Mack., s. in mts. to B.C., Wash., and n. and c. Calif. (Tulare Co.), e. to s. N. Mex., and n. to Black Hills of S. Dak. and n. Sask. Atlas vol. 2, map 56: vol. 3, maps 193-N, 193-W.

Added here as rarely becoming a small tree to 20 ft (6 m) high in se. Alaska.

HYBRIDIZES WITH: *Amelanchier alnifolia* (*florida*) (×*Amelasorbus jackii* Rehd.).

**Sórbus sitchénsis** Roem. **Sitka mountain-ash‡**

‡*Sorbus sitchensis* Roem., Fam. Nat. Reg. Veg. Syn. Mon. 3: 139. 1847.

*Pyrus occidentalis* Wats., Proc. Am. Acad. Arts Sci. 23: 263. 1888.

*Sorbus sambucifolia* var. *grayi* Wenzig, Bot. Centralbl. 35: 342. 1888.

*Sorbus occidentalis* (Wats.) Greene, Fl. Franc. 54. 1891.

*Sorbus californica* Greene, Pittonia 4: 131. 1900.

*Pyrus sitchensis* (Roem.) Piper, Mazama 2: 101. 1901.
*Sorbus sitchensis* var. *californica* (Greene) Smiley, Univ. Calif. Publ. Bot. 9: 233. 1921.
†*Sorbus americana sitchensis* (Roem.) Sudw., U.S. Dep. Agric. Misc. Circ. 92: 133. 1927.
*Sorbus cascadensis* G. N. Jones, Univ. Wash. Publ. Biol. 7: 174. 1938.
*Sorbus sitchensis* ssp. *californica* (Greene) Abrams, Illus. Fl. Pacific States 2: 470. 1944.
*Sorbus sitchensis* var. *grayi* (Wenzig) C. L. Hitchc., Vasc. Pl. Pacif. Northwest 3: 189. 1961.

DERIVATION—Of Sitka, Alaska, where it was discovered.

OTHER COMMON NAMES—California mountain-ash, Pacific mountain-ash, western mountain-ash†.

RANGE—Sw. Alaska including Kodiak Is., se. along Pacific coast to se. Alaska and B.C. incl. Queen Charlotte and Vancouver Is., and s. in mts. from Wash. to c. Calif., and ne. to n. Idaho, w. Mont., and c. Alta. Atlas vol. 2, map 57; vol. 3, maps 194-N, 194-W.

SPÓNDIAS PURPÚREA L. (Sp. Pl. ed. 2, 613. 1762; Family Anacardiaceae), purple mombin (hogplum), is recorded by Long and Lakela (Fl. Trop. Fla. 562, 564. 1971) as naturalized on shell mounds and disturbed sites in s. Fla. Hawaii, P.R., and V.I. Native of tropical continental Am. and widely planted for fruit and naturalized through the tropics.

**Staphylèa** L. (Family Staphyleaceae) **bladdernut**
‡†*Staphylea* L., Sp. Pl. 270. 1753; Gen. Pl. ed. 5, 130. 1754; "*Staphylaea*."

DERIVATION—From Greek, cluster of grapes, referring to the clustered flowers.

REFERENCE—Spongberg, Stephen. The Staphyleaceae in the southeastern United States. J. Arnold Arbor. 52: 196-203, illus. 1971.

NUMBER OF SPECIES: Native trees, 2; Mex., 1; Eurasia, 7; total, 10.

**Staphylèa bolánderi** Gray **Sierra bladdernut‡**
‡*Staphylea bolanderi* Gray, Proc. Am. Acad. Arts Sci. 10: 69. 1874.

DERIVATION—Its discoverer, Henry Nicholas Bolander (1831-97), State botanist of California.

OTHER COMMON NAMES—Bolander bladdernut, California bladdernut.

RANGE—Mts. from n. to c. Calif. (Sierra Nev.). Atlas vol. 3, map 195.

**Staphylèa trifòlia** L. **American bladdernut‡**
‡†*Staphylea trifolia* L., Sp. Pl. 270. 1753.

DERIVATION—Three-leaf, referring to the 3 leaflets.

OTHER COMMON NAME—bladdernut‡.

RANGE—N.H., Vt., and extreme s. Que., w. to s. Ont., Mich., n. Wis., and se. Minn., s. to e. Nebr., and e. Okla., and e. to Ark., nw. Fla., and Ga. Atlas vol. 4, maps 143-NE, 143-SE; vol. 5, map 140.

*Sterculia*, see **Firmiana**

**Stewártia** L. (Family Theaceae) **stewartia‡**
‡*Stewartia* L., Sp. Pl. 698. 1753; Gen. Pl. ed. 5, 311. 1754.
*Malachodendron* Mitchell, Diss. Brev. Princ. Bot. Zool. 38. 1769.
*Stuartia* L' Hér., Stirp. Nov. 153. 1791.

DERIVATION—In honor of John Stuart (1713-92), Earl of Bute and a patron of botany.

REFERENCES—Kobuski, Clarence E. Studies in the Theaceae, XXI. The species of Theaceae indigenous to the United States. J. Arnold Arbor. 32: 123-138, illus. 1951.

Spongberg, Stephen A. A review of deciduous-leaved species of Stewartia (Theaceae). J. Arnold Arbor. 55: 182-214, illus. 1974.

NUMBER OF SPECIES: Native shrubs or small trees (se. U.S.), 2; e. Asia, about 8; total, about 10.

**Stewártia malacodéndron** L. **Virginia stewartia‡**

*Stewartia malacondendron* L., Sp. Pl. 698. 1753.
‡*Stuartia malacodendron* (L.) L'Hér., Stirp. Nov. 153, pl. 73. 1791.

DERIVATION—An older generic name adopted by John Mitchell (1680?-1768), Virginia physician and botanist; it, in turn, derives from Greek *malakos*, soft, and *dendron*, tree, referring to the silky hairy under surface of the leaves.

OTHER COMMON NAMES—silky-camellia, round-fruit stewartia.

RANGE—Coastal Plain chiefly, from e. Va. and N.C., sw. to nw. Fla., La., se. Tex., and s. Ark. Atlas vol. 4, map 146; vol. 5, map 141.

REFERENCE—Reed, Clyde F. Phytologia 10: 169. 1964.

**Stewártia ovàta** (Cav.) Weatherby **mountain stewartia‡**

*Malachodendron ovatum* Cav., Monadelph. Class. Diss. 5: 302, pl. 158, fig. 2. 1788.
*Stuartia pentagyna* L'Hér., Stirp. Nov. 155, pl. 74. 1791.
*Malachodendron pentagynum* (L'Hér.) Dum.-Cours., Bot. Cult. ed. 2, 5: 107. 1811.
*Stewartia pentagyna* var. *grandiflora* Bean, Trees Shrubs Brit. Isles 2: 555. 1914.
‡*Stewartia ovata* (Cav.) Weatherby, Rhodora 41: 198. 1939.
*Stewartia ovata* var. *grandiflora* (Bean) Weatherby, Rhodora 41: 198. 1939.

DERIVATION—Ovate, referring to the leaves.

OTHER COMMON NAMES—mountain-camellia, angle-fruit stewartia.

RANGE—Mts. chiefly, from e. and s. Va. to se. Ky., s. to e. Tenn., extreme ne. Miss., c. Ala., n. Ga., and c. N.C. Atlas vol. 4, map 147.

REFERENCE—Baldwin, J. T. A seventeenth century record for Stewartia. Rhodora 71: 434-438, illus. 1969.

*Strobus*, see **Pinus**
*Strombocarpa*, see **Prosopis**
*Stuartia*, see **Stewartia**

**Stỳrax** L. (Family Styracaceae) **snowbell**

‡†*Styrax* L., Sp. Pl. 444. 1753; Gen. Pl. ed. 5, 203. 1754.

DERIVATION—The ancient Greek name of *Styrax officinalis* L., storax or drug snowbell, which produces the resin storax.

OTHER COMMON NAMES—storax, silverbells.

REFERNECES—Cory, V. L. The genus Styrax in central and western Texas. Madroño 7: 110-115. 1943.

Gonsoulin, Gene J. A revision of Styrax (Styracaceae) in North America, Central America, and the Caribbean. Sida 5: 191-258, illus. 1974.

Howard, Richard A. Further comments on Styrax L. Sida 5: 334-337. 1974.

Nicolson, Dan H., and George C. Steyskal. The masculine gender of the generic name Styrax Linnaeus (Styracaceae). Taxon 25: 581-587. 1976.

Wood, C. E., Jr. J. Arnold Arbor. 41: 22-26. 1960.

The gender of *Storax* is masculine, according to Nicolson and Steyskal (1976), feminine, according to Gonsoulin (1974), and neuter, according to Wood (1960) and Howard (1974).

NUMBER OF SPECIES: Native trees, 3; native shrubs, 3; P.R., 1; total, widespread from tropical to warm temperate zones, about 120.

**Stỳrax americànus** Lam. **American snowbell**

*Styrax americana* Lam., Encycl. Méth. Bot. 1: 82. 1783.
*Styrax pulverulentum* Michx., Fl. Bor.-Am. 2: 41. 1803.
*Styrax americana* var. *pulverulenta* (Michx.) Perkins ex Rehd. in Bailey, Stand. Cycl, Hort. 6: 3280. 1917.

DERIVATION—American.

RANGE—Coastal Plain chiefly, from se. Va. to c. Fla., and w. to e. Tex., n. in Miss. Valley to extreme se. Okla, se. Mo., s. Ill., sw. Ind., and

w. Ky. Also local in n. Ind. and s. Ohio. Atlas vol. 4, map 148; vol. 5, map 142.

Usually a shrub but added here as a small tree to 20 ft (6 m) high, according to Correll and Johnston (Man. Vasc. Pl. Tex. 1191. 1970), Kurz and Godfrey (Trees North. Fla. 267-268. 1962), and others.

**Stỳrax grandifòlius** Ait. **bigleaf snowbell‡**

‡†*Styrax grandifolium* Ait., Hort. Kew 2: 75. 1789.

DERIVATION—Large-leaf.

OTHER COMMON NAMES—snowbell†, storax.

RANGE—Coastal Plain mostly, from se. Va. to n. Fla., and w. to e. Tex., n. in Miss. Valley to n. Ark., se. Mo., extreme s. Ill., and Ky. Also local in s. Ohio and e. to W. Va. Atlas vol. 4, map 149; vol. 5, map 143.

**Stỳrax platanifòlius** Engelm. **sycamore-leaf snowbell**

*Styrax platanifolia* Engelm., J. Boston Nat. Hist. 6: 146-147. 1854; Engelm. ex Torr., Smithson. Inst. Contrib. Knowl. 6: 4. 1854.

*Styrax platanifolia* var. *stellata* Cory, Madroño 7: 112. 1943.

DERIVATION—Sycamore-leaf, from the shape of the lobed leaf.

RANGE—Edwards Plateau, c. Tex. Atlas vol. 4, map 150.

Added here as a shrub or small tree to 13 ft (4 m) high, according to Correll and Johnston (Man. Vasc. Pl. Tex. 1191. 1970).

**Surìana** L. (Family Simaroubaceae) **baycedar**

‡†*Suriana* L., Sp. Pl. 284. 1753; Gen. Pl. ed. 5, 137. 1754.

DERIVATION—Named in honor of Joseph Donat Surian (d. 1691), French physician and artist, who collected in the West Indies.

REFERENCE—Gutzwiller, Marie-Anne. Die phylogenetische Stellung von Suriana maritima L. Bot. Jahrb. 81: 1-49, illus. 1961.

By some authors and in the 1927 checklist placed in a separate family, Surianaceae.

NUMBER OF SPECIES: 1 (also P.R. and V.I.), world tropics.

**Surìana marítima** L. **baycedar‡†**

‡†*Suriana maritima* L., Sp. Pl. 284. 1753.

DERIVATION—Maritime, from the habitat of sea shores.

OTHER COMMON NAME—thatch-leaf.

RANGE—Shores of c. and s. Fla. incl. Fla. Keys w. to Marquesas Key and Dry Tortugas, n. on e. coast to s. Brevard Co. and on w. coast to Pinellas Co. Widely distributed on shores of tropical America from Bermuda and Bahamas through West Indies incl. P.R. and V.I. Also from se. Mex. (Yuc.) to Colombia and Brazil. Also in Old World tropics and Pacific Is. Atlas vol. 5, map 246.

*Swida*, see **Cornus**

**Swietènia** Jacq. (Family Meliaceae) **mahogany**

†‡*Swietenia* Jacq., Enum., Pl. Carib. 4, 20. 1760.

DERIVATION—Dedicated to Baron Gerald von Swieten (1700-72), Dutch physician and founder of the botanical garden at Vienna.

NUMBER OF SPECIAL: Native trees (s. Fla.), 1 (also in West Indies); Mex. and C. A., 1; C. and S. Am., 1; total, 3.

***Swietènia mahágoni** Jacq. **West Indies mahogany‡**

*Cedrela mahagoni* L., Syst. Nat. ed. 10, 2: 940. 1759; "*Mahag.*"

‡†*Swietenia mahagoni* Jacq., Enum. Pl. Carib. 20. 1760.

DERIVATION—From the vernacular name.

RANGE—Rare in s. Fla. incl. Upper Fla. Keys and s. border of mainland (s. Dade and s. Monroe Cos.), extinct northward. Bahamas, Cuba, and Hispaniola. Introduced in P.R. and V.I. Cultivated and naturalized

elsewhere in tropical regions. Atlas vol., map 192-E; vol. 5, map 247.

REFERENCE—Styles, B. T. J. Oxf. Univ. For. Soc., Ser. 6, 4: 17-20. 1968.

**Symplocos** Jacq. (Family Symplocaceae) **sweetleaf**

‡†*Symplocos* Jacq., Enum. Pl. Ins. Carib. 5, 24. 1760.

DERIVATION—From Greek, connected and twisted, referring to the stamens united at the base and with corolla in the type species.

REFERENCE—Wood, C. E., Jr., and R. B. Channell. J. Arnold Arbor. 41: 31-35, ilus. 1960.

NUMBER OF SPECIES: Native trees, 1; P.R., 3, incl. 1 also in V.I. total, mostly tropical and subtropical, about 350.

**Symplocos tinctoria** (L.) L'Hér. **sweetleaf†**

*Hopea tinctoria* L., Mant. Pl. 105. 1767.

‡†*Symplocos tinctoria* (L.) L'Hér., Trans. Linn. Soc. [Lond.] 1: 176. 1791.

*Symplocos tinctoria* var. *ashei* Harbison, J. Elisha Mitchell Sci. Soc. 46: 219. 1931.

DERIVATION—Of dyes; the leaves and bark being the source of a yellow dye.

OTHER COMMON NAMES—horse-sugar, common sweetleaf‡, yellowwood.

RANGE—Coastal Plain chiefly, from s. Del., se. Md., and se. Va. to n. and c. Fla., and w. to e. Tex., n. in Miss. Valley to extreme se. Okla. and c. Ark. Atlas vol. 4, map 151; vol. 5, map 144.

‡†*Talisia pedicellaris* Radlk.(K. Bayer. Akad. Wiss. München Math.-Phys. Cl. Sitzber. 8: 342. 1878; Family Sapindaceae), Guiana talisia‡, is to be excluded. This small tree native of French Guiana was collected in 1910 but not afterwards in Brickell Hammock, Miami, Fla., perhaps an accidental introduction. The report in 1927 and 1953 checklists was from Small (Man. Southeast. Flora 828. 1933). This species in an area destroyed by urban development, is no longer present according to George K. Brizicky (J. Arnold Arbor. 44: 464-465. 1963) and Long and Lakela (Fl. Trop. Fla. 577. 1971).

*Tamala*, see **Persea**

TAMARINDUS L. (Family Leguminosae) TAMARIND

‡†*Tamarindus* L., Sp. Pl. 34. 1753; Gen. Pl. ed. 5, 20. 1754.

DERIVATION—From Arabic *tamr hindi*, Indian dried date, through Spanish and Italian *tamarindo*.

TAMARINDUS INDICA L. TAMARIND‡†

‡†*Tamarindus indica* L., Sp. Pl. 34. 1753; Gen. Pl. ed. 5, 20. 1754.

DERIVATION—Of India.

RANGE—Planted for fruit and shade, long persistent, and locally naturalized in s. Fla. incl. Fla. Keys. Hawaii, P.R., and V.I. Native of Old World tropics and widely planted and naturalized through the tropics.

TAMARIX L. (Family Tamaricaceae) TAMARISK

‡†*Tamarix* L., Sp. Pl. 270. 1753; Gen. Pl. ed. 5, 131. 1754.

DERIVATION—The classical Latin name, perhaps from Tamaris, a river in Spain.

OTHER COMMON NAME—saltcedar.

REFERENCES—Baum, Bernard R. Monographic revision of the genus Tamarix. 193 p., illus. 1966.

Baum, Bernard R. Introduced and naturalized tamarisks in the United States and Canada [Tamaricaceae]. Baileya 15:19-25, illus. 1967.

Horton, Jerome S. Notes on the introduction of deciduous tamarisk. U.S.D.A. For. Serv. Res. Note RM-16, 7 p. 1964.

McClintock, Elizabeth. Studies in California plants 3. The tamarisks. J. Calif. Hort. Soc. 12: 76-83, illus. 1951.

A few other species of this Old World genus are planted but apparently not naturalized.

TÁMARIX CHINÊNSIS Lour. TAMARISK
‡*Tamarix pentandra* Pall., Fl. Ross. 1(2): 72, pl. 79. 1788; *nom. illegit.*
*Tamarix chinensis* Lour., Fl. Cochinch. 1: 182. 1790.
*Tamarix ramosissima* Ledeb., Fl. Altaica 1: 424. 1829.
DERIVATION—Of China.
OTHER COMMON NAMES—saltcedar, five-stamen tamarisk‡; palo de salitral, tamarisco (Spanish).
RANGE—Extensively naturalized along streams in w. U.S. from sw. Nebr. w. to Utah, Nev., and s. Calif., and e. to Ariz., s. Tex., and Ark. Local from Wyo. and Mont. w. to Wash. and Oreg. Also in n. Mex. Native of Asia and se. Europe.
REFERENCES—Christensen, Earl M. The rate of naturalization of Tamarix in Utah. Am. Midl. Nat. 68:51-57. 1962.
Robinson, T. W. Introduction, spread and areal extent of saltcedar (Tamarix) in the western States. U.S. Geol. Surv. Prof. Pap. 491-A, 12 p., illus. 1965.
This is the common naturalized sp. in sw. U.S. Formerly referred to ‡†*Tamarix gallica* L.

TÁMARIX GÁLLICA L. FRENCH TAMARISK
†*Tamarix gallica* L., S,. Pl. 270. 1753.
DERIVATION—Of Gaul or France.
RANGE—Naturalized locally in s. Tex. and s. La. Native of s. Europe.

TÁMARIX PARVIFLÒRA L. SMALL-FLOWER TAMARISK‡†
‡*Tamarix parviflora* DC., Prodr. 3: 97 1828.
DERIVATION—Small-flower.
RANGE—Planted and escaped across continental U.S. Naturalized locally in Calif. Native of Mediterranean region.
Formerly referred also to *T. tetrandra* Pall.

**Taxòdium** Rich. (Family Taxodiaceae) **baldcypress**
‡†*Taxodium* Rich., Paris Mus. Hist. Nat. Ann. 16: 298. 1810.
DERIVATION—From *Taxus*, yew, and a suffix meaning like, referring to the yewlike leaves.
This genus formerly in the family Pinaceae, pine family, is now placed in the segregate family Taxodiaceae, redwood family.
NUMBER OF SPECIES: Native trees, 2 (1 also in Mex.); total, 2.

***Taxòdium dístichum** (L.) Rich. **baldcypress‡**
*Cupressus disticha* L., Sp. Pl. 1003. 1753.
‡†*Taxodium distichum* (L.) Rich., Paris Mus. Hist. Nat. Ann. 16: 298. 1810.
DERIVATION—Two-ranked, the leaves being in 2 rows.
RANGE—Coastal Plain from s. Del. to s. Fla., w. to e. and s. Tex., and n. in Miss. Valley to se. Okla., se. Mo., s. Ill., sw. Ind., and w. Ky. Atlas vol. 1, map 84-E; vol. 5, map 11.

**Taxòdium dístichum** (L.) Rich. var. **dístichum** **baldcypress (typical)‡**
OTHER COMMON NAMES—cypress, southern-cypress†, swamp-cypress, red-cypress, yellow-cypress, white-cypress, tidewater red-cypress, gulf-cypress.
RANGE—Same as sp.

**Taxòdium dístichum** var. **nùtans** (Ait.) Sweet **pondcypress‡†**
*Cupressus disticha* β *nutans* (Ait.), Hort. Kew. 3: 372. 1789.
*Cupressus disticha* β *imbricaria* Nutt., Gen. No. Am. Pl. 2: 224. 1818.
‡*Taxodium distichum* β *nutans* Sweet, Hort. Brit. 372. 1827.
†*Taxodium ascendens* Brongn., Ann. Sci. Nat. 30: 182. 1833.

*Taxodium distichum* var. *imbricarium* (Nutt.) Croom, Cat. Pl. New Bern N.C. 30. 1837.
*Taxodium imbricarium* (Nutt.) R. M. Harper, Bull. Torrey Bot. Club 29: 383. 1902.
*Taxodium ascendens* var. *nutans* (Ait.) Rehd., Man. Cult. Trees 25. 1927.

DERIVATION—Nodding, described from a cultivated variation with drooping branches.

OTHER COMMON NAMES—black-cypress, cypress.

RANGE—Coastal Plain from se. Va. to s. Fla., w. to se. La. Atlas vol. 1, map 84-E.

**Taxòdium mucronàtum** Ten. **Montezuma baldcypress**‡
‡*Taxodium mucronatum* Ten., Ann. Sci. Nat., Bot., Sér. 3, 19: 355. 1853.

DERIVATION—Mucronate, or with a short, sharp point.

OTHER COMMON NAMES—Mexican cypress; sabino, ahuehuete, ciprés (Spanish).

RANGE—Extreme s. Tex. (Cameron and Hidalgo Cos.). Also Mex. (Tamps. to Son., s. to Oax. and Chis.) and Guatemala, mostly in mts. Atlas vol. 1, maps 83-W, 83-N.

**Táxus** L. (Family Taxaceae) **yew**
‡†*Taxus* L., Sp. Pl. 1040. 1753; Gen. Pl. ed. 5, 462. 1754.

DERIVATION—The classical Latin name (Greek, *taxos*).

REFERENCE—Chadwick, L. C., and R. A. Keen. A study of the genus Taxus. Ohio Agric. Res. Dev. Cent., Bull. 1086, 56 p., illus. 1976.

NUMBER OF SPECIES: Native trees, 2; native shrubs, 1; Mex. to Honduras, 1; Eurasia, 6; total, n. temperate, 10.

*Táxus canadénsis* Marsh. (Arbustr. Am. 151. 1785), Canada yew, the third native species, is a low shrub. Range—Nfld. and Labr., w. to Ont. and extreme sw. Man., s. to Minn. and e. Iowa, and e. to Ohio, W. Va., Pa., and n. N.J. Also local s. to Va., Ky., and Tenn. Atlas vol. 1, maps 86.1-N, 86.1-E.

***Táxus brevifòlia** Nutt. **Pacific yew**‡†
‡†*Taxus brevifolia* Nutt., No. Am. Sylva 3: 86, pl. 108. 1849.

DERIVATION—Short-leaf; that is, in comparison with *Taxus baccata* L., English yew.

OTHER COMMON NAME—western yew.

RANGE—Pacific Coast region from extreme se. Alaska, s. in w. B.C., w. Wash., w. Oreg., and n. and c. Calif., incl. Sierra Nev. Also Rocky Mt. region from se. B.C. s. to nw. Mont., n. Idaho e. Wash., and ne. Oreg. Atlas vol. 1, maps 86-W, 86-N; vol. 2, map 1.

**Táxus floridàna** Nutt. ex Chapm. **Florida yew**‡†
*Taxus floridana* Nutt., No. Am. Sylva 3: 92. 1849; as synonym.
‡†*Taxus floridana* Nutt. ex Chapm., Fl. South. U.S. 436. 1860.

DERIVATION—Of Florida.

RANGE—Nw. Fla. (Gadsden and Liberty Cos.). Very rare and local. Atlas vol. 1, map 85-E; vol. 5, map 12.

REFERENCE—Godfrey, R. L., and Herman Kurz. The Florida torreya destined for extinction. Science 136: 900-902. 1962.

**Tecòma** Juss. **trumpet-flower**
*Tecoma* Juss., Gen. Pl. 139. 1789.

DERIVATION—From the Aztec Indian (Nahuatl) name *tecomaxochitl*. Other pronunciation—*Técoma*.

NUMBER OF SPECIES: Native shrubs or trees, 1, also P.R. and V.I.; total, tropical Am., about 10.

**Tecòma stáns** (L.) H.B.K. **yellow-elder**
*Bignonia stans* L., Sp. Pl. ed. 2, 871. 1763.

*Tecoma stans* (L.) H.B.K., Nov. Gen. Sp. 3: 144. 1819.
*Stenolobium incisum* Rose & Standl. in Woot. & Standl., U.S. Natl. Mus., Contrib. U.S. Natl. Herb. 16: 174. 1913.
*Tecoma stans* var. *angustata* Rehd., Mitt. Dtsch. Dendrol. Ges. 1915: 227. 1915.
*Tecoma incisa* (Rose & Standl.) I. M. Johnst., J. Arnold Arbor. 21: 264. 1940.

DERIVATION—Standing erect.

OTHER COMMON NAMES—yellow trumpet-flower, hardy yellow-trumpet, yellow-bells; tronadora, esperanza, miñona (Spanish).

RANGE—Trans-Pecos Tex., s. N. Mex., and s. Ariz. Mex. s. to Brazil and n. Argentina. Also in West Indies incl. P.R. and V.I. Cultivated and naturalized beyond, incl. s. Fla.

A native shrub in sw. U.S. Added here as naturalized in s. Fla., usually a shrub but rarely a small tree. The official flower of the U.S. Virgin Islands, as ginger-thomas.

TERMINÀLIA L. (Family Combretaceae) TERMINALIA

*Terminalia* L., Syst. Nat. ed. 12, [674] (err. "638"). 1767; Mant. Pl. 21, 128. 1767; *nom. cons.*

DERIVATION—Referring to the clustered terminal leaves at ènds of branches.

TERMINÀLIA CATÁPPA L. INDIA-ALMOND

‡†*Terminalia catappa* L., Mant. Pl. 128. 1767.

DERIVATION—Aboriginal East Indian name.

OTHER COMMON NAMES—tropical-almond, Indian-almond‡†, West-Indian-almond.

RANGE—Planted and naturalized in s. Fla. incl. Fla. Keys. Hawaii. P.R., and V.I. Native of East Indies and Oceanica but planted and naturalized through the tropics.

**Tetrazýgia** Rich. ex DC. (Family Melastomataceae) **tetrazygia**

‡†*Tetrazygia* Rich. ex DC., Prodr. 3: 172. 1828.

DERIVATION—From Greek, 4 yokes referring to the 4-parted flowers.

NUMBER OF SPECIES: Native trees (s. Fla.), 1; P.R., 5, including 2 also in V.I.; West Indies, additional, 15; Guyana, 1; total, about 20.

**Tetrazýgia bicolor** (Mill.) Cogn. **Florida tetrazygia‡**

*Melastoma bicolor* Mill., Gard. Dict. ed. 8, *Melastoma* No. 6. 1768
‡†*Tetrazygia bicolor* (Mill.) Cogn. in A. DC. & C. DC., Monogr. Phan. v. 7 (Melastomaceae): 724. 1891.

DERIVATION—Two-color, referring to the leaves, which are dark green on upper surface and silvery white beneath. Other pronunciation—*Tetrazýgia bícolor.*

RANGE—Local in s. Fla. (s. Dade Co.) incl. Key Largo. Also Bahamas, Cuba, and Hispaniola. Atlas vol. 5, map 248.

*Thelycrania*, see **Cornus**

THESPÈSIA Soland. ex Correa (Family Malvaceae) THESPESIA

‡†*Thespesia* Soland. ex Correa, Paris Mus. Hist. Nat. Ann. 9: 290, pl. 25, fig. 1. 1807; *nom. cons.*

DERIVATION—From Greek, divine, apparently because the type species was regarded as a sacred tree in South Pacific islands.

THESPÈSIA POPÚLNEA Soland. ex Correa PORTIATREE‡†

*Hibiscus populneus* L., Sp. Pl. 694. 1753.
‡†*Thespesia populnea* (L.) Soland. ex Correa, Paris Mus. Hist. Nat. Ann. 9: 290, pl. 25, fig. 1. 1807.

DERIVATION—Like *Populus*, or poplar, referring to the shape of the leaves.

OTHER COMMON NAME—seaside mahoe†.

RANGE—Naturalized along shores of s. Fla., incl. Fla. Keys. Also Hawaii, P.R., and V.I. Widely distributed on tropical shores, native in Old World and mainly naturalized beyond. Disseminated partly by floating fruits and seeds.

**Thrìnax** Sw. (Family Palmae) **thatchpalm**

‡†*Thrinax* Sw., Nov. Gen. Sp. Prodr. 4, 57. 1788.

DERIVATION—From Greek trident, or three-pronged fork, under the apparent misapprehension that the word means fan and is apropos for a plant with fan-shaped leaves.

OTHER COMMON NAME—peaberry-palm.

REFERENCES—Bailey, L. H. Thrinax--the peaberry palms. Gentes Herbarum 4: 12-149, illus. 1938.

Read, Robert W. The genus Thrinax (Palmae: Coryphoideae). Smithson. Contrib. Bot. 19, 98 p., illus. 1975.

NUMBER OF SPECIES: Native trees (s. Fla.), 2 including 1 also in P.R. and V.I.; total, incl. West Indies, se. Mex. and Belize, 4.

**Thrìnax mórrisii** H. Wendl. **key thatchpalm**

*Thrinax morrisii* H. Wendl., Gard. Chron., Ser. 3, 9: 700, fig. 134. 1891; *nom. nud.*
*Thrinax morrisii* H. Wendl., Gard. Chron., Ser. 3, 11: 104, fig. 20, 21. 1892.
‡†*Thrinax microcarpa* Sarg., Gard. and Forest 9: 162. 1896.
†*Thrinax keyensis* Sarg., Bot. Gaz. 27: 86. 1899.

DERIVATION—Daniel Morris (1844-1933), of the Royal Botanic Gardens, Kew, England, who discovered this palm at Anguilla in 1890.

OTHER COMMON NAMES—silvertop palmetto†, brittle thatchpalm‡, brittle-thatch, thatchpalm†.

RANGE—Through Fla. Keys sw. to Marquesas Key. S. Fla. mainland n. on e. coast to Broward Co. Bahamas, Cuba, Hispaniola, P.R., Anegada, Anguilla, and Barbuda. Reported from se. Mex. (Yuc.) and Belize (islands). Atlas vol. 5, map 249.

**Thrìnax radiàta** Lodd. ex J. A. & J. H. Schult. **Florida thatchpalm**

*Thrinax radiata* Lodd. ex. J. A. &. J. H. Schult., Syst. Veg. 7(2): 1301. 1830.
*Thrinax floridana* Sarg., Bot. Gaz. 27: 84. 1899.
*Thrinax wendlandiana* Becc., Webbia 2: 265. 1907.

DERIVATION—Radiate, or rayed.

OTHER COMMON NAMES—Jamaica thatchpalm‡, thatchpalm†, silktop thatchpalm, silktop palmetto, silktop thatch.

RANGE—Nearly through Fla. Keys and s. border of s. Fla. mainland (Dade and Monroe Cos.), formerly nw. to Cape Romano, Collier Co. (extinct). Also Bahamas (N. Cat Cay), Cuba, Jamaica, and Hispaniola. Se. Mex. (Yuc.) and Belize. Atlas vol. 5, map 250.

REFERENCE—Small, John K. Silk-top thatch—Thrinax parviflora. J. N.Y. Bot. Gard. 26: 49-54, illus. 1925.

In the 1953 checklist referred to ‡*Thrinax parviflora* Sw. of Jamaica.

**Thùja** L. (Family Cupressaceae) **thuja**

‡†*Thuja* L., Sp. Pl. 1002. 1753; Gen. Pl. ed. 5, 435. 1754 ("*Thuya*").
*Thuja* sect. *Biota* D. Don in Lamb., Descr. Genus Pinus. ed. 2, 2: 129. 1828.
*Platycladus* Spach, Hist Vég. Phan. 11: 333. 1842.
*Biota* (D. Don) Endl., Synops. Conif. 47. 1847.

DERIVATION—From Greek *thuia*, an aromatic wood highly prized in ancient times for choice, durable furniture and probably a juniper.

OTHER COMMON NAME—arborvitae.

NUMBER OF SPECIES: Native trees, 2, incl. 1 n. to Alaska; naturalized trees, 1; e. Asia (China to Korea and Japan), 4; total, 6.

***Thùja occidentàlis** L. **northern white-cedar**‡†

‡†*Thuja occidentalis* L., Sp. Pl. 1002. 1753.

DERIVATION—Western, meaning of the Western Hemisphere.

OTHER COMMON NAMES—white-cedar, eastern white-cedar, arborvitae, eastern arborvitae, swamp-cedar.

RANGE—Anticosti Is., Gaspé Pen. of Que., N.B., P.E.I., sw. N.S., and Maine, w. to n. Ont. and se. Man., s. to se. Minn. and ne. Ill., e. to

extreme nw. Ind., Mich., s. Ont., s. N.Y., R.I., and Mass. S. locally in Appalachian Mts. in w. Pa., Ohio, W. Va., Va., w. N.C., and e. Tenn. Also local in c. Man. Atlas vol. 1, maps 89-N, 89-E.

THÙJA ORIENTÀLIS L. ORIENTAL ARBORVITAE‡

‡*Thuja orientalis* L., Sp. Pl. 1002. 1753.
*Biota orientalis* (L.) Endl., Synops. Conif. 47. 1847.
*Platycladus orientalis* (L.) Franco, Portug. Acta Biol. Sér. B, Vol. 'Júlio Henriques', 33. 1949.

DERIVATION—Eastern, referring to the Orient.

OTHER COMMON NAME—Chinese arborvitae.

RANGE—Persistent about abandoned gardens and occasionally spontaneous on the coast of Fla., though not extensively naturalized, according to Small (Man. Southeast. Fl. 10. 1933). A cultivated ornamental in U.S., also Hawaii, P.R., and V.I. Native of n. China and Korea.

***Thùja plicàta** Donn ex D. Don **western redcedar‡†**

*Thuja plicata* Donn, Hort. Cantab. Ed. 4, 211. 1807; *nom. nud.*
‡†*Thuja plicata* Donn ex D. Don in Lamb., Descr. Genus Pinus 2: [19]. 1824.

DERIVATION—Plicate, folded into plaits, perhaps suggested by the flattened twigs with regularly arranged scalelike leaves.

OTHER COMMON NAMES—Pacific redcedar, giant-cedar, arborvitae, giant arborvitae, canoe-cedar, shinglewood.

RANGE—Pacific Coast region from s. third of se. Alaska se. to w. B.C., w. Wash., w. Oreg., and nw. Calif. Also Rocky Mt. region from se. B.C. s. to e. Wash., n. Idaho, and w. Mont. Atlas vol. 1, maps 90-W, 90-N; vol. 2, map 11.

**Tília** L. (Family Tiliaceae) **basswood**

‡†*Tilia* L., Sp. Pl. 514. 1753; Gen. Pl. ed. 5, 230. 1754.

DERIVATION—The classical Latin name, probably from Greek *ptilon*, wing, referring to the winglike bract of flower clusters.

OTHER COMMON NAMES—linden, linn, beetree, limetree.

REFERENCES—Ashby, William Clark. A note on basswood nomenclature. Castanea 20: 109-116. 1964.

Brizicky, George K. J. Arnold Arbor. 46: 286-295. 1965.

Jones, George Neville. Taxonomy of American species of linden (Tilia). Ill. Biol. Monogr. 39, 156 p., illus. 1968.

Laughlin, Kendall. Tilia relicta Laughlin: Hot Springs basswood. Phytologia 24: 302-332, illus. 1972.

Laughlin, Kendall. A key to the principal glabrate species of Tilia. Phytologia 35: 217-219. 1977.

The number of native species accepted in the genus *Tilia* in the monograph by Jones (1968) now is again 3, as distinguished nearly a century ago by Sargent (Silva No. Am. 1: 49-58, illus. 1891). The fourth species accepted in the 1953 checklist, ‡*Tilia florida* Small, has been united with *T. caroliniana* Mill. The synonymy below includes species (but not varieties) accepted in the 1927 checklist (†).

NUMBER OF SPECIES: Native trees (e. U.S. and Can.), 3; Mex., 1; Eurasia, about 30; total, n. temperate zone, about 35.

***Tília americàna** L. **American basswood‡**

‡*Tilia americana* L., Sp. Pl. 514. 1753.
†*Tilia glabra* Vent., An. Hist. Nat. [Madrid] 2: 62. 1800.
†*Tilia neglecta* Spach, Ann. Sci. Nat., Bot., Sér. 2, 2: 341, pl. 15, fig. 4. 1834.
†*Tilia venulosa* Sarg., Bot. Gaz. 66: 428. 1918.
*Tilia americana* var. *neglecta* (Spach) Fosberg, Castanea 20: 58. 1955.
?*Tilia relicta* Laughlin, Phytologia 24: 302, figs. 1972.

DERIVATION—American.

OTHER COMMON NAMES—American linden, basswood†.

RANGE—Sw. N.B. and Maine, w. to s. Que., s. and w. Ont., Mich., Minn., and se. Man., s. to e. N. Dak., n. and e. Nebr., e. Kans., and ne. Okla., and e. to n. Ark., Tenn., w. N.C., and N.J. Atlas vol. 1, map 193.

***Tília caroliniàna** Mill. **Carolina basswood‡**

‡†*Tilia caroliniana* Mill., Gard. Dict. ed. 8, *Tilia* No. 4. 1768.
*Tilia pubescens* Ait., Hort. Kew. 2: 229. 1789.
†*Tilia australis* Small, Fl. Southeast. U.S. 761, 1335. 1903.
‡†*Tilia floridana* Small, Fl. Southeast. U.S. 761, 1335. 1903.
†*Tilia leucocarpa* Ashe, Charleston [S.C.] Mus. Bull. 14: 32. 1918 (Oct. 24).
†*Tilia cocksii* Srg. Bot. Gaz. 66: 430. 1918.
†*Tilia creno-serrata* Sarg., Bot. Gaz. 66: 430. 1918.
†*Tilia georgiana* Sarg., Bot. Gaz. 66: 510. 1918.
†*Tilia littoralis* Sarg., Bot. Gaz. 66: 430. 1918.
†*Tilia phanera* Sarg., Bot. Gaz. 66: 501. 1918.
†*Tilia texana* Sarg., Bot. Gaz. 66: 500. 1918.
†*Tilia porracea* Ashe, Charleston Mus. Quart. 1(2): 31. 1925.

DERIVATION—Of Carolina.

OTHER COMMON NAMES—Florida basswood†, basswood†, Carolina linden, Florida linden.

RANGE—Coastal Plain and Piedmont from N.C. to c. Fla., w. to e. and c. Tex., and n. to se. Okla. and c. Ark. Atlas vol. 4, map 153; vol. 5, map 145.

***Tília heterophýlla** Vent. **white basswood‡†**

‡†*Tilia heterophylla* Vent., An. Hist. Nat. [Madrid] 2: 68. 1800.
*Tilia americana* var. *heterophylla* (Vent.) Loud., Arb. Frut. Brit. 1: 375. 1838.
†*Tilia eburnea* Ashe, Bot. Gaz. 33: 231. 1902.
†*Tilia monticola* Sarg., Bot. Gaz. 66: 508. 1918.
†*Tilia lata* Ashe, Bull. Torrey Bot. Club 53: 20. 1926.

DERIVATION—Various-leaved.

OTHER COMMON NAME—beetree linden.

RANGE—Sw. Pa. w. to s. Ohio, s. Ind., extreme s. Ill., and e. and s. Mo., s. to n. Ark., e. to ne. Miss., Ala., nw. Fla., and Ga., and n. to Md. Also local ne. to e. Pa. and w. N.Y. Atlas vol. 1, map 194-E; vol. 5, map 146.

**Tòrreya** Arn. (Family Taxaceae) **torreya**

*Torreya* Arn. ex Torr. in Croom, Cat. Pl. New Bern N.C. v. 1837; *nom. provisor.*
‡*Torreya* Arn., Ann. Mag. Nat. Hist. 1: 130. 1838; *nom. cons.* Non *Torreya* Raf., Am. Mon. Mag. Crit. Rev. 3: 356. 1818; *nom. rejic.*
†*Tumion* Raf., Amen. Nat. 63. 1840.

DERIVATION—In honor of John Torrey (1796-1873), United States botanist of Columbia University, who first studied specimens of this genus.

NUMBER OF SPECIES: Native trees, 2; e. Asia (China and Japan), 4; total, 6.

**Tòrreya califórnica** Torr. **California torreya‡**

‡*Torreya californica* Torr., N.Y. J. Pharm. 3: 51. 1854 (Feb. 3?).
*Torreya myristica* Hook., Curtis' Bot. Mag. 80: No. 4780, pl. 4780. 1854 (May 1).
†*Tumion californicum* (Torr.) Greene, Pittonia 2: 195. 1891.

DERIVATION—Of California.

OTHER COMMON NAME—California-nutmeg†.

RANGE—Rare and local in mts. of c. Calif. incl. Coast Ranges and w. slope of Sierra Nev. Atlas vol. 1, map 87-W.

**Tòrreya taxifòlia** Arn. **Florida torreya‡**

‡*Torreya taxifolia* Arn., Ann. Mag. Nat. Hist. 1: 130. 1838.
†*Tumion taxifolium* (Arn.) Greene, Pittonia 2: 194. 1891.

DERIVATION—With leaves like *Taxus*, or yew-leaf.

OTHER COMMON NAME—stinking-cedar†.

RANGE—Extreme sw. Ga. (Decatur Co.) and nw. Fla. (Gadsden, Liber-

ty, and Jackson Cos.). Very rare and local and threatened by a fungus disease. Atlas vol. 1, map 88-E; vol. 5, map 13.

*Torrubia*, see **Guapira**

**Toxicodéndron** Mill. (Family Anacardiaceae) **poison-sumac**

†*Rhus* L., Sp. Pl. 265. 1753; Gen. Pl. ed. 5, 129. 1754; in part.
‡*Toxicodendron* Mill., Gard. Dict. Abr. ed. 4. v. 3. 1754.

DERIVATION—From Greek, poison tree, referring to the toxic secretion which irritates the skin upon contact.

REFERENCES—See also **Rhus**

Gillis, William T. The systematics and ecology of poison-ivy and the poison-oaks (Toxicodendron, Anacardiaceae). Rhodora 73: 72-159, 161-237, 370-443, 465-540, illus. 1971.

To this genus belong 4 other native poisonous species: *Toxicodendron radicans* (L.) Kuntze, poison-ivy; *T. rydbergii* (Small ex Rydb.) Greene, Rydberg poison-ivy, *T. toxicarium* (Salisb.) Gillis, eastern poison-oak; and *T. diversilobium* (Torr. & Gray) Greene, western poison-oak.

NUMBER OF SPECIES—Native trees, 1 (also Can.); native shrubs and vines, 4 (3 also in Can., incl. 2 also in Mex. and 1 also in Guatemala, Bermuda, Bahamas, and e. Asia); Mex., C. Am., and n. S. Am. (to Peru and Brazil), 1; New World, 6; e. Asia (India to China, Japan, and Java), about 10; total, about 15.

**Toxicodéndron vérnix** (L.) Kuntze **poison-sumac**‡†

†*Rhus vernix* L., Sp. Pl. 265. 1753.
*Rhus venenata* DC., Prodr. 2: 68. 1825.
‡*Toxicodendron vernix* (L.) Kuntze, Rev. Gen. Pl. 1: 153. 1891.

DERIVATION—Varnish; erroneously thought to be the Japanese lacquer-tree, *T. vernicifluum* (Stokes) Barkley.

OTHER COMMON NAMES—poison-dogwood, poison-elder, thunderwood.

RANGE—S. Maine w. to extreme s. Que., N.Y., s. Ont., c. Mich., c. Wis., and se. Minn., s. to Ill., se. Tenn., e. Tex., and c. Fla. Atlas vol. 4, maps 152-NE, 152-SE; vol. 5, map 147.

*Toxylon*, see **Maclura**

**Trèma** Lour. (Family Ulmaceae) **trema**

‡†*Trema* Lour., Fl. Cochinch. 2: 562. 1790.

DERIVATION—From Greek, hole, in reference to the pitted drupe fruit; the name was unexplained by its author.

The gender is usually regarded as feminine but may be neuter or masculine, according to recent authors.

NUMBER OF SPECIES: Native trees in s. Fla., 2 (also in P.R., 1 also in V.I.); total (tropical and subtropical), about 25.

**Trèma lamarckiàna** (Roem. & Schult.) Blume **West Indies trema**‡

*Celtis lima* Lam., Encycl. Meth. Bot. 4: 140. 1797. Non *Celtis lima* Sw., Nov. Gen. Sp. Pl. Prodr. 53. 1788.
*Celtis lamarckiana* Roem. & Schult., Syst. Veget. 6: 311. 1820.
‡*Trema lamarckiana* (Roem. & Schult.) Blume, Mus. Bot. Lugd. Bat. 2: 58. 1853.

DERIVATION—In honor of Jean Baptiste de Lamarck (1744-1829), French naturalist who first described this species.

RANGE—Local in Upper Fla. Keys (Key Largo to Key Biscayne) and adjacent s. Fla. mainland (se. Dade Co.). Bermuda and from Bahamas through West Indies incl. P.R. to St. Vincent. Atlas vol. 5, map 251.

**Trèma micrántha** (L.) Blume **Florida trema**‡

*Rhamnus micranthus* L., Syst. Nat. ed. 10, 937. 1759.
*Celtis mollis* Humb. & Bonpl. ex Willd., Sp. Pl. ed. 4, 4: 996. 1806.
‡*Trema micrantha* (L.) Blume, Mus. Bot. Lugd. Bat. 2: 58. 1853.

†*Trema mollis* (Humb. & Bonpl.) Blume, Mus. Bot. Lugd. Bat. 2: 58 1853.
*Trema floridana* Britton in Small, Fl. Southeast. U.S. 366, 1329. 1903.
*Trema micrantha* (L.) Blume var. *floridana* (Britton) Standl. & Steyerm., Field Mus. Publ. Bot. 23: 40. 1944.

DERIVATION—Small-flower.

RANGE—S. Fla. incl. Fla. Keys, n. to s. Palm Beach, Hendry, and Collier Cos., n. locally on w. coast to Pinellas Co. Greater Antilles incl. P.R. and V.I. and Lesser Antilles. Also from c. Mex. (Ver. to Sin.) s. to Brazil and Argentina. Atlas vol. 5, map 252.

By some authors distinguished as var. *floridana* (Britton) Standl. & Steyerm.

*Triadica*, see **Sapium**
*Tricerma*, see **Maytenus**

**Tsùga** (Endl.) Carr. (Family Pinaceae) **hemlock**
*Pinus* sect. *Tsuga* Endl., Synops. Conif. 83. 1847.
‡†*Tsuga* (Endl.) Carr., Traité Gén. Conif. 185. 1855.
*Tsuga* [sect.] *Hesperopeuce* Engelm. in Wats., Bot. Calif. 2: 121. 1879.
*Hesperopeuce* (Engelm.) Lemm., Calif. State Bd. For. Rep. 3: 111, 126, 128. 1890.

DERIVATION—The Japanese name for the native hemlocks of Japan.

NUMBER OF SPECIES: Native trees, 4, incl. 2 n. to Alaska; s. and e. Asia (Himalayas to China and Japan), about 10; total, n. temperate, about 14.

***Tsùga canadénsis** (L.) Carr. **eastern hemlock**‡†
*Pinus canadensis* L., Sp. Pl. ed. 2, 1421. 1763.
‡†*Tsuga canadensis* (L.) Carr., Traité Gén. Conif. 189. 1855.

DERIVATION—Of Canada.

OTHER COMMON NAMES—Canada hemlock, hemlock spruce.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., Gaspé Pen. of s. Que., and Maine, w. to s. Ont., n. Mich., Wis., and e. Minn., s. to Ind., and e. to Ohio, Pa., Md., and N.J. and s. in mts. to nw. S.C., n. Ga., and n. Ala. Atlas vol. 1, maps 91-N, 91-E.

**Tsùga caroliniàna** Engelm. **Carolina hemlock**‡†
‡†*Tsuga caroliniana* Engelm., Bot. Gaz. 6: 223. 1881.

DERIVATION—Of Carolina.

RANGE—Southern Appalachian Mts. of sw. Va., ne. Tenn., w. N.C., extreme nw. S.C., and extreme ne. Ga. Atlas vol. 1, map 94-E.

REFERENCE—James, R. L. Carolina hemlock—wild and cultivated. Castanea 24: 112-134, illus. 1959.

***Tsùga heterophýlla** (Raf.) Sarg. **western hemlock**‡†
*Abies heterophylla* Raf., Atl. J. 1: 119. 1832.
‡†*Tsuga heterophylla* (Raf.) Sarg., Silva No. Am. 12: 73, pl. 605. 1898.

DERIVATION—With other (different or various) leaves.

OTHER COMMON NAMES—Pacific hemlock, west coast hemlock.

RANGE—Pacific Coast region from s. Alaska (Kenai Pen.) se. through se. Alaska and w. B.C. to w. Wash., w. Oreg., and nw. Calif. Also Rocky Mt. region from se. B.C. s. to ne. Wash., n. Idaho, and nw. Mont. Atlas vol. 1, maps 92-W, 92-N; vol. 2, map 7.

REFERENCE—Taylor, Ronald J. The relationship and origin of Tsuga heterophylla and Tsuga mertensiana based on phytochemical and morphological interpretations. Am. J. Bot. 59: 149-157, illus. 1972.

Earlier known as *Tsuga mertensiana*, a name which belongs instead to mountain hemlock.

HYBRIDIZES WITH: *Tsuga mertensiana* (*Ts.* ×*jeffreyi* (Henry) Henry).

***Tsùga mertensiàna** (Bong.) Carr. **mountain hemlock**‡†
*Pinus mertensiana* Bong., Acad. Imp. Sci. St. Pétersbourg Mém., Sér. 6, Sci. Math. Phys. Nat. 2: 163. 1832.

‡†*Tsuga mertensiana* (Bong.) Carr., Traité Gén. Conif. ed. 2, 250. 1867; as to name but not descr.
*Hesperopeuce mertensiana* (Bong.) Rydb., Bull. Torrey Bot. Club 39: 100. 1912.

DERIVATION—Named for Karl Heinrich Mertens (1796-1830), German naturalist and physician, who discovered it at Sitka, Alaska.

OTHER COMMON NAMES—black hemlock, alpine hemlock, hemlock spruce.

RANGE—Pacific Coast region from s. Alaska (Kenai Pen.) se. through se. Alaska and w. B.C. and s. in mts. from w. Wash. to w. Oreg., and Sierra Nev. to c. Calif. Also Rocky Mt. region from sw. B.C. s. to ne. Oreg., n. Idaho, and nw. Mont. Atlas vol. 1, maps 93-W, 93-N; vol. 2, map 8.

HYBRIDIZES WITH: *Tsuga heterophylla* (*Ts.* ×*jeffreyi* (Henry) Henry).

*Tulipastrum*, see **Magnolia**
*Tumion*, see **Torreya**

**Ulmus** L. (Family Ulmaceae) **elm**

‡†*Ulmus* L., Sp. Pl. 225. 1753; Gen. Pl. ed. 5, 106. 1754.

DERIVATION—The classical Latin name.

Several additional species introduced for shade may persist and escape locally but apparently are not naturalized. *Ulmus procera* Salisb., English elm, spreads by sprouts and has been noted (Fernald, Gray's Man. Bot. ed. 8, 551-552. 1950; Munz, Calif. Fl. 919. 1959).

NUMBER OF SPECIES: Native trees, 6; naturalized trees, 1; Mex., about 6 (incl. 1 also in U.S. and 1 s. to Panama); total (the others in Eurasia), about 45.

***Ulmus alata** Michx. **winged elm**‡†

‡†*Ulmus alata* Michx., Fl. Bor.-Am. 1: 173. 1803.

DERIVATION—Winged, from the corky wings on the twigs.

OTHER COMMON NAMES—cork elm, wahoo.

RANGE—S. Va. w. to Ky., s. Ind., s. Ill., and c. Mo., s. to c. Okla. and c. and se. Tex., and e. to c. Fla. Also local in Md. Atlas vol. 1, map 195-E; vol. 5, map 148.

***Ulmus americana** L. **American elm**‡†

‡†*Ulmus americana* L., Sp. Pl. 226. 1753.
*Ulmus floridana* Chapm., Fl. Southeast. U.S. 416. 1860.
‡*Ulmus americana* var. *floridana* (Chapm.) Little, Phytologia 4: 306. 1953.

DERIVATION—American.

OTHER COMMON NAMES—white elm, water elm, soft elm, Florida elm‡.

RANGE—Cape Breton Is., N.S., P.E.I., N.B., and s. Que. (Gaspé), w. to c. Ont., s. Man., and se. Sask., s. to extreme e. Mont., extreme ne. Wyo., w. Nebr., w. Kans., w. Okla., and nw., c., and se. Tex., and e. to c. Fla. Atlas vol. 1, maps 196-N, 196-W, 196-E; vol. 5, map 149.

REFERENCE—Seymour, Frank C. The type of Ulmus americana L. Rhodora 54: 138-139. 1952.

***Ulmus crassifolia** Nutt. **cedar elm**‡†

‡†*Ulmus crassifolia* Nutt., Trans. Am. Phil. Soc., New Ser. 5: 169. 1837.

DERIVATION—Thick-leaf.

OTHER COMMON NAMES—basket elm, red elm, southern rock elm, olmo (Spanish).

RANGE—Extreme sw. Tenn., Ark., and s. Okla., s. to c. and s. Tex. and extreme ne. Mex. (N.L. and Tamps.), and e. to La. and w. Miss. Also local in n. Fla. Atlas vol. 1, map 197-E; vol. 5, map 150.

*Ulmus floridana*, see **U. americana**
*Ulmus fulva*, see **U. rubra**
*Ulmus parvifolia*, see note under **U. pumila**

**Ùlmus pùmila** L. SIBERIAN ELM‡

‡*Ulmus pumila* L., Sp. Pl. 226. 1753.

DERIVATION—Dwarf.

OTHER COMMON NAMES—Asiatic elm, dwarf elm, dwarf Asiatic elm, Pekin elm.

RANGE—Widely planted in central and western States for shade and shelterbelts. Recorded as escaped and naturalized from Minn. s. to Kans. and w. to Utah and perhaps beyond. Native from Turkestan to e. Siberia and n. China.

REFERENCE—Christensen, Earl M. The recent naturalization of Siberian elm (Ulmus pumila L.) in Utah. Great Basin Nat. 24: 103-106. 1964.

Erroneously called Chinese elm, which is the common name of *Ulmus parvifolia* Jacq., an autumn-flowering species from e. Asia and also in cultivation.

*Ulmus racemosa*, see **U. thomasii**

***Ùlmus rùbra** Muhl. **slippery elm**‡†

*Ulmus americana* Marsh., Arbustr. Am. 156. 1785. Non *Ulmus americana* L., Sp. Pl. 226. 1753.

‡*Ulmus rubra* Muhl., Trans. Am. Phil. Soc. 3: 165. 1793.

†*Ulmus fulva* Michx., Fl. Bor.-Am. 1: 172. 1803.

DERIVATION—Red, referring to the rusty or reddish brown buds.

OTHER COMMON NAMES—red elm, gray elm, soft elm.

RANGE—Sw. Maine w. to N.Y., extreme s. Que., s. Ont., n. Mich., c. Minn., and se. N. Dak., s. to e. S. Dak., c. Nebr., w. Okla., and c. Tex., and e. to nw. Fla. and Ga. Atlas vol. 1, maps 198-W, 198-E; vol. 5, map 151.

REFERENCE—Fernald, M. L. Rhodora 47: 132, 203-204. 1945.

***Ùlmus serótina** Sarg. **September elm**‡

‡†*Ulmus serotina* Sarg., Bot. Gaz. 27: 92. 1899.

DERIVATION—Late, referring to the autumnal flowers in contrast to the spring flowers of most species of the genus.

OTHER COMMON NAME—red elm†.

RANGE—Mostly local and in mts. in Ky., Tenn., nw. Ga., n. Ala., n. Miss., Ark., and e. Okla. Atlas vol. 1, map 197.1-E.

***Ùlmus thómasii** Sarg. **rock elm**‡†

†*Ulmus racemosa* Thomas, Am. J. Sci. Arts 19: 170, fig. 1-5. 1831. Non *U. racemosa* Borkh., Theor.-prakt. Handb. Forstbot. 1: 851. 1800.

‡*Ulmus thomasii* Sarg., Silva No. Am. 14: 102. 1902; "*thomasi*."

DERIVATION—David Thomas (1776-1859), United States civil engineer and horticulturist, who first named it.

OTHER COMMON NAME—cork elm.

RANGE—N.H., Vt., N.Y., and extreme s. Que., w. to s. Ont., Mich., and n. Minn., s. to se. S. Dak., n. and se. Nebr., ne. Kans., Mo., and n. Ark., e. to Tenn., sw. Va., and sw. Pa. Also local and in n. N.J. Atlas vol. 1, map 200-E.

**Umbellulària** (Nees) Nutt. (Family Lauraceae) **California-laurel**

*Oreodaphne* Subg. *Umbellularia* Nees, Syst. Laur. 381, 462. 1836; "*Umbellaria*" on p. 381.

‡†*Umbellularia* (Nees) Nutt., No. Am. Sylva 1: 87. 1843.

DERIVATION—From Latin *umbellula*, a small umbrella, or small umbel, describing the inflorescence.

NUMBER OF SPECIES: 1.

***Umbellulària califórnica** (Hook. & Arn.) Nutt. **California-laurel**‡

*Tetranthera* ? *californica* Hook. & Arn., Bot. Beech. Voy. 159. 1833.

‡†*Umbellularia californica* (Hook. & Arn.) Nutt., No. Am. Sylva 1: 87. 1843.
*Umbellularia californica* var. *fresnensis* Eastwood, Leafl. West. Bot. 4: 166. 1945.

DERIVATION—Of California, where it was discovered.

OTHER COMMON NAMES—California-bay, Oregon-myrtle†, Pacific-myrtle, pepperwood, spice-tree.

RANGE—Pacific coast region of sw. Oreg., s. mostly in Coast Ranges to s. Calif. and in Sierra Nev. to c. Calif. Atlas vol. 1, map 199-W.

**Ungnàdia** Endl. (Family Sapindaceae) **Mexican-buckeye**

‡†*Ungnadia* Endl., Atakta Bot. pl. 36. 1835; pl. without descr. Endl., Nov. Stirp. Dec. 75. 1839.
*Ungnadia* Endl. ex Torr. & Gray, Fl. No. Am. 1: 253. 1838; "*Ungnodia*." corr. to "*Ungnadia*" on p. 684. (1840).

DERIVATION—In commemoration of Baron Ferdinand von Ungnad, Austrian ambassador at Constantinople, who introduced horsechestnut into western Europe in 1576 by sending seeds to Vienna.

REFERENCE—Stearn, W. T. J. Arnold Arbor. 28: 426-427. 1947.

NUMBER OF SPECIES: 1.

**Ungnàdia speciòsa** Endl. **Mexican-buckeye‡**

‡†*Ungnadia speciosa* Endl., Atakta Bot. pl. 36. 1835; pl. without descr. Endl., Nov. Stirp. Dec. 75. 1839.

DERIVATION—Showy, referring to the flowers.

OTHER COMMON NAMES—Texas-buckeye, New-Mexican-buckeye, Spanish-buckeye†, monilla (Spanish).

RANGE—E. Tex. to Edwards Plateau and Trans-Pecos Tex. and s. N. Mex. Also in ne. Mex. (ne. Son. to Tamps. and e. S.L.P.). Atlas vol. 3, map 196.

**Vaccínium** L. (Family Ericaceae) **blueberry**

‡†*Vaccinium* L., Sp. Pl. 349. 1753; Gen. Pl. ed. 5, 166. 1754.
*Batodendron* Nutt., Trans. Am. Phil. Soc. Trans., Ser. 2, 8: 261. 1843.

DERIVATION—The classical Latin name of an Old World species, possibly cowberry, *Vaccinium vitis-idaea* L., alluding to the fondness of the domestic cow *(vacca)* for the fruit. Other pronunciation—*Vaccìnium.*

REFERENCE—Camp, W. H. The North American blueberries with notes on other groups of Vacciniaceae. Brittonia 5: 203-275, illus. 1945.

NUMBER OF SPECIES: Native small trees, 1; native shrubs, about 30 (including 7 n. to Alaska); total, n. temperate and tropical mts. s. to Andes and in s. Africa, about 250-300.

**Vaccínium arbòreum** Marsh. **tree sparkleberry‡**

‡†*Vaccinium arboreum* Marsh., Arbustr. Am. 157. 1785.
*Batodendron arboreum* (Marsh.) Nutt., Trans. Am. Phil. Soc., Ser. 2, 8: 261. 1843.

DERIVATION—Treelike; the only native species of the genus reaching tree size.

OTHER COMMON NAMES—farkleberry, sparkleberry, tree-huckleberry†, winter-huckleberry.

RANGE—Va. w. to Ky., s. Ind., s. Ill., and extreme se. Kans., s. to e. Okla. and se. Tex., and e. to c. Fla. Atlas vol. 4, map 154; vol. 5, map 152.

*Vachellia*, see **Acacia**

**Vauquelínia** Correa ex Humb. & Bonpl. (Family Rosaceae) **vauquelinia**

‡†*Vauquelinia* Correa ex Humb. & Bonpl., Pl. Aequin. 1: 140, pl. 40. 1808.

DERIVATION—In honor of Louis Nicolas Vauquelin (1763-1829), French chemist.

NUMBER OF SPECIES: Native trees, 2 (also in Mex.); native shrubs, 1 (also

in Mex.); Mex., additional, about 5; total, sw. U.S. and Mex., trees and shrubs, about 8.

**Vauquelínia califórnica** (Torr.) Sarg. **Torrey vauquelinia**‡

*Spiraea californica* Torr. in Emory, Notes Mil. Reconn. Ft. Leav. Calif. 139. 1848.
‡†*Vauquelinia californica* (Torr.) Sarg., Gard. and For. 2: 400. 1889.

DERIVATION—Of California, named when boundaries were indefinite; however, this species was discovered in Arizona and is not native in California.

OTHER COMMON NAME—Arizona-rosewood.

RANGE—Mts. of s. Ariz. Also in B. Cal. and n. B. Cal. Sur. Atlas vol. 3, map 197.

**Vauquelínia pauciflòra** Standl. **fewflower vauquelinia**

*Vauquelinia pauciflora* Standl., Proc. Biol. Soc. Wash. 31: 131. 1918.

DERIVATION—Few-flower.

RANGE—Extreme se. Ariz. and extreme sw. N. Mex. Reported from n. Mex. Atlas, vol. 3, map 198.

REFERENCE—Wells, Philip V., and R. Roy Johnson. Vauquelinia pauciflora (Rosaceae) from Guadalupe Canyon, Arizona: a species of trees newly reported for the United States. Southwest. Nat. 9: 151-154, illus. 1964.

Added as a shrub sometimes becoming a small tree. However, this species may be only a variation of the preceding.

**Vibúrnum** L. (Family Caprifoliaceae) **viburnum**

‡†*Viburnum* L., Sp. Pl. 267. 1753; Gen. Pl. ed. 5, 129. 1754.

DERIVATION—The classical Latin name of wayfaringtree, *Viburnum lantana* L., of Eurasia, a shrub or tree long cultivated in se. Can. and ne. U.S. and occasionally escaped.

OTHER COMMON NAME—arrowwood.

REFERENCES—Ferguson, I. K. J. Arnold Arbor. 47: 41-47. 1966.

McAtee, W. L. A review of the Nearctic Viburnum. 125 p., illus. 1956.

NUMBER OF SPECIES: Native trees, 6; native shrubs, about 15 (incl. 1 n. to Alaska); world total, mostly shrubs (mainly in n. temperate and subtropical zones, s. in mts. to S. Am.), 150-200.

**Vibúrnum lentàgo** L. **nannyberry**‡†

‡†*Viburnum lentago* L., Sp. Pl. 268. 1753.

DERIVATION—An old name, meaning flexible, for wayfaring tree, *Viburnum lantana* L., of Eurasia, transferred to this species.

OTHER COMMON NAMES—blackhaw, sheepberry, sweet viburnum.

RANGE—N.B., Maine, and s. Que., w. to s. Ont., n. Mich., s. Man., and se. Sask., s. to N. Dak., Black Hills of S. Dak., extreme ne. Wyo., and e. to nw. and e. Nebr., Iowa, n. Mo., Ohio, W. Va., and N.J., also local in sw. Va. Atlas vol. 3, map 199; vol. 4, map 155.

**Vibúrnum nùdum** L. **possumhaw viburnum**‡

‡*Viburnum nudum* L., Sp. Pl. 268. 1753.

DERIVATION—Naked, from the stalked, leafless inflorescence.

OTHER COMMON NAMES—possumhaw, swamphaw.

RANGE—Coastal Plain chiefly, from s. Conn., Long Is., N.J., and sw. Pa., to c. Fla., w. to e. Tex., and n. to c. Ark. and w. Ky. Atlas vol. 4, map 156; vol. 5, map 153.

**Vibúrnum obovàtum** Walt. **Walter viburnum**‡

‡†*Viburnum obovatum* Walt., Fl. Carol. 116. 1788.
*Viburnum nashii* Small, Fl. Southeast. U.S. 1123, 1338. 1903.

DERIVATION—Obovate, referring to the leaf shape.

OTHER COMMON NAMES—blackhaw, small-leaf viburnum.

RANGE—Coastal Plain from e. S.C. to c. and nw. Fla. Atlas vol. 4, map 157; vol. 5, map 154.

REFERENCE—Duncan, Wilbur H. Synonymy in Viburnum obovatum and V. cassinoides. Rhodora 52: 179-183. 1950.

**Vibúrnum prunifòlium** L. **blackhaw**‡†

‡†*Viburnum prunifolium* L., Sp. Pl. 268. 1753.

DERIVATION—With leaves like *Prunus*, or plum.

OTHER COMMON NAMES—stagbush, sweethaw.

RANGE—Sw. Conn. and se. N.Y., w. to s. Mich., extreme se. Wis., Ill., and sw. Iowa, s. to e. Kans. and c. Ark., and e. to Tenn., Ala., and S.C. Atlas vol. 4, map 158.

HYBRIDIZES WITH: *Viburnum rufidulum*.

**Vibúrnum rufídulum** Raf. **rusty blackhaw**‡†

‡†*Viburnum rufidulum* Raf., Alsogr. Am. 56. 1838.
*Viburnum prunifolium* ß *ferrugineum* Torr. & Gray, Fl. No. Am. 2: 15. 1841.

DERIVATION—Reddish, from the rusty colored hairy covering of young leaves and twigs.

OTHER COMMON NAMES—southern blackhaw, blackhaw, bluehaw, rusty nannyberry, southern nannyberry, nannyberry.

RANGE—Se. Va. w. to Ky., s. Ohio, s. Ind., c. Mo., and e. Kans., s. to c. Okla. and c. and e. Tex., and e. to n. Fla. Atlas vol. 4, map 160; vol. 5, map 155.

HYBRIDIZES WITH: *Viburnum prunifolium*.

**Vibúrnum trìlobum** Marsh. **American cranberrybush**

*Viburnum trilobum* Marsh., Arbustr. Am. 162. 1785.
*Viburnum opulus* L. ß *americanum* Ait., Hort. Kew. 1:373. 1789. "*americana*."

DERIVATION—Three-lobed, referring to the leaves. Other pronunciation—*Vibúrnum trílobum*.

OTHER COMMON NAME—highbush-cranberry.

RANGE—Nfld., N.S. (Cape Breton Is.), P.E.I., N.B., and s. Que., w. to s. Ont. and s. Man., s. to N. Dak., Black Hills and ne. S. Dak., and e. to ne. Iowa, n. Ill., Pa., and N.J., and local in W. Va. and n. Va. Also local in s. Alta., s. B.C., and Wash. Atlas vol. 4, maps 159-N, 159-NE.

Added here as a shrub rarely becoming a small tree to 25 ft (7.6 m) high in Michigan.

VÍTEX ÁGNUS-CÁSTUS L. (Sp. Pl. 638. 1753; family Verbenaceae), common chastetree (hemptree, monks-peppertree, Indian-spice) is a shrub or sometimes small tree to 16 ft (5 m) high widely planted in se. U.S. Recorded as escaping from cultivation in Coastal Plain from N.C. to s. Fla. and s. Tex. and naturalized locally. Native of s. Europe and w. Asia.

*Wallia*, see **Juglans**

**Washingtònia** H. Wendl. (Family Palmae) **washingtonia**

‡†*Washingtonia* H. Wendl., Bot. Ztg. 37: lxi, 68, 148. 1879; *nom. cons.* Non *Washingtonia* Raf., Am. Mon. Mag. 2: 176. 1818. Nec *Washingtonia* Winslow, Calif. Farmer 2: 58. 1854; *nom. provisor.*

DERIVATION—Dedicated to President George Washington (1732-99).

OTHER COMMON NAMES—Washington-palm, California-palm.

REFERENCES—Bailey, L. H. Washingtonia. Gentes Herbarum 4: 51-82, illus. 1936.

Benson, Lyman. Washingtonia. Am. J. Bot. 30: 233-234. 1943.

NUMBER OF SPECIES: Native trees, 1; n. Baja. Cal., Mex., 1 additional; total, 2.

**Washingtònia filífera** (Linden ex André) H. Wendl. **California washingtonia‡**

*Pritchardia filifera* Linden ex André, Illus. Hort. 21: 27, 28. 1874; 24: 32-34, fig., 105-107, fig. 1877; *nom. subnud.*

*Pritchardia filamentosa* Fenzi, R. Soc. Toscana Ort. Bull. 1: 116, fig. 1876 (*nom. subnud.?*; not seen).

*Pritchardia filifera* (Linden ex André) H. Wendl., Bot. Ztg. 37: 65. 1879.

*Washingtonia filifera* (Linden) H. Wendl., Bot. Ztg. 37: xli. 1879.

‡*Washingtonia filifera* H. Wendl. ex Wats., Bot. Calif. 2: 211. 1880.

†*Washingtonia filamentosa* (H. Wendl.) Kuntze, Rev. Gen. Pl. 737. 1891.

DERIVATION—Thread-bearing, referring to the threadlike fibers of the frayed leaf edges.

OTHER COMMON NAMES—California-palm†, fanpalm, California fanpalm, desert-palm.

RANGE—Canyons of desert mts. in sw. Ariz. (Kofa Mts., Yuma Co.; also s. Yavapai Co. where perhaps introduced), s. Calif. (San Bernardino Co. to San Diego Co.), and n. B. Cal., Mex. Atlas vol. 3, map 201.

REFERENCE—Henderson, Randall. Palm hunter in the wastelands. Principes 8: 14-22, illus. 1964.

*Xanthoxylum*, see **Zanthoxylum**

**Ximènia** L. (Family Olacaceae) **tallowwood**

‡†*Ximenia* L., Sp. Pl. 1193. 1753; Gen. Pl. ed. 5, 500. 1754.

DERIVATION—In commemoration of Francisco Ximénez, Spanish-born missionary and naturalist of Mexico who published a book on the plants and animals of Mexico in 1615.

REFERENCES—DeFilipps, Robert Anthony. A revision of Ximenia (Plum.) L. (Olacaceae). [Abstract] Diss. Abstr. 29.(10-B): 3634. 1969.

DeFilipps, Robert A. Adumbratio Florae Aethiopicae. 28. Olacaceae. Webbia 30: 177-190, illus. 1976.

NUMBER OF SPECIES: Native trees (Fla.), 1, also widespread in tropics and subtropics, especially shores, incl. P.R. and V.I.; also Mex., 2; West Indies, 2; S. Am., 2; Africa, 1; total, 8.

**Ximènia americàna** L. **tallowwood‡†**

‡†*Ximenia americana* L., Sp. Pl. 1193. 1753.

DERIVATION—American.

OTHER COMMON NAMES—hogplum.

RANGE—N. to s. Fla. incl. Fla. Keys, mostly near shores. Widely distributed on shores of tropical and subtropical regions and inland in both New and Old Worlds. From Bahamas through West Indies incl. P.R. and St. Thomas. Also from c. Mex. (Ver. and Col., s.) s. to Brazil, Argentina, and Bolivia. Africa, Asia, Australia, and islands of Pacific Ocean. Atlas vol. 5, map 253.

Besides the widespread typical variety (var. *americana*) in Fla., a second is distinguished in S. Am. and a third in Africa.

**Yúcca** L. (Family Liliaceae; Agavaceae) **yucca**

‡†*Yucca* L., Sp. Pl. 319. 1753; Gen. Pl. ed. 5, 150. 1754.

*Clistoyucca* (Engelm.) Trel., Mo. Bot. Gard. Rep. 13: 41. 1902.

*Samuela* Trel., Mo. Bot. Gard. Rep. 13: 116. 1902.

DERIVATION—From *yuca*, the Carib Indian name of the root of *Manihot*, cassava, misapplied to this genus.

REFERENCES—Gentry, Howard Scott. The Agave family in Sonora. U.S. Dep. Agric., Agric. Handb. 399, 195 p., illus. 1972.

McKelvey, Susan D. Yuccas of the southwestern United States, pt. 1. 150 p., illus. 1938; pt. 2, 192 p., illus. 1947.

Webber, John Milton. Yuccas of the Southwest. U.S. Dep. Agric., Agric. Monogr. 17, 97 p., illus. 1953.

NUMBER OF SPECIES: Native trees, 11 incl. 1 also in West Indies and 8 in Mex; native shrubs, about 15; Mex., additional shrubs and trees, 10; total, about 35.

**Yúcca aloifòlia** L. **aloe yucca**‡

‡†*Yucca aloifolia* L., Sp. Pl. 319. 1753.

DERIVATION—Aloe-leaf, the leaves resembling those of the genus *Aloe*.

OTHER COMMON NAMES—Spanish-bayonet†, Spanish-dagger.

RANGE—Coastal sands, dunes, and mounds from se. N.C. to s. Fla. incl. Fla. Keys and w. to s. Ala. Native range uncertain and may have extended to se. Mex. (Ver. to Yuc.) Planted across s. border of U.S. and in tropical Am. incl. P.R. and V.I., escaping and becoming naturalized. Atlas vol. 4, map 161; vol. 5, map 156.

***Yúcca brevifòlia** Engelm. **Joshua-tree**‡†

*Yucca draconis* L. var. *arborescens* Torr., U.S. Rep. Explor. Surv. Miss. Pacif. 4(5): 147. 1857.

‡†*Yucca brevifolia* Engelm. in Wats., King Rep. U.S. Geol. Explor. 40th Par. 5: 496. 1871.

*Yucca arborescens* (Torr.) Trel., Mo. Bot. Gard. Rep. 3: 163, pl. 5, 49. 1892; *nom. provisor.*

*Yucca arborescens* (Torr.) Cov. in Merriam, No. Am. Fauna 7: 353, pl. 13. 1893 (May 31).

*Clistoyucca brevifolia* (Engelm.) Rydb., Fl. Rocky Mts. 170, 1061. 1917.

*Yucca brevifolia* var. *jaegeriana* McKelvey, J. Arnold Arbor. 16: 269, pl. 139. 1935 (April 24).

DERIVATION—Short-leaf, the leaves being shorter than in related species.

OTHER COMMON NAMES—tree yucca, yucca-palm, Joshua-tree yucca.

RANGE—Mohave Desert in extreme sw. Utah, s. Nev., s. Calif., and w. Ariz. Atlas vol. 3, map 202.

**Yúcca çarnerosàna** (Trel.) McKelvey **Carneros yucca**‡

*Samuela carnerosana* Trel., Mo. Bot. Gard. Ann. Rep. 13; 118, pl. 76-81, 85 fig. 12, pl. 87, fig. 2. 1902.

*Yucca carnerosana* (Trel.) McKelvey, Yuccas Southwest. U.S. 1: 24, pl. 6-7. 1938.

DERIVATION—Carneros Pass, the type locality, Coah., Mex.

OTHER COMMON NAMES—Spanish-dagger, giant-dagger; palma barreta, palma samandoca (Spanish).

RANGE—Trans-Pecos Tex. and ne. Mex. (Coah. to Zac. and Tamps.). Atlas vol. 3, map 203.

HYBRIDIZES WITH: *Yucca torreyi*.

**Yúcca elàta** Engelm. **soaptree yucca**‡

*Yucca angustifolia* var. β *radiosa* Engelm. in Wats., King Rep. Geol. Explor. 40th Par. 5: 497. 1871.

*Yucca angustifolia* var. β *elata* Engelm., Trans. Acad. Sci. St. Louis 3: 50. 1873.

‡†*Yucca elata Engelm., Bot. Gaz. 7: 17. 1882.*

DERIVATION—Elevated, or tall.

OTHER COMMON NAMES—soapweed† soaptree; amole, palmilla (Spanish).

RANGE—Trans-Pecos Tex. w. to c. N. Mex. and c. Ariz., and local in sw. Utah. Also n. Mex. (n. Chih. and nw. Coah.). Atlas vol. 3, map 204.

**Yúcca faxoniàna** Sarg. **Faxon yucca**‡

*Samuela faxoniana* Trel., Mo. Bot. Gard. Ann. Rep. 13: 117. pl. 73-75, 82, 85, fig. 11. 1902.

‡†*Yucca faxoniana* Sarg., Man. Trees No. Am. 121, fig. 106. 1905.

DERIVATION—Charles Edward Faxon (1846-1918), artist of Sargent's Silva of North America, who made drawings of this species under the name *Yucca macrocarpa*.

OTHER COMMON NAMES—Spanish-bayonet†, Spanish-dagger, palma (Spanish).

RANGE—Trans-Pecos Tex. and ne. Mex. (Coah.). Atlas vol. 3, map 205.

HYBRIDIZES WITH: *Yucca torreyi*.

**Yúcca gloriósa** L. **moundlily yucca‡**

‡*Yucca gloriosa* L., Sp. Pl. 319. 1753.

DERIVATION—Glorious.

OTHER COMMON NAMES—Spanish-bayonet, Spanish-dagger†.

RANGE—Coastal dunes and beaches from ne. N.C. to se. Ga. and extreme ne. Fla. Atlas vol. 4, map 162; vol. 5, map 157.

*Yucca mohavensis*, see **Y. schidigera**

**Yúcca rostràta** Engelm. ex Trel. **beaked yucca‡**

‡*Yucca rostrata* Engelm. ex Trel., Mo. Bot. Gard. Ann. Rpt. 13: 68, pl. 36, 40-42, 84. 1902.

DERIVATION—Beaked, referring to the long pointed apex of the fruit.

OTHER COMMON NAME—Big Bend yucca.

RANGE—Mts. of Trans-Pecos Tex. (Brewster Co.) and ne. Mex. (Coah.). Atlas vol. 3, map 207.

**Yúcca schidigera** Roezl ex Ortgies **Mohave yucca‡†**

*Yucca schidigera* Roezl ex Ortgies, Gartenflora 20:110. 1871;*nom. subnud.* Belg. Hort. 1880: 51. 1880.

‡†*Yucca mohavensis* Sarg., Gard. and Forest 9: 104. 1896.

DERIVATION—From the resemblance to *Agave schidigera* Lem., of Mexico, whose leaf margins split to form fibers or threads.

OTHER COMMON NAME—Spanish-dagger.

RANGE—Mohave Desert in nw. Ariz., s. Nev., s. Calif., and n. B. Cal., Mex. Atlas vol. 3, map 206 (as *Yucca mohavensis* Sarg.).

REFERENCES—Benson, Lyman. Am. J. Bot. 30: 235. 1943.

Little, Elbert L., Jr. Am. Midl. Nat. 33: 505-507. 1945.

McKelvey, Susan D. Yuccas of the southwestern United States 1: 92-104, illus. 1938.

*Yucca schidigera* is adopted here to conform to current usage. That name was rejected in the 1953 checklist as not validly published. It was mentioned briefly and incidentally by Karl Eduard Ortgies in an account of travels and collections of Benedict Roezl. The checklists of 1898, 1927, and 1953 all accepted *Y. mohavensis*.

**Yúcca schóttii** Engelm. **Schott yucca‡**

‡†*Yucca schottii* Engelm., Trans. Acad. Sci. St. Louis 3: 46. 1873.

DERIVATION—Arthur Carl Victor Schott (1814-75), German-born naturalist with the United States and Mexican Boundary Survey, who discovered the species in 1855.

OTHER COMMON NAMES—Spanish-bayonet†, Spanish-dagger, hoary yucca, mountain yucca, yuca (Spanish).

RANGE—Mts. of extreme sw. N. Mex., se. Ariz., and adjacent Mex. (ne. Son. and nw Chih.). Atlas vol. 3, map 208.

**Yúcca tòrreyi** Shafer **Torrey yucca‡**

*Yucca baccata* Torr. var. *macrocarpa* Torr., U.S. Mex. Bound. Surv. Bot. 222. 1859.

*Yucca macrocarpa* Cov. in Merriam, No. Am. Fauna 7: 358, pl. 14. 1893 (May 31). Non *Y. macrocarpa* Engelm., Bot. Gaz. 6: 224. 1881.

‡†*Yucca torreyi* Shafer in Britton & Shafer, No. Am. Trees 157, fig. 117. 1908.

DERIVATION—John Torrey (1796-1873), United States botanist who in 1859 distinguished this species as a new variety.

OTHER COMMON NAMES—Spanish-bayonet†, Spanish-dagger, palma (Spanish).

RANGE—Sw.Tex. incl. Trans-Pecos Tex., s. N. Mex., and ne. Mex. (Chih. and Dgo. e. to Tamps.). Atlas vol.3, map 209.

Perhaps only a variety of *Yucca treculeana*.

HYBRIDIZES WITH: *Yucca carnerosana*; *Y. faxoniana*; *Y. treculeana*.

**Yúcca treculeàna** Carr. **Trecul yucca**‡

‡†*Yucca treculeana* Carr., Rev. Hort. [Paris], Sér. 4, 7: 580. 1858.

*Yucca treculeana* var. *succulenta* McKelvey, Yuccas Southwest. U.S. 1: 80, pl. 37-39. 1938.

DERIVATION—Auguste Adolph Lucien Trécul (1818-96), French botanist who collected the type in 1850 on a visit to North America on behalf of the French Government.

OTHER COMMON NAMES—Spanish-bayonet†, Spanish-dagger; palma-pita, palma de dátil (Spanish).

RANGE—S. Tex. and ne. Mex. (Coah. to Tamps. and e. S.L.P.). Atlas vol. 3, map 210.

Perhaps a shrub not reaching tree size in the United States, though recorded as a tree occasionally 20-30 ft (6-9 m) high (Sargent, Man. Trees No. Am. ed. 2, 112. 1922). The stems are 10-11.5 ft (3-3.5 m) tall, according to Webber (p. 21) and Correll and Johnson (Man. Vasc. Pl. Tex. 398. 1970).

HYBRIDIZES WITH: *Yucca torreyi*.

**Zanthóxylum** L. (Family Rutaceae) **prickly-ash**

‡*Zanthoxylum* L., Sp. Pl. 270. 1753; Gen. Pl. ed. 5, 130. 1754.

*Fagara* Duhamel, Traité Arb. Arbust. 1: 229, pl. 97. 1755; *nom. rejic*

*Fagara* L., Syst. Nat. ed. 10, 897, 1362. 1759; *nom. cons.*

†*Xanthoxylum* Mill., Gard. Dict. ed. 8. 1768.

DERIVATION—From Greek, yellow and wood, referring to the color of the wood. Other pronunciation—*Zanthoxylum*.

REFERENCES—Brizicky, George K. J. Arnold Arbor. 43: 1-22, 80-93, illus. 1962.

Fish, F., and P. G. Waterman. Chemosystematics in the Rutaceae II. The chemosystematics of the Zanthoxylum/Fagara complex. Taxon 22: 177-203, illus. 1973.

Fosberg, F. R. Taxon 7: 94-96. 1958; 8: 103-105. 1959.

Porter, Duncan M. Zanthoxylum (Rutaceae) in North America north of Mexico. Brittonia 28: 443-447. 1976.

The original spelling *Zanthoxylum* replaces the orthographically correct, variant spelling *Xanthoxylum*, which has been rejected.

NUMBER OF SPECIES: Native trees, 6; native shrubs, 1; P.R., 8, incl. 4 also in V.I.; Hawaii, 9; total, widespread, mostly tropical and subtropical, a few n. temperate, about 250.

**Zanthóxylum americànum** Mill. **common prickly-ash**‡

‡*Zanthoxylum americanum* Mill., Gard. Dict. ed. 8, *Zanthoxylum* No. 2. 1768; "*Xanthoxylum*."

*Zanthoxylum fraxinifolium* Marsh., Arbustr. Am. 167. 1785.

DERIVATION—American.

OTHER COMMON NAMES—toothache-tree, northern prickly-ash, prickly-ash.

RANGE—S. N.H., Vt., and sw. Que., w. to s. Ont., n. Mich., n. Minn., and e. N. Dak., s. to c. Nebr., and c. Okla., e. to Ga. and S.C., and n. to sw. Va., Pa., and N.J. Atlas vol. 4, map 163.

**Zanthóxylum clàva-hérculis** L. **Hercules-club**‡†

‡†*Zanthoxylum clava-herculis* L., Sp. Pl. 270. 1753; "*Clava herculis.*"

*Fagara clava-herculis* (L.) Small, Fl. Southeast. U.S. 675, 1333. 1903.

DERIVATION—Hercules-club, from the spiny branches.

OTHER COMMON NAMES—pepperbark, southern prickly-ash, toothache-tree, tingle-tongue.

RANGE—Coastal Plain from e. Va. to s. Fla. and w. to e. Tex., and n. to se. Okla. and c. Ark. Atlas vol. 4, map 165; vol. 5, map 158.

HYBRIDIZES WITH: *Zanthoxylum hirsutum.*

**Zanthóxylum coriàceum** A. Rich. **Biscayne prickly-ash‡**

‡†*Zanthoxylum coriaceum* A. Rich. in Sagra, Hist. Phys. Pol. Nat. Cuba [v. 12] Bot. Pl. Vasc. (Ess. Fl. Cub.) 326, pl. 34. 1841.

*Fagara coriacea* (A. Rich.) Krug & Urban in Urban, Bot. Jahrb. 21: 591. 1896.

DERIVATION—Leathery, referring to the thick, evergreen leaflets.

OTHER COMMON NAME—Hercules-club†.

RANGE—Rare along e. coast of s. Fla. (Dade, Broward, and Palm Beach Cos.) and Key Biscayne. Also Bahamas, Cuba, Grand Cayman, and Hispaniola. Atlas vol. 5, map 254.

**Zanthóxylum fagàra** (L.) Sarg. **lime prickly-ash‡**

*Schinus fagara* L., Sp. Pl. 389. 1753.

*Fagara pterota* L., Syst. Nat. ed. 10, 897. 1759.

*Zanthoxylum pterota* (L.) H.B.K., Nov. Gen. Sp. 6: 3. 1823.

‡†*Zanthoxylum fagara* (L.) Sarg., Gard. and Forest 3: 186. 1890; "*Xanthoxylum.*"

DERIVATION—The old generic name.

OTHER COMMON NAMES—wild-lime-tree†, wild-lime; colima, uña de gato, correosa (Spanish).

RANGE—C. and s. Fla. incl. Fla. Keys (n. to Volusia and Citrus Cos.) and se., s., and sw. Tex. (n. near coast to Jackson and Matagorda Cos.). Also West Indies in Bahamas, Cuba, Jamaica. Hispaniola, Martinique, and Trinidad. From n. Mex. (Tamps. to Coah., s. Son., and s. B. Cal. Sur, s.) to Ecuador incl. Galápagos Is. and Peru. Atlas vol. 4, maps 164-N, 164-SE; vol. 5, map 255.

**Zanthóxylum flàvum** Vahl **West Indies satinwood**

‡†*Zanthoxylum flavum* Vahl, Eclog. Am. 3: 48. 1807.

*Fagara flava* (Vahl) Krug & Urban, Bot. Jahrb. 21: 571. 1896.

DERIVATION—Yellow, from the color of the wood.

OTHER COMMON NAMES—satinwood†, yellowwood, yellowheart‡.

RANGE—Very rare on Lower Fla. Keys (extinct at Key West and perhaps other keys), not on s. Fla. mainland. Bermuda and from Bahamas through West Indies incl. P.R. to St. Lucia. Atlas vol. 5, map 256.

REFERENCE—Little, Elbert L., Jr. U.S. Dep. Agric. Conserv. Res. Rep. 20: 8. 1976.

**Zanthóxylum hirsùtum** Buckl. **Texas Hercules-club**

*Zanthoxylum carolinianum* "var. fruticosum" Gray, Pl. Wright. 1: 30. 1852.

*Zanthoxylum carolinianum* var. *fruticosum* Gray in Chapm., Fl. South. U.S. 66. 1860.

*Zanthoxylum hirsutum* Buckl., Proc. Acad. Nat. Sci. Phila. 1861: 450. 1861.

‡†*Zanthoxylum clava-herculis* var. *fruticosum* (Gray) Wats., Bibl. Index No. Am. Bot. 1: 156. 1878.

*Fagara fruticosa* (Gray) Small, Fl. Southeast. U.S. 675, 1333. 1903.

DERIVATION—Hairy, referring to the leaves and twigs.

OTHER COMMON NAMES—Hercules-club†, toothache-tree, tickle-tongue, prickly-ash.

RANGE—S. Okla. s. to s. and sw. Tex. and ne. Mex. (n. Tamps., n. N.L., and n. Coah.). Atlas vol. 4, map 166.

This shrub or rarely small tree was cited as a variety in the 1953 checklist.

HYBRIDIZES WITH: *Zanthoxylum clava-herculis.*

**Zíziphus** Mill. (Family Rhamnaceae) **jujube**

‡*Ziziphus* Mill., Gard. Dict. Abr. ed. 4, v. 3. 1754.

DERIVATION—The ancient Greek name derived from the Persian *ziza-fun*, jujube, also related oriental languages. Formerly spelled *Zizyphus.*

REFERENCE—Johnston, Marshall C. The species of Ziziphus indigenous to United States and Mexico. Am. J. Bot. 50: 1020-1027, illus. 1963.

NUMBER OF SPECIES: Native shrubs, 2 (also in Mexico); naturalized trees, 1; P.R. and V.I. native trees, 3, naturalized trees, 1; Mexico, additional trees, 4, shrubs, 1; total, mostly tropical 100-150.

ZÍZIPHUS JUJÙBA Mill. COMMON JUJUBE‡

*Rhamnus zizyphus* L., Sp. Pl. 194. 1753.
‡*Ziziphus jujuba* Mill. Gard. Dict. ed. 8, *Ziziphus* No. 1. 1768.
*Zizyphus vulgaris* Lam., Encycl. Méth. Bot. 3: 316. 1789.

DERIVATION—From *jujube*, the French common name, derived from the Arabic.

OTHER COMMON NAMES—Chinese jujube, jujube.

RANGE—Cultivated for its fruits and escaped and naturalized locally from Ala. to La. and Tex., according to Small (Man. Southeast. Fl. 831. 1933) and Correll and Johnston (Man. Vasc. Pl. Tex. 1013. 1970). Native of se. Europe and s. and e. Asia. Planted and naturalized in subtropical regions.

*Zíziphus obtusifòlia* (Hook. ex Torr. & Gray) Gray (Gen. Fl. Am. Bor.-Or. Ill. 2: 170, pl. 163. 1849; ‡*Condalia obtusifolia* (Hook.) Weberb., *C. lycioides* (Gray) Weberb., *Condaliopsis lycioides* (Gray) Suessenguth), lotebush (lotewood condalia‡, gumdrop-tree; clepe, Spanish), mentioned previously in a note, may rarely become a small tree in s. Ariz. A shrub or small tree 3-13 ft (1-4 m) tall, according to Johnston (1963). Two varieties have been distinguished. Range—Sw. Okla. and c. Tex., w. to s. N. Mex., nw. Ariz., s. Nev., and se. Calif. Also in n. Mex. (B. Cal., B. Cal. Sur. and Son., e. to Tamps., S.L.P., and Ver.). References—Johnston, Marshall C. Brittonia 14: 367. 1962. Johnston, Marshall C. Am. J. Bot. 50: 1025. 1963.

*Zygia*, see **Pithecellobium**

# APPENDIX 1
# CONDENSED CHECKLIST—ALPHABETICAL BY SCIENTIFIC NAMES

This condensed Checklist contains only the accepted scientific names of species and varieties of United States trees and their approved common names. The arrangement is alphabetical by scientific names. As in the main Checklist, naturalized species are designated by capitals and small capitals. Also, the asterisk (*) indicates important forest tree species commercially useful for lumber or other wood products or noteworthy for special values. Appendix 2, Condensed Checklist—Alphabetical by Common Names is the same but has the common name first, as in the Index of Common Names.

**Abies amabilis* Dougl. ex Forbes, Pacific silver fir
**Abies balsamea* (L.) Mill., balsam fir
*Abies bracteata* D. Don ex Poiteau, bristlecone fir
**Abies concolor* (Gord. & Glend.) Lindl. ex Hildebr., white fir
var. *concolor*, white fir (typical)
var. *lowiana* (Gord.) Lemm., California white fir
**Abies fraseri* (Pursh) Poir., Fraser fir
**Abies grandis* (Dougl. ex D. Don) Lindl., grand fir
**Abies lasiocarpa* (Hook.) Nutt., subalpine fir
var. *lasiocarpa*, subalpine fir (typical)
var. *arizonica* (Merriam) Lemm., corkbark fir
**Abies magnifica* A. Murr., California red fir
**Abies procera* Rehd., noble fir
*Acacia berlandieri* Benth., guajillo
*Acacia choriophylla* Benth., cinnecord
*Acacia farnesiana* (L.) Willd., huisache
*Acacia greggii* Gray, Gregg catclaw
*Acacia macracantha* Humb. & Bonpl. ex Willd., long-spine acacia
*Acacia rigidula* Benth., blackbrush acacia
*Acacia roemeriana* Scheele, Roemer catclaw
*Acacia tortuosa* (L.) Willd., huisachillo
*Acacia wrightii* Benth., Wright catclaw
*Acer barbatum* Michx., Florida maple
*Acer circinatum* Pursh, vine maple
*Acer glabrum* Torr., Rocky Mountain maple
*Acer grandidentatum* Nutt., canyon maple
*Acer leucoderme* Small, chalk maple
**Acer macrophyllum* Pursh, bigleaf maple
**Acer negundo* L., boxelder
**Acer nigrum* Michx. f., black maple
*Acer pensylvanicum* L., striped maple
**Acer rubrum* L., red maple
**Acer saccharinum* L., silver maple
**Acer saccharum* Marsh., sugar maple
*Acer spicatum* Lam., mountain maple
*Acoelorrhaphe wrightii* (Griseb. & H. Wendl.) H. Wendl. ex Becc., paurotis-palm
*Adenostoma sparsifolium* Torr., redshank
*Aesculus californica* (Spach) Nutt., California buckeye
**Aesculus glabra* Willd., Ohio buckeye
var. *glabra*, Ohio buckeye (typical)
var. *arguta* (Buckl.) Robins., Texas buckeye
**Aesculus octandra* Marsh., yellow buckeye
*Aesculus parviflora* Walt., bottlebrush buckeye
*Aesculus pavia* L., red buckeye
*Aesculus sylvatica* Bartr., painted buckeye
AILANTHUS ALTISSIMA (Mill.) Swingle, AILANTHUS
ALBIZIA JULIBRISSIN Durazzini, SILKTREE
ALBIZIA LEBBECK (L.) Benth., LEBBEK
ALNUS GLUTINOSA (L.) Gaertn., EUROPEAN ALDER
*Alnus maritima* Muhl. ex Nutt., seaside alder
*Alnus oblongifolia* Torr., Arizona alder
**Alnus rhombifolia* Nutt., white alder
**Alnus rubra* Bong., red alder
*Alnus rugosa* (Du Roi) Spreng., speckled alder
*Alnus serrulata* (Ait.) Willd., hazel alder
*Alnus sinuata* (Regel) Rydb., Sitka alder
*Alnus tenuifolia* Nutt., mountain alder
*Alvaradoa amorphoides* Liebm., Mexican alvaradoa
*Amelanchier alnifolia* (Nutt.) Nutt., western serviceberry
*Amelanchier arborea* (Michx. f.) Fern., downy serviceberry
*Amelanchier sanguinea* (Pursh) DC., roundleaf serviceberry

*Amelanchier utahensis* Koehne, Utah serviceberry
*Amphitecna latifolia* (Mill.) A. H. Gentry, black-calabash
*Amyris balsamifera* L., balsam torchwood
*Amyris elemifera* L., torchwood
*Annona glabra* L., pond-apple
ANNONA SQUAMOSA L., SUGAR-APPLE
*Aralia spinosa* L., devils-walkingstick
*Arbutus arizonica* (Gray) Sarg., Arizona madrone
**Arbutus menziesii* Pursh, Pacific madrone
*Arbutus texana* Buckl., Texas madrone
*Arctostaphylos glauca* Lindl., bigberry manzanita
*Arctostaphylos pringlei* Parry, Pringle manzanita
*Arctostaphylos viscida* Parry, whiteleaf manzanita
*Ardisia escallonioides* Schiede & Deppe ex Schlecht. & Cham., marlberry
*Artemisia tridentata* Nutt., big sagebrush
*Asimina obovata* (Willd.) Nash, bigflower pawpaw
*Asimina parviflora* (Michx.) Dunal, smallflower pawpaw
*Asimina triloba* (L.) Dunal, pawpaw
*Avicennia germinans* (L.) L., blackmangrove
*Baccharis halimifolia* L., eastern baccharis
**Betula alleghaniensis* Britton, yellow birch
**Betula lenta* L., sweet birch
**Betula nigra* L., river birch
*Betula occidentalis* Hook., water birch
**Betula papyrifera* Marsh., paper birch
var. *papyrifera*, paper birch (typical)
var. *commutata* (Regel) Fern., western paper birch
var. *cordifolia* (Regel) Fern., mountain paper birch
var. *kenaica* (W.H. Evans) Henry, Kenai birch
var. *neolaskana* (Sarg.) Raup, Alaska paper birch
var. *subcordata* (Rydb.) Sarg., northwestern paper birch
**Betula populifolia* Marsh., gray birch
*Betula uber* (Ashe) Fern., Virginia roundleaf birch
*Bourreria ovata* Miers, Bahama strongback
*Bourreria radula* (Poir.) G. Don, rough strongback
BROUSSONETIA PAPYRIFERA (L.) Vent., PAPER-MULBERRY
*Bumelia celastrina* H.B.K., saffron-plum
*Bumelia lanuginosa* (Michx.) Pers., gum bumelia
*Bumelia lycioides* (L.) Pers., buckthorn bumelia
*Bumelia tenax* (L.) Willd., tough bumelia
*Bursera fagaroides* (H.B.K.) Engler, fragrant bursera
*Bursera microphylla* Gray, elephant-tree
*Bursera simaruba* (L.) Sarg., gumbo-limbo
*Byrsonima lucida* DC., key byrsonima
CAESALPINIA GILLIESII (Hook.) Dietr., PARADISE CAESALPINIA
*Caesalpinia mexicana* Gray, Mexican caesalpinia
CAESALPINIA PULCHERRIMA (L.) Sw., FLOWERFENCE
*Calyptranthes pallens* Griseb., pale lidflower
*Calyptranthes zuzygium* (L.) Sw., myrtle-of-the-river
*Canella winterana* (L.) Gaertn., canella
*Canotia holacantha* Torr., canotia
*Capparis cynophallophora* L., Jamaica caper
*Capparis flexuosa* (L.) L., limber caper
CARICA PAPAYA L., PAPAYA
**Carpinus caroliniana* Walt., American hornbeam
**Carya aquatica* (Michx. f.) Nutt., water hickory
**Carya cordiformis* (Wangenh.) K. Koch, bitternut hickory
*Carya floridana* Sarg., scrub hickory
**Carya glabra* (Mill.) Sweet, pignut hickory
var. *glabra*, pignut hickory (typical)
var. *odorata* (Marsh.) Little, red hickory
**Carya illinoensis* (Wangenh.) K. Koch, pecan
**Carya laciniosa* (Michx. f.) Loud., shellbark hickory
**Carya myristiciformis* (Michx. f.) Nutt., nutmeg hickory
**Carya ovata* (Mill.) K. Koch, shagbark hickory
var. *ovata*, shagbark hickory (typical)
*var. australis* (Ashe) Little, Carolina hickory
**Carya pallida* (Ashe) Engl. & Graebn., sand hickory
**Carya texana* Buckl., black hickory
**Carya tomentosa* (Poir.) Nutt., mockernut hickory
*Castanea alnifolia* Nutt., Florida chinkapin
**Castanea dentata* (Marsh.) Borkh., American chestnut
*Castanea ozarkensis* Ashe, Ozark chinkapin
*Castanea pumila* Mill., Allegheny chinkapin
**Castanopsis chrysophylla* (Dougl.) A. DC., giant chinkapin
CASUARINA EQUISETIFOLIA J. R. & G. Forst., HORSETAIL CASUARINA
**Catalpa bignoniodes* Walt., southern catalpa
**Catalpa speciosa* Warder ex Engelm., northern catalpa
*Ceanothus arboreus* Greene, feltleaf ceanothus
*Ceanothus spinosus* Nutt., greenbark ceanothus
*Ceanothus thyrsiflorus* Eschsch., blueblossom
**Celtis laevigata* Willd., sugarberry
*Celtis lindheimeri* Engelm. ex K. Koch, Lindheimer hackberry
**Celtis occidentalis* L., hackberry
**Celtis reticulata* Torr., netleaf hackberry
*Celtis tenuifolia* Nutt., Georgia hackberry
*Cephalanthus occidentalis* L., buttonbush
*Cercidium floridum* Benth. ex Gray, blue paloverde

**Cercidium microphyllum* (Torr.) Rose & Johnst., yellow paloverde
*Cercidium texanum* Gray, Texas paloverde
**Cercis canadensis* L., eastern redbud
var. *canadensis*, eastern redbud (typical)
var. *texensis* (Wats.) Hopkins, Texas redbud
*Cercis occidentalis* Torr. ex Gray, California redbud
*Cercocarpus betuloides* Nutt., birchleaf cercocarpus
*Cercocarpus breviflorus* Gray, hairy cercocarpus
*Cercocarpus ledifolius* Nutt., curlleaf cercocarpus
*Cercocarpus montanus* Raf., alderleaf cercocarpus
*Cercocarpus traskiae* Eastw., Catalina cercocarpus
**Cereus giganteus* Engelm., saguaro
*Cereus robinnii* (Lem.) L. Benson, key tree-cactus
var. *robinii*, key tree-cactus (typical)
var. *deeringii* (Small) L. Benson, Deering tree-cactus
**Chamaecyparis lawsoniana* (A. Murr.) Parl., Port-Orford-cedar
**Chamaecyparis nootkatensis* (D. Don) Spach, Alaska-cedar
**Chamaecyparis thyoides* (L.) B.S.P., Atlantic white-cedar
*Chilopsis linearis* (Cav.) Sweet, desert-willow
*Chionanthus virginicus* L., fringetree
*Chrysobalanus icaco* L., cocoplum
*Chrysophyllum oliviforme* L., satinleaf
CINNAMOMUM CAMPHORA (L.) Sieb., CAMPHOR-TREE
*Citharexylum berlandieri* Robins., Berlandier fiddlewood
*Citharexylum fruticosum* L., Florida fiddlewood
CITRUS AURANTIFOLIA (Christmann in L.) Swingle, LIME
CITRUS AURANTIUM L., SOUR ORANGE
CITRUS SINENSIS Osbeck, ORANGE
*Cladrastis kentukea* (Dum.-Cours.) Rudd, yellowwood
*Clethra acuminata* Michx., cinnamon clethra
*Cliftonia monophylla* (Lam.) Britton ex Sarg., buckwheat-tree
*Clusia rosea* Jacq., Florida clusia
*Coccoloba diversifolia* Jacq., pigeon-plum
*Coccoloba uvifera* (L.) L., seagrape
*Coccothrinax argentata* (Jacq.) Bailey, Florida silverpalm
COCOS NUCIFERA L., COCONUT
*Colubrina arborescens* (Mill.) Sarg., coffee colubrina
*Colubrina cubensis* (Jacq.) Brongn., Cuba colubrina
*Colubrina elliptica* (Sw.) Briz. & Stern, soldierwood
*Condalia globosa* I. M. Johnst., bitter condalia
*Condalia hookeri* M. C. Johnst., bluewood
*Conocarpus erectus* L., button-mangrove
*Cordia boissieri* A. DC., anacahuite
CORDIA SEBESTENA L., GEIGER-TREE
*Cornus alternifolia* L. f., alternate-leaf dogwood
*Cornus drummondii* C. A. Meyer, roughleaf dogwood
**Cornus florida* L., flowering dogwood
*Cornus glabrata* Benth., smooth dogwood
**Cornus nuttallii* Audubon, Pacific dogwood
*Cornus occidentalis* (Torr. & Gray) Cov., western dogwood
*Cornus racemosa* Lam., gray dogwood
*Cornus rugosa* Lam., roundleaf dogwood
*Cornus sessilis* Torr. ex Durand, blackfruit dogwood
*Cornus stolonifera* Michx., red-osier dogwood
*Cornus stricta* Lam., swamp dogwood
*Corylus cornuta* var. *californica* (A. DC.) Sharp, California hazel
*Cotinus obovatus* Raf., American smoketree
*Cowania mexicana* D. Don, cliffrose
*Crataegus aestivalis* (Walt.) Torr. & Gray, May hawthorn
*Crataegus berberifolia* Torr. & Gray, barberry hawthorn
*Crataegus brachyacantha* Sarg. & Engelm., blueberry hawthorn
*Crataegus brainerdii* Sarg., Brainerd hawthorn
*Crataegus calpodendron* (Ehrh.) Medic., pear hawthorn
*Crataegus chrysocarpa* Ashe, fireberry hawthorn
*Crataegus coccinea* L., scarlet hawthorn
*Crataegus coccinioides* Ashe, Kansas hawthorn
*Crataegus columbiana* Howell, Columbia hawthorn
*Crataegus crus-galli* L., cockspur hawthorn
*Crataegus dilatata* Sarg., broadleaf hawthorn
*Crataegus douglasii* Lindl., black hawthorn
*Crataegus erythropoda* Ashe, Cerro hawthorn
*Crataegus flabellata* (Bosc) K. Koch, fanleaf hawthorn
*Crataegus flava* Ait., yellow hawthorn
*Crataegus greggiana* Eggl., Gregg hawthorn
*Crataegus harbisonii* Beadle, Harbison hawthorn
*Crataegus intricata* Lange, Biltmore hawthorn
*Crataegus lacrimata* Small, Pensacola hawthorn
Crataegus marshallii Eggl., parsley hawthorn
*Crataegus mollis* Scheele, downy hawthorn
CRATAEGUS MONOGYNA Jacq., ONESEED HAWTHORN
*Crataegus opaca* Hook & Arn., riverflat hawthorn
*Crataegus phaenopyrum* (L. f.) Medic., Washington hawthorn
*Crataegus pruinosa* (H. L. Wendl.) K. Koch, frosted hawthorn
*Crataegus pulcherrima* Ashe, beautiful hawthorn
*Crataegus punctata* Jacq., dotted hawthorn

*Crataegus reverchonii* Sarg., Reverchon hawthorn
*Crataegus saligna* Greene, willow hawthorn
*Crataegus spathulata* Michx., littlehip hawthorn
*Crataegus succulenta* Schrad., fleshy hawthorn
*Crataegus texana* Buckl., Texas hawthorn
*Crataegus tracyi* Ashe ex Eggl., Tracy hawthorn
*Crataegus triflora* Chapm., threeflower hawthorn
*Crataegus uniflora* Muenchh., oneflower hawthorn
*Crataegus viridis* L., green hawthorn
*Crossopetalum rhacoma* Crantz, Florida crossopetalum
*Cupania glabra* Sw., Florida cupania
**Cupressus arizonica* Greene, Arizona cypress
var. *arizonica*, Arizona cypress (typical)
var. *glabra* (Sudw.) Little, Arizona smooth cypress
var. *nevadensis* (Abrams) Little, Piute cypress
var. *stephensonii* (C. B. Wolf) Little, Cuyamaca cypress
*Cupressus bakeri* Jeps., Baker cypress
*Cupressus goveniana* Gord., Gowen cypress
var. *goveniana*, Gowen cypress (typical)
var. *abramsiana* (C. B. Wolf) Little, Santa Cruz cypress
var. *pigmaea* Lemm., Mendocino cypress
*Cupressus guadalupensis* Wats. var. *forbesii* (Jeps.) Little, Tecate cypress
*Cupressus macnabiana* A. Murr., MacNab cypress
*Cupressus macrocarpa* Hartw., Monterey cypress
*Cupressus sargentii* Jeps., Sargent cypress
*Cyrilla racemiflora* L., swamp cyrilla
var. *racemiflora*, swamp cyrilla (typical)
var. *parvifolia* Sarg., littleleaf cyrilla

*Dalea spinosa* Gray, smokethorn
*Diospyros texana* Scheele, Texas persimmon
**Diospyros virginiana* L., common persimmon
*Dipholis salicifolia* (L.) A. DC., willow bustic
*Dodonaea viscosa* Jacq., hopbush
*Drypetes diversifolia* Krug & Urban, milkbark
*Drypetes lateriflora* (Sw.) Krug & Urban, Guiana-plum

*Ehretia anacua* (Terán & Berland.) I. M. Johnst., anacua
ELAEAGNUS ANGUSTIFOLIA L., RUSSIAN-OLIVE
*Elliottia racemosa* Muhl. ex Ell., elliottia
*Erythrina flabelliformis* Kearney, southwestern coralbean
*Erythrina herbacea* L., southeastern coralbean
*Esenbeckia berlandieri* Baill., Berlandier esenbeckia
EUCALYPTUS GLOBULUS Labill., BLUEGUM EUCALYPTUS
*Eugenia axillaris* (Sw.) Willd., white stopper
*Eugenia confusa* DC., redberry stopper
*Eugenia foetida* Pers., boxleaf stopper
*Eugenia rhombea* (Berg) Krug & Urban, red stopper
*Euonymus atropurpureus* Jacq., eastern burningbush
*Euonymus occidentalis* Nutt. ex Torr., western burningbush
*Exostema caribaeum* (Jacq.) Roem. & Schult., princewood
*Exothea paniculata* (Juss.) Radlk., inkwood
*Eysenhardtia polystachya* (Gómez Ortega) Sarg., kidneywood
*Eysenhardtia texana* Scheele, Texas kidneywood

*Fagus grandifolia* Ehrh., American beech
*Ficus aurea* Nutt., Florida strangler fig
*Ficus citrifolia* Mill., shortleaf fig
FIRMIANA SIMPLEX (L.) W. F. Wight, CHINESE PARASOLTREE
*Forestiera acuminata* (Michx.) Poir., swamp-privet
*Forestiera angustifolia* Torr., Texas forestiera
*Forestiera phillyreoides* (Benth.) Torr., desert-olive forestiera
*Forestiera segregata* (Jacq.) Krug & Urban, Florida-privet
*Franklinia alatamaha* Bartr. ex Marsh., franklinia
**Fraxinus americana* L., white ash
*Fraxinus anomala* Torr. ex Wats, singleleaf ash
var. *anomala*, singleleaf ash (typical)
var. *lowellii* (Sarg.) Little, Lowell ash
*Fraxinus berlandierana* A. DC., Berlandier ash
*Fraxinus caroliniana* Mill., Carolina ash
*Fraxinus cuspidata* Torr., fragrant ash
*Fraxinus dipetala* Hook. & Arn., two-petal ash
*Fraxinus gooddingii* Little, Goodding ash
*Fraxinus greggii* Gray, Gregg ash
**Fraxinus latifolia* Benth., Oregon ash
**Fraxinus nigra* Marsh., black ash
*Fraxinus papillosa* Lingelsh., Chihuahua ash
**Fraxinus pennsylvanica* Marsh., green ash
**Fraxinus profunda* (Bush) Bush, pumpkin ash
**Fraxinus quadrangulata* Michx., blue ash
*Fraxinus texensis* (Gray) Sarg., Texas ash
*Fraxinus velutina* Torr., velvet ash
*Fremontodendron californicum* (Torr.) Cov., California fremontia
*Fremontodendron mexicanum* Davidson, Mexican fremontia

*Garrya elliptica* Dougl. ex Lindl., wavyleaf silktassel
*Genipa clusiifolia* (Jacq.) Griseb., seven-year-apple
*Gleditsia aquatica* Marsh., waterlocust
**Gleditsia triacanthos* L., honeylocust
*Gordonia lasianthus* (L.) Ellis, loblolly-bay
*Guaiacum angustifolium* Engelm., Texas lignumvitae

*Guaiacum sanctum* L., roughbark lignum-vitae
*Guapira discolor* (Spreng.) Little, longleaf blolly
*Guettarda elliptica* Sw., elliptic-leaf velvetseed
*Guettarda scabra* (L.) Vent., roughleaf velvetseed
*Gyminda latifolia* (Sw.) Urban, falsebox
*Gymnathes lucida* Sw., oysterwood
**Gymnocladus dioicus* (L.) K. Koch, Kentucky coffeetree

**Halesia carolina* L., Carolina silverbell
*Halesia diptera* Ellis, two-wing silverbell
*Halesia parviflora* Michx., little silverbell
*Hamamelis virginiana* L., witch-hazel
*Hamelia patens* Jacq., scarletbush
*Helietta parvifolia* (Gray) Benth., barreta
*Heteromeles arbutifolia* (Lindl.) M. J. Roem., toyon
HIBISCUS TILIACEUS L., SEA HIBISCUS
*Holacantha emoryi* Gray, holacantha
*Hypelate trifoliata* Sw., hypelate

*Ilex ambigua* (Michx.) Torr., Carolina holly
*Ilex amelanchier* M. A. Curtis, sarvis holly
*Ilex cassine* L., dahoon
*Ilex coriacea* (Pursh) Chapm., large gallberry
*Ilex decidua* Walt., possumhaw
*Ilex krugiana* Loes., tawnyberry holly
*Ilex laevigata* (Pursh) Gray, smooth winterberry
*Ilex longipes* Chapm. ex Trel., Georgia holly
*Ilex montana* Torr. & Gray, mountain winterberry
*Ilex myrtifolia* Walt., myrtle dahoon
**Ilex opaca* Ait., American holly
var. *opaca* American holly (typical)
var. *arenicola* (Ashe) Ashe, dune holly
*Ilex verticillata* (L.) Gray, common winterberry
*Ilex vomitoria* Ait., yaupon
*Illicium floridanum* Ellis, Florida anise-tree
*Illicium parviflorum* Michx. ex Vent., yellow anise-tree

*Jacquinia keyensis* Mez, joewood
*Juglans californica* Wats., southern California walnut
**Juglans cinerea* L., butternut
*Juglans hindsii* Jeps. ex R. E. Smith, northern California walnut
*Juglans major* (Torr.) Heller, Arizona walnut
*Juglans microcarpa* Berland., little walnut
**Juglans nigra* L., black walnut
*Juniperus ashei* Buchholz, Ashe juniper
*Juniperus californica* Carr., California juniper
*Juniperus communis* L., common juniper
**Juniperus deppeana* Steud., alligator juniper
*Juniperus erythrocarpa* Cory, redberry juniper
*Juniperus flaccida* Schlecht., drooping juniper
*Juniperus monsperma* (Engelm.) Sarg., one-seed juniper
**Juniper occidentalis* Hook. western juniper
**Juniperus osteosperma* (Torr.) Little, Utah juniper
*Juniperus pinchotii* Sudw., Pinchot juniper
**Juniperus scopulorum* Sarg., Rocky Mountain juniper
**Juniperus silicicola* (Small) Bailey, southern redcedar
**Juniperus virginiana* L., eastern redcedar

**Kalmia latifolia* L., mountain-laurel
*Koeberlinia spinosa* Zucc., allthorn
*Krugiodendron ferreum* (Vahl) Urban, leadwood

*Laguncularia racemosa* (L.) Gaertn. f., white-mangrove
**Larix laricina* (Du Roi) K. Koch, tamarack
*Larix lyallii* Parl., subalpine larch
**Larix occidentalis* Nutt., western larch
*Leitneria floridana* Chapm., corkwood
LEUCAENA LEUCOCEPHALA (Lam.) de Wit, LEUCAENA
*Leucaena pulverulenta* (Schlecht.) Benth., great leucaena
*Leucaena retusa* Benth., littleleaf leucaena
**Libocedrus decurrens* Torr., incense-cedar
*Licaria triandra* (Sw.) Kosterm., Florida licaria
LIGUSTRUM JAPONICUM Thunb., JAPANESE PRIVET
LIGUSTRUM OVALIFOLIUM Hassk., CALIFORNIA PRIVET
LIGUSTRUM SINENSE Lour., CHINESE PRIVET
**Liquidambar styraciflua* L., sweetgum
**Liriodendron tulipifera* L., yellow-poplar
**Lithocarpus densiflorus* (Hook. & Arn.) Rehd., tanoak
*Lyonia ferruginea* (Walt.) Nutt., tree lyonia
*Lyonothamnus floribundus* Gray, Lyontree
*Lysiloma latisiliquum* (L.) Benth., Bahama lysiloma
*Lysiloma microphyllum* Benth., littleleaf lysiloma

**Maclura pomifera* (Raf.) Schneid., Osage-orange
**Magnolia acuminata* L., cucumbertree
*Magnolia ashei* Weatherby, Ashe magnolia
*Magnolia fraseri* Walt., Fraser magnolia
**Magnolia grandiflora* L., southern magnolia
*Magnolia macrophylla* Michx., bigleaf magnolia
*Magnolia pyramidata* Bartr., pyramid magnolia
*Magnolia tripetala* L., umbrella magnolia
**Magnolia virginiana* L., sweetbay
*Malus angustifolia* (Ait.) Michx, southern crab apple
*Malus coronaria* (L.) Mill., sweet crab apple
*Malus fusca* (Raf.) Schneid., Oregon crab apple
*Malus ioensis* (Wood) Britton, prairie crab apple
MALUS SYLVESTRIS (L.) Mill., APPLE
MANGIFERA INDICA L., MANGO
*Manilkara bahamensis* (Baker) Lam & Meeuse, wild-dilly

MANILKARA ZAPOTA (L.) v. Royen, SAPODILLA
*Masticodendron foetidissimum* (Jacq). H. J. Lam, false-mastic
*Maytenus phyllanthoides* Benth., Florida mayten
MELALEUCA QUINQUENERVIA (Cav.) S. T. Blake, CAJEPUT-TREE
MELIA AZEDARACH L., CHINABERRY
*Metopium toxiferum* (L.) Krug & Urban, Florida poison tree
MORUS ALBA L., WHITE MULBERRY
*Morus microphylla* Buckl., Texas mulberry
MORUS NIGRA L., BLACK MULBERRY
**Morus rubra* L., red mulberry
*Myrcianthes fragrans* (Sw.) McVaugh, twinberry stopper
var. *fragrans*, twinberry stopper (typical)
var. *simpsonii* (Small) R.W. Long, Simpson stopper
*Myrica californica* Cham., Pacific bayberry
*Myrica cerifera* L., southern bayberry
*Myrica heterophylla* Raf., evergreen bayberry
*Myrica inodora* Bartr., odorless bayberry
*Myrica pensylvanica* Loisel., northern bayberry
*Nectandra coriacea* (Sw.) Griseb., Florida nectandra
*Nemopanthus collinus* (Alexander) Clark, mountain-holly
NICOTIANA GLAUCA Graham, TREE TOBACCO
*Nolina bigelovii* (Torr.) Wats., Bigelow nolina
**Nyssa aquatica* L., water tupelo
**Nyssa ogeche* Bartr. ex Marsh., Ogeechee tupelo
**Nyssa sylvatica* Marsh., black tupelo; blackgum
var. *sylvatica*, black tupelo (typical)
var. *biflora* (Walt.) Sarg., swamp tupelo; blackgum
*Olneya tesota* Gray, tesota
OPUNTIA BRASILIENSIS (Willd.) Haw., BRAZIL PRICKLYPEAR
OPUNTIA FICUS-INDICA (L.) Mill., INDIAN-FIG
*Opuntia fulgida* Engelm., jumping cholla
*Osmanthus americanus* (L.) Benth. & Hook. f. ex Gray, devilwood
**Ostrya chisosensis* Correll, Chisos hophornbeam
*Ostrya knowltonii* Cov., Knowlto hophornbeam
**Ostrya virginiana* (Mill.) K. Koch, eastern hophornbeam
*Oxydendrum arboreum* (L.) DC., sourwood
*Parkinsonia aculeata* L., Jerusalem-thorn
PAULOWNIA TOMENTOSA (Thunb.) Sieb. & Zucc. ex Steud., ROYAL PAULOWNIA
PERSEA AMERICANA Mill., AVOCADO
**Persea borbonia* (L.) Spreng., redbay
var. *borbonia*, redbay (typical)
var. *humilis* (Nash) Kopp, silkbay
var. *pubescens* (Pursh) Little, swampbay
*Picea brewerana* Wats., Brewer spruce
**Picea engelmannii* Parry ex Engelm., Engelmann spruce
**Picea glauca* (Moench) Voss, white spruce
**Picea mariana* (Mill.) B.S.P., black spruce
**Picea pungens* Engelm., blue spruce
**Picea rubens* Sarg., red spruce
**Picea sitchensis* (Bong.) Carr., Sitka spruce
*Picramnia pentandra* Sw., bitterbush
*Pinckneya pubens* Michx., pinckneya
*Pinus albicaulis* Engelm., whitebark pine
**Pinus aristata* Engelm., bristlecone pine
**Pinus attenuata* Lemm., knobcone pine
var. *aristata*, Colorado bristlecone pine
var. longaeva (D.K. Bailey) Little, Intermountain bristlecone pine
*Pinus balfouriana* Grev. & Balf., foxtail pine
**Pinus banksiana* Lamb., jack pine
*Pinus cembroides* Zucc., Mexican pinyon
**Pinus clausa* (Chapm. ex Engelm.) Vasey ex Sarg., sand pine
**Pinus contorta* Dougl. ex Loud., lodgepole pine
var. *contorta*, shore pine
var. *latifolia* Engelm., lodgepole pine
var. *murrayana* (Grev. & Balf.) Engelm., Sierra lodgepole pine
*Pinus coulteri* D. Don, Coulter pine
**Pinus echinata* Mill., shortleaf pine
**Pinus edulis* Engelm., pinyon
**Pinus elliottii* Engelm., slash pine
var. *elliottii*, slash pine (typical)
var. *densa* Little & Dorman, South Florida slash pine
**Pinus engelmannii* Carr. Apache pine
**Pinus flexilis* James, limber pine
**Pinus glabra* Walt., spruce pine
**Pinus jeffreyi* Grev. & Balf., Jeffrey pine
**Pinus lambertiana* Dougl., sugar pine
*Pinus leiophylla* Schiede & Deppe var. *chihuahuana* (Engelm.) Shaw, Chihuahua pine
**Pinus monophylla* Torr. & Frem., singleleaf pinyon
**Pinus monticola* Dougl. ex D. Don, western white pine
*Pinus muricata* D. Don, bishop pine
**Pinus palustris* Mill., longleaf pine
**Pinus ponderosa* Dougl. ex Laws., ponderosa pine
var. *ponderosa*, ponderosa pine (typical)
var. *arizonica* (Engelm.) Shaw, Arizona pine
var. *scopulorum* Engelm., Rocky Mountain ponderosa pine
*Pinus pungens* Lamb., Table Mountain pine
*Pinus quadrifolia* Parl. ex Sudw., Parry pinyon
**Pinus radiata* D. Don, Monterey pine
**Pinus resinosa* Ait., red pine
**Pinus rigida* Mill., pitch pine
**Pinus sabiniana* Dougl., Digger pine
**Pinus serotina* Michx., pond pine
**Pinus strobiformis* Engelm., southwestern white pine
**Pinus strobus* L., eastern white pine
PINUS SYLVESTRIS L., SCOTCH PINE
**Pinus taeda* L., loblolly pine
*Pinus torreyana* Parry ex Carr., Torrey pine
**Pinus virginiana* Mill., Virginia pine

*Pinus washoensis* Mason & Stockwell, Washoe pine
*Piscidia piscipula* (L.) Sarg., Florida fishpoison-tree
*Pisonia rotundata* Griseb., pisonia
*Pistacia texana* Swingle, Texas pistache
*Pithecellobium flexicaule* (Benth.) Coult., ebony blackbead
*Pithecellobium guadalupense* (Pers.) Chapm., Guadeloupe blackbead
*Pithecellobium pallens* (Benth.) Standl., huajillo
*Pithecellobium unguis-cati* (L.) Benth., catclaw blackbead
*Planera aquatica* J. F. Gmel., water-elm
**Platanus occidentalis* L., sycamore
**Platanus racemosa* Nutt., California sycamore
*Platanus wrightii* Wats., Arizona sycamore
PONCIRUS TRIFOLIATA (L.) Raf., TRIFOLIATE-ORANGE
POPULUS ALBA L., WHITE POPLAR
*Populus angustifolia* James, narrowleaf cottonwood
**Populus balsamifera* L., balsam poplar
**Populus deltoides* Bartr. ex Marsh., eastern cottonwood
var. *deltoides*, eastern cottonwood (typical)
var. *occidentalis* Rydb., plains cottonwood
**Populus fremontii* Wats., Fremont cottonwood
var. *fremontii*, Fremont cottonwood (typical)
var. *mesetae* (Eckenwalder) Little, meseta cottonwood
var. *wislizeni* Wats., Rio Grande cottonwood
**Populus grandidentata* Michx., bigtooth aspen
**Populus heterophylla* L., swamp cottonwood
**Populus tremuloides* Michx., quaking aspen
**Populus trichocarpa* Torr. & Gray, black cottonwood
*Prosopis glandulosa* Torr., honey mesquite
var. *glandulosa*, honey mesquite (typical)
var. *torreyana* (L.) Benson) M.C. Johnst., western honey mesquite
*Prosopis pubescens* Benth., screwbean mesquite
*Prosopis velutina* Woot., velvet mesquite
*Prunus alleghaniensis* Porter, Allegheny plum
*Prunus americana* Marsh., American plum
*Prunus angustifolia* Marsh., Chickasaw plum
PRUNUS AVIUM (L.) L., MAZZARD
*Prunus caroliniana* (Mill.) Ait., Carolina laurelcherry
PRUNUS CERASUS L., SOURCHERRY
PRUNUS DOMESTICA L., GARDEN PLUM
*Prunus emarginata* Dougl. ex Eaton, bitter cherry
*Prunus fremontii* Wats., desert apricot
*Prunus hortulana* Bailey, hortulan plum
*Prunus ilicifolia* (Nutt. ex Hook. & Arn.) D. Dietr., hollyleaf cherry
*Prunus lyonii* (Eastw.) Sarg., Catalina cherry
PRUNUS MAHALEB L., MAHALEB CHERRY
*Prunus mexicana* Wats., Mexican plum
*Prunus munsoniana* Wight & Hedr., wildgoose plum
*Prunus myrtifolia* (L.) Urban, West Indies cherry
*Prunus nigra* Ait., Canada plum
*Prunus pensylvanica* L. f., pin cherry
PRUNUS PERSICA Batsch, PEACH
**Prunus serotina* Ehrh., black cherry
var. *serotina* black cherry (typical)
var. *alabamensis* (Mohr) Little, Alabama black cherry
var. *eximia* (Small) Little, escarpment cherry
var. *rufula* (Woot) & Standl.) McVaugh, southwestern black cherry
*Prunus subcordata* Benth., Klamath plum
*Prunus umbellata* Ell., flatwoods plum
**Prunus virginiana* L., chokecherry
*Pseudophoenix sargentii* H. Wendl. ex Sarg., buccaneer-palm
*Pseudotsuga macrocarpa* (Vasey) Mayr, bigcone Douglas-fir
*Pseudotsuga menziesii* (Mirb.) Franco, Douglas-fir
var. *menziesii*, coast Douglas-fir
var. *glauca* (Beissn.) Franco, Rocky Mountain Douglas-fir
PSIDIUM GUAJAVA L., GUAVA
*Psidium longipes* (Berg) McVaugh, long-stalk stopper
*Ptelea crenulata* Greene, California hoptree
*Ptelea trifoliata* L., common hoptree
PYRUS COMMUNIS L., PEAR
*Quercus agrifolia* Née, coast live oak
**Quercus alba* L., white oak
**Quercus arizonica* Sarg., Arizona white oak
*Quercus arkansana* Sarg., Arkansas oak
**Quercus bicolor* Willd., swamp white oak
*Quercus chapmanii* Sarg., Chapman oak
**Quercus chrysolepis* Liebm., canyon live oak
**Quercus coccinea* Muenchh., scarlet oak
**Quercus douglasii* Hook. & Arn., blue oak
*Quercus dunnii* Kellogg, Dunn oak
*Quercus durandii* Buckl., Durand oak
var. *durandii*, Durand oak (typical)
var. *breviloba* (Torr.) Palmer, Bigelow oak
**Quercus ellipsoidalis* E. J. Hill, northern pin oak
**Quercus emoryi* Torr., Emory oak
*Quercus engelmannii* Greene, Engelmann oak
**Quercus falcata* Michx., southern red oak
var. *falcata*, southern red oak (typical)
var. *pagodifolia* Ell., cherrybark oak
**Quercus gambelii* Nutt., Gambel oak
**Quercus garryana* Dougl. ex Hook., Oregon white oak
*Quercus georgiana* M. A. Curtis, Georgia oak

*Quercus glaucoides* Mart. & Gal., Lacey oak
*Quercus graciliformis* C. H. Muller, Chisos oak
*Quercus gravesii* Sudw., Graves oak
*Quercus grisea* Liebm., gray oak
*Quercus havardii* Rydb., Havard oak
*Quercus hypoleucoides* A. Camus, silverleaf oak
*Quercus ilicifolia* Wangenh., bear oak
**Quercus imbricaria* Michx., shingle oak
*Quercus incana* Bartr., bluejack oak
**Quercus kelloggii* Newb., California black oak
**Quercus laevis* Walt., turkey oak
**Quercus laurifolia* Michx., laurel oak
**Quercus lobata* Née, valley oak
**Quercus lyrata* Walt., overcup oak
*Quercus macdonaldii* Greene, McDonald oak
**Quercus macrocarpa* Michx., bur oak
**Quercus marilandica* Muenchh., blackjack oak
**Quercus michauxii* Nutt., swamp chestnut oak
*Quercus mohriana* Buckl. ex Rydb., Mohr oak
**Quercus muehlenbergii* Engelm., chinkapin oak
*Quercus myrtifolia* Willd., myrtle oak
**Quercus nigra* L., water oak
**Quercus nuttallii* Palmer, Nuttall oak
**Quercus oblongifolia* Torr., Mexican blue oak
*Quercus oglethorpensis* Duncan, Oglethorpe oak
**Quercus palustris* Muenchh., pin oak
**Quercus phellos* L., willow oak
**Quercus prinus* L., chestnut oak
*Quercus pungens* Liebm., sandpaper oak
var. *pungens*, sandpaper oak (typical)
var. *vaseyana* (Buckl.) C. H. Muller, Vasey oak
QUERCUS ROBUR L., ENGLISH OAK
**Quercus rubra* L., northern red oak
*Quercus rugosa* Née, netleaf oak
**Quercus shumardii* Buckl., Shumard oak
var. *shumardii*, Shumard oak (typical)
var. *texana* (Buckl.) Ashe, Texas oak
**Quercus stellata* Wangenh., post oak
var. *stellata*, post oak (typical)
var. *margaretta* (Ashe) Sarg., sand post oak
var. *paludosa* Sarg., Delta post oak
*Quercus tardifolia* C. H. Muller, lateleaf oak
*Quercus tomentella* Engelm., island live oak
*Quercus toumeyi* Sarg., Toumey oak
*Quercus turbinella* Greene, turbinella oak
var. *turbinella*, turbinella oak (typical)
var. *ajoensis* (C. H. Muller) Little, Ajo oak
**Quercus velutina* Lam., black oak
**Quercus virginiana* Mill., live oak
var. *virginiana*, live oak (typical)
var. *fusiformis* (Small) Sarg., Texas live oak
var. *geminata* (Small) Sarg., sand live oak
*Quercus wislizeni* A. DC., interior live oak

*Rapanea punctata* (Lam.) Lundell, Florida rapanea
*Reynosia septentrionalis* Urban, darling-plum
*Rhamnus betulifolia* Greene, birchleaf buckthorn
*Rhamnus californica* Eschsch., California buckthorn
*Rhamnus caroliniana* Walt., Carolina buckthorn
RHAMNUS CATHARTICA L., EUROPEAN BUCKTHORN
*Rhamnus crocea* Nutt., hollyleaf buckthorn
RHAMNUS FRANGULA L., GLOSSY BUCKTHORN
**Rhamnus purshiana* DC., cascara buckthorn
**Rhizophora mangle* L., mangrove
*Rhododendron catawbiense* Michx., Catawba rhododendron
*Rhododendron macrophyllum* D. Don ex G. Don, Pacific rhododendron
*Rhododendron maximum* L., rosebay rhododendron
RHODOMYRTUS TOMENTOSA (Ait.) Hassk., DOWNY-MYRTLE
*Rhus choriophylla* Woot. & Standl., Mearns sumac
*Rhus copallina* L., shining sumac
var. *copallina*, shining sumac (typical)
var. *leucantha* (Jacq.) DC., southern sumac
*Rhus integrifolia* (Nutt.) Benth. & Hook. f. ex Brewer & Wats., lemonade sumac
*Rhus kearneyi* Barkley, Kearney sumac
*Rhus lanceolata* (Gray) Britton, prairie sumac
*Rhus laurina* Nutt., laurel sumac
*Rhus microphylla* Engelm., littleleaf sumac
*Rhus ovata* Wats., sugar sumac
*Rhus typhina* L.,staghorn sumac
*Rhus virens* Lindh. ex Gray, evergreen sumac
RICINUS COMMUNIS L., CASTORBEAN
*Robinia kelseyi* Hutch., Kelsey locust
*Robinia neomexicana* Gray, New Mexico locust
**Robinia pseudoacacia* L., black locust
*Robinia viscosa* Vent., clammy locust
*Roystonea elata* (Bartr.) F. Harper, Florida royalpalm

*Sabal mexicana* Mart., Mexican palmetto
*Sabal minor* (Jacq.) Pers., dwarf palmetto
**Sabal palmetto* (Walt.) Lodd. ex J. A. & J. H. Schult., cabbage palmetto
*Salix alaxensis* (Anderss.) Cov., feltleaf willow
SALIX ALBA L., WHITE WILLOW
**Salix amygdaloides* Anderss., peachleaf willow
*Salix arbusculoides* Anderss., littletree willow
SALIX BABYLONICA L., WEEPING WILLOW
*Salix bebbiana* Sarg., Bebb willow
*Salix bonplandiana* H.B.K., Bonpland willow

*Salix caroliniana* Michx., Coastal Plain willow
*Salix discolor* Muhl., pussy willow
*Salix exigua* Nutt., sandbar willow
*Salix floridana* Chapm., Florida willow
*Salix fluviatilis* Nutt., river willow
SALIX FRAGILIS L., CRACK WILLOW
*Salix geyerana* Anderss., Geyer willow
*Salix hindsiana* Benth., Hinds willow
*Salix hookerana* Barratt, Hooker willow
*Salix lasiandra* Benth., Pacific willow
*Salix lasiolepis* Benth., arroyo willow
*Salix lucida* Muhl., shining willow
*Salix mackenzieana* (Hook.) Barratt ex Anderss., Mackenzie willow
**Salix nigra* Marsh., black willow
*Salix pellita* Anderss. ex Schneid., satiny willow
*Salix petiolaris* J. E. Sm., meadowlark willow
*Salix pyrifolia* Anderss., balsam willow
*Salix scoulerana* Barratt ex Hook., Scouler willow
*Salix sericea* Marsh., silky willow
*Salix sessilifolia* Nutt., northwest willow
*Salix sitchensis* Sanson ex Bong., Sitka willow
*Salix taxifolia* H.B.K., yewleaf willow
*Salix tracyi* Ball, Tracy willow
SALIX VIMINALIS L., BASKET WILLOW
*Sambucus callicarpa* Greene, Pacific red elder
*Sambucus candensis* L., American elder
var. *canadensis* American elder (typical)
var. *laciniata* Gray, Florida elder
*Sambucus cerulea* Raf., blue elder
*Sambucus mexicana* Presl, Mexican elder
*Sambucus velutina* Durand & Hilgard, velvet elder
*Sapindus drummondii* Hook. & Arn., western soapberry
*Sapindus saponaria* L., wingleaf soapberry
*Sapium biloculare* (Wats.) Pax, jumping-bean sapium
SAPIUM SEBIFERUM (L.) Roxb., TALLOWTREE
**Sassafras albidum* (Nutt.) Nees, sassafras
*Savia bahamensis* Britton, maidenbush
*Schaefferia frutescens* Jacq., Florida-boxwood
SCHINUS MOLLE L., PEPPERTREE
SCHINUS TEREBINTHIFOLIA Raddi, BRAZIL PEPPERTREE
*Schoepfia chrysophylloides* (A. Rich.) Planch., graytwig
**Sequoia sempervirens* (D. Don) Endl., redwood
**Sequoiadendron giganteum* (Lindl.) Buchholz, giant sequoia
*Serenoa repens* (Bartr.) Small, saw-palmetto
*Shepherdia argentea* (Pursh) Nutt., silver buffaloberry
*Simarouba glauca* DC., paradise-tree
*Solanum erianthum* D. Don, mullein nightshade
*Sophora affinis* Torr. & Gray, Texas sophora
*Sophora secundiflora* (Gómez Ortega) Lag. ex DC., mescalbean
*Sorbus americana* Marsh., American mountain-ash
SORBUS AUCUPARIA L., EUROPEAN MOUNTAIN-ASH
*Sorbus decora* (Sarg.) Schneid., showy mountain-ash
*Sorbus scopulina* Greene, Greene mountain-ash
*Sorbus sitchensis* Roem., Sitka mountain-ash
*Staphylea bolanderi* Gray, Sierra bladdernut
*Staphylea trifolia* L., American bladdernut
*Stewartia malacodendron* L., Virginia stewartia
*Stewartia ovata* (Cav.) Weatherby, mountain stewartia
*Styrax americanus* Lam., American snowbell
*Styrax grandifolius* Ait., bigleaf snowbell
*Styrax platanifolius* Engelm., sycamore-leaf snowbell
*Suriana maritima* L., baycedar
**Swietenia mahagoni* Jacq., West Indies mahogany
*Symplocos tinctoria* (L.) L'Hér., sweetleaf
TAMARINDUS INDICA L., TAMARIND
TAMARIX CHINENSIS Lour., TAMARISK
TAMARIX GALLICA L., FRENCH TAMARISK
TAMARIX PARVIFLORA DC., SMALL-FLOWER TAMARISK
**Taxodium distichum* (L.) Rich., baldcypress
var. *distichum* , baldcypress (typical)
var. *nutans* (Ait.) Sweet, pondcypress
*Taxodium mucronatum* Ten., Montezuma baldcypress
**Taxus brevifolia* Nutt., Pacific yew
*Taxus floridana* Nutt. ex Chapm., Florida yew
*Tecoma stans* (L.) H.B.K., yellow-elder
TERMINALIA CATAPPA L., INDIA-ALMOND
*Tetrazygia bicolor* (Mill.) Cogn., Florida tetrazygia
THESPESIA POPULNEA (L.) Soland. ex Correa, PORTIATREE
*Thrinax morrisii* H. Wendl., key thatch-palm
*Thrinax radiata* Lodd. ex J. A. & J. H. Schult., Florida thatchpalm
**Thuja occidentalis* L., northern white-cedar
THUJA ORIENTALIS L., ORIENTAL ARBORVITAE
*Thuia plicata* Donn ex D. Don, western redcedar
**Tilia americana* L., American basswood
**Tilia caroliniana* Mill., Carolina basswood
**Tilia heterophylla* Vent., white basswood
*Torreya californica* Torr., California torreya
*Torreya taxifolia* Arn., Florida torreya
*Toxicodendron vernix* (L.) Kuntze, poison-sumac
*Trema lamarckiana* (Roem. & Schult.) Blume, West Indies trema
*Trema micrantha* (L.) Blume, Florida trema
**Tsuga canadensis* (L.) Carr., eastern hemlock
*Tsuga caroliniana* Engelm., Carolina hemlock
**Tsuga heterophylla* (Raf.) Sarg., western hemlock

**Tsuga mertensiana* (Bong.) Carr., mountain hemlock

**Ulmus alata* Michx., winged elm
**Ulmus americana* L., American elm
**Ulmus crassifolia* Nutt., cedar elm
ULMUS PUMILA L., SIBERIAN ELM
**Ulmus rubra* Muhl., slippery elm
**Ulmus serotina* Sarg., September elm
**Ulmus thomasii* Sarg., rock elm
**Umbellularia californica* (Hook. & Arn.) Nutt., California-laurel
*Ungnadia speciosa* Endl., Mexican-buckeye

*Vaccinium arboreum* Marsh., tree sparkleberry
*Vauquelinia californica* (Torr.) Sarg., Torrey vauquelinia
*Vauquelinia pauciflora* Standl., fewflower vauquelinia
*Viburnum lentago* L., nannyberry
*Viburnum nudum* L., possumhaw viburnum
*Viburnum obovatum* Walt., Walter viburnum
*Viburnum prunifolium* L., blackhaw
*Viburnum rufidulum* Raf., rusty blackhaw
*Viburnum trilobum* Marsh., American cranberrybush

*Washingtonia filifera* (Linden ex André) H. Wendl., California washingtonia

*Ximenia americana* L., tallowwood

*Yucca aloifolia* L., aloe yucca
**Yucca brevifolia* Engelm., Joshua-tree
*Yucca carnerosana* (Trel.) McKelvey, Carneros yucca
*Yucca elata* Engelm., soaptree yucca
*Yucca faxoniana* Sarg., Faxon yucca
*Yucca gloriosa* L., moundlily yucca
*Yucca rostrata* Engelm. ex. Trel., beaked yucca
*Yucca schidigera* Roezl ex Ortgies, Mohave yucca
*Yucca schottii* Engelm., Schott yucca
*Yucca torreyi* Shafer, Torrey yucca
*Yucca treculeana* Carr., Trecul yucca

*Zanthoxylum americanum* Mill., common prickly-ash
*Zanthoxylum clava-herculis* L., Hercules-club
*Zanthoxylum coriaceum* A. Rich., Biscayne prickly-ash
*Zanthoxylum fagara* (L.) Sarg., lime prickly-ash
*Zanthoxylum flavum* Vahl, West Indies satinwood
*Zanthoxylum hirsutum* Buckl., Texas Hercules-club
ZIZIPHUS JUJUBA Mill., COMMON JUJUBE

# APPENDIX 2
# CONDENSED CHECKLIST—ALPHABETICAL BY COMMON NAMES

This condensed Checklist contains only the accepted scientific names of species and varieties of United States trees and their approved common names. The arrangement is alphabetical by common names. As in the main Checklist, naturalized species are designated by capitals and small capitals. Also, the asterisk (*) indicates important forest tree species commercially useful for lumber or other wood products or noteworthy for special values. Appendix 1, Condensed Checklist—Alphabetical by Scientific Names, is the same but has the scientific name first, as in the main Checklist.

acacia, blackbrush, *Acacia rigidula* Benth.
acacia, long-spine, *Acacia macracantha* Humb. & Bonpl. ex Willd.
AILANTHUS, AILANTHUS ALTISSIMA (Mill.) Swingle
Alaska-cedar, **Chamaecyparis nootkatensis* (D. Don) Spach
alder, Arizona, *Alnus oblongifolia* Torr.
ALDER, EUROPEAN, ALNUS GLUTINOSA (L.) Gaertn.
alder, hazel, *Alnus serrulata* (Ait.) Willd.
alder, mountain, *Alnus tenuifolia* Nutt.
alder, red, **Alnus rubra* Bong.
alder, seaside, *Alnus maritima* Muhl. ex Nutt.
alder, Sitka, *Alnus sinuata* (Regel) Rydb.
alder, speckled, *Alnus rugosa* (Du Roi) Spreng.
alder, white, **Alnus rhombifolia* Nutt.
allthorn, *Koeberlinia spinosa* Zucc.
alvaradoa, Mexican, *Alvaradoa amorphoides* Liebm.
anacahuite, *Cordia boissieri* A. DC.
anacua, *Ehretia anacua* (Terán & Berland.) I. M. Johnst.
anise-tree, Florida, *Illicium floridanum* Ellis
anise-tree, yellow, *Illicium parviflorum* Michx. ex Vent.
APPLE, MALUS SYLVESTRIS (L.) Mill.
apple, Oregon crab, *Malus fusca* (Raf.) Schneid.
apple, prairie crab, *Malus ioensis* (Wood) Britton
apple, southern crab, *Malus angustifolia* (Ait.) Michx.
apple, sweet crab, *Malus coronaria* (L.) Mill.
apricot, desert, *Prunus fremontii* Wats.
ARBORVITAE, ORIENTAL, THUJA ORIENTALIS L.
ash, Berlandier, *Fraxinus berlandierana* A. DC.
ash, black, **Fraxinus nigra* Marsh.
ash, blue, **Fraxinus quadrangulata* Michx.
ash, Carolina, *Fraxinus caroliniana* Mill.
ash, Chihuahua, *Fraxinus papillosa* Lingelsh.
ash, fragrant, *Fraxinus cuspidata* Torr.
ash, Goodding, *Fraxinus gooddingii* Little
ash, green, **Fraxinus pennsylvanica* Marsh.
ash, Gregg, *Fraxinus greggii* Gray
ash, Lowell, *Fraxinus anomala* var. *lowellii* (Sarg.) Little
ash, Oregon, **Fraxinus latifolia* Benth.
ash, pumpkin, **Fraxinus profunda* (Bush) Bush
ash, singleleaf, *Fraxinus anomala* Torr. ex Wats.
ash, singleleaf (typical), *Fraxinus anomala* Torr. ex Wats. var. *anomala*
ash, Texas, *Fraxinus texensis* (Gray) Sarg.
ash, two-petal, *Fraxinus dipetala* Hook. & Arn.
ash, velvet ash, *Fraxinus velutina* Torr.
ash, white, **Fraxinus americana* L.
aspen, bigtooth, **Populus grandidentata* Michx.
aspen, quaking, **Populus tremuloides* Michx.
AVOCADO, PERSEA AMERICANA Mill.

baccharis, eastern, *Baccharis halimifolia* L.
baldcypress, **Taxodium distichum* (L.) Rich.
baldcypress (typical), *Taxodium distichum* (L.) Rich. var. *distichum*
baldcypress, Montezuma, *Taxodium mucronatum* Ten.
barreta, *Helietta parvifolia* (Gray) Benth.
basswood, American, **Tilia americana* L.
basswood, Carolina, **Tilia caroliniana* Mill.
basswood, white, **Tilia heterophylla* Vent.
bayberry, evergreen, *Myrica heterophylla* Raf.
bayberry, northern, *Myrica pensylvanica* Loisel.
bayberry, odorless, *Myrica inodora* Bartr.

bayberry, Pacific, *Myrica californica* Cham.
bayberry, southern, *Myrica cerifera* L.
baycedar, *Suriana maritima* L.
beech, American, **Fagus grandifolia* Ehrh.
birch, Alaska paper, *Betula papyrifera* var. *neoalaskana* (Sarg.) Raup
birch, gray, **Betula populifolia* Marsh.
birch, Kenai, *Betula papyrifera* var. *kenaica* (W. H. Evans) Henry
birch, mountain paper, *Betula papyrifera* var. *cordifolia* (Regel) Fern.
birch, northwestern paper, *Betula papyrifera* var. *subcordata* (Rydb.) Sarg.,
birch, paper, **Betula papyrifera* Marsh.
birch, paper (typical), *Betula papyrifera* Marsh. var. *papyrifera*
birch, river, **Betula nigra* L.
birch, sweet, **Betula lenta* L.
birch, Virginia roundleaf, *Betula uber* (Ashe) Fern.
birch, water, *Betula occidentalis* Hook.
birch, western paper, *Betula papyrifera* var. *commutata* (Regel) Fern.
birch, yellow, **Betula alleghaniensis* Britton
bitterbush, *Picramnia pentandra* Sw.
blackbead, catclaw, *Pithecellobium flexicaule* (Benth.) Coult.
blackbead, Guadeloupe, *Pithecellobium guadalupense* (Pers.) Chapm.
black-calabash, *Amphitecna latifolia* (Mill.) A. H. Gentry
blackgum; black tupelo, **Nyssa sylvatica* Marsh.
blackgum; swamp tupelo, *Nyssa sylvatica* var. *biflora* (Walt.) Sarg.
blackhaw, *Viburnum prunifolium* L.
blackhaw, rusty, *Viburnum rufidulum* Raf.
black-mangrove, *Avicennia germinans* (L.) L.
bladdernut, American, *Staphylea trifolia* L.
bladdernut, Sierra, *Staphylea bolanderi* Gray
blolly, longleaf, *Guapira discolor* (Spreng.) Little
blueblossom, *Ceanothus thyrsiflorus* Eschsch.
bluewood, *Condalia hookeri* M. C. Johnst.
boxelder, **Acer negundo L.*
buccaneer-palm, *Pseudophoenix sargentii* H. Wendl. ex Sarg.
buckeye, bottlebrush, *Aesculus parviflora* Walt.
buckeye, California, *Aesculus californica* (Spach) Nutt.
buckeye, Ohio, **Aesculus glabra* Willd.
buckeye, Ohio (typical), *Aesculus glabra* Willd. var. *glabra*
buckeye, painted, *Aesculus sylvatica* Bartr.
buckeye, red, *Aesculus pavia* L.
buckeye, Texas, *Aesculus glabra* var. *arguta* (Buckl.) Robins.
buckeye, yellow, **Aesculus octandra* Marsh.
buckthorn, birchleaf, *Rhamnus betulifolia* Greene
buckthorn, California, *Rhamnus californica* Eschsch.
buckthorn, Carolina, *Rhamnus caroliniana* Walt.
buckthorn, cascara, **Rhamnus purshiana* DC.
BUCKTHORN, EUROPEAN, RHAMNUS CATHARTICA L.
BUCKTHORN, GLOSSY, RHAMNUS FRANGULA L.
buckthorn, hollyleaf, *Rhamnus crocea* Nutt.
buckwheat-tree, *Cliftonia monophylla* (Lam.) Britton ex Sarg.
buffaloberry, silver, *Shepherdia argentea* (Pursh) Nutt.
bumelia, buckthorn, *Bumelia lycioides* (L.) Pers.
bumelia, gum, *Bumelia lanuginosa* (Michx.) Pers.
bumelia, tough, *Bumelia tenax* (L.) Willd.
burningbush, eastern, *Euonymus atropurpureus* Jacq.
burningbush, western, *Euonymus occidentalis* Nutt. ex Torr.
bursera, fragrant, *Bursera fagaroides* (H. B. K.) Engler
bustic, willow, *Dipholis salicifolia* (L.) A. DC.
butternut, **Juglans cinerea* L.
buttonbush, *Cephalanthus occidentalis* L.
button-mangrove, *Conocarpus erectus* L.
byrsonima, key, *Byrsonima lucida* DC.

caesalpinia, Mexican, *Caesalpinia mexicana* Gray
CAESALPINIA, PARADISE, CAESALPINIA GILLIESII (Hook) Dietr.
CAJEPUT-TREE, MELALEUCA QUINQUENERVIA (Cav.) S. T. Blake
California-laurel, **Umbellularia californica* (Hook. & Arn.) Nutt.
CAMPHOR-TREE, CINNAMOMUM CAMPHORA (L.) J. S. Presl
canella, *Canella winterana* (L.) Gaertn.
canotia, *Canotia holacantha* Torr.
caper, Jamaica, *Capparis cynophallophora* L.
caper, limber, *Capparis flexuosa* (L.) L.
CASTORBEAN, RICINUS COMMUNIS L.
CASUARINA, HORSETAIL, CASUARINA EQUISETIFOLIA J. R. & G. Forst.
catalpa, northern, **Catalpa speciosa* Warder ex Engelm.
catalpa, southern **Catalpa bignonioides* Walt.
catclaw, Gregg, *Acacia greggii* Gray
catclaw, Roemer, *Acacia roemeriana* Scheele
catclaw, Wright, *Acacia wrightii* Benth.
ceanothus, feltleaf, *Ceanothus arboreus* Greene
ceanothus, greenbark, *Ceanothus spinosus* Nutt.
cercocarpus, alderleaf, *Cercocarpus montanus* Raf.
cercocarpus, birchleaf, *Cercocarpus betuloides* Nutt.
cercocarpus, Catalina, *Cercocarpus traskiae* Eastw.
cercocarpus, curlleaf, *Cercocarpus ledifolius* Nutt.
cercocarpus, hairy, *Cercocarpus breviflorus* Gray
cherry, Alabama black, *Prunus serotina* var. *alabamensis* (Mohr) Little
cherry, bitter, *Prunus emarginata* Dougl. ex Eaton

cherry, black, **Prunus serotina* Ehrh.
cherry, black (typical), *Prunus serotina* Ehrh. var. *serotina*
cherry, Catalina, *Prunus lyonii* (Eastw.) Sarg.
cherry, escarpment, *Prunus serotina* var. *eximia* (Small) Little
cherry, hollyleaf, *Prunus ilicifolia* (Nutt. ex Hook. & Arn.) D. Dietr.
CHERRY, MAHALEB, PRUNUS MAHELEB L.
cherry, pin, *Prunus pensylvanica* L. f.
CHERRY, SOUR, PRUNUS CERASUS L.
cherry, southwestern black, *Prunus serotina var. rufula* (Woot. & Standl.) McVaugh
cherry, West Indies, *Prunus myrtifolia* (L.) Urban
chestnut, American, **Castanea dentata* (Marsh.) Borkh.
CHINABERRY, MELIA AZEDARACH L.
chinkapin, Allegheny, *Castanea pumila* Mill.
chinkapin, Florida, *Castanea alnifolia* Nutt.
chinkapin, giant, **Castanopsis chrysophylla* (Dougl.) A. DC.
chinkapin, Ozark, *Castanea ozarkensis* Ashe
chokecherry, *Prunus virginiana* L.
cholla, jumping, *Opuntia fulgida* Engelm.
cinnecord, *Acacia choriophylla* Benth.
clethra, cinnamon, *Clethra acuminata* Michx.
cliffrose, *Cowania mexicana* D. Don
clusia, Florida, *Clusia rosea* Jacq.
COCONUT, COCOS NUCIFERA L.
cocoplum, *Chrysobalanus icaco* L.
coffeetree, Kentucky, *Gymnocladus dioicus* (L.) K. Koch
colubrina, coffee, *Colubrina arborescens* (Mill.) Sarg.
colubrina, Cuba, *Colubrina cubensis* (Jacq.) Brongn.
condalia, bitter, *Condalia globosa* I. M. Johnst.
coralbean, southeastern, *Erythrina herbacea* L.
coralbean, southwestern, *Erythrina flabelliformis* Kearney
corkwood, *Leitneria floridana* Chapm.
cottonwood, black, **Populus trichocarpa* Torr. & Gray
cottonwood, eastern, **Populus deltoides* Bartr. ex Marsh.
cottonwood, eastern (typical), *Populus deltoides* Bartr. ex Marsh. var. *deltoides*
cottonwood, Fremont, **Populus fremontii* Wats.
cottonwood, Fremont (typical), *Populus fremontii* Wats. var. *fremontii*
cottonwood, meseta, *Populus fremontii* var. *mesetae* (Eckenwalder) Little
cottonwood, narrowleaf, *Populus angustifolia* James
cottonwood, plains, *Populus deltoides* var. *occidentalis* Rydb.
cottonwood, Rio Grande, *Populus fremontii* var. *wislizeni* Wats.
cottonwood, swamp, **Populus heterophylla* L.
cranberrybush, American, *Viburnum trilobum* Marsh.
crossopetalum, Florida, *Crossopetalum rhacoma* Crantz
cucumbertree, **Magnolia acuminata* L.
cupania, Florida, *Cupania glabra* Sw.
cypress, Arizona, **Cupressus arizonica* Greene
cypress, Arizona (typical), *Cupressus arizonica* Greene var. *arizonica*
cypress, Arizona smooth, *Cupressus arizonica* var. *glabra* (Sudw.) Little
cypress, Baker, *Cupressus bakeri* Jeps.
cypress, Cuyamaca, *Cupressus arizonica* var. *stephensonii* (C. B. Wolf) Little
cypress, Gowen, *Cupressus goveniana* Gord.
cypress, Gowen (typical), *Cupressus goveniana* Gord. var. *goveniana*
cypress, MacNab, *Cupressus macnabiana* A. Murr.
cypress, Mendocino, *Cupressus goveniana* var. *pigmaea* Lemm.
cypress, Monterey, *Cupressus macrocarpa* Hartw.
cypress, Piute, *Cupressus arizonica* var. *nevadensis* (Abrams) Little
cypress, Santa Cruz, *Cupressus goveniana* var. *abramsiana* (C. B. Wolf) Little
cypress, Sargent, *Cupressus sargentii* Jeps.
cypress, Tecate, *Cupressus guadalupensis* var. *forbesii* (Jeps.) Little
cyrilla, littleleaf, *Cyrilla racemiflora* var. *parvifolia* Sarg.
cyrilla, swamp, *Cyrilla racmiflora* L.
cyrilla, swamp (typical), *Cyrilla racemiflora* L. var. *racemiflora*

dahoon, *Ilex cassine* L.
dahoon, myrtle, *Ilex myrtifolia* Walt.
darling-plum, *Reynosia septentrionalis* Urban
desert-willow, *Chilopsis linearis* (Cav.) Sweet
devils-walkingstick, *Aralia spinosa* L.
devilwood, *Osmanthus americanus* (L.) Benth. & Hook. f. ex Gray
dogwood, alternate-leaf, *Cornus alternifolia* L. f.
dogwood, blackfruit, *Cornus sessilis* Torr. ex Durand
dogwood, flowering, **Cornus florida* L.
dogwood, gray, *Cornus racemosa* Lam.
dogwood, Pacific, *Cornus nuttallii* Audubon
dogwood, red-osier, *Cornus stolonifera* Michx.
dogwood, roughleaf, *Cornus drummondii* C. A. Meyer
dogwood, roundleaf, *Cornus rugosa* Lam.
dogwood, smooth, *Cornus glabrata* Benth.
dogwood, swamp, *Cornus stricta* Lam.
dogwood, western, *Cornus occidentalis* (Torr. & Gray) Cov.
Douglas-fir, **Pseudotsuga menziesii* (Mirb.) Franco
Douglas-fir, bigcone, *Pseudotsuga macrocarpa* (Vasey) Mayr
Douglas-fir, coast, *Pseudotsuga menziesii* (Mirb.) Franco var. *menziesii*
Douglas-fir, Rocky Mountain, *Pseudotsuga menziesii* var. *glauca* (Beissn.) Franco
DOWNY-MYRTLE, RHODOMYRTUS TOMENTOSA (Ait.) Hassk.

elder, American, *Sambucus canadensis* L.,
elder, American (typical), *Sambucus canadensis* L. var. *canadensis*
elder, blue, *Sambucus cerulea* Raf.
elder, Florida, *Sambucus canadensis* var. *laciniata* Gray
elder, Mexican, *Sambucus mexicana* Presl
elder, Pacific red, *Sambucus callicarpa* Greene
elder, velvet, *Sambucus velutina* Durand & Hilgard
elephant-tree, *Bursera microphylla* Gray
elliottia, *Elliottia racemosa* Muhl. ex Ell.
elm, American, **Ulmus americana* L.
elm, cedar, **Ulmus crassifolia* Nutt.
elm, rock, **Ulmus thomasii* Sarg.
elm, September, **Ulmus serotina* Sarg.
ELM, SIBERIAN, ULMUS PUMILA L.
elm, slippery, **Ulmus rubra* Muhl.
elm, winged, **Ulmus alata* Michx.
esenbeckia, Berlandier, *Esenbeckia berlandieri* Baill.
EUCALYPTUS, BLUEGUM, EUCALYPTUS GLOBULUS Labill.

falsebox, *Gyminda latifolia* (Sw.) Urban
false-mastic, *Mastichodendron foetidissimum* (Jacq.) H. J. Lam
fiddlewood, Berlandier, *Citharexylum berlandieri* Robins.
fiddlewood, Florida, *Citharexylum fruticosum* L.
fig, Florida strangler, *Ficus aurea* Nutt.
fig, shortleaf, *Ficus citrifolia* Mill.
fir, balsam, **Abies balsamea* (L.) Mill.
fir, bristlecone, *Abies bracteata* D. Don ex Poiteau
fir, California red, **Abies magnifica* A. Murr.
fir, California white, *Abies concolor* var. *lowiana* (Gord.) Lemm.
fir, corkbark, *Abies lasiocarpa* var. *arizonica* (Merriam) Lemm.
fir, Fraser, **Abies fraseri* (Pursh) Poir.
fir, grand, **Abies grandis* (Dougl. ex D. Don) Lindl.
fir, noble, **Abies procera* Rehd.
fir, Pacific silver, **Abies amabilis* (Dougl.) Forbes
fir, subalpine, **Abies lasiocarpa* (Hook.) Nutt.
fir, subalpine (typical), *Abies lasiocarpa* (Hook.) Nutt. var. *lasiocarpa*
fir, white, **Abies concolor* (Gord. & Glend.) Lindl. ex Hildebr.
fir, white (typical) *Abies concolor* (Gord. & Glend.) Lindl. ex Hildebr. var. *concolor*
fishpoison-tree, Florida, *Piscidia piscipula* (L.) Sarg.
Florida-boxwood, *Schaefferia frutescens* Jacq.
Florida-privet, *Forestiera segregata* (Jacq.) Krug & Urban
FLOWERFENCE, CAESALPINIA PULCHERRIMA (L.) Sw.
forestiera, desert-olive, *Forestiera phillyreoides* (Benth.) Torr.
forestiera, Texas, *Forestiera angustifolia* Torr.
franklinia, *Franklinia alatamaha* Bartr. ex Marsh.
fremontia, California, *Fremontodendron californicum* (Torr.) Cov.
fremontia, Mexican, *Fremontodendron mexicanum* Davidson
fringetree, *Chionanthus virginicus* L.

gallberry, large, *Ilex coriacea* (Pursh) Chapm.
GEIGER-TREE, CORDIA SEBESTENA L.
graytwig, *Schoepfia chrysophylloides* (A. Rich.) Planch.
guajillo, *Acacia berlandieri* Benth.
GUAVA, PSIDIUM GUAJAVA L.
Guiana-plum, *Drypetes lateriflora* (Sw.) Krug & Urban
gumbo-limbo, *Bursera simaruba* (L.) Sarg.

hackberry, **Celtis occidentalis* L.
hackberry, Georgia, *Celtis tenuifolia* Nutt.
hackberry, Lindheimer, *Celtis lindheimeri* Engelm. ex K. Koch
hackberry, netleaf, **Celtis reticulata* Torr.
hawthorn, barberry, *Crataegus berberifolia* Torr. & Gray
hawthorn, beautiful, *Crataegus pulcherrima* Ashe
hawthorn, Biltmore, *Crataegus intricata* Lange
hawthorn, black, *Crataegus douglasii* Lindl.
hawthorn, blueberry, *Crataegus brachyacantha* Sarg. & Engelm.
hawthorn, Brainerd, *Crataegus brainerdii* Sarg.
hawthorn, broadleaf, *Crataegus dilatata* Sarg.
hawthorn, Cerro, *Crataegus erythropoda* Ashe
hawthorn, cockspur, *Crataegus crus-galli* L.
hawthorn, Columbia, *Crataegus columbiana* Howell
hawthorn, dotted, *Crataegus punctata* Jacq.
hawthorn, downy, *Crataegus mollis* Scheele
hawthorn, fanleaf, *Crataegus flabellata* (Bosc) K. Koch
hawthorn, fireberry, *Crataegus chrysocarpa* Ashe
hawthorn, fleshy, *Crataegus succulenta* Schrad.
hawthorn, frosted, *Crataegus pruinosa* (H. L. Wendl.) K. Koch
hawthorn, green, *Crataegus viridis* L.
hawthorn, Gregg, *Crataetus greggiana* Eggl.
hawthorn, Harbison, *Crataegus harbisonii* Beadle
hawthorn, Kansas, *Crataegus coccinioides* Ashe
hawthorn, littlehip, *Crataegus spathulata* Michx.
hawthorn, May, *Crataegus aestivalis* (Walt.) Torr. & Gray
hawthorn, oneflower, *Crataegus uniflora* Muenchh.
HAWTHORN, ONESEED, CRATAEGUS MONOGYNA Jacq.
hawthorn, parsley, *Crataegus marshallii* Eggl.

hawthorn, pear, *Crataegus calpodendron* (Ehrh.) Medic.
hawthorn, Pensacola, *Crataegus lacrimata* Small
hawthorn, Reverchon, *Crataegus reverchonii* Sarg.
hawthorn, riverflat, *Crataegus opaca* Hook. & Arn.
hawthorn, scarlet, *Crataegus coccinea* L.
hawthorn, Texas, *Crataegus texana* Buckl.
hawthorn, threeflower, *Crataegus triflora* Chapm.
hawthorn, Tracy, *Crataegus tracyi* Ashe ex Eggl.
hawthorn, Washington, *Crataegus phaenopyrum* (L. f.) Medic.
hawthorn, willow, *Crataegus saligna* Greene
hawthorn, yellow, *Crataegus flava* Ait.
hazel, California, *Corylus cornuta* var. *californica* (A. DC.) Sharp
hemlock, Carolina, *Tsuga caroliniana* Engelm.
hemlock, eastern, **Tsuga canadensis* (L.) Carr.
hemlock, mountain, **Tsuga mertensiana* (Bong.) Carr.
hemlock, western, **Tsuga heterophylla* (Raf.) Sarg.
Hercules-club, *Zanthoxylum clava-herculis* L.
Hercules-club, Texas, *Zanthoxylum hirsutum* Buckl.
HIBISCUS, SEA, HIBISCUS TILIACEUS L.
hickory, black, **Carya texana* Buckl.
hickory, bitternut, **Carya cordiformis* (Wangenh.) K. Koch
hickory, Carolina, *Carya ovata* var. *australis* (Ashe) Little
hickory, mockernut, **Carya tomentosa* (Poir.) Nutt.
hickory, nutmeg, **Carya myristiciformis* (Michx. f.) Nutt.
hickory, pignut, **Carya glabra* (Mill.) Sweet
hickory, pignut (typical), *Carya glabra* (Mill.) Sweet var. *glabra*
hickory, red, *Carya glabra* var. *odorata* (Marsh.) Little
hickory, sand, **Carya pallida* (Ashe) Engl. & Graebn.
hickory, scrub, *Carya floridana* Sarg.
hickory, shagbark, **Carya ovata* (Mill.) K. Koch
hickory, shagbark (typical), *Carya ovata* (Mill.) K. Koch var. *ovata*
hickory, shellbark, **Carya laciniosa* (Michx. f.) Loud.
hickory, water, **Carya aquatica* (Michx f.) Nutt.
holacantha, *Holacantha emoryi* Gray
holly, American, **Ilex opaca* Ait.
holly, American (typical), *Ilex opaca* Ait. var. *opaca*
holly, Carolina, *Ilex ambigua* (Michx.) Torr.
holly, dune, *Ilex opaca* var. *arenicola* (Ashe) Ashe
holly, Georgia, *Ilex longipes* Chapm.
holly, sarvis, *Ilex amelanchier* M. A. Curtis
holly, tawnyberry, *Ilex krugiana* Loes.
honeylocust, **Gleditsia triacanthos* L.
hopbush, *Dodonaea viscosa* Jacq.
hophornbeam, Chisos, *Ostrya chisosensis* Correll
hophornbeam, eastern, **Ostrya virginiana* (Mill.) K. Koch
hophornbeam, Knowlton, *Ostrya knowltonii* Cov.
hoptree, California, *Ptelea crenulata* Greene
hoptree, common, *Ptelea trifoliata* L.
hornbeam, American, **Carpinus caroliniana* Walt.
huajillo, *Pithecellobium pallens* (Benth.) Standl.
huisache, *Acacia farnesiana* (L.) Willd.
huisachillo, *Acacia tortuosa* (L.) Willd.
hypelate, *Hypelate trifoliata* Sw.
incense-cedar, **Libocedrus decurrens* Torr.
INDIA-ALMOND, TERMINALIA CATAPPA L.
INDIAN-FIG, OPUNTIA FICUS-INDICA (L.) Mill.
inkwood, *Exothea paniculata* (Juss.) Radlk.

Jerusalem-thorn, *Parkinsonia aculeata* L.
joewood, *Jacquinia keyensis* Mez
Joshua-tree, **Yucca brevifolia* Engelm.
JUJUBE, COMMON, ZIZIPHUS JUJUBA Mill.
juniper, alligator, **Juniperus deppeana* Steud.
juniper, Ashe, *Juniperus ashei* Buchholz
juniper, California, *Juniperus californica* Carr.
juniper, common, *Juniperus communis* L.
juniper, drooping, *Juniperus flaccida* Schlecht.
juniper, one-seed, *Juniperus monosperma* (Engelm.) Sarg.
juniper, Pinchot, *Juniperus pinchotii* Sudw.
juniper, redberry, *Juniperus erythrocarpa* Cory
juniper, Rocky Mountain, **Juniperus scopulorum* Sarg.
juniper, Utah, **Juniperus osteosperma* (Torr.) Little
juniper, western, *Juniperus occidentalis* Hook.

kidneywood, *Eysenhardtia polystachya* (Gómez Ortega) Sarg.
kidneywood, Texas, *Eysenhardtia texana* Scheele

larch, subalpine, *Larix lyallii* Parl.
larch, western, **Larix occidentalis* Nutt.
laurelcherry, Carolina, *Prunus caroliniana* (Mill.) Ait.
leadwood, *Krugiodendron ferreum* (Vahl) Urban
LEBBEK, ALBIZIA LEBBECK (L.) Benth.
LEUCAENA, LEUCAENA LEUCOCEPHALA (Lam.) de Wit
leucaena, great, *Leucaena pulverulenta* (Schlecht.) Benth.
leucaena, littleleaf, *Leucaena retusa* Benth.
licaria, Florida, *Licaria triandra* (Sw.) Kosterm.
lidflower, pale, *Calyptranthes pallens* Griseb.
lignumvitae, roughbark, *Guaiacum sanctum* L.
lignumvitae, Texas, *Guaiacum angustifolium* Engelm.

LIME, CITRUS AURANTIFOLIA (Christmann in L.) Swingle
loblolly-bay, *Gordonia lasianthus* (L.) Ellis
locust, black, **Robinia pseudoacacia* L.
locust, clammy, *Robinia viscosa* Vent.
locust, Kelsey, *Robinia kelseyi* Hutch.
locust, New Mexico, *Robinia neomexicana* Gray
lyonia, tree, *Lyonia ferruginea* (Walt.) Nutt.
Lyontree, *Lyonothamnus floribundus* Gray
lysiloma, Bahama, *Lysiloma latisiliquum* (L.) Benth.
lysiloma, littleleaf, *Lysiloma microphyllum* Benth.

madrone, Arizona, *Arbutus arizonica* (Gray) Sarg.
madrone, Pacific, **Arbutus menziesii* Pursh
madrone, Texas, *Arbutus texana* Buckl.
magnolia, Ashe, *Magnolia ashei* Weatherby
magnolia, bigleaf, *Magnolia macrophylla* Michx.
magnolia, Fraser, *Magnolia fraseri* Walt.
magnolia, pyramid, *Magnolia pyramidata* Bartr.
magnolia, southern, **Magnolia grandiflora* L.
magnolia, umbrella, *Magnolia tripetala* L.
mahogany, West Indies, **Swietenia mahagoni* Jacq.
maidenbush, *Savia bahamensis* Britton
MANGO, MANGIFERA INDICA L.
mangrove, *Rhizophora mangle* L.
manzanita, bigberry, *Arctostaphylos glauca* Lindl.
manzanita, Pringle, *Arctostaphylos pringlei* Parry
manzanita, whiteleaf, *Arctostaphylos viscida* Parry
maple, bigleaf, **Acer macrophyllum* Pursh,
maple, black, **Acer nigrum* Michx. f.
maple, canyon, *Acer grandidentatum* Nutt.
maple, chalk, *Acer leucoderme* Small
maple, Florida, *Acer barbatum* Michx.
maple, mountain, *Acer spicatum* Lam.
maple, red, **Acer rubrum* L.
maple, Rocky Mountain, *Acer glebrum* Torr.
maple, silver, **Acer saccharinum* L.
maple, striped, *Acer pensylvanicum* L.
maple, sugar, **Acer saccharum* Marsh.
maple, vine, *Acer circinatum* Pursh
marlberry, *Ardisia escallonioides* Schiede & Deppe ex Schlecht. & Cham.
mayten, Florida, *Maytenus phyllanthoides* Benth.
MAZZARD, PRUNUS AVIUM (L.) L.
mescalbean, *Sophora secundiflora* (Gómez Ortega) Lag. ex DC.
mesquite, honey, *Prosopis glandulosa* Torr.
mesquite, honey (typical), *Prosopis glandulosa* Torr. var. *glandulosa*
mesquite, screwbean, *Prosopis pubescens* Benth.
mesquite, velvet, *Prosopis velutina* Woot.
mesquite, western honey, *Prosopis glandulosa* var. *torreyana* (L. Benson) M. C. Johnst.
Mexican-buckeye, *Ungnadia speciosa* Endl.
milkbark, *Drypetes diversifolia* Krug & Urban
mountain-ash, American, *Sorbus americana* Marsh.
MOUNTAIN-ASH, EUROPEAN, SORBUS AUCUPARIA L.
mountain-ash, Greene, *Sorbus scopulina* Greene
mountain-ash, showy, *Sorbus decora* (Sarg.) Schneid.
mountain-ash, Sitka, *Sorbus sitchensis* Roem.
mountain-holly, *Nemopanthus collinus* (Alexander) Clark
mountain-laurel, *Kalmia latifolia* L.
MULBERRY, BLACK, MORUS NIGRA L.
mulberry, red, **Morus rubra* L.
mulberry, Texas, *Morus microphylla* Buckl.
MULBERRY, WHITE, MORUS ALBA L.
myrtle-of-the-river, *Calyptranthes zuzygium* (L.) Sw.

nannyberry, *Viburnum lentago* L.
nectandra, Florida, *Nectandra coriacea* (Sw.) Griseb.
nightshade, mullein, *Solanum erianthum* D. Don
nolina, Bigelow, *Nolina bigelovii* (Torr.) Wats.

oak, Ajo, *Quercus turbinella* var. *ajoensis* (C. H. Muller) Little
oak, Arizona white, **Quercus arizonica* Sarg.
oak, Arkansas, *Quercus arkansana* Sarg.
oak, bear, *Quercus ilicifolia* Wangenh.
oak, Bigelow, *Quercus durandii* var. *breviloba* (Torr.) Palmer
oak, black, **Quercus velutina* Lam.
oak, blackjack, **Quercus marilandica* Muenchh.
oak, blue, **Quercus douglasii* Hook. & Arn.,
oak, bluejack, *Quercus incana* Bartr.
oak, bur, **Quercus macrocarpa* Michx.
oak, California black, **Quercus kelloggii* Newb.
oak, canyon live, **Quercus chrysolepis* Liebm.
oak, Chapman, *Quercus chapmanii* Sarg.
oak, cherrybark, *Quercus falcata* var. *pagodifolia* Ell.
oak, chestnut, **Quercus prinus* L.
oak, chinkapin, **Quercus muehlenbergii* Engelm.
oak, Chisos, *Quercus graciliformis* C. H. Muller
oak, coast live, **Quercus agrifolia* Née
oak, Delta post, *Quercus stellata* var. *paludosa* Sarg.
oak, Dunn, *Quercus dunnii* Kellogg
oak, Durand, *Quercus durandii* Buckl.
oak, Durand (typical), *Quercus durandii* Buckl. var. *durandii*
oak, Emory, **Quercus emoryi* Torr.
oak, Engelmann, *Quercus engelmannii* Greene
OAK, ENGLISH, QUERCUS ROBUR L.
oak, Gambel, **Quercus gambelii* Nutt.
oak, Georgia, *Quercus georgiana* M. A. Curtis
oak, Graves, *Quercus gravesii* Sudw.
oak, gray, *Quercus grisea* Liebm.
oak, Havard, *Quercus havardii* Rydb.

oak, interior live, *Quercus wislizeni* A. DC.
oak, island live, *Quercus tomentella* Engelm.
oak, Lacey, *Quercus glaucoides* Mart. & Gal.
oak, lateleaf, *Quercus tardifolia* C. H. Muller,
oak, laurel, **Quercus laurifolia* Michx.
oak, live, **Quercus virginiana* Mill.
oak, live (typical), *Quercus virginiana* Mill. var. *virginiana*
oak, McDonald, *Quercus macdonaldii* Greene
oak, Mexican blue, **Quercus oblongifolia* Torr.
oak, Mohr, *Quercus mohriana* Buckl. ex Rydb.
oak, myrtle, *Quercus myrtifolia* Willd.
oak, netleaf, *Quercus rugosa* Née
oak, northern pin, **Quercus ellipsoidalis* E. J. Hill
oak, northern red, **Quercus rubra* L.
oak, Nuttall, **Quercus nuttallii* Palmer
oak, Oglethorpe, *Quercus oglethorpensis* Duncan
oak, Oregon white, **Quercus garryana* Dougl. ex Hook.
oak, overcup, **Quercus lyrata* Walt.
oak, pin, **Quercus palustris* Muenchh.
oak, post, **Quercus stellata* Wangenh.
oak, post (typical), *Quercus stellata* Wangenh. var. *stellata*
oak, sand live, *Quercus virginiana* var. *geminata* (Small) Sarg.
oak, sand post, *Quercus stellata* var. *margaretta* (Ashe) Sarg.
oak, sandpaper, *Quercus pungens* Liebm.
oak, sandpaper (typical), *Quercus pungens* Liebm. var. *pungens*
oak, scarlet, **Quercus coccinea* Muenchh.
oak, shingle, **Quercus imbricaria* Michx.
oak, Shumard, **Quercus shumardii* Buckl.,
oak, Shumard (typical), *Quercus shumardii* Buckl. var. *shumardii*
oak, silverleaf, *Quercus hypoleucoides* A. Camus
oak, southern red, **Quercus falcata* Michx.
oak, southern red (typical), *Quercus falcata* Michx. var. *falcata*
oak, swamp chestnut, **Quercus michauxii* Nutt.
oak, swamp white, **Quercus bicolor* Willd.
oak, Texas, *Quercus shumardii* var. *texana* (Buckl.) Ashe
oak, Texas live, *Quercus virginiana* var. *fusiformis* (Small) Sarg.
oak, Toumey, *Quercus toumeyi* Sarg.
oak, turbinella, *Quercus turbinella* Greene
oak, turbinella (typical), *Quercus turbinella* Greene var. *turbinella*
oak, turkey, **Quercus laevis* Walt.
oak, valley, **Quercus lobata* Née
oak, Vasey, *Quercus pungens* var. *vaseyana* (Buckl.) C. H. Muller
oak, water, **Quercus nigra* L.
oak, white, **Quercus alba* L.
oak, willow, **Quercus phellos* L.
ORANGE, CITRUS SINENSIS Osbeck
ORANGE, SOUR, CITRUS AURANTIUM L.
Osage-orange, **Maclura pomifera* (Raf.) Schneid.
oysterwood, *Gymnanthes lucida* Sw.
palmetto, cabbage, **Sabal palmetto* (Walt.) Lodd. ex J. A. & J. H. Schult.
palmetto, dwarf, *Sabal minor* (Jacq.) Pers.
palmetto, Mexican, *Sabal mexicana* Mart.
paloverde, blue, *Cercidium floridum* Benth. ex Gray
paloverde, Texas, *Cercidium texanum* Gray
paloverde, yellow, *Cercidium microphyllum* (Torr.) Rose & Johnst.
PAPAYA, CARICA PAPAYA L.
PAPER-MULBERRY, BROUSSONETIA PAPYRIFERA (L.) Vent.
paradise-tree, *Simarouba glauca* DC.
PARASOLTREE, CHINESE, FIRMIANA SIMPLEX (L.) W. F. Wight
PAULOWNIA, ROYAL, PAULOWNIA TOMENTOSA (Thunb.) Sieb. & Zucc. ex Steud.
paurotis-palm, *Acoelorrhaphe wrightii* (Griseb. & H. Wendl.) H. Wendl. ex Becc.
pawpaw, *Asimina triloba* (L.) Dunal
pawpaw, bigflower, *Asimina obovata* (Willd.) Nash
pawpaw, smallflower, *Asimina parviflora* (Michx.) Dunal
PEACH, PRUNUS PERSICA Batsch
PEAR, PYRUS COMMUNIS L.
pecan, **Carya illinoensis* (Wangenh.) K. Koch
PEPPERTREE, SCHINUS MOLLE L.
PEPPERTREE, BRAZIL, SCHINUS TEREBINTHIFOLIA Raddi
persimmon, common, **Diospyros virginiana* L.
persimmon, Texas, *Diospyros texana* Scheele
pigeon-plum, *Coccoloba diversifolia* Jacq.
pinckneya, *Pinckneya pubens* Michx.
pine, Apache, **Pinus engelmannii* Carr.
pine, Arizona, *Pinus ponderosa* var. *arizonica* (Engelm.) Shaw
pine, bishop, *Pinus muricata* D. Don,
pine, bristlecone, *Pinus aristata* Engelm.
pine, Chihuahua, *Pinus leiophylla* Schiede & Deppe var. *chihuahuana* (Engelm.) Shaw
pine, Colorado bristlecone, Pinus *aristata* Engelm. var. *aristata*
pine, Coulter, *Pinus coulteri* D. Don
pine, Digger, **Pinus sabiniana* Dougl.
pine, eastern white, **Pinus strobus* L.
pine, foxtail, *Pinus balfouriana* Grev. & Balf.
pine, Intermountain bristlecone, *Pinus aristata* var. *longaeva* (D. K. Bailey) Little
pine, jack, **Pinus banksiana* Lamb.
pine, Jeffrey, **Pinus jeffreyi* Grev. & Balf.
pine, knobcone, **Pinus attenuata* Lemm.
pine, limber, **Pinus flexilis* James,
pine, loblolly, **Pinus taeda* L.
pine, lodgepole, **Pinus contorta* Dougl. ex Loud.
pine, lodgepole, *Pinus contorta* var. *latifolia* Engelm.
pine, longleaf, **Pinus palustris* Mill.
pine, Monterey, **Pinus radiata* D. Don
pine, pitch, **Pinus rigida* Mill.

pine, pond, **Pinus serotina* Michx.
pine, ponderosa, **Pinus ponderosa* Dougl. ex Laws.
pine, ponderosa (typical), *Pinus ponderosa* Dougl. ex Laws. var. *ponderosa*
pine, red, **Pinus resinosa* Ait.
pine, Rocky Mountain ponderosa, *Pinus ponderosa* var. *scopulorum* Engelm.
pine, sand, **Pinus clausa* (Chapm. ex Engelm.) Vasey ex Sarg.
PINE, SCOTCH, PINUS SYLVESTRIS L.
pine, shore, *Pinus contorta* Dougl. ex Loud. var. *contorta*
pine, shortleaf, **Pinus echinata* Mill.
pine, Sierra lodgepole, *Pinus contorta* var. *murrayana* (Grev. & Balf.) Engelm.
pine, slash, **Pinus elliottii* Engelm.
pine, slash (typical), *Pinus elliottii* Engelm. var. *elliottii*
pine, South Florida slash, *Pinus elliottii* var. *densa* Little & Dorman
pine, southwestern white, *Pinus strobiformis* Engelm.
pine, spruce, *Pinus glabra* Walt.
pine, sugar, **Pinus lambertiana* Dougl.
pine, Table Mountain, *Pinus pungens* Lamb.
pine, Torrey, *Pinus torreyana* Parry ex Carr.
pine, Virginia, **Pinus virginiana* Mill.
pine, Washoe, *Pinus washoensis* Mason & Stockwell
pine, western white, **Pinus monticola* Dougl. ex D. Don
pine, whitebark, *Pinus albicaulis* Engelm.
pinyon, **Pinus edulis* Engelm.
pinyon, Mexican, *Pinus cembroides* Zucc.
pinyon, Parry, *Pinus quadrifolia* Parl. ex Sudw.
pinyon, singleleaf, **Pinus monophylla* Torr. & Frem.
pisonia, *Pisonia rotundata* Griseb.
pistache, Texas, *Pistacia texana* Swingle
plum, Allegheny, *Prunus alleghaniensis* Porter
plum, American, *Prunus americana* Marsh.
plum, Canada, *Prunus nigra* Ait.
plum, Chickasaw, *Prunus angustifolia* Marsh.
plum, flatwoods, *Prunus umbellata* Ell.,
PLUM, GARDEN, PRUNUS DOMESTICA L.
plum, hortulan, *Prunus hortulana* Bailey
plum, Klamath, *Prunus subcordata* Benth.
plum, Mexican, *Prunus mexicana* Wats.
plum, wildgoose, *Prunus munsoniana* Wight & Hedr.
poison-sumac, *Toxicodendron vernix* (L.) Kuntze
poisontree, Florida, *Metopium toxiferum* (L.) Krug & Urban
pond-apple, *Annona glabra* L.
pondcypress, *Taxodium distichum* var. *nutans* (Ait.) Sweet
poplar, balsam, **Populus balsamifera* L.
POPLAR, WHITE, POPULUS ALBA L.
PORTIATREE, THESPESIA POPULNEA (L.) Soland. ex Correa
Port-Orford-cedar, **Chamaecyparis lawsoniana* (A. Murr.) Parl.
possumhaw, *Ilex decidua* Walt.
prickly-ash, Biscayne, *Zanthoxylum coriaceum* A. Rich.
prickly-ash, common, *Zanthoxylum americanum* Mill.
prickly-ash, lime, *Zanthoxylum fagara* (L.) Sarg.
PRICKLYPEAR, BRAZIL, OPUNTIA BRASILIENSIS (Willd.) Haw.
princewood, *Exostema caribaeum* (Jacq.) Roem. & Schult.
PRIVET, CALIFORNIA, LIGUSTRUM OVALIFOLIUM Hassk.
PRIVET, CHINESE, LIGUSTRUM SINENSE Lour.
PRIVET, JAPANESE, LIGUSTRUM JAPONICUM Thunb.

rapanea, Florida, *Rapanea punctata* (Lam.) Lundell
redbay, *Persea borbonia* (L.) Spreng.
redbay, (typical), *Persea borbonia* (L.) Spreng. var. *borbonia*
redbud, California, *Cercis occidentalis* Torr. ex Gray
redbud, eastern, *Cercis canadensis* L.
redbud, eastern (typical), *Cercis canadensis* L. var. *canadensis*
redbud, Texas, *Cercis canadensis* var. *texensis* (Wats.) Hopkins
redcedar, eastern, **Juniperus virginiana* L.
redcedar, southern, **Juniperus silicicola* (Small) Bailey
redcedar, western, **Thuja plicata* Donn ex D. Don
redshank, *Adenostoma sparsifolium* Torr.
redwood, **Sequoia sempervirens* (D. Don) Endl.
rhododendron, Catawba, *Rhododendron catawbiense* Michx.
rhododendron, Pacific, *Rhododendron, macrophyllum* D. Don ex G. Don
rhododendron, rosebay, *Rhododendron maximum* L.
royalpalm, Florida, *Roystonea elata* (Bartr.) F. Harper
RUSSIAN-OLIVE, ELAEAGNUS ANGUSTIFOLIA L.

saffron-plum, *Bumelia celastrina* H.B.K.
sagebrush, big, *Artemisia tridentata* Nutt.
saguaro, **Cereus giganteus* Engelm.
sapium, jumping-bean, *Sapium biloculare* (Wats.) Pax
SAPODILLA, MANILKARA ZAPOTA (L.) v. Royen
sassafras, *Sassafras albidum* (Nutt.) Nees
satinleaf, *Chrysophyllum oliviforme* L.
satinwood, West Indies, *Zanthoxylum flavum* Vahl
saw-palmetto, *Serenoa repens* (Bartr.) Small
scarletbush, *Hamelia patens* Jacq.
seagrape, *Coccoloba uvifera* (L.) L.
sequoia, giant, **Sequoiadendron giganteum* (Lindl.) Buchholz
serviceberry, downy, *Amelanchier arborea* (Michx. f.) Fern.
service berry, roundleaf, *Amerlanchier sanguinea* (Pursh) DC.
serviceberry, Utah, *Amelanchier utahensis* Koehne
serviceberry, western, *Amelanchier alnifolia* (Nutt.) Nutt.

seven-year-apple, *Genipa clusiifolia* (Jacq.) Griseb.
silkbay, *Persea borbonia* var. *humilis* (Nash) Kopp
silktassel, wavyleaf, *Garrya elliptica* Dougl. ex Lindl.
SILKTREE, ALBIZIA JULIBRISSIN Durazzini
silverbell, Carolina, **Halesia carolina* L.
silverbell, little, *Halesia parviflora* Michx.
silverbell, two-wing, *Halesia diptera* Ellis
silverpalm, Florida, *Coccothrinax argentata* (Jacq.) Bailey
smokethorn, *Dalea spinosa* Gray
smoketree, American, *Cotinus obovatus* Raf.
snowbell, American, *Styrax americanus* Lam.
snowbell, bigleaf, *Styrax grandifolius* Ait.
snowbell, sycamore-leaf, *Styrax platanifolius* Engelm.
soapberry, western, *Sapindus drummondii* Hook. & Arn.
soapberry, wingleaf, *Sapindus saponaria* L.
soldierwood, *Colubrina elliptica* (Sw.) Briz. & Stern.
sophora, Texas, *Sophora affinis* Torr. & Gray
sourwood, *Oxydendrum arboreum* (L.) DC.,
sparkleberry, tree, *Vaccinium arboreum* Marsh.
spruce, black, **Picea mariana* (Mill.) B.S.P.
spruce, blue, **Picea pungens* Engelm.
spruce, Brewer, *Picea brewerana* Wats.
spruce, Engelmann, **Picea engelmannii* Parry ex Engelm.
spruce, red, **Picea rubens* Sarg.
spruce, Sitka, **Picea sitchensis* (Bong.) Carr.
spruce, white, **Picea glauca* (Moench) Voss
stewartia, mountain, *Stewartia ovata* (Cav.) Weatherby
stewartia, Virginia, *Stewartia malacodendron* L.
stopper, boxleaf, *Eugenia foetida* Pers.
stopper, long-stalk, *Psidium longipes* (Berg) McVaugh
stopper, red, *Eugenia rhombea* (Berg) Krug & Urban
stopper, redberry, *Eugenia confusa* DC.
stopper, Simpson, *Myrcianthes fragrans* var. *simpsonii* (Small) R. W. Long
stopper, twinberry, *Myrcianthes fragans* (Sw.) McVaugh
stopper, twinberry (typical), *Myrcianthes fragrans* (Sw.) McVaugh var. *fragrans*
stopper, white, *Eugenia axillaris* (Sw.) Willd.
strongback, Bahama, *Bourreria ovata* Miers
strongback, rough, *Bourreria radula* (Poir.) G. Don
SUGAR-APPLE, ANNONA SQUAMOSA L.
sugarberry, **Celtis laevigata* Willd.
sumac, evergreen, *Rhus virens* Lindh. ex Gray
sumac, Kearney, *Rhus kearneyi* Barkley
sumac, laurel, *Rhus laurina* Nutt.
sumac, lemonade, *Rhus integrifolia* (Nutt.) Benth. & Hook. f. ex Brewer & Wats.
sumac, littleleaf, *Rhus microphylla* Engelm.
sumac, Mearns, *Rhus choriophylla* Woot. & Standl.
sumac, prairie, *Rhus lanceolata* (Gray) Britton
sumac, shining, *Rhus copallina* L.
sumac, shining (typical), *Rhus copallina* L. var. *copallina*
sumac, smooth, *Rhus glabra* L.
sumac, southern, *Rhus copallina* var. *leucantha* (Jacq.) DC.
sumac, staghorn, *Rhus typhina* L.
sumac, sugar, *Rhus ovata* Wats.
swampbay, *Persea borbonia* var. *pubescens* (Pursh) Little
swamp-privet, *Forestiera acuminata* (Michx.) Poir.
sweetbay, **Magnolia virginiana* L.
sweetgum, **Liquidambar styraciflua* L.
sweetleaf, *Symplocos tinctoria* (L.) L'Hér.
sycamore, **Platanus occidentalis* L.
sycamore, Arizona, *Platanus wrightii* Wats.
sycamore, California, **Platanus racemosa* Nutt.
TALLOWTREE, SAPIUM SEBIFERUM (L.) Roxb.
tallowwood, *Ximenia americana* L.
tamarack, **Larix laricina* (Du Roi) K. Koch
TAMARIND, TAMARINDUS INDICA L.
TAMARISK, TAMARIX CHINENSIS Lour.
TAMARISK, FRENCH, TAMARIX GALLICA L.
TAMARISK, SMALL-FLOWER, TAMARIX PARVIFLORA DC.
tanoak, **Lithocarpus densiflorus* (Hook. & Arn.) Rehd.
tesota, *Olneya tesota* Gray
tetrazygia, Florida, *Tetrazygia bicolor* (Mill.) Cogn.
thatchpalm, Florida, *Thrinax radiata* Lodd. ex J. A. & J. H. Schult.
thatchpalm, key, *Thrinax morrisii* H. Wendl.
TOBACCO, TREE, NICOTIANA GLAUCA Graham
torchwood, *Amyris elemifera* L.
torchwood, balsam, *Amyris balsamifera* L.
torreya, California, *Torreya californica* Torr.
torreya, Florida, *Torreya taxifolia* Arn.
toyon, *Heteromeles arbutifolia* (Lindl.) M. J. Roem.
tree-cactus, Deering, *Cereus robinii* var. *deeringii* (Small) L. Benson
tree-cactus, key, *Cereus robinii* (Lem.) L. Benson
tree-cactus, key (typical), *Cereus robinii* (Lem.) L. Benson var. *robinii*
trema, Florida, *Trema micrantha* (L.) Blume
trema, West Indies, *Trema lamarckiana* (Roem. & Schult.) Blume
TRIFOLIATE-ORANGE, PONCIRUS TRIFOLIATA (L.) Raf.
tupelo, black; blackgum, **Nyssa sylvatica* Marsh.
tupelo, black (typical), *Nyssa sylvatica* Marsh. var. *sylvatica*
tupelo, Ogeechee, **Nyssa ogeche* Bartr. ex Marsh.
tupelo, swamp; blackgum, *Nyssa sylvatica* var. *biflora* (Walt.) Sarg.
tupelo, water, **Nyssa aquatica* L.
vauquelinia, fewflower, *Vauquelinia pauciflora* Standl.,
vauquelinia, Torrey, *Vauquelinia californica* (Torr.) Sarg.

velvetseed, elliptic-leaf, *Guettarda elliptica* Sw.
velvetseed, roughleaf, *Guettarda scabra* (L.) Vent.
viburnum, possumhaw, *Viburnum nudum* L.
viburnum, Walter, *Viburnum obovatum* Walt.

walnut, Arizona, *Juglans major* (Torr.) Heller
walnut, black, **Juglans nigra* L.
walnut, little, *Juglans microcarpa* Berland.
walnut, northern California, *Juglans hindsii* Jeps. ex R. E. Smith
walnut, southern California, *Juglans californica* Wats.
washingtonia, California, *Washingtonia filifera* (Linden ex André) H. Wendl.
water-elm, *Planera aquatica* J. F. Gmel.
waterlocust, *Gleditsia aquatica* Marsh.
white-cedar, Atlantic, **Chamaecyparis thyoides* (L.) B.S.P.
white-cedar, northern, **Thuja occidentalis* L.
white-mangrove, *Laguncularia racemosa* (L.) Gaertn. f.
wild-dilly, *Manilkara bahamensis* (Baker) Lam & Meeuse
willow, arroyo, *Salix lasiolepis* Benth.
willow, balsam, *Salix pyrifolia* Anderss.
WILLOW, BASKET, SALIX VIMINALIS L.
willow, Bebb, *Salix bebbiana* Sarg.
willow, black, **Salix nigra* Marsh.
willow, Bonpland, *Salix bonplandiana* H.B.K.
willow, Coastal Plain, *Salix caroliniana* Michx.
WILLOW, CRACK, SALIX FRAGILIS L.
willow, feltleaf, *Salix alaxensis* (Anderss.) Cov.
willow, Florida, *Salix floridana* Chapm.
willow, Geyer, *Salix geyerana* Anderss.
willow, Hinds, *Salix hindsiana* Benth.
willow, Hooker, *Salix hookerana* Barratt
willow, littletree, *Salix arbusculoides* Anderss.
willow, Mackenzie, *Salix mackenzieana* (Hook.) Barratt ex Anderss.
willow, meadow, *Salix petiolaris* J. E. Sm.
willow, northwest, *Salix sessilifolia* Nutt.
willow, Pacific, *Salix lasiandra* Benth.
willow, peachleaf, **Salix amygdaloides* Anderss.
willow, pussy, *Salix discolor* Muhl.
willow, river, *Salix fluviatilis* Nutt.
willow, sandbar, *Salix exigua* Nutt.
willow, satiny, *Salix pellita* Anderss. ex Schneid.
willow, Scouler, *Salix scoulerana* Barratt ex Hook.
willow, shining, *Salix lucida* Muhl.
willow, silky, *Salix sericea* Marsh.
willow, Sitka, *Salix sitchensis* Sanson ex Bong.
willow, Tracy, *Salix tracyi* Ball
WILLOW, WEEPING, SALIX BABYLONICA L.
WILLOW, WHITE, SALIX ALBA L.
willow, yewleaf, *Salix taxifolia* H.B.K.
winterberry, common, *Ilex verticillata* (L.) Gray
winterberry, mountain, *Ilex montana* Torr. & Gray
winterberry, smooth, *Ilex laevigata* (Pursh) Gray
witch-hazel, *Hamamelis virginiana* L.

yaupon, *Ilex vomitoria* Ait.
yellow-elder, *Tecoma stans* (L.) H.B.K.
yellow-poplar, **Liriodendron tulipifera* L.
yellowwood, *Cladrastis kentukea* (Dum.-Cours.) Rudd
yew, Florida, *Taxus floridana* Nutt. ex Chapm.
yew, Pacific, **Taxus brevifolia* Nutt.
yucca, aloe, *Yucca aloifolia* L.
yucca, beaked, *Yucca rostrata* Engelm. ex Trel.
yucca, Carneros, *Yucca carnerosana* (Trel.) McKelvey
yucca, Faxon, *Yucca faxoniana* Sarg.
yucca, Mohave, *Yucca schidigera* Roezl ex Ortgies
yucca, moundlily, *Yucca gloriosa* L.
yucca, Schott, *Yucca schottii* Engelm.
yucca, soaptree, *Yucca elata* Engelm.
yucca, Torrey, *Yucca torreyi* Shafer
yucca, Trecul, *Yucca treculeana* Carr.

# APPENDIX 3
# NEW SCIENTIFIC NAMES OF UNITED STATES TREES, 1951-1977

An alphabetical list of the new scientific names of trees of continental United States published from 1951 to 1977, or after the 1953 checklist, is presented here. Several names published as late as 1977 have been inserted, as have a few before 1951 that were omitted previously. Thus, this Checklist continues the last one and cites new names published since. (Other additions have been made at end.)

This Appendix was extracted almost entirely from the Gray Herbarium Card Index, to which grateful acknowledgment is made. Special credit is due the following compilers at the Gray Herbarium, Harvard University: Marjorie Stone, 1931-54; Robert C. Foster, 1954-70; and Elizabeth A. Shaw, 1970 to date. Except for that very large reference on cards, this revision is the only attempt to assemble these new tree names.

The scope of the Gray Herbarium Card Index has been explained by present and past compilers (*107*, *93*). That index of new scientific names of New World vascular plants originated in the Library of the United States Department of Agriculture in 1891. It was published by offset in book form in 10 folio volumes for issues 1 through 251*(39)*. Afterwards, cards of issues 252-283 through 1978 have appeared.

The coverage here, which differs slightly from the much larger card index, merits an explanation. New names are listed for these ranks: genera (g.), species (sp., including hybrids), subspecies (ssp.), and varieties (var.). Also, 2 new families (fam. nov.) are cited. However, forms (f.) are omitted, following the 1953 checklist. In genera also containing shrubs, listing is limited to trees and shrub variations of tree species.

Most names listed here are new combinations, or transfers, and therefore not previously unnamed tree populations new to science. These changes are indicated by the double citation of authors, the first or original author in parentheses. The second made the present combination, such as a change in rank from a variety to species or subspecies, or the reverse, or a species transferred from one genus to another. The earlier scientific name (basionym) is added.

Several new names already have been transferred, as indicated by cross references to later combinations. Others have not yet been accepted. However, neither the card index nor this compilation indicates new names reduced elsewhere to synonymy.

Citations of many new names have not been verified. These names have not been repeated in the synonymy unless widely used or otherwise important in the nomenclature.

As the list of new scientific names summarizes one phase of activity in taxonomy, an analysis may be appropriate. The trees of continental United States are well known, and nearly all conspicuous or important variations have been named. New scientific names, mostly new combinations or transfers, for the 26-year period 1951-1976 total approximately 394 names, about 15 a year, or 12 if *Crataegus*, hawthorn is omitted.

About one-sixth of the total, 69, are in that genus, mostly reductions by one author of many species to varieties.

For taxonomic groups proposed as new to science, the number of names published in the same interval is relatively small, about 55, or 2 a year. Their ranks are: new species 21 (including 9 in *Crataegus*); new subspecies, 6; and new varieties, 28 (including 11 in *Crataegus*). Several of the new species have been reduced to varieties or synonyms. Two are accepted here: *Fraxinus gooddingii* Little in 1952 and in the 1953 checklist, and *Ostrya chisosensis* Correll in 1965. (Another published earlier has been accepted also: *Juniperus erythrocarpa* Cory in 1936.)

Binomials have been published for about 38 natural interspecific hybrids of trees, among them 11 in *Quercus*, 9 in *Populus*, and 6 in *Betula*. The 3 new segregate genera and 2 new plant families involving United States trees have not been adopted.

*Abies balsamea* var. *fallax* (Engelm.) Boivin, Nat. Can. 93: 272. 1966. *A. subalpina* var. *fallax* Engelm.

*Abies balsamea* ssp. *lasiocarpa* (Hook.) Boivin, Nat. Can. 86: 222. 1959. *Pinus lasiocarpa* Hook.

*Abies balsamea* ssp. *lasiocarpa* var. *arizonica* (Merriam) Boivin, Nat. Can. 86: 223. 1959. *A. arizonica* Merriam

*Abies lasiocarpa* var. *fallax* (Engelm.) Franco, Abetos 15. 1950. *A. subalpina* var. *fallax* Engelm.

*Abies* ×*phanerolepis* (Fern.) Liu, Monogr. Gen. Abies 316. 1972; *Abies balsamea* × *fraseri*. *Abies balsamea* var. *phanerolepis* Fern.

*Acacia greggii* var. *arizonica* Isley, Sida 3(6): 377. 1969. Ariz.

*Acacia greggii* var. *wrightii* (Benth.) Isely, Sida 3(6): 378. 1969. *A. wrightii* Benth.

*Acacia schaffneri* (Wats.) F. J. Hermann, J. Wash. Acad. Sci. 38: 236. 1948. *Pithecellobium schaffneri* Wats.

*Acacia schaffneri* var. *bravoensis* Isely, Sida 3(6): 383. 1969. Tex.

*Acer* ×*freemanii* E. Murray, Kalmia 1: 2, 18, 42. 1969. *A. rubrum* × *saccharinum*

*Acer glabrum* ssp. *diffusum* (Greene) E. Murray, Kalmia 3: 14. 1971. *A. diffusum* Greene

*Acer glabrum* ssp. *neo-mexicanum* (Greene), E. Murray, Kalmia 2:1. 1970. *A. neo-mexicanum* Greene

*Acer glabrum* ssp. *torreyi* (Greene) E. Murray, Kalmia 3:14. 1971. *A. torreyi* Greene

*Acer negundo* ssp. *interius* (Britton) A. & D. Löve, Bull. Torrey Bot. Club 81: 33. 1954. *A. interius* Britton

*Acer nigrum* var. *floridanum* (Chapm.) Fosberg, Castanea 19: 27. 1954. *A. saccharinum* var. *floridanum* Chapm.

*Acer nigrum* var. *glaucum* (Schmidt) Fosberg, Castanea 19: 27. 1954. *A. saccharinum* var. *glaucum* Schmidt

*Acer nigrum* var. *grandidentatum* (Nutt. in Torr. & Gray) Fosberg, Castanea 19: 27. 1954. *A. grandidentatum* Nutt. in Torr. & Gray

*Acer nigrum* var. *leucoderme* (Small) Fosberg, Castanea 19: 27. 1954. *A. leucoderme* Small

*Acer nigrum* ssp. *saccharophorum* (K. Koch) Clausen, Sedum No. Am. 106. 1975. *A. saccharophorum* K. Koch

*Acer nigrum* var. *schneckii* (Rehd.) Fosberg, Castanea 19: 27. 1954. *A. saccharum* var. *schneckii* Rehd.

*Acer nigrum* var. *sinuosum* (Rehd.) Fosberg, Castanea 19: 27. 1954. *A. sinuosum* Rehd.

*Acer rubrum* ssp. *drummondii* (Nutt.) E. Murray, Kalmia 1: 29. 1969. *A. drummondii* Nutt.

*Acer saccharum* ssp. *brachypterum* (Woot. & Standl.) E. Murray, Kalmia 7: 15. 1975. *A. brachypterum* Woot. & Standl.

*Acer saccharum* var. *floridanum* (Chapm.) Desmarais, Brittonia 7: 382. 1952. *A. saccharinum* var. *floridanum* Chapm.

*Acer saccharum* ssp. *grandidentatum* (Nutt. in Torr. & Gray) Desmarais, Brittonia 7: 383. 1952. *A. grandidentatum* Nutt. in Torr. & Gray

*Acer saccharum* ssp. *leucoderme* (Small) Desmarais, Brittonia 7: 384. 1952. *A. leucoderme* Small

*Acer saccharum* ssp. *nigrum* (Michx. f.) Desmarais, Brittonia 7: 382. 1952. *A. nigrum* Michx. f.

*Acer saccharum* ssp. *schneckii* (Rehd.) Desmarais, Brittonia 7: 384. 1952. *A. saccharum* var. *schneckii* Rehd.

*Acer saccharum* ssp. *skutchii* (Rehd.) E. Murray, Kalmia 7: 18. 1975. *A skutchii* Rehd.

*Acer* ×*senecaense* Slavin, Phytologia 5: 1. 1954. *A. leucoderme* × *saccharum*

*Aesculus pavia* var. *flavescens* (Sarg.) Correll, Wrightia 3: 132. 1965. *Ae. discolor* var. *flavescens* Sarg.

*Alnaster crispus* (Ait.) Czerep., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 96. 1955. *Alnus crispa* (Ait.) Pursh

*Alnaster sinuatus* (Regel) Czerep., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 97. 1955. *Alnus viridis* var. *sinuata* Regel

*Alnus americana* (Regel) Czerep., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 17: 103. 1955. *A. incana* var. *americana* Regel

*Alnus crispa* var. *sinuata* (Regel) Breitung, Can. Field-Nat. 71: 51. 1957. *A. viridis* var. *sinuata* Regel

*Alnus incana* ssp. *rugosa* var. *occidentalis* (Dippel) C. L. Hitchc., Vasc. Pl. Pacif. NW. 2: 73. 1964. *A. occidentalis* Dippel

*Alnus incana* var. *serrulata* (Ait.) Boivin, Phytologia 15: 419. 1967. *Betula serrulata* Ait.

*Alnus metoporina* Furlow, Ann. Mo. Bot. Gard. 63: 381. 1976. *Betula-alnus maritima* Marsh., Arbustr. Am. 20. 1785.

*Alnus viridis* ssp. *sinuata* (Regel) A. & D. Löve, Univ. Colo. Stud., Biol. Ser. 17: 20. 1965. *A. viridis* var. *sinuata* Regel

*Amelanchier alnifolia* var. *compacta* (Nielsen) McKay, Ont. Field Biol. 29: 10. 1975; 30: 55. 1976. *A. humilis* var. *compacta* Nielsen, Am. Midl. Nat. 22: 174, pl. 6. 1939.

*Amelanchier alnifolia* var. *cusickii* (Fern.) C. L. Hitchc., Vasc. Pl. Pacif. NW. 3: 94. 1961. *A. cusickii* Fern.

*Amelanchier alnifolia* ssp. *florida* (Lindley) Hultén, Bot. Not. 126: 496. 1973. *A. florida* Lindley

*Amelanchier alnifolia* var. *humptulipensis* (G. N. Jones) C. L. Hitchc., Vasc. Pl. Pacif. NW. 3: 94. 1961. *A. florida* var. *humptulipensis* G. N. Jones

*Amelanchier alnifolia* var. *oreophila* (A. Nels.) R. J. Davis, Madroño 11: 144. 1951. *A. oreophila* A. Nels.

*Amelanchier alnifolia* var. *semiintegrifolia* (Hook.) C. L. Hitchc., Vasc. Pl. Pacif. NW. 3: 94. 1961. *A. ovalis semiintegrifolia* Hook.

*Amelanchier arborea* var. *austromontana* (Ashe) Ahles, J. Elisha Mitchell Sci. Soc. 80: 172. 1964. *A. austromontana* Ashe

*Amelanchier arborea* var. *cordifolia* (Ashe) Boivin, Nat. Can. 93: 432. 1966. *A. laevis* var. *cordifolia* Ashe

*Amelanchier arborea* ssp. *laevis* (Wieg.) S. McKay, Bull. Soc. Bot. France 122: 247. 1975. *A. laevis* Wieg.

*Amelanchier arborea* var. *laevis* (Wieg.) Ahles, J. Elisha Mitchell Sci. Soc. 80: 172. 1964. *A. laevis* Wieg.

*Amelanchier florida* var. *cusickii* (Fern.) Boivin, Nat. Can. 93: 432. 1966. *A. cusickii* Fern.

*Amelanchier sanguinea* var. *alnifolia* (Nutt.) Landry, Bull. Soc. Bot. France 122: 249. 1975. *Aronia alnifolia* Nutt.

*Amelanchier sanguinea* var. *arguta* (Greene) Landry, Bull. Soc. Bot. France 122: 249. 1975. *A. pallida* var. *arguta* Greene

*Arctostaphylos viscida* ssp. *mariposa* (Dudley) P. V. Wells, Madroño 19: 204. 1968. *A. mariposa* Dudley

*Arctostaphylos viscida* ssp. *pulchella* (Howell) P. V. Wells, Madroño 19: 204. 1968. *A. pulchella* Howell

*Artemisia tridentata* ssp. *vaseyana* (Rydb.) Beetle, Rhodora 61: 83. 1959. *A. vaseyana* Rydb.

*Artemisia tridentata* var. *vaseyana* (Rydb.) Boivin, Phytologia 23: 91. 1972. *A. vaseyana* Rydb.

*Artemisia tridentata* ssp. *wyomingensis* Beetle & Young, Rhodora 67: 405. 1965. Wyo.

*Betula alleghaniensis* var. *fallax* (Fassett) Brayshaw, Can. Field-Nat. 80: 161. 1966. *B. lutea* f. *falax* Fassett

*Betula alleghaniensis* var. *macrolepis* (Fern.) Brayshaw, Can. Field-Nat. 80: 161. 1966. *B. lutea* var. *macrolepis* Fern.

*Betula* ×*arbuscula* Dugle, Can. J. Bot. 44: 983. 1966. Alta. *B. sargentii* × *papyrifera*

*Betula kamtschatica* (Reg.) Jansson var. *kenaica* (W. H. Evans) Jansson, Act. Hort. Gotoburg. 25: 137, fig. 20. 1962. *B. kenaica* W. H. Evans

*Betula neoalaskana* var. *kenaica* (W. H. Evans) Boivin, Nat. Can. 94: 230. 1967. *B. kenaica* W. H. Evans

*Betula* ×*neoborealis* Lepage, Nat. Can. 84: 56, fig. 4. 1957. Que., Ont. *B. borealis* × *pumila* var. *glandulifera*

*Betula occidentalis* var. *inopina* (Jeps.) C. L. Hitchc., Vasc. Pl. Pacif. NW. 2: 78. 1964. *B. occidentalis* f. *inopina* Jeps.

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*Betula papyrifera* var. *recessa* Lepage, Nat. Can. 89: 115, fig. 2. 1962. Que.

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*Nemopanthus collinus* (Alexander) Clark, J. Arnold Arbor. 55: 437. 1974. *Ilex collina* Alexander

*Nolina bigelovii* var. *wolfii* (Munz) L. Benson in Benson & Darrow, Trees Shrubs Sw. Deserts 72, 418. 1954. *N. parryi* ssp. *wolfii* Munz

*Nolina parryi* ssp. *wolfii* Munz in Munz & Roos, Aliso 2: 221, fig. 1, 2, 5, 8. 1950. Calif.

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*Picea glauca* ssp. *engelmannii* (Parry) T. M. C. Taylor, Madroño 15: 114. 1959. *P. engelmanni* Parry ex Engelm.

*Picea glauca* var. *engelmanii* (Parry) Boivin, Nat. Can. 93: 272. 1966. *P. engelmanni* Parry

*Picea* ×*lutzii* Little, J. For. 51: 746. 1953. Alaska. *P. glauca* × *sitchensis*

*Picea mariana* var. *semiprostrata* (Peck) Teeri, Rhodora 71: 1. 1969. *P. brevifolia* var. *semiprostrata* Peck

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*Pilosocereus deeringii* (Small) Byles & Rowley, Cact. Succ. J. Great Brit. 19: 66. 1957. *Cephalocereus deeringii* Small

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*Pinus clausa* var. *immuginata* D. B. Ward, Castanea 28: 4. 1963. Fla.

*Pinus contorta* ssp. *bolanderi* (Parl.) Critchfield, Harvard Univ., Maria Moors Cabot Found. Publ. 3: 106. 1957. *P. bolanderi* Parl.

*Pinus contorta* ssp. *latifolia* (Engelm. ex Wats.) Critchfield, Harvard Univ., Maria Moors Cabot Found. Publ. 3: 107. 1957. *P. contorta* var. *latifolia* Engelm. ex Wats.

*Pinus contorta* ssp. *murrayana* (Balf.) Critchfield, Harvard Univ., Maria Moors Cabot Found. Publ. 3: 106. 1957. *P. murrayana* Balf.

*Pinus densa* (Little & Dorman) Gaussen, Trav. Lab. For. Toulouse tome 2, sect. 1, v. 1, pt. 2, fasc. 6: 52, 108. 1960; without citation of basionym.

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*Pinus edulis* var. *fallax* Little, Phytologia 17: 331. 1968. Ariz., N. Mex.

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*Pinus longaeva* D. K. Bailey, Ann. Mo. Bot. Gard. 57: 243, figs. 1970. Nev.

*Populus balsamifera* ssp. *trichocarpa* (Torr. & Gray) Brayshaw, Can. Field-Nat. 79: 95. 1965. *P. trichocarpa* Torr. & Gray

*Populus balsamifera* ssp. *tricocarpa* var. *hastata* (Dode) Brayshaw, Can. Field-Nat. 79: 95. 1965. *P. hastata* Dode

*Populus* ×*barnesii* W. H. Wagner, Mich. Bot. 9: 54. 1970. Mich. *P. grandidentata* × *tremuloides*

*Populus* ×*bernardii* Boivin, Nat. Can. 93: 434. 1966. *P. deltoides* var. *occidentalis* × *tremuloides*. Sask.

*Populus* ×*brayshawii* Boivin, Nat. Can. 93: 434. 1966. *P. angustifolia* × *balsamifera*. Alta.

*Populus deltoides* ssp. *monilifera* (Ait.) Eckenwalder, J. Arnold Arbor, 58: 204. 1977. *P. monilifera* Ait.

*Populus deltoides* ssp. *wislizenii* (Wats.) Eckenwalder, J. Arnold Arbor. 58: 205. 1977. *P. fremontii* var. *wislizenii* Wats.

*Populus* ×*dutillyi* Lepage, Nat. Can. 88: 50, fig. 4. 1961. Ont. *P. balsamifera* var. *subcordata* × *tremuloides*

*Populus fremontii* ssp. *mesetae* Eckenwalder, J. Arnold Arbor. 58: 201. 1977. Mexico.

*Populus* ×*heimburgeri* Boivin, Nat. Can. 93: 434. 1966. Que. *P. alba* × *tremuloides*

*Populus hinckleyana* Correll, Wrightia 2: 45, fig. 8. 1960. Tex.

*Populus* ×*polygonifolia* Bernard, Nat. Can. 95: 799, fig. 2. 1968. Que. *P. balsamifera* × *deltoides* × *tremuloides*.

*Populus* ×*rouleauiana* Boivin, Nat. Can. 93: 435. 1966. Que. *P. alba* × *grandidentata*

*Populus* ×*sennii* Boivin, Mat. Can. 93: 435. 1966. Alta *P. angustifolia* × *tremuloides*

*Populus* ×*smithii* Boivin, Nat. Can. 93: 435. 1966. *P. grandidentata* × *tremuloides*

*Populus tremula* ssp. *tremuloides* (Michx.) A. & D. Löve, Bot. Not. 128: 505. 1975 (1976). *P. tremuloides* Michx.

*Prosopis glandulosa* var. *prostrata* Burkart, J. Arnold Arbor. 57: 516. 1976. Tex.

*Prosopis glandulosa* var. *torreyana* (L. Benson) M. C. Johnst., Brittonia 14: 82. 1962. *P. juliflora* var. *torreyana* L. Benson

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*Prunus serotina* var. *alabamensis* (C. Mohr) Little, Phytologia 4: 309. 1953. *P. alabamensis* C. Mohr

*Prunus serotina* ssp. *capuli* (Cav. ex Spreng.) McVaugh, Brittonia 7: 308. 1951. *P. capuli* Cav. ex Spreng.

*Prunus serotina* ssp. *eximia* (Small) McVaugh, Brittonia 7: 302. 1951. *P. eximia* Small

*Prunus serotina* var. *eximia* (Small) Little, Phytologia 4: 309. 1953. *P. eximia* Small

*Prunus serotina* ssp. *hirsuta* (Ell.) McVaugh, Brittonia 7: 299. 1951. *P. hirsuta* Ell.

*Prunus serotina* ssp. *virens* (Woot. & Standl.) McVaugh, Brittonia 7: 303. 1951. *Padus virens* Woot. & Standl.

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*Psidium longipes* (Berg) McVaugh, J. Arnold Arbor. 54: 312. 1973. *Eugenia longipes* Berg

*Ptelea trifoliata* ssp. *angustifolia* (Benth.) V. L. Bailey, Brittonnia 14: 15. 1962. *P. angustifolia* Benth.
*Ptelea trifoliata* ssp. *angustifolia* var. *persicifolia* (Greene) V. L. Bailey, Brittonia 14: 19. 1962. *P. persicifolia* Greene
*Ptelea trifoliata* ssp. *pallida* (Greene) V. L. Bailey, Brittonia 14: 23. 1962. *P. pallida* Greene
*Ptelea trifoliata* ssp. *pallida* var. *confinis* (Greene) V. L. Bailey, Brittonia 14: 27. 1962. *P. confinis* Greene
*Ptelea trifoliata* ssp. *pallida* var. *lutescens* (Greene) V. L. Bailey, Brittonia 14: 25. 1962. *P. lutescens* Greene
*Ptelea trifoliata* ssp. *polyadenia* (Greene) V. L. Bailey, Brittonia 14: 20. 1962. *P. polyadenia* Greene
*Pyrus groenlandica* (Schneid.) K. Robertson, J. Arnold Arbor. 55: 646. 1974. *Sorbus americana* var. *groenlandica* Schneid.

*Quercus ajoensis* C. H. Muller, Madroño 12: 140, fig. 1. 1954. Ariz. *Q. turbinella ajoensis* (Muller) Felger & Lowe
*Quercus alba* var. *subcaerulea* A. L. & M. C. W. Pickens, Castanea 25: 125. 1960. S.C.
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*Quercus* ×*caesariensis* Moldenke, Phytologia 4: 293. 1953. N.J. *Q. ilicifolia* × *rubra* [*falcata*]
*Quercus* ×*columnaris* Laughlin, Phytologia 9: 488, figs. 1964. Ill. *Q. palustris* × *rubra*
*Quercus* ×*discreta* Laughlin, Phytologia 7: 411, figs. 1961. Mo. *Q. shumardii* × *velutina*
*Quercus ellipsoidalis* var. *kaposianensis* J. W. Moore, Rhodora 51: 56. 1950. Minn.
*Quercus* ×*fontana* Laughlin, Phytologia 15: 295, figs. 1967. Mo. *Q. coccinea* × *velutina*
*Quercus hemispherica* var. *maritima* (Michx.) C. H. Muller, Am. Midl. Nat. 65: 35. 1961. *Q. phellos* beta *maritima* Michx.
*Quercus* ×*howellii* Tucker, Madroño 12: 125, fig. 1D. 1953. Calif. *Q. dumosa* × *garryana*
*Quercus* ×*intrognessa* P. M. Thomson, Rhodora 79: 453, fig. 1 1977. Mo. *Q. bicolor* × (*Q. muehlenbergii* × *prinoides*)
*Quercus* ×*megaleia* Laughlin, Phytologia 8: 154, figs. 1962. Mo. *Q. lyrata* × *macrocarpa*
*Quercus* ×*munzii* Tucker, Madroño 19: 257, fig. 1, 3-6. 1968. *Q. lobata* × *turbinella* ssp. *californica*
*Quercus oleoides* var. *quaterna* C. H. Muller, Contrib. Tex. Res. Found. 1: 76, pl. 54, 55. 1951. Tex.
*Quercus* ×*pinetorum* Moldenke, Phytologia 4: 293. 1953. N.J. *Q. rubra* [*falcata*] × *velutina*
*Quercus prinoides* var. *acuminata* (Michx.) Gleason, Phytologia 4: 23. 1952. *Q. prinus* (*acuminata*) Michx.
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*Quercus* ×*riparia* Laughlin, Phytologia 9: 102, figs. 1963. Mo. *Q. rubra* × *shumardii schneckii*
*Quercus shumardii* var. *microcarpa* (Torr.) Shinners, Field and Lab. 24: 37. 1956. *Q. coccinea* var. ? *microcarpa* Torr.
*Quercus shumardii* var. *stenocarpa* Laughlin, Phytologia 19: 57, figs. 1969. Ill.
*Quercus stellata* var. *mississippiensis* (Ashe) Little, Phytologia 4: 305. 1953. *Q. mississippiensis* Ashe
*Quercus* ×*subconvexa* Tucker, Madroño 12: 119, fig. 1B. 1953. Calif. *Q. durata* × *garryana*
*Quercus* ×*tottenii* Melvin, J. Elisha Mitchell Sci. Soc. 72: 347. 1956. N.C. *Q. lyrata* × *michauxii*
*Quercus turbinella* ssp. *ajoensis* (C. H. Muller) Felger & Lowe, J. Ariz. Acad. Sci. 6: 83. 1970. *Q. ajoensis* C. H. Muller
*Quercus turbinella* ssp. *californica* Tucker, Madroño 11: 240. 1952. Calif.

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*Salix* ×*beschelii* Boivin, Nat. Can. 93: 436. 1966. Can. *S. bebbiana* × *discolor*
*Salix* ×*brachypurpurea* Boivin, Phytologia 15: 407. 1967. Sask. *S. brachycarpa* × *lutea* var. *turnorii*
*Salix depressa* L. ssp. *rostrata* (Anderss.) Hiitonen, Memo. Soc. Faun. Fl. Fenn. 25: 82. 1950.

*Salix exigua* ssp. *interior* (Rowlee) Cronq., Vasc. Pl. Pacif. NW. 2: 51. 1964. *S. interior* Rowlee

*Salix exigua* ssp. *melanopis* (Nutt.) Cronq., Vasc. Pl. Pacif. NW. 2: 51. 1964. *S. interior* Rowlee

*Salix exigua* ssp. *melanopis* var. *gracilipes* (Ball) Cronq., Vasc. Pls. Pacif. NW. 2: 51. 1964. *S. melanopis* var *gracilipes* Ball

*Salix fluviatilis* var. *sericans* (Nees) Boivin, Nat. Can. 93: 436. 1966. *S. longifolia* var. *sericans* Nees

*Salix fluviatilis* var. *sericans* f. *hindsiana* (Benth.) Boivin, Nat. Can. 93: 436. 1966.

*Salix glauca* subsp. *acutifolia* (Hook.) Hultén, Ark. Bot. (n.s.) 7: 40. 1968. *S. villosa* var. *acutifolia* Hook.

*Salix glauca* subsp. *glabrescens* (Anderss.) Hultén, Ark. Bot. (n.s.) 7: 40. 1968. *S. glaucops* var. *glabrescens* Anderss.

*Salix glauca* var. *macounii* (Rydb.) Boivin, Nat. Can. 93: 437. 1966. *S. macounii* Rydb.

*Salix glauca* var. *niphoclada* (Rydb.) Wiggins in Wiggins & Thomas, Fl. Alask. Arct. Slope 144. 1962. *S. niphoclada* Rydb.

*Salix lutea* var. *turnorii* (Raup) Boivin, Phytologia 15: 408. 1967. *S. turnorii* Raup

*Salix melanopsis* var. *kronkheitii* L. Kelso, Biol. Leafl. 48: 1, fig. 1950. Colo.

*Salix pellita* var. *angustifolia* (Bebb) Boivin, Nat. Can. 93: 437. 1966. *S. sitchensis* var. *angustifolia* Bebb

*Salix rigida* var. *mackenzieana* (Hook.) Cronq., Vasc. Pl. Pacif. NW. 2: 63. 1964. *S. cordata* var. *mackenzieana* Hook.

*Salix rigida* var. *macrogemma* (Ball) Cronq., Vasc. Pl. Pacif. NW. 2: 65. 1964. *S. mackenzieana* var. *macrogemma* Ball

*Salix rigida* var. *watsonii* (Bebb) Cronq., Vasc. Pl. Pacif. NW. 2: 65. 1964. *S. cordata* var. *watsonii* Bebb

*Salix* ×*schneideri* Boivin, Nat. Can. 93: 437. 1966. Ont. *S. lucida* × *nigra*

*Salix starkeana* Willd. ssp. *bebbiana* (Sarg.) Youngberg, Rhodora 72: 549. 1970. *S. bebbiana* Sarg.

*Sorbus groenlandica* (Schneid.) A. & D. Löve, Univ. Colo. Stud., Biol. Ser. 17: 23. 1965. *S. americana* var. *groenlandica* Schneid.

*Sorbus scopulina* var. *cascadensis* (G. N. Jones) C. L. Hitchc., Vasc. Pl. Pacif. NW. 3: 189. 1961. *S. cascadensis* G. N. Jones

*Sorbus sitchensis* ssp. *grayi* (Wenzig) Cald. & Tayl., Can. J. Bot. 43: 1395. 1965. *S. sambucifolia* var. *grayi* Wenzig

*Sorbus sitchensis* var. *grayi* (Wenzig) C. L. Hitchc., Vasc. Pl. Pacif. NW. 3: 189. 1961. *S. sambucifolia* var. *grayi* Wenzig

*Swida* ×*acadiensis* (Fern.) Soják, Novit. Bot. Hort. Bot. Univ. Carol. 10. 1960. *Cornus* ×*acadiensis* Fern. *(C. alternifolia* × *stolonifera)*

*Thelycrania asperifolia* (Michx.) Pojark., Notul. Syst. Inst. Bot. Komarov Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *asperifolia* Michx.

*Thelycrania baileyi* (Coult. & Evans Pojark., Notul. Syst. Inst. Bot. Komarov Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *baileyi* Coult. & Evans

*Thelycrania californica* (C. A. Mey.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *californica* C. A. Mey.

*Thelycrania candidissima* (Marsh.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *candidissima* Marsh.

*Thelycrania catalinensis* (Millsp.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Svida*] *catalinensis* Millsp.

*Thelycrania glabrata* (Benth.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *glabrata* Benth.

*Thelycrania instolonea* (A. Nels.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *instolonea* A. Nels.

*Thelycrania interior* (Rydb.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950; "*interna*." [*Suida*] *interior* Rydb.

*Thelycrania microcarpa* (Nash) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *microcarpa* Nash

*Thelycrania priceae* (Small) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *priceae* Small

*Thelycrania pubescens* (Nutt.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *pubescens* Nutt.

*Thelycrania purpusii* (Koehne) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *purpusii* Koehne

*Thelycrania racemosa* (Lam.) D. Löve & Bernard, Sv. Bot. Tidskr. 53: 417. 1959. *Cornus racemosa* Lam. Tsitsin, Trees & Shrubs 50. 1959.

*Thelycrania rugosa* (Lam.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS. 12: 165. 1950. [*Cornus*] *rugosa* Lam.

*Thelycrania sericea* (L.) Dandy, Watsonia 4: 47. 1957. *Cornus sericea* L.

*Thelycrania stolonifera* (Michx.) Pojark., Notul. Syst. Inst. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *stolonifera* Michx.
*Thelycrania stricta* (Lam.) Pojark., Notul. Syst. Int. Bot. Komarov. Acad. Sci. URSS 12: 165. 1950. [*Cornus*] *stricta* Lam.
*Tilia americana* var. *neglecta* (Spach) Fosberg, Castanea 20: 58. 1955. *T. neglecta* Spach
*Tilia relicta* Laughlin, Phytologia 24: 302, figs. 1972. Ark.
*Tricerma phyllanthoides* (Benth.) Lundell, Wrightia 4: 158. 1971. *Maytenus phyllanthoides* Benth.

*Ulmus americana* var. *floridana* (Chapm.) Little, Phytologia 4: 306. 1953. *U. floridana* Chapm.

*Viburnum cassinoides* var. *angustifolium* (Torr. & Gray) Shinners, Southw. Nat. 1: 91. 1957. *V. nudum* var. *angustifolium* Torr. & Gray
*Viburnum opulus* var. *trilobum* (Marsh.) McAtee, Rev. Nearct. Viburnum 48. 1956. *V. trilobum* Marsh.

*Yucca brevifolia* var. *herbertii* (J. M. Webber) Munz, Aliso 4: 88. 1958. *Y. brevifolia* f. *herbertii* J. M. Webber
*Yucca elata* var. *utahensis* (McKelvey) Reveal in Cronq. et al., Intermt. Fl. 6: 533, 566. 1977. *Y. utahensis* McKelvey
*Yucca elata* var. *verdiensis* (McKelvey) Reveal in Cronq. et al., Intermt. Fl. 6: 533, 566. 1977. *Y. verdiensis* McKelvey

*Ziziphus obtusifolia* var. *canescens* (Gray) M. C. Johnst., Brittonia 14: 367. 1962. *Z. lycioides* var. *canescens* Gray

*Condaliopsis obtusifolia* (Hook. ex Torr. & Gray) Suessenguth, Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 20d: 135, 392. 1953.
*Manilkara achras* (Mill.) Fosberg, Taxon 13: 255. 1964. *Sapota achras* Mill.
*Myrcianthes fragrans* var. *simpsonii* (Small) R. W. Long, Rhodora 72: 23. 1970. *Anamomis simpsonii* Small
*Myrcianthes simponii* (Small) K. A. Wils., J. Arnold Arbor. 41: 276. 1960
*Persea borbonia* var. *pubescens* (Pursh) Little, Phytologia 42: 219. 1979. *Laurus carolinensis var. β pubescens* Pursh
*Pinus aristata* var. *longaeva* (D. K. Bailey) Little, Phytologia 42: 221. 1979. *P. longaeva* D. K. Bailey
*Pinus chiapensis* (Martínez) Andresen, Phytologia 10:417. 1964. *P. strobus var. chiapensis* Martínez
*Populus fremontii* var. *mesetae* (Eckenwalder) Little, Phytologia 42: 220. 1979. *P. fremontii* ssp. *mesetae* Eckenwalder

*Quercus* ×*diversiloba* Tharp ex A. Camus, Les Chênes 3: 439. 1954. Tex. *Q. laurifolia* var. *litoralis* × *marilandica*
*Quercus* ×*palmeriana* A. Camus, Les Chênes 3: 1270. 1954. *Q.* ×*anceps* Palmer, non Korth.
*Quercus turbinella* var. *ajoensis* (C. H. Muller) Little, Phytologia 42: 221. 1979. *Q. ajoensis* C. H. Muller
*Strobus lambertiana* (Dougl.) Moldenke, Phytologia 4: 128. 1952. *Pinus lambertiana* Dougl.
*Swida* ×*arnoldiana* (Rehd.) Soják, Novit. Bot. Hort. Bot. Univ. Carol. 10. 1960. *Cornus* ×*arnoldiana* Rehd.
*Swida drummondii* (C. A. Meyer) Soják, Novit. Bot. Hort. Bot. Univ. Carol. 10. 1960. *Cornus drummondii* C. A. Meyer
*Swida occidentalis* (Torr. & Gray) Soják, Novit. Bot. Hort. Bot. Univ. Carol. 10. 1960. *Cornus drummondii* C. A. Meyer
*Swida purpusii* (Koehne) Soják, Novit. Bot. Hort. Bot. Univ. Carol. 10. 1960. *Cornus purpusii* Koehne
*Swida sericea* (L.) Holub, Folia Geobot. Phytotax. Praha 2: 427. 1967. *Cornus sericea* L.

# APPENDIX 4
# AUTHORS OF ACCEPTED SCIENTIFIC NAMES

Brief biographical information about the authors of accepted scientific names, approximately 300 persons, is added to this revision. Genera, species, varieties, and interspecific hybrids are included, but synonyms and names in notes are not. The author's complete name is needed to locate the reference, often briefly cited, containing the original description and related historical data, such as locality and collector of the type specimen.

Full name of the author is followed by: (1) year of birth and of death (if deceased); (2) geographical region, such as country of residence or special field work; and (3) brief notes, such as occupation or taxonomic specialty within the scope of this Checklist. Where two persons were joint authors, their names are listed separately.

Most persons listed have been plant taxonomists, botanists, or scientists involved in naming and describing plants. Some early workers were naturalists or physicians, while others were better known as plant collectors or explorers than as authors. For a few persons, such as clergymen, naming new plants was an avocation. Several merely made one or more transfers or new combinations or named only hybrids or varieties. Mention of a geographical region is incomplete for those who moved or traveled widely.

This biographical information was assembled from various sources. Three special references are: Barnhart *(9)*, Hunt Institute for Botanical Documentation *(44)*, and, for contemporary national authors, American Men and Women of Science *(46)*. Further details are available in the lists of collectors by Lanjouw and Stafleu *(53)* and references on taxonomic literature by Stafleu and Cowan *(114, 116)*. Some descriptive floras contain lists of authors for their respective geographic regions *(21, 34, 43, 74, 83, 91,* etc.*)*. These titles may be consulted for additional authors cited in synonymy.

Adans. Michel Adanson (1727-1806), France, originated 1600 generic names.

Ait. William Aiton (1731-93), England, Kew Gardens, botanist, gardener.

Alexander Edward Johnson Alexander (1901- ), US, New York Botanical Garden.

Anderss. Nils Johan Andersson (1821-80), Sweden, collected in California in 1852; *Salix*.

André Édouard Francois André (1840-1911), France, horticulturist, botanical collector.

Arn. George Arnold Walker Arnott (1799-1868), Scotland.

Ashe William Willard Ashe (1872-1932), US, Forest Service, forester, dendrologist.

Aubl. Jean Baptiste Christophe Fusée Aublet (1720-78), France, French Guiana.

Audubon John James Laforest Audubon (1780-1851), US, ornithologist, artist.

Bailey Liberty Hyde Bailey (1858-1954), US, Cornell University, horticulturist, author; Palmae.

D. K. Bailey Dana Kavanagh Bailey (1916- ), US; *Pinus*.

Baill. Henri Ernest Baillon (1827-95), France.

Balf. John Hutton Balfour (1808-84), Scotland, Edinburgh.

Ball Carleton Roy Ball (1873-1958), US, Department of Agriculture, agronomist, botanist; *Salix*.

Banks Joseph Banks (1743-1820), England, Kew Gardens, botanical collector, patron of sciences.

Barkl. Fred Alexander Barkley (1908- ), US, Northeastern University; Anacardiaceae.

Barratt Joseph Barratt (1797-1882), US, British born, physician, geologist; *Salix*.

Bartr. William Bartram (1739-1823), US, Pennsylvania, botanist, naturalist.

Batsch August Johann Georg Karl Batsch (1761-1802), German horticultural writer.

Beadle Chauncey Delos Beadle (1866-1950), US, North Carolina, horticulturist, landscape architect, botanist; *Crataegus*.

Bebb Michael Schuck Bebb (1833-95), US, Illinois; *Salix*.

Becc. Odoardo Beccari (1843-1927), Italy; Palmae.

Beissn. Ludwig Beissner (1843-1927), Germany.

L. Benson Lyman David Benson (1909- ), US, California, Arizona; Cactaceae.

Benth. George Bentham (1800-84), British botanist, author; Leguminosae.

Berg Otto Karl Berg (1815-66), Germany; Myrtaceae.

Berland. Jean Louis Berlandier (1805-51), native of Belgium, Switzerland, Mexico; one of first plant collectors in Texas, pharmacist.

Bernard F. Guy Bernard (19- ), Canada, University of Montreal.

Blanchard William Henry Blanchard (1850-1922), US, New England, teacher.

S. T. Blake Stanley Thatcher Blake (1910-1973), Australia.

Blume Carl Ludwig von Blume (1796-1862), Germany, Java.

Boivin Joseph Robert Bernard Boivin (1916- ), Canada.

Bong. August Heinrich Gustav Bongard (1786-1839), Russia, St. Petersburg, plants of Brazil and Alaska.

Borkh. Moritz Balthasar Borkhausen (1760-1806), Germany.

Bosc Louis Augustin Guillaume Bosc (1759-1828), French naturalist.

P. Br. Patrick Browne (1720-90), Ireland, Jamaica, physician, naturalist.

Britton Nathaniel Lord Britton (1859-1934), US, New York Botanical Garden, North America, Puerto Rico and Virgin Islands; Cactaceae.

Briz. George Konstantin Brizicky (1901-1968), US, Harvard University.

Brongn. Adolphe Théodore Brongniart (1801-76), France, paleobotanist, botanist.

B.S.P. Nathaniel Lord Britton; Emerson Ellick Sterns (1846-1926), US, New York; and Justus Ferdinand Poggenburg (1840-93), US, New York, newspaper publisher.

Buchholz John Theodore Buchholz (1888-1951), US, Illinois; Coniferae.

Buckl. Samuel Botsford Buckley (1809-1884), US, Texas, geologist, naturalist, collector.

Burm. f. Nicolaas Laurens Burman (1733-93), Netherlands.

Bush Benjamin Franklin Bush (1858-1937), US, Missouri, postmaster, botanist.

Butler Bertram Theodor Butler (1872-19 ?), US, Columbia University; *Betula*.

A. Camus Aimée Antoinette Camus (1879-1965), France; *Quercus*, *Castanea*, *Cupressus*.

Carr. Élie Abel Carrière (1818-96), France, Paris; horticulturist, botanist; Coniferae.

Cav. Antonio José Cavanilles (1745-1804), Spain, Madrid.

Cham. Ludolf Adalbert von Chamisso (formerly Louis Charles Adelaide Chamisso de Boncourt; 1781-1838); Germany, visited California in 1816 and Alaska in 1816 and 1817; naturalist, explorer.

Chapm. Alvan Wentworth Chapman (1809-99), US, Florida, physician, botanist.

H. H. Chapm. Herman Haupt Chapman (1874-1963), US, Yale University, forester.

Christmann Gottlieb Friedrich Christmann (1752-?), Germany.

Clark Ross Carlton Clark (19- ), US.

Cogn. Célestin Alfred Cogniaux (1841-1916), Belgium; Melastomataceae.

Cook Orator Fuller Cook (1867-1949), US, Department of Agriculture, botanist, plant explorer; Palmae.

Correa José Francisco Corrêa da Serra (1751-1823), Portugal; botanist, clergyman.

Correll Donovan Stewart Correll (1908- ), US, Fairchild Tropical Garden, earlier Department of Agriculture.

Cory Victor Louis Cory (1880-1964), US, Texas, Southern Methodist University.

Coult. John Merle Coulter (1851-1928), US, University of Chicago.

Cov. Frederick Vernon Coville (1867-1937), US, Department of Agriculture, National Herbarium.

Crantz Heinrich Johann Nepomuk von Crantz (1722-1799), Austria, physician, botanist.

A. Cunn. Allan Cunningham (1791-1839), England, Australia.

M. A. Curtis Moses Ashley Curtis (1808-72), US, botanist, clergyman.

A. Davidson Anstruther Davidson (1860-1932), US, Los Angeles, physician, botanist.

W. T. Davis William Thompson Davis (1862-1945), US.

DC. Augustin Pyramus de Candolle (also Décandolle; 1778-1841), Switzerland, Geneva.

A. DC. Alphonse Louis Pierre Pyramus de Candolle, the son (1806-93), Switzerland, Geneva.

de Wit Hendrik Cornelis Dirk de Wit (1909- ), Netherlands.

Deppe Ferdinand Deppe (d. 1861), Germany.

Desf. René Louiche Desfontaines (1750-1833), France, Paris.

Dieck George Dieck (1847-1925), Germany, collected in western United States in 1888.

A. Dietr. Albert Gottfried Dietrich (1795-1856), Germany, Berlin, gardener.

D. Dietr. David Nathanael Friedrich Dietrich (1800-88), Germany, Jena.

Dippel Leopold Dippel (1827-1914), Germany, dendrologist.
Dode Louis Albert Dode (1875-1943), France, botanist, forester; *Populus*.
D. Don David Don (1799-1841), England, London.
G. Don George Don (1798-1856), brother of David, England, botanical collector.
Donn James Donn (1758-1813), British gardener.
Dorman Keith William Dorman (1910- ), US, Forest Service, forester.
Dougl. David Douglas (1798-1834), Scotch botanical collector in California, Oregon, Hawaii.
Dugle Janet Mary Rogge Dugle (1934- ), US, Canada; *Betula*.
Dum.-Cours. Georges Louis Marie Dumond de Courset (1746-1824), French agronomist and horticultural writer.
Dunal Michel Félix Dunal (1789-1856), France, Montpellier.
Duncan Wilbur Howard Duncan (1910- ), US, University of Georgia.
Durand Elias Magloire Durand (1794-1873), US, Philadelphia, pharmacist, botanist.
Durazzini Antonio Durazzini (fl. 1772), Italy, Florence.
Du Roi Johann Philipp Du Roi (1741-85), Germany.
Eastw. Alice Eastwood (1859-1953), US, California Academy of Sciences, San Francisco.
Eaton Amos Eaton (1776-1842), US, New York, botanist, author of first U.S. regional manual in English.
Eberm. Carl Heinrich Ebermaier (1802-70), Germany.
Echenwalder James E. Echenwalder (19- ), US; *Populus*.
Eggl. William Webster Eggleston (1863-1935), US, Department of Agriculture, Washington, D.C., botanist, pharmacist; *Crataegus*.
Ehrh. Friedrich Ehrhart (1742-95), German botanist of Swiss origin.
Ell. Stephen Elliott (1771-1830), US, Charleston, S.C., botanist, banker.
Ellis John Ellis (1710-76), Irish-born merchant in London.
Endl. Stephen Friedrich Ladislaus Endlicher (1804-49), Austria, Vienna, botanist, linguist; Coniferae.
Engelm. George Engelmann (1809-84), US, St. Louis, physician, botanist; Coniferae, Cactaceae, *Yucca*.
Engl. Adolf Engler (Heinrich Gustaf Adolf; 1844-1930), Germany, Berlin Botanic Garden.
Eschsch. Johann Friedrich Eschscholtz (1793-1831), Esthonia, Russia, physician, naturalist, visited California in 1816 and 1824.
W. H. Evans Walter Harrison Evans (1863-1941), US, Department of Agriculture; Alaska.
Fern. Merritt Lyndon Fernald (1873-1950), US, Harvard University.
Forbes James Forbes (1773-1861), British gardener.
Franco João Manuel Antonio Paes do Amaral Franco (1921- ), Portugal, Lisbon.
Frém. John Charles Frémont (1813-90), US, general, explorer, politician, first plant collector in Sierra Nevada of California.
Gaertn. Joseph Gaertner (1732-91), Germany, physician, botanist.
Gaertn. f. Carl Friederich von Gaertner (1772-1850), son of Joseph, Germany, botanist.
Gal. Henri (Guillaume) Galeotti (1814-58), Belgium, Mexico.
Garden Alexander Garden (1730-91), US, Charleston, S.C., physician and amateur botanist.
A. H. Gentry Alwin Howard Gentry (1945- ), US; Bignoniaceae.

Glend. Robert Glendinning (fl. 1844-58), British nurseryman.
J. F. Gmel. Johann Friedrich Gmelin (1748-1804), Germany.
Gómez Ortega Casimiro Gómez Ortega (1740-1818), Spain, Madrid.
Gord. George Gordon (1806-79), British gardener; Coniferae.
Graebn. Karl Otto Robert Peter Paul Graebner (1871-1933), Germany, Berlin.
Graham Robert C. Graham (1786-1845), Scotland, Edinburgh.
Gray Asa Gray (1810-88), US, Harvard University.
Greene Edward Lee Greene (1843-1915), US, California, Catholic University of America, Smithsonian Institution.
Grev. Robert Kaye Greville (1794-1866), Scotland, Edinburgh.
Griseb. August Heinrich Rudolf Grisebach (1814-79), Germany, West Indies.
F. Harper Francis Harper (1886- ), brother of Roland McMillan Harper, US, zoologist, botanist.
Hartw. Karl Theodor Hartweg (1812-71), Germany, plant collector in Mexico and in California 1846-47.
Hassk. Justus Carl Hasskarl (1811-94), Germany, Java.
Haw. Adrian Hardy Haworth (1767-1833), British gardener and entomologist; succulents.
H.B.K. Friedrich Wilhelm Heinrich Alexander von Humboldt (1769-1859), Germany, tropical America, naturalist, explorer; Aimé Jacques Alexandre Bonpland (1773-1858), France, tropical America, botanist, explorer; and Carl Sigismund Kunth (1788-1850), Germany, Berlin, botanist.
Hedr. Ulysses Prentiss Hedrick (1870-1951), US, New York, pomologist.
Heller Amos Arthur Heller (1867-1944), US, botanist, plant collector.
Henry Augustine H. Henry (1857-1930), British forester, China.
Hildebr. Friedrich Hermann Gustav Hildebrand (1835-1915), Germany.
Hilgard Theodore Charles Hilgard (1828-1917), US, Philadelphia, physician.
E. J. Hill Ellsworth Jerome Hill (1833-1917), US, Illinois, teacher, botanist.
Hook. William Jackson Hooker (1785-1865), England, Kew.
Hook. f. Joseph Dalton Hooker (1817-1911), the son, England, Kew, visited America in 1877.
Hopkins Milton Hopkins (1906- ), US; *Cercis*.
Hornem. Jens Wilken Hornemann (1770-1841), Denmark.
Howell Thomas Jefferson Howell (1842-1912), US, Portland, Oreg.
Hutch. John Hutchinson (1884-1972), England, Kew, botanist, artist.
Jacq. Nikolaus Joseph von Jacquin (1727-1817), Austria, West Indies, botanist, artist.
James Edwin James (1797-1861), US, physician, naturalist, first plant collector in Colorado (1819-20).
Jeps. Willis Linn Jepson (1867-1946), US, University of California, Berkeley.
I. M. Johnst. Ivan Murray Johnston (1898-1960), US, Harvard University; Boraginaceae.
M. C. Johnst. Marshall Conring Johnston (1930- ), US, University of Texas, Austin; Rhamnaceae.
Juss. Antoine Laurent de Jussieu (1748-1836), France, Paris.
Kearney Thomas Henry Kearney (1874-1956), US, Department of Agriculture; Arizona.

Kell. Albert Kellogg (1813-87), US, California, San Francisco, physician, botanist.

Kirchner Georg Kirchner (1837-85), Germany.

K. Koch Karl Heinrich Emil Koch (1809-79), Germany, Berlin, botanist, dendrologist.

Koehne Bernhard Adalbert Emil Koehne (1848-1918), Germany, Berlin.

Kopp Lucille E. Kopp (later Mrs. Robert F. Blum; 1926- ), US; *Persea*.

Kosterm. André Joseph Guillaume Henri Kostermans (1907- ), Indonesia.

Krug Carl Wilhelm Leopold Krug (1833-98), Germany, Puerto Rico, businessman, botanist, patron of science.

Kruschke Emil Paul Kruschke (1907-76), US, Wisconsin; *Crataegus*.

Kuntze Carl Ernst Otto Kuntze (1843-1907), Germany.

L. Carolus Linnaeus (afterwards Carl von Linné; 1707-78), Sweden, naturalist, botanist, founder of binomial nomenclature, the "Father of Botany."

L. f. Carl von Linné, the son (1741-83), Sweden.

Labill. Jacques Julien Houtton de Labillardière (1755-1834), France, explorer and botanist.

Lag. Mariano Lagasca y Segura (1776-1839), Spain, Madrid.

Lam. Jean Baptiste Antoine Pierre Monnet de Lamarck (1744-1829), France, naturalist.

H. J. Lam Herman Johannes Lam (1892- ), Netherlands.

Lamb. Aylmer Bourke Lambert (1761-1842), England, London, botanist, patron; Coniferae.

Lange Johan Martin Christian Lange (1818-98), Denmark, Copenhagen.

Laughlin Kendall Laughlin (1890- ), US; *Crataegus*.

Lawson Charles Lawson ( 1794-1873), Scotch nurseryman.

Lem. Charles Antoine Lemaire (1801-71), Belgium, Cactaceae.

Lemm. John Gill Lemmon (1832-1908), US, California; Coniferae.

Lepage (Abbé) Ernest Lepage (1905- ), Canada.

L'Hér. Charles Louis L'Héritier de Brutelle (1746-1800), France.

Linden Jean Jules Linden (1817-98), Belgium, Brussels.

Lindl. John Lindley (1799-1865), British botanist, horticulturist.

Lingelsh. Alexander von Lingelsheim (1874-1937), Germany; Oleaceae.

Little Elbert Luther Little, Jr. (1907- ), US, Forest Service, Washington, D.C., botanist, dendrologist.

Lodd. Conrad Loddig (1738-1826), British nurseryman.

Loes. Ludwig Eduard Theodor Loesener (1865-1941), Germany, Mexico.

R. W. Long Robert William Long (1927-76), US, Florida.

Loud. John Claudius Loudon (1783-1843), British horticulturist.

Lour. João de Loureiro (1710-91), Portuguese missionary and naturalist.

Lundell Cyrus Longworth Lundell (1907- ), US, Texas Research Foundation.

Macfadyen James Macfadyen (1798-1850), Scotland, Jamaica.

McKelvey Susan Adams McKelvey (née Delano; 1883-1964), US, *Yucca*.

Marsh. Humphrey Marshall (1722-1801), US, Pennsylvania, early dendrologist; first native-born American to write a book on the trees and shrubs, Arbustrum Americanum (1785).

Marsili Giovanni Marsili (1727-95), Italy.

Mart. Carl Friedrich Phillipp von Martius (1794-1868), Germany, Brazil.

Mason Herbert Louis Mason (1896- ), US, University of California, Berkeley.

McVaugh Rogers McVaugh (1909- ), US, University of Michigan, earlier U.S. Department of Agriculture; Myrtaceae.

Mayr Heinrich Mayr (1856-1911), German forester.

Medic. Friedrich Casimir Medicus (1736-1808), Germany.

Meeuse Adrianus Dirk Jacob Meeuse (1914- ), Netherlands.

Melvin Lionel Melvin (19-- ), US, North Carolina.

Merr. Elmer Drew Merrill (1876-1956), US, New York Botanical Garden, Harvard University, earlier Department of Agriculture; Philippines and southeast Asia.

Merriam Clinton Hart Merriam (1855-1942), US, founder of Biological Survey.

C. A. Mey. Carl Anton von Meyer (1795-1855), Russia, St. Petersburg.

Mez Carl Christian Mez (1866-1944), Germany.

Michx. André Michaux (1746-1802), France, United States; *Quercus*.

Michx. f. François André Michaux, the son (1770-1855), France, United States.

Miers John Miers (1789-1879), England, South America.

Mill. Philip Miller (1691-1771), England, botanist, horticulutrist.

Miq. Friedrich Anton Wilhelm Miquel (1811-71), Netherlands.

Mirb. Charles François Brisseau de Mirbel (1776-1854), France, Paris.

Moench Conrad Moench (1744-1805), Germany.

Mohr Charles Theodor Mohr (1824-1901), US, of German birth, chemist, botanist; Alabama.

Moldenke Harold Norman Moldenke (1909- ), US, New Jersey, Verbenaceae.

Muenchh. Otto von Muenchhausen (1716-74), Germany.

Muhl. Henry Muhlenberg (formerly Gotthilf Heinrich Ernst Muehlenberg; 1753-1815), US, Pennsylvania, clergyman, botanist.

C. H. Muller Cornelius Herman Muller (1909- ), US, University of California at Santa Barbara; *Quercus*.

A. Murr. Andrew Murray (1812-78), Scotland, entomologist, botanist; Coniferae.

Nash George Valentine Nash (1864-1919), US, New York Botanical Garden, botanist, horticulturist.

Née Luis Née (c1760-18--), Spaniard of French birth, one of first botanists to visit California, in 1791.

Nees Christian Gottfried Daniel Nees von Esenbeck (1776-1858), Germany.

T.F.L. Nees Theodor Friedrich Nees von Esenbeck (1787-1837), Germany.

Nielsen Etlar Lester Nielsen (1905- ), US, *Amelanchier*.

Newb. John Strong Newberry (1822-92), US, physician, botanist, paleobotanist.

Nutt. Thomas Nuttall (1786-1859), US and England, Philadelphia, Harvard, botanist, ornithologist.

Ortgies Karl Eduard Ortgies (1829-1916), Germany.

Osbeck Pehr Osbeck (1723-1805), Sweden.

Palmer Ernest Jesse Palmer (1875-1962), US, Missouri Botanical Garden and Arnold Arboretum; *Crataegus*, *Quercus*.

Parl. Filippo Parlatore (1816-77), Italy; Coniferae.
Parry Charles Christopher Parry (1823-90), US, Iowa.
Pax Ferdinand Albin Pax (1858-1942), Germany; Aceraceae.
Pers. Christian Hendrik Persoon (1761-1836), France, Germany, botanist, mycologist.
Planch. Jules Émile Planchon (1823-88), France.
Poir. Jean Louis Marie Poiret (1755-1834), France.
Poiteau Pierre Antoine Poiteau (1766-1854), France.
Porter Thomas Conrad Porter (1822-1901), US, Pennsylvania.
Presl Karel Boriwog Presl (1794-1852), Czechoslovakia.
J. S. Presl Jan Swatopluk Presl (1791-1849), Czechoslovakia, brother of Karel Boriwog Presl.
Pursh Frederick Traugott Pursh (1774-1820), US, Philadelphia, of German birth.
Raddi Guiseppe Raddi (1770-1829), Italy, Brazil.
Radlk. Ludwig Adolph Timotheus Radlkofer (1829-1927), Germany, Sapindaceae.
Raf. Constantine Samuel Rafinesque (or Rafinesque-Schmaltz; 1783-1840), US, born in Constantinople, naturalist, botanist.
Raup Hugh Miller Raup (1901- ), US, Arnold Arboretum; *Salix*.
Regel Eduard August von Regel (1815-92), Russia, St. Petersburg; Betulaceae.
Rehd. Alfred Rehder (1863-1949), US, of German birth, Arnold Arboretum, botanist, dendrologist.
Rich. Louis Claude Marie Richard (1754-1821), France.
A. Rich. Achille Richard, the son (1794-1852), France, Paris, physician, botanist.
Righter Francis Irving Righter (1897-1972), US, Forest Service, geneticist.
Robins. Benjamin Lincoln Robinson (1864-1935), US, Harvard University.
Roem. Johann Jacob Roemer (1763-1819), Switzerland.
M. J. Roem. Max J. Roemer (fl. 1846-47), Germany.
Roezl Benedict (Benito) Roezl (1824-85), Czechoslovakia, horticultural collector in western United States and tropical America.
Roland. Daniel Rolander (1725-93), Sweden, Surinam.
Rose Joseph Nelson Rose (1862-1928), US, Department of Agriculture and National Herbarium; Cactaceae.
Rottboell Christen Friis Rottboell (1727-97), Denmark.
Rowlee Willard Winfield Rowlee (1861-1923), US, Cornell University; *Salix*.
Roxb. William Roxburgh (1751-1815), Scotland, India, physician and botanist.
v. Royen Pieter van Royen (1923- ), Indonesia, Hawaii.
Rudd Velva Elaine Rudd (1910- ), US, National Museum of Natural History; Leguminosae.
Rydb. Per Axel Rydberg (1860-1931), US, Swedish-born, New York Botanical Garden.
Sanson Martial (?) Sanson, Russia, St. Petersburg, botanist of the 1830's.
Sarg. Charles Sprague Sargent (1841-1927), US, Arnold Arboretum, botanist, dendrologist; *Crataegus*.
Schaeffer Jacob Christian Schaeffer (1718-90), Germany, botanist, clergyman.
Scheele Georg Heinrich Adolf Scheele (1808-64), Germany.

Schelle Ernst Schelle (1864-1929), Germany.
Schiede Christian Julius Wilhelm Schiede (1798-1836), Germany, physician, collected in Mexico.
Schlecht. Diederich Franz Leonhard von Schlechtendal (1794-1866), Germany.
Schneid. Camillo Karl (formerly Carl Camillo) Schneider (1876-1951), Austria and Germany, dendrologist; *Salix*.
Schrad. Heinrich Adolph Schrader (1768-1836), Germany.
Schrank Franz von Paula von Schrank (1747-1838), Germany.
Schreb. Johann Christian Daniel von Schreber (1739-1810), Germany.
Schult. Joseph August Schultes (1773-1831), Austria.
J. H. Schult. Julius Herman Schultes (1804-40), son of Josef August, Austria.
Scop. Johann Anton (Giovanni Antonio) Scopoli (1723-88), Austria, Italy, physician, naturalist.
Shaf. John Adolf Shafer (1863-1918) US, New York Botanical Garden; Cuba.
Sharp Aaron John Sharp (1904- ), US, University of Tennessee, bryologist.
Shaw George Russell Shaw (1848-1937), US, architect, botanist; *Pinus*.
Sieb. Philipp Franz von Siebold (1796-1866), Germany, Japan.
Slavin Bernard Henry Slavin (1873-19 ?), US, N.Y., Rochester, park superintendent.
J. E. Sm. James Edward Smith (1759-1828), England, botanist, physician.
Small John Kunkel Small (1869-1938), US, New York Botanical Garden.
R. E. Smith Ralph Elliott Smith (1874-1953), US, plant pathologist.
Soland. Daniel Carl Solander (1733-82), Sweden, England.
Spach Édouard Spach (1801-79), France.
Spreng. Kurt Polycarp Joachim Sprengel (1766-1833), Germany.
Standl. Paul Carpenter Standley (1884-1963), US, National Museum, Field Museum.
Stern William Louis Stern (1926- ), US, University of Maryland, earlier, National Museum.
Steyerm. Julian Alfred Steyermark (1909- ), US, Field Museum, Venezuela.
Stockwell William Palmer Stockwell (1898-1950), US, Forest Service.
Sudw. George Bishop Sudworth (1864-1927), US, Forest Service, Washington, D.C., dendrologist.
Sw. Olof Peter Swartz (1760-1818), Sweden, West Indies.
Sweet Robert Sweet (1783-1835), England, horticulturist and ornithologist.
Swingle Walter Tennyson Swingle (1871-1952), US, Department of Agriculture; *Citrus*.
Ten. Michele Tenore (1780-1861), Italy.
Terán Manuel de Mier y Terán (d. 1832?), Mexican general.
P. M. Thomson Paul M. Thomson (19-- ), US, Missouri.
Thunb. Carl Pehr (Karl Peter) Thunberg (1743-1828), Sweden, Japan, South Africa.
Torr. John Torrey (1796-1873), US, New York, botanist, chemist, physician.

Trel. William Trelease (1857-1945), US, Missouri Botanical Garden, University of Illinois; *Quercus*, *Yucca*.

Tucker John Maurice Tucker (1916- ), US, University of California, Davis.

Tul. Edmond Louis René Tulasne (1815-85), France, botanist, mycologist.

Urban Ignatz Urban (1848-1931), Germany, West Indies including Puerto Rico.

Vahl Martin Hendriksen Vahl (1749-1804), Denmark.

Vasey George Vasey (1822-93), US, Department of Agriculture, one of founders of National Herbarium.

Vent. Étienne Pierre Ventenat (1757-1808), France, Paris, horticulturist.

Voss Andreas Voss (1857-1924), Germany; Coniferae.

Walt. Thomas Walter (1740-89), US, English-born, Charleston, S.C., planter.

Wangenh. Friedrich Adam Julius von Wangenheim (1747-1800), German forester, British soldier in N.Y. and Pa. (1777-83).

Warder John Astor Warder (1812-83), US, Cincinnati, Ohio, physician, horticulturist, forester.

Wats. Sereno Watson (1826-92), US, Harvard University.

Weatherby Charles Alfred Weatherby (1875-1949), US, Harvard University.

Wendl. Hermann Wendland (1825-1923), Germany, botanist, horticulturist; Palmae.

H. L. Wendl. Heinrich Ludolph Wendland (1791-1869), father of Hermann, Germany.

Wight William Franklin Wight (1874-1954), US, New York, botanist, horticulturist.

Willd. Carl Ludwig Willdenow (1765-1812), Germany, Berlin.

C. B. Wolf Carl Brandt Wolf (1905-74), US, California, botanist, horticulturist; *Cupressus*, *Rhamnus*.

Wood Alphonso Wood (1810-81), US, New York, teacher, botanist.

Woot. Elmer Ottis Wooton (1865-1945), US, Department of Agriculture, Washington, DC., New Mexico.

Youngken Heber Wilkinson Youngken (1885-1963), US, University of Pennsylvania, pharmacologist.

Zabel Hermann Zabel (1832-1912), Germany, dendrologist.

Zucc. Joseph Gerhard Zuccarini (1797-1848), Germany, Munich.

# APPENDIX 5
# COMMERCIAL NAMES FOR LUMBER

Lumber is sometimes recognized by the same common tree name as the tree from which it is cut. More often, however, a lumber name corresponds to several species, and the lumber may be made from any of them. For example, Hem-fir lumber may be California red fir, grand fir, noble fir, Pacific silver fir, white fir, or western hemlock.

For marketing convenience, lumber from a single species may bear one of several different commercial names. As an example, in the American Lumber Standard System, lumber from lodgepole pine (*Pinus contorta*) may bear the name Engelmann Spruce—Lodgepole Pine, Ponderosa Pine—Lodgepole Pine, Western Woods, or White Woods. Sometimes merchandisers choose names for lumber or products made from lumber that are not defined in terms of specific species. The name "hard rock maple" frequently used with furniture demonstrates this situation.

Subcommittee D07.10 on Wood Nomenclature and Definitions, of the American Society for Testing and Materials, occasionally reviews and standardizes commercial naming practices. The list below was prepared from "Standard Nomenclature of Domestic Hardwoods and Softwoods," 1976 edition (American National Standards Institute/American Society for Testing and Materials, Designation D 1165–76). This appendix is a revision by Robert L. Ethington and Harold E. Wahlgren, of the Forest Products and Engineering Research staff, of the list with the same title in the 1953 checklist.

| *Commercial Name for Lumber* | *Common Name of Tree* | *Scientific (Botanical) Name of Tree* |
|---|---|---|
| Alder: | | |
| Red Alder | red alder | *Alnus rubra* |
| Ash: | | |
| Black Ash | black ash | *Fraxinus nigra* |
| Oregon Ash | Oregon ash | *F. latifolia* |
| Pumpkin Ash | pumpkin ash | *F. profunda* |
| White Ash | blue ash | *F. quadrangulata* |
| | green ash | *F. pennsylvanica* |
| | white ash | *F. americana* |
| Aspen | bigtooth aspen | *Populus grandidentata* |
| | quaking aspen | *P. tremuloides* |
| Balsam Poplar | balsam poplar | *P. balsamifera* |
| Balsam Fir[1] | balsam fir | *Abies balsamea* |
| | Fraser fir | *A. fraseri* |
| Basswood | American basswood | *Tilia americana* |
| | white basswood | *T. heterophylla* |
| Beech | American beech | *Fagus grandifolia* |
| Birch[2] | gray birch | *Betula populifolia* |
| | paper birch | *B. papyrifera* |
| | river birch | *B. nigra* |
| | sweet birch | *B. lenta* |
| | yellow birch | *B. alleghaniensis* |
| Box Elder | boxelder | *Acer negundo* |

[1]Balsam fir lumber is sometimes designated either as eastern fir or as balsam.

[2]Usually designated either as red birch or as sap (white) birch, or as birch if unselected for color.

| *Commerical Name for Lumber* | *Common Name of Tree* | *Scientific (Botanical) Name of Tree* |
|---|---|---|
| Buckeye | Ohio buckeye | *Aesculus glabra* |
| | yellow buckeye | *Ae. octandra* |
| Butternut | butternut | *Juglans cinerea* |
| Cedar: | | |
| Eastern Red Cedar | eastern redcedar | *Juniperus virginiana* |
| | southern redcedar | *J. silicicola* |
| Western Cedar | Alaska-cedar | *Chamaecyparis nootkatensis* |
| | incense-cedar | *Libocedrus decurrens* |
| | Port-Orford-cedar | *Chamaecyparis lawsoniana* |
| | western redcedar | *Thuja plicata* |
| Eastern White Cedar | northern white-cedar | *Thuja occidentalis* |
| Northern White Cedar | northern white-cedar | *T. occidentalis* |
| Southern White Cedar | Atlantic white-cedar | *Chamaecyparis thyoides* |
| Cherry | black cherry | *Prunus serotina* |
| Chestnut | American chestnut | *Castanea dentata* |
| Cottonwood | black cottonwood | *Populus trichocarpa* |
| | eastern cottonwood | *P. deltoides* |
| | swamp cottonwood | *P. heterophylla* |
| | balsam poplar | *P. balsamifera* |
| Cucumber | cucumbertree | *Magnolia acuminata* |
| Cypress[3] | baldcypress | *Taxodium distichum* |
| | pondcypress | *T. distichum* var. *nutans* |
| Dogwood | flowering dogwood | *Cornus florida* |
| | Pacific dogwood | *C. nuttallii* |
| Douglas Fir—Larch[4] | Douglas-fir | *Pseudotsuga menziesii* |
| | western larch | *Larix occidentalis* |
| Douglas Fir (South)[5] | Douglas-fir | *Pseudotsuga menziesii* |
| Eastern Hemlock— | eastern hemlock | *Tsuga canadensis* |
| Tamarack | tamarack | *Larix laricina* |
| Eastern Spruce— | black spruce | *Picea mariana* |
| | red spruce | *P. rubens* |
| Balsam Fir | white spruce | *P. glauca* |
| | balsam fir | *Abies balsamea* |
| Eastern Woods | bigtooth aspen | *Populus grandidentata* |
| | quaking aspen | *P. tremuloides* |
| | balsam fir | *Abies balsamea* |
| | Carolina hemlock | *Tsuga caroliniana* |
| | eastern hemlock | *T. canadensis* |
| | eastern white pine | *Pinus strobus* |
| | jack pine | *P. banksiana* |
| | red pine | *P. resinosa* |
| | black spruce | *Picea mariana* |
| | red spruce | *P. rubens* |
| | white spruce | *P. glauca* |
| | tamarack | *Larix laricina* |
| Elm: | cedar elm | *Ulmus crassifolia* |
| Rock Elm | rock elm | *U. thomasii* |
| | September elm | *U. serotina* |
| | winged elm | *U. alata* |
| Soft Elm[6] | American elm | *U. americana* |
| | slippery elm | *U. rubra* |
| Engelmann Spruce— | Engelmann spruce | *Picea engelmannii* |
| Alpine Fir | subalpine fir | *Abies lasiocarpa* |
| Engelmann Spruce— | Engelmann spruce | *Picea engelmannii* |
| Lodgepole Pine | lodgepole pine | *Pinus contorta* |
| Gum[7] | sweetgum | *Liquidambar styraciflua* |

[3]Cypress includes types designated as red cypress, white cypress, and yellow cypress. Red cypress is frequently classified and sold separately from the other types.

[4]Douglas fir from anywhere in the U.S. except Arizona, Colorado, Nevada, New Mexico, and Utah.

[5]Douglas fir from Arizona, Colorado, Nevada, New Mexico, and Utah.

[6]Soft elm lumber is sometimes designated as white elm.

[7] Usually designated either as red gum or as sap gum, or as gum or sweetgum if unselected for color.

| *Commercial Name for Lumber* | *Common Name of Tree* | *Scientific (Botanical) Name of Tree* |
|---|---|---|
| Hackberry | hackberry | *Celtis occidentalis* |
| | sugarberry | *C. laevigata* |
| Hem-Fir | western hemlock | *Tsuga heterophylla* |
| | California red fir | *Abies magnifica* |
| | grand fir | *A. grandis* |
| | noble fir | *A. procera* |
| | Pacific silver fir | *A. amabilis* |
| | white fir | *A. concolor* |
| Hemlock: | | |
| Eastern Hemlock | Carolina hemlock | *Tsuga caroliniana* |
| | eastern hemlock | *T. canadensis* |
| Mountain Hemlock | mountain hemlock | *T. mertensiana* |
| Western Hemlock | western hemlock | *T. heterophylla* |
| Hickory | mockernut hickory | *Carya tomentosa* |
| | pignut hickory | *C. glabra* |
| | shagbark hickory | *C. ovata* |
| | shellbark hickory | *C. laciniosa* |
| Holly | American holly | *Ilex opaca* |
| Ironwood | eastern hophornbeam | *Ostrya virginiana* |
| Juniper | alligator juniper | *Juniperus deppeana* |
| | Rocky Mountain juniper | *J. scopulorum* |
| | Utah juniper | *J. osteosperma* |
| | western juniper | *J. occidentalis* |
| Locust | black locust | *Robinia pseudoacacia* |
| | honeylocust | *Gleditsia triacanthos* |
| Madrone | Pacific madrone | *Arbutus menziesii* |
| Maple: | | |
| Hard Maple[8] | black maple | *Acer nigrum* |
| | sugar maple | *A. saccharum* |
| Oregon Maple | bigleaf maple | *A. macrophyllum* |
| Soft Maple[8] | red maple | *A. rubrum* |
| | silver maple | *A. saccharinum* |
| Mixed Species | Alaska-cedar | *Chamaecyparis nootkatensis* |
| | incense-cedar | *Libocedrus decurrens* |
| | Port-Orford-cedar | *Chamaecyparis lawsoniana* |
| | western redcedar | *Thuja plicata* |
| | Douglas-fir[4] | *Pseudotsuga menziesii* |
| | California red fir | *Abies magnifica* |
| | grand fir | *A. grandis* |
| | noble fir | *A. procera* |
| | Pacific silver fir | *A. amabilis* |
| | subalpine fir | *A. lasiocarpa* |
| | white fir | *A. concolor* |
| | mountain hemlock | *Tsuga mertensiana* |
| | western hemlock | *T. heterophylla* |
| | western larch | *Larix occidentalis* |
| | blue spruce | *Picea pungens* |
| | Engelmann spruce | *P. engelmannii* |
| | Sitka spruce | *P. sitchensis* |
| | lodgepole pine | *Pinus contorta* |
| | ponderosa pine | *P. ponderosa* |
| | Jeffrey pine | *P. jeffreyi* |
| | sugar pine | *P. lambertiana* |
| | western white pine | *P. monticola* |
| Mountain Hemlock—Hem-Fir | California red fir | *Abies magnifica* |
| | grand fir | *A. grandis* |
| | noble fir | *A. procera* |
| | Pacific silver fir | *A. amabilis* |
| | white fir | *A. concolor* |
| | mountain hemlock | *Tsuga mertensiana* |
| | western hemlock | *T. heterophylla* |

[8]Sometimes specified to be white; this can be interpreted as being a requirement for sapwood.

| *Commercial Name for Lumber* | *Common Name of Tree* | *Scientific (Botanical) Name of Tree* |
|---|---|---|
| Mulberry | red mulberry | *Morus rubra* |
| Oak: | | |
| Red Oak | black oak | *Quercus velutina* |
| | blackjack oak | *Q. marilandica* |
| | California black oak | *Q. kelloggii* |
| | cherrybark oak | *Q. falcata* var. *pagodifolia* |
| | laurel oak | *Q. laurifolia* |
| | northern pin oak | *Q. ellipsoidalis* |
| | northern red oak | *Q. rubra* |
| | Nuttall oak | *Q. nuttallii* |
| | pin oak | *Q. palustris* |
| | scarlet oak | *Q. coccinea* |
| | Shumard oak | *Q. shumardii* |
| | southern red oak | *Q. falcata* |
| | turkey oak | *Q. laevis* |
| | water oak | *Q. nigra* |
| | willow oak | *Q. phellos* |
| | Emory oak | *Q. emoryi* |
| White Oak | Arizona white oak | *Quercus arizonica* |
| | blue oak | *Q. douglasii* |
| | bur oak | *Q. macrocarpa* |
| | chestnut oak | *Q. prinus* |
| | chinkapin oak | *Q. muehlenbergii* |
| | Gambel oak | *Q. gambelii* |
| | live oak | *Q. virginiana* |
| | Mexican blue oak | *Q. oblongifolia* |
| | Oregon white oak | *Q. garryana* |
| | overcup oak | *Q. lyrata* |
| | post oak | *Q. stellata* |
| | swamp chestnut oak | *Q. michauxii* |
| | swamp white oak | *Q. bicolor* |
| | valley oak | *Q. lobata* |
| | white oak | *Q. alba* |
| Oregon Myrtle | California-laurel | *Umbellularia californica* |
| Osage Orange | Osage-orange | *Maclura pomifera* |
| Pecan | bitternut hickory | *Carya cordiformis* |
| | nutmeg hickory | *C. myristiciformis* |
| | water hickory | *C. aquatica* |
| | pecan | *C. illinoensis* |
| Persimmon | common persimmon | *Diospyros virginiana* |
| Pine: | | |
| Eastern White Pine | eastern white pine | *Pinus strobus* |
| Idaho White PIne | western white pine | *P. monticola* |
| Lodgepole Pine | lodgepole pine | *P. contorta* |
| Longleaf Pine | longleaf pine | *P. palustris* |
| | slash pine | *P. elliottii* |
| Northern Pine | jack pine | *P. banksiana* |
| | red pine | *P. resinosa* |
| | pitch pine | *P. rigida* |
| Ponderosa Pine—Sugar Pine | ponderosa pine | *P. ponderosa* |
| | sugar pine | *P. lambertiana* |
| Ponderosa Pine—Lodgepole Pine | ponderosa pine | *P. ponderosa* |
| | lodgepole pine | *P. contorta* |
| Southern Pine | loblolly pine | *P. taeda* |
| | longleaf pine | *P. palustris* |
| | pitch pine | *P. rigida* |
| | pond pine | *P. serotina* |
| | sand pine | *P. clausa* |
| | shortleaf pine | *P. echinata* |
| | slash pine | *P. elliottii* |
| | Table Mountain pine | *P. pungens* |
| | Virginia pine | *P. virginiana* |
| Southern Pine (Minor) | pitch pine | *P. rigida* |
| | pond pine | *P. serotina* |
| | Virginia pine | *P. virginiana* |

| *Commercial Name for Lumber* | *Common Name of Tree* | *Scientific (Botanical) Name of Tree* |
|---|---|---|
| Popple: See Aspen | | |
| Sassafras | sassafras | *Sassafras albidum* |
| Silverbell | Carolina silverbell | *Halesia carolina* |
| Spruce: | | |
| Eastern Spruce | black spruce | *Picea mariana* |
| | red spruce | *P. rubens* |
| | white spruce | *P. glauca* |
| Engelmann Spruce | blue spruce | *P. pungens* |
| | Engelmann spruce | *P. engelmannii* |
| Sitka Spruce | Sitka spruce | *P. sitchensis* |
| Sycamore | sycamore | *Platanus occidentalis* |
| Tamarack | tamarack | *Larix laricina* |
| Tanoak | tanoak | *Lithocarpus densiflorus* |
| Tupelo | black tupelo | *Nyssa sylvatica* |
| | Ogeechee tupelo | *N. ogeche* |
| | water tupelo | *N. aquatica* |
| Walnut | black walnut | *Juglans nigra* |
| Western Woods | incense-cedar | *Libocedrus decurrens* |
| | western redcedar | *Thuja plicata* |
| | Douglas-fir | *Pseudotsuga menziesii* |
| | California red fir | *Abies magnifica* |
| | grand fir | *A. grandis* |
| | noble fir | *A. procera* |
| | Pacific silver fir | *A. amabilis* |
| | subalpine fir | *A. lasiocarpa* |
| | white fir | *A. concolor* |
| | mountain hemlock | *Tsuga mertensiana* |
| | western hemlock | *T. heterophylla* |
| | western larch | *Larix occidentalis* |
| | lodgepole pine | *Pinus contorta* |
| | ponderosa pine | *P. ponderosa* |
| | sugar pine | *P. lambertiana* |
| | western white pine | *P. monticola* |
| | Engelmann spruce | *Picea engelmannii* |
| White Woods | California red fir | *Abies magnifica* |
| | grand fir | *A. grandis* |
| | noble fir | *A. procera* |
| | Pacific silver fir | *A. amabilis* |
| | subalpine fir | *A. lasiocarpa* |
| | white fir | *A. concolor* |
| | mountain hemlock | *Tsuga mertensiana* |
| | western hemlock | *T. heterophylla* |
| | lodgepole pine | *Pinus contorta* |
| | ponderosa pine | *P. ponderosa* |
| | sugar pine | *P. lambertiana* |
| | western white pine | *P. monticola* |
| | Engelmann spruce | *Picea engelmannii* |
| Willow | black willow | *Salix nigra* |
| | peachleaf willow | *S. amygdaloides* |
| Yellow Poplar | yellow-poplar | *Liriodendron tulipifera* |
| Yew | Pacific yew | *Taxus brevifolia* |

# APPENDIX 6
# GUIDING PRINCIPLES FOR COMMON NAMES OF UNITED STATES TREES

## OUTLINE BY PARAGRAPH NUMBERS

General, 1–17
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## GENERAL

1. A formal, detailed code of rules seems unnecessary. These guiding principles developed through the years are summarized here for reference.

2. Both the guiding principles and English common names of trees used in this Checklist are limited to the United States and do not apply to other countries or to international commerce. A tree species may have different English names in other countries, where it is native or introduced, and in international commerce. Likewise, it may have common names in other languages. Example: boxelder, *Acer negundo*, is known in Canada as Manitoba maple, also in Quebec as érable à giguèr (French), and in Mexico as acezintle (Spanish Indian). The same English common name may be applied to unrelated species in other countries. Example: the name redwood in the United States is *Sequoia sempervirens* but elsewhere is used for *Pinus sylvestris* and several unrelated trees.

3. A system of uniform English common names for the forest trees of the United States is essential, because of their great economic importance. Confusion, such as between buyer and seller of forest products, must be avoided.

4. English common names generally should correspond to the Latin scientific or botantical names, which are based upon the International Code of Botanical Nomenclature (ICBN; 1972).

5. Names of cultivated varieties (cultivars) of trees (omitted from Checklist) and those of other plants in English and other modern languages are based upon the International Code of Nomenclature of Cultivated Plants (Cultivated Code; 1969).

6. Guidance and leadership toward uniformity of usage of English common names for forest trees is needed. (Similarly, dictionaries provide guidance and acceptance for words, including spelling, meanings, and usage.)

7. The importance of uniform English common names for the forest trees of the United States was first recognized in early publications by the Forest Service and its predecessors (Division of Forestry and Bureau of Forestry).

8. Over the years the Forest Service through its Dendrology Project and Tree and Range Plant Name Committee, with the cooperation of the

forestry profession, has exercised leadership in this field. This Committee is responsible for adopting approved common names in Forest Service checklists and other official publications. It acts upon proposals for changes and additions.

9. The Forest Service checklists of trees are official standards for tree names in the Forest Service and have been widely adopted outside. One important object of checklists is to encourage uniform usage of tree names.

10. The best established usage should be adopted wherever possible, if it conforms to the guiding principles.

11. Common sense should be exercised. Any new names proposed for approval should have a reasonable chance of popular acceptance. An artificial name published in a book may be objectionable and may not be adopted in usage.

12. The approved English common name should be suitable throughout the United States. Other names of limited, local use should be avoided.

13. Each kind or group of trees should have only one approved English common name. That is, *synonyms* should be avoided.

14. The approved English common name should be restricted to only one kind or group. Thus, only one genus (group of related species; plural genera) should be called oak, and only one species or kind of oak should be called white oak. That is, *homonyms* should be avoided.

15. Every taxonomic group of trees designated by a scientific name does not require an equivalent English common name. Many minor variations are distinguished only by specialists. Examples are varieties and hybrids, also species in very large genera, such as hawthorn, *Crataegus*.

16. English common names of forest trees and commercial names of lumber should aim to agree. Equivalents can be shown in a table. Woods of several closely related tree species often are combined under the same commercial name for lumber (lumber trade name). Examples: Red oak lumber includes besides *Quercus rubra* more than 10 related species. White oak lumber includes besides *Quercus alba* several related species. Sometimes the lumber within a species has more than one name, if differing in color or other specifications.

17. The same English common names of native forest trees used in forestry should apply also for other uses, such as in horticulture. However, a few exceptions are established in usage. Examples: *Platanus*, sycamore, is planetree in horticulture; *Tilia*, basswood, is linden in horticulture.

## GENERA

18. The English common name of a genus, or generic common name, should be one word, which may be hyphened.

19. As established by usage, a few large genera have more than one generic name, usually for distinct groups such as subgenera. Examples: *Populus*, poplar, contains species known also as aspen and cottonwood. *Prunus*, plum, contains also cherry, peach, and laurelcherry.

20. Generic common names based in part on another generic name should be one word, which may be solid or hyphened. Examples: tanoak, *Lithocarpus*, a genus related to oak, *Quercus;* willow, *Salix*, and desert-willow, *Chilopsis*, not related; ash, *Fraxinus*, mountain-ash, *Sorbus*, and prickly-ash, *Zanthoxylum*, not related; buckeye, *Aesculus*, and Mexican-buckeye, *Ungnadia*, not related.

21. Generic common names must not be misleading. Example: walnut refers to *Juglans*. Woods of other genera, which have different properties, should not be called kinds of walnut.

22. A few names widely used in several unrelated genera should be avoided altogether, to prevent confusion. Examples: ironwood, applied to *Bumelia*, *Carpinus*, *Cliftonia*, *Cyrilla*, *Eugenia*, *Exothea*, *Krugiodendron*, *Ostrya*, etc., and the hyphened names Catalina-ironwood, *Lyonothamnus*, and Arizona-ironwood, *Olneya*.

23. In the absence of a distinctive generic common name, the Latin generic name can be adopted as a common name. Examples: franklinia from *Franklinia*, magnolia from *Magnolia*, rhododendron from *Rhododendron*. (Sometimes scientific names have been derived from common names such as American Indian. Examples: *Catalpa* from catalpa; *Olneya tesota* from tesota.)

## SPECIES

24. The English common name of a species generally should be two words (binomial). Example: white oak *(Quercus alba)*. The second word (oak) is the name of the genus and corresponds to the Latin generic name (*Quercus*). The first word (white) designates the species or kind and corresponds to the Latin specific epithet (*alba*).

25. Some English common names are from other languages. Several are of American Indian origin. Examples: hickory, chinkapin, pawpaw, mesquite, saguaro. A few are from Spanish: madrone from madroño, pinyon from piñón. Lignumvitae is from Latin.

26. In the absence of a distinctive specific common name, a translation of the scientific name (specific epithet), usually descriptive, geographical, or personal, can be adopted as a common name. Examples: grand fir from *Abies grandis*, Sitka spruce from *Picea sitchensis*, Gambel oak from *Quercus gambelii*.

27. Indefinite terms of limited application should be avoided. Examples: the geographical terms "northern"and "southern." Others not appropriate in some parts of the range are "common" and "dwarf."

28. Sometimes the English common name consists of three words, generally not hyphened. Examples: Rocky Mountain maple, *Acer glabrum;* eastern white pine, *Pinus strobus;* California black oak, *Quercus kelloggii*.

29. A few tree species, especially in large genera, have well-established common names of one word, which omit the generic name. Four kinds are distinguished below.

A. Distinct species, usually of economic importance, long known by one word. Examples: peach, *Prunus persica*; avocado, *Persea americana*; pecan, *Carya illinoensis*; tamarack, *Larix laricina*.

B. The only species of a distinct (monotypic) genus. Examples: corkwood, *Leitneria floridana*; sourwood, *Oxydendrum arboreum*; desert-willow, *Chilopsis linearis*.

C. The only species native in the United States of a genus with foreign representatives. Example: tanoak, *Lithocarpus densiflorus*. American beech, *Fagus grandifolia*, may be designated simply as beech when the one native species is meant.

D. An important species in a small genus. Examples: Douglas-fir, *Pseudotsuga menziesii* (or also the genus *Pseudotsuga)*; but bigcone Douglas-fir, *Pseudotsuga macrocarpa*.

30. The specific common name can be abbreviated to the one-word generic name in informal usage when the meaning is clear. Example: pine, for the only species of *Pinus* in a locality.

## VARIETIES

31. The English common name of a tree species is applicable also to any included varieties.

32. English common names of botanical varieties (or subspecies) of trees are optional. Many minor botanical varieties need not be distinguished by separate English names. English common names of tree varieties generally are of three words, the first for the variety, the second for the species, and the third for the genus. Example: Delta post oak, *Quercus stellata* var. *paludosa*.

33. Typical varieties may not need separate English common names. The word "(typical)" can be added after the common name of the species to distinguish the typical variety from any other named varieties. In many species the typical variety is much more common than the other varieties and usually is meant when the two-word common name of the species is used. Example: slash pine, *Pinus elliottii*, has a named variety, South Florida slash pine, *P. elliottii* var. *densa*. The typical variety, *P. elliottii* var. *elliottii*, can be designated as slash pine (typical) or merely as slash pine, provided that the meaning is clear or is explained.

34. A distinct botanical variety may have an English common name of two words, if established in usage. Examples: cherrybark oak, *Quercus falcata* var. *pagodifolia*; Arizona pine, *Pinus ponderosa* var. *arizonica*; corkbark fir, *Abies lasiocarpa* var. *arizonica*.

## HYBRIDS

35. Natural hybrids between tree species generally do not require special common names. Confusion is avoided by joining the common names of the parents with the word hybrid or cross, corresponding to a formula in scientific name. If needed, a distinctive common name corresponding to a binomial and a species may be given. Examples: longleaf–loblolly hybrid pine (from the formula *Pinus palustris* × *taeda)*; Sonderegger pine from the binomial for the same hybrid, *Pinus* ×*sondereggeri*). Artificial hybrids, which may differ with the same parent species, may be named as cultivated varieties (cultivars) under the Cultivated Code.

## COMPOUNDING

36. Compounding affects the written form of common names but not pronunciation. The spoken language does not distinguish between two words, a hyphened word, and a solid word.

37. Compound words for tree names, formed from two or more words connected, are written either solid or hyphened. It is important that the words be united to convey a different meaning than that of separate words. Less important is whether the compound word is written solid or hyphened. Example: Douglas-fir ( or Douglasfir), but not Douglas fir (not a true fir).

38. Solid words are of three kinds:

A. Short words. Examples: tanoak, redcedar.

B. Words written as compound for many years. Gradually over a period of time the hyphen may be dropped. Examples: laurelcherry, honeylocust.

C. Words with a short, much used suffix referring to a tree or part. Familiar endings are bark, bean, berry, bush, leaf, nut, palm, plant, seed, thorn, tree, wood. (U.S. Government Printing Office, Style Manual, 1973, p. 277; 20.5.) Examples: corkbark, coralbean, serviceberry, butterbush, goldenleaf, bladdernut, royalpalm, velvetseed, buckthorn, coffeetree, cottonwood. However, some long words are hyphened for clarity. Examples: fishpoison-tree, firecracker-plant.

39. Hyphened words are of three kinds:

A. Words, mostly long, where the hyphen helps in reading and pronouncing, by indicating syllables or silent vowels. Examples: incense–cedar, white-cedar, saw-palmetto, button-mangrove, jungle-plum, yellow-poplar, cypress-pine, desert-willow.

B. Words formed from a proper name. (U.S. Government Printing Office, Style Manual, 1973, p. 277; 20.2, 20.5.) Examples: Douglas-fir, California-laurel.

C. Words derived from three or more words. Examples: myrtle-of-the-river, seven-year-apple.

40. Compounding serves to separate trees of unrelated genera that have been known by the same common name. Examples: cypress, *Cupressus*, and baldcypress, *Taxodium*; mangrove (red mangrove), *Rhizophora*, black-mangrove, *Avicennia*, white-mangrove, *Laguncularia*, and button-mangrove, *Conocarpus*.

## SPELLING

41. Nouns, being shorter, are preferred to adjectives in English specific names. Examples: narrowleaf cottonwood (not narrow-leaved), *Populus angustifolia*; New Mexico locust (not New Mexican), *Robinia neomexicana*.

42. Personal names are shortened by omission of possessive ending ('s). Examples: Engelmann spruce (not Engelmann's), *Picea engelmannii*; Nuttall oak (not Nuttall's), *Quercus nuttallii*. Where there may be confusion between the names of a person and of an idea or thing, the personal name is capitalized and written in possessive form without the apostrophe. Example: Browns hickory, *Carya* ×*brownii*.

## CAPITALIZATION

43. English common names of trees preferably are written with only proper names capitalized. However, all words may be capitalized, if desired, to designate approved common names clearly equivalent to scientific names and to avoid ambiguity.

## REFERENCES

44. The 12 reference titles are designated here by number (*27, 32, 52, 55, 85, 92, 115, 121, 122, 123 125, 126*) and are listed under References, p. 25.

# APPENDIX 7
# BOTANICAL INDEX OF PLANT FAMILIES AND GENERA

This index shows the botanical classification and relationships of the genera of native and naturalized trees of continental United States in plant families and supplements the alphabetical order of the main list. The classification used here and in the 1953 checklist is the standard conservative one by Dalla Torre and Harms *(24)*, in which both families and genera of seed plants are numbered. It has been widely adopted by large herbaria in filing specimens and by the International Code of Botanical Nomenclature in listing conserved and rejected generic names. Also, following the Englerian system, it is the best known, most detailed, and most convenient. Obviously, a list in a straight line does not show detailed relationships, which are branching and treelike, perhaps sometimes uniting like a network.

First, the Alphabetical List of Plant Families cites Dalla Torre and Harms family numbers. Second, the Botanical Index, like a table of contents, contains the plant families and genera in natural arrangement by number, with Checklist page numbers of genera added.

## ALPHABETICAL LIST OF PLANT FAMILIES

The native and naturalized trees of continental United States are classified under 76 plant families, listed below alphabetically. Of these, 73 are native and 3 (designated by small capitals) are naturalized and without native species. With very few exceptions, family names end in -aceae.

Aceraceae, 163
Anacardiaceae, 153
Annonaceae, 98
Aquifoliaceae, 157
Araliaceae, 227
Betulaceae, 61
Bignoniaceae, 258
Boraginaceae, 252
Burseraceae, 139
Cactaceae, 210
Canellaceae, 197
Capparaceae, 107
Caprifoliaceae, 271
CARICACEAE, 205
CASUARINACEAE, 51
Celastraceae, 158
Clethraceae, 230
Combretaceae, 221
Compositae, 280
Cornaceae, 229
Cupressaceae, 6b
Cyrillaceae, 154
Ebenaceae, 240
Elaeagnaceae, 215
Ericaceae, 233
Euphorbiaceae, 147
Fagaceae, 62
Guttiferae, 187
Hamamelidaceae, 123
Hippocastanaceae, 164
Juglandaceae, 60
Koeberliniaceae, 196
Lauraceae, 102
Leguminosae, 128
Leitneriaceae, 59
Liliaceae, 38
Magnoliaceae, 95
Malpighiaceae, 141
Malvaceae, 175
Melastomataceae, 223
Meliaceae, 140
Moraceae, 64
Myricaceae, 57
Myrsinaceae, 236
Myrtaceae, 222
Nyctaginaceae, 80
Olacaceae, 72
Oleaceae, 243
Palmae, 21
Pinaceae, 6
Platanaceae, 124
Polygonaceae, 77
Rhamnaceae, 169
Rhizophoraceae, 220
Rosaceae, 126
Rubiaceae, 270
Rutaceae, 137
Salicaceae, 56
Sapindaceae, 165
Sapotaceae, 239
Scrophulariaceae, 257
Simaroubaceae, 138
Solanaceae, 256
Staphyleaceae, 161
Sterculiaceae, 178
Styracaceae, 241
Symplocaceae, 242
TAMARICACEAE, 191
Taxaceae, 5
Taxodiaceae, 6a
Theaceae, 186
Theophrastaceae, 235a
Tiliaceae, 174
Ulmaceae, 63
Verbenaceae, 253
Zygophyllaceae, 135

## BOTANICAL INDEX

The 76 plant families and 244 genera of native and naturalized trees of continental United States are arranged numerically by the Dalla Torre and Harms numbers at left, checklist page numbers of genera at right. The naturalized groups (designated by small capitals) without native species total 3 families and 24 genera.

Names of larger groups of seed plants (spermatophytes) in which the families are placed, are inserted as center heads. The 3 subfamilies of the large legume family, Leguminosae, are noted. English common names for both families and genera and widely used synonyms of scientific names are listed. Following each family name is the number of genera with native trees (indicated by the abbreviation g.) and in parentheses the number of genera with naturalized trees, if any; then follows the total number of native species with the number of naturalized species in parentheses. Example: 21. Palmae, palm family, 8 g. (1 g.), 11 (1).

Dalla Torre and Harms numbers here are incomplete and not consecutive because many families and genera of seed plants of the world are not represented. Several names accepted at a later date are indicated by a letter inserted after the number.

The Botanical Index can be used to find where a genus is classified and also the names of related genera. *Abies*, or fir, will serve as an example. As listed on page 33, the family is Pinaceae. In the Alphabetical List of Plant Families above, Pinaceae is family number 6. Then, in the Botanical Index below, family 6, Pinaceae, with English common name pine family contains, including *Abies*, 6 genera listed by number according to relationships. Added for ready reference are English common names and page numbers.

Another use of the Botanical Index is to list the genera of native and naturalized trees belonging to each plant family. For example, to obtain names of the tree genera in the family Leguminosae, first, find the family number, 128, in the Alphabetical List. Then under family 128 in the Botanical Index are 19 native and 2 naturalized genera, grouped according to their relationships.

### GYMNOSPERMS (INCLUDING CONIFERS)


| | | Page |
|---|---|---|
| 5. | Taxaceae, yew family, 2 g., 4 | |
| | 17. **Torreya, torreya,** 2 | 287 |
| | 18. **Taxus, yew,** 2 | 283 |
| 6. | Pinaceae, pine family, 6 g., 61 (1) | |
| | 22. **Pinus, pine,** 36 (1) | 187 |
| | 24. **Larix, larch,** 3 | 159 |
| | 26. **Picea, spruce,** 7 | 184 |
| | 27. **Tsuga, hemlock,** 4 | 289 |
| | 27a. **Pseudotsuga, Douglas-fir,** 2 | 218 |
| | 29. **Abies, fir,** 9 | 33 |
| 6a. | Taxodiaceae, redwood family, 3 g., 4 | 282 |
| | 32. **Sequoia, sequoia,** 1 | 273 |
| | 32a. **Sequoiadendron, giant sequoia,** 1 | 273 |
| | 35. **Taxodium, baldcypress,** 2 | 282 |
| 6b. | Cupressaceae, cypress family, 5 g., 26 (1) | 119 |
| | 41. **Libocedrus,** (*Calocedrus*), **incense-cedar,** 1 | 161 |
| | 42. **Thuja, thuja,** 2 (1) | 285 |
| | 43. **Cupressus, cypress,** 7 | 119 |
| | 44. **Chamaecyparis, white-cedar,** 3 | 87 |
| | 45. **Juniperus, juniper,** 13 | 153 |

## ANGIOSPERMS (FLOWERING PLANTS)
## MONOCOTYLEDONS


| | | Page |
|---|---|---|
| 21. | Palmae, palm family, 8 g. (1 g.), 11 (1) | |
| | 536. **Thrinax, thatchpalm,** 2 | 285 |
| | 536a. **Coccothrinax, silverpalm,** 1 | 93 |
| | 543. **Washingtonia, washingtonia,** 1 | 294 |
| | 547. **Sabal, palmetto,** 3 | 254 |
| | 548. **Serenoa, saw-palmetto,** 1 | 274 |
| | 549a. **Acoelorrhaphe** (*Paurotis*), **paurotis-palm,** 1 | 44 |
| | 599. **Pseudophoenix, buccaneer-palm,** 1 | 217 |
| | 613. **Roystonea, royalpalm,** 1 | 254 |
| | 663. COCOS, COCONUT, (1) | 93 |
| 38. | Liliaceae, lily family (Agavaceae), 2 g., 12 | |
| | 1103. **Yucca, yucca,** 11 | 295 |
| | 1105. **Nolina, nolina,** 1 | 177 |


## DICOTYLEDONS (INCLUDING HARDWOODS)


| | | |
|---|---|---|
| 51. | CASUARINACEAE, casuarina family, (1 g.), (1) | |
| | 1855. CASUARINA, CASUARINA, (1) | 78 |
| 56. | Salicaceae, willow family, 2 g., 35 (5) | |
| | 1872. **Populus, cottonwood; poplar,** 8 (1) | 203 |
| | 1873. **Salix, willow,** 27 (4) | 255 |
| 57. | Myricaceae, bayberry (waxmyrtle) family 1 g., 5 | |
| | 1874. **Myrica, bayberry,** 5 | 175 |
| 59. | Leitneriaceae, corkwood family, 1 g., 1 | |
| | 1876. **Leitneria, corkwood,** 1 | 160 |
| 60. | Juglandaceae, walnut family, 2 g., 17 | |
| | 1881. **Juglans, walnut,** 6 | 151 |
| | 1882. **Carya, hickory,** 11 | 71 |
| 61. | Betulaceae, birch family, 5 g., 20 (1) | |
| | 1884. **Carpinus, hornbeam,** 1 | 71 |
| | 1885. **Ostrya, hophornbeam,** 3 | 181 |
| | 1886. **Corylus, hazel,** 1 | 100 |
| | 1887. **Betula, birch,** 7 | 59 |
| | 1888. **Alnus, alder,** 8 (1) | 47 |
| 62. | Fagaceae, beech family, 5 g., 65 (1) | |
| | 1890. **Fagus, beech,** 1 | 131 |
| | 1891. **Castanea, chestnut,** 4 | 76 |
| | 1891a. **Castanopsis, chinkapin,** 1 | 77 |
| | 1892. **Lithocarpus, tanoak,** 1 | 163 |
| | 1893. **Quercus, oak,** 58 (1) | 221 |
| 63. | Ulmaceae, elm family, 4 g., 14 (1) | |
| | 1896. **Ulmus, elm,** 6, (1) | 290 |
| | 1897. **Planera, planertree,** 1 | 202 |
| | 1898. **Celtis, hackberry,** 5 | 80 |
| | 1902. **Trema, trema,** 2 | 288 |
| 64. | Moraceae, mulberry family, 3 g. (1 g.), 5 (3) | |
| | 1913. **Morus, mulberry,** 2 (2) | 173 |
| | 1918. **Maclura, Osage-orange,** 1 | 165 |
| | 1923. BROUSSONETIA, PAPER-MULBERRY, (1) | 64 |
| | 1961. **Ficus, fig,** 2 | 131 |
| 72. | Olacaceae, olax family, 2 g., 2 | |
| | 2129. **Schoepfia, graytwig,** 1 | 272 |
| | 2136. **Ximenia, tallowwood,** 1 | 295 |
| 77. | Polygonaceae, buckwheat family, 1 g., 2 | |
| | 2209. **Coccoloba, seagrape,** 2 | 92 |
| 80. | Nyctaginaceae, four-o'clock family, 2 g., 2 | |
| | 2354. **Pisonia, pisonia,** 1 | 200 |
| | 2354a. **Guapira** (*Torrubia*), **blolly,** 1 | 141 |
| 95. | Magnoliaceae, magnolia family (Illiciaceae), 3 g., 11 | |
| | 2651. **Magnolia, magnolia,** 8 | 165 |
| | 2654. **Liriodendron, yellow-poplar,** 1 | 163 |
| | 2657. **Illicium, anise-tree,** 2 | 151 |
| 98. | Annonaceae, annona (custard-apple) family, 2 g., 4 (1) | |
| | 2673a. **Asimina, pawpaw,** 3 | 58 |
| | 2729. **Annona, annona,** 1 (1) | 54 |
| 102. | Lauraceae, laurel family, 5 g. (1 g.), 5 (2) | |
| | 2782. CINNAMOMUM, CINNAMON, (1) | 89 |

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|---|---|---|
| | 2783. **Persea, persea,** 1 (1) | 183 |
| | 2789. **Umbellularia, California-laurel,** 1 | 291 |
| | 2790. **Nectandra, nectandra,** 1 | 176 |
| | 2795. **Sassafras, sassafras,** 1 | 271 |
| | 2820. **Licaria** (*Misanteca*), **licaria,** 1 | 161 |
| 107. | Capparaceae, caper family, 1 g., 2 | |
| | 3101. **Capparis, caper,** 2 | 70 |
| 123. | Hamamelidaceae, witch-hazel family, 2 g., 2 | |
| | 3298. **Liquidambar, sweetgum,** 1 | 162 |
| | 3309. **Hamamelis, witch-hazel,** 1 | 144 |
| 124. | Platanaceae, sycamore family, 1 g., 3 | |
| | 3314. **Platanus, sycamore,** 3 | 202 |
| 126. | Rosaceae, rose family (Chrysobalanaceae), 12 g. (1 g.), 77 (9) | |
| | 3329. **Vauquelinia, vauquelinia,** 2 | 292 |
| | 3338. PYRUS, PEAR, (1) | 221 |
| | 3338b. **Malus, apple,** 4 (1) | 167 |
| | 3338d. **Sorbus; mountain-ash,** 4(1) | 276 |
| | 3341a. **Heteromeles** (*Photinia*), **toyon,** 1 | 145 |
| | 3343. **Amelanchier, serviceberry,** 4 | 50 |
| | 3345a. **Crataegus, hawthorn,** 35 (1) | 101 |
| | 3367. **Cowania, cliffrose,** 1 | 101 |
| | 3369. **Cercocarpus, cercocarpus,** 5 | 84 |
| | 3370. **Adenostoma, chamise,** 1 | 44 |
| | 3396. **Prunus** (*Amygdalus, Cerasus, Laurocerasus, Padus*), **cherry; plum,** 18 (5) | 210 |
| | 3398. **Chrysobalanus, coco-plum,** 1 | 88 |
| | 3409. **Lyonothamnus, lyontree,** 1 | 164 |
| 128. | Leguminosae, legume family, 19 g. (2 g.), 44(6) | |
| 128a. | Subfamily Mimosoideae (Mimosaceae), 5 g. (1 g.), 20 (3) | |
| | 3441. **Pithecellobium, blackbead,** 4 | 200 |
| | 3443. ALBIZIA, ALBIZIA, (2) | 47 |
| | 3445. **Lysiloma, lysiloma,** 2 | 164 |
| | 3446. **Acacia, acacia,** 9 | 36 |
| | 3447. **Leucaena, leucaena,** 2 (1) | 160 |
| | 3454. **Prosopis, mesquite,** 3 | 209 |
| 128b. | Subfamily Caesalpinioideae (Caesalpiniaceae), 6 g. (1 g.), 10 (3) | |
| | 3508. TAMARINDUS, TAMARIND, (1) | 281 |
| | 3526. **Cercis, redbud,** 2 | 83 |
| | 3544. **Gleditsia, honeylocust,** 2 | 139 |
| | 3545. **Gymnocladus, coffeetree,** 1 | 143 |
| | 3551. **Parkinsonia, parkinsonia,** 1 | 182 |
| | 3554. **Cercidium, paloverde,** 3 | 82 |
| | 3559. **Caesalpinia** (*Poinciana*), **caesalpinia,** 1 (2) | 67 |
| 128c. | Subfamily Faboideae (Fabaceae), 8 g., 14 | |
| | 3602. **Sophora, sophora,** 2 | 276 |
| | 3606. **Cladrastis, yellowwood,** 1 | 91 |
| | 3708. **Eysenhardtia, kidneywood,** 2 | 130 |
| | 3709. **Dalea, dalea,** 1 | 122 |
| | 3733. **Robinia, locust,** 4 | 253 |
| | 3739. **Olneya, tesota,** 1 | 179 |
| | 3839. **Piscidia, fishpoison-tree,** 1 | 200 |
| | 3870. **Erythrina, coralbean,** 2 | 126 |
| 135. | Zygophyllaceae, caltrop family, 1 g., 2 | |
| | 3968. **Guaiacum, lignumvitae,** 2 | 141 |
| 137. | Rutaceae, rue (citrus) family, 5 g. (2 g.), 12 (4) | |
| | 3990. **Zanthoxylum, prickly-ash,** 6 | 298 |
| | 4048. **Esenbeckia, esenbeckia,** 1 | 127 |
| | 4067. **Helietta, helietta,** 1 | 145 |
| | 4069. **Ptelea, hoptree,** 2 | 220 |
| | 4084. **Amyris, amyris,** 2 | 53 |
| | 4100. CITRUS, CITRUS, (3) | 90 |
| | 4100c. PONCIRUS, TRIFOLIATE-ORANGE, (1) | 203 |
| 138. | Simaroubaceae, quassia family, 5 g. (1 g.), 5 (1) | |
| | 4106. **Suriana, baycedar,** 1 | 280 |
| | 4111. **Simarouba, simarouba,** 1 | 275 |
| | 4119. **Holacantha, holacantha,** 1 | 146 |
| | 4124. AILANTHUS, AILANTHUS, (1) | 46 |
| | 4131. **Picramnia, bitterbush,** 1 | 187 |

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4132. **Alvaradoa, alvaradoa,** 1 ---- 50
139. Burseraceae, bursera family, 1 g., 3.
4150. **Bursera, bursera,** 3 ---- 66
140. Meliaceae, mahogany family, 1 g. (1 g.), 1 (1)
4164. **Swietenia, mahogany,** 1 ---- 280
4175. MELIA, CHINABERRY, (1) ---- 172
141. Malpighiaceae, malpighia family, 1 g., 1
4255. **Byrsonima, byrsonima,** 1 ---- 67
147. Euphorbiaceae, spurge family, 5 g. (1 g.), 6 (2)
4288. **Savia, maidenbush,** 1 ---- 271
4309. **Drypetes, drypetes,** 2 ---- 125
4424. RICINUS, CASTOR-BEAN, (1) ---- 253
4483. **Sapium, sapium,** 1 (1) ---- 270
4486. **Hippomane, manchineel,** 1 ---- 146
4492. **Gymnanthes** (*Ateramnus*), **oysterwood,** 1 ---- 142
153. Anacardiaceae, cashew family, 5 g. (2 g.), 15 (3)
4545. MANGIFERA, MANGO, (1) ---- 170
4568. **Pistacia, pistache,** 1 ---- 200
4582. SCHINUS, PEPPERTREE, (2) ---- 272
4585. **Cotinus, smoketree,** 1 ---- 100
4591. **Metopium, poisontree,** 1 ---- 173
4594. **Rhus, sumac,** 11 ---- 250
4594d. **Toxicodendron, poison-sumac,** 1 ---- 288
154. Cyrillaceae, cyrilla family, 2 g., 2
4609. **Cliftonia, buckwheat-tree,** 1 ---- 91
4611. **Cyrilla, cyrilla,** 1 ---- 122
157. Aquifoliaceae, holly family, 2 g., 14
4614. **Ilex, holly,** 13 ---- 147
4615. **Nemopanthus, mountain-holly,** 1 ---- 176
158. Celastraceae, bittersweet family, 6 g., 7
4618. **Euonymus, euonymus,** 2 ---- 129
4626. **Maytenus** (*Tricerma*), **mayten,** 1 ---- 171
4648a. **Crossopetalum** (*Rhacoma*), **crossopetalum,** 1 ---- 118
4649a. **Gyminda, falsebox,** 1 ---- 142
4653. **Schaefferia, schaefferia,** 1 ---- 271
4659. **Canotia, canotia,** 1 ---- 69
161. Staphyleaceae, bladdernut family, 1 g., 2
4665. **Staphylea, bladdernut,** 2 ---- 278
163. Aceraceae, maple family, 1 g., 13
4720. **Acer, maple,** 13 ---- 39
164. Hippocastanaceae, horsechestnut (buckeye) family, 1 g., 6
4721. **Aesculus, buckeye,** 6 ---- 44
165. Sapindaceae, soapberry family, 6 g., 7
4831. **Dodonaea, hopbush,** 1 ---- 124
4833. **Hypelate, hypelate,** 1 ---- 147
4834. **Exothea, inkwood,** 1 ---- 130
4739. **Sapindus, soapberry,** 2 ---- 269
4786. **Cupania, cupania,** 1 ---- 118
4846. **Ungnadia, Mexican-buckeye,** 1 ---- 292
169. Rhamnaceae, buckthorn family, 7 g., 15 (3)
4861. **Ziziphus, jujube** (1) ---- 299
4862. **Condalia, condalia,** 2 ---- 95
4864. **Reynosia, darling-plum,** 1 ---- 246
4875. **Rhamnus, buckthorn,** 5 (2) ---- 246
4875a. **Krugiodendron, leadwood,** 1 ---- 158
4877. **Ceanothus, ceanothus,** 3 ---- 79
4882. **Colubrina, colubrina,** 3 ---- 94
174. Tiliaceae, linden (basswood) family, 1 g., 3
4964. **Tilia, basswood,** 3 ---- 286
175. Malvaceae, mallow family, 1 g.(1 g.), (2)
5013. **Hibiscus, hibiscus,** (1) ---- 145
5018. THESPESIA, THESPESIA, (1) ---- 284
178. Sterculiaceae, sterculia family, 1 g. (1 g.), 2 (1)
5046. **Fremontodendron** (*Fremontia*), **fremontia,** 2 ---- 138
5086. FIRMIANA, FIRMIANA, (1) ---- 132
186. Theaceae, tea family, 3 g., 4
5148. **Gordonia, gordonia,** 1 ---- 140

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5148a. **Franklinia, franklinia,** 1 ---- 133
5152. **Stewartia, stewartia,** 2 ---- 278
187. Guttiferae (Clusiaceae), mangosteen family, 1 g., 1
5181. **Clusia, clusia,** 1 ---- 92
191. TAMARICACEAE, tamarisk family, (1 g.), (3)
5239. TAMARIX, TAMARISK. (3) ---- 281
196. Koeberliniaceae, allthorn family 1 g., 1
5253. **Koeberlinia, allthorn,** 1 ---- 158
197. Canellaceae, canella family, 1 g., 1
5254. **Canella, canella,** 1 ---- 69
205. CARICACEAE, papaya family, (1 g.), (1)
5377. CARICA, PAPAYA. (1) ---- 70
210. Cactaceae, cactus family, 2 g., 3 (2)
5401. **Cereus** (*Carnegiea, Cephalocereus*), **cereus,** 2 ---- 85
5417. **Opuntia, pricklypear; cholla,** 1 (2) ---- 179
215. Elaeagnaceae, elaeagnus family, 2 g., 1 (1)
5471. **Shepherdia, buffaloberry,** 1 ---- 275
5472. **Elaeagnus, elaeagnus,** (1) ---- 125
220. Rhizophoraceae, mangrove family, 1 g., 1
5523. **Rhizophora, mangrove,** 1 ---- 248
221. Combretaceae, combretum family, 2 g. (1 g.), 2 (1)
5544. TERMINALIA, TERMINALIA. (1) ---- 284
5548. **Conocarpus, button-mangrove,** 1 ---- 95
5551. **Laguncularia, white-mangrove,** 1 ---- 158
222. Myrtaceae, myrtle family, 4 g. (3 g.), 8 (4)
5559. **Psidium, guava,** 1 (1) ---- 219
5563. RHODOMYRTUS, DOWNY-MYRTLE. (1) ---- 249
5575. **Calyptranthes, lid-flower,** 2 ---- 69
5578. **Eugenia, eugenia,** 4 ---- 128
5578c. **Myrcianthes, myrcianthes,** 1 ---- 174
5598. EUCALYPTUS, EUCALYPTUS. (1) ---- 127
5603. MELALEUCA, MELALEUCA. (1) ---- 172
223. Melastomataceae, melastome family, 1 g., 1
5758. **Tetrazygia, tetrazygia,** 1 ---- 284
227. Araliaceae, ginseng family, 1 g., 1
5881. **Aralia, aralia,** 1 ---- 55
229. Cornaceae, dogwood family (Nyssaceae; Garryaceae), 3 g., 15
6150. **Garrya, silktassel,** 1 ---- 138
6151. **Nyssa, tupelo,** 3 ---- 178
6159. **Cornus, dogwood,** 11 ---- 96
230. Clethraceae, clethra family, 1 g., 1
6165. **Clethra, clethra,** 1 ---- 91
233. Ericaceae, heath family, 8 g., 14
6179. **Elliottia, elliottia,** 1 ---- 126
6184. **Rhododendron, rhododendron,** 3 ---- 248
6192. **Kalmia, kalmia,** 1 ---- 157
6200. **Lyonia, lyonia,** 1 ---- 163
6203. **Oxydendrum, sourwood,** 1 ---- 182
6211. **Arbutus, madrone,** 3 ---- 55
6212. **Arctostaphylos, manzanita,** 3 ---- 56
6216. **Vaccinium, blueberry,** 1 ---- 292
235a. Theophrastaceae, theophrasta family, 1 g., 1
6282. **Jacquinia, jacquinia,** 1 ---- 151
236. Myrsinaceae, myrsine family, 2 g., 2
6285. **Ardisia, ardisia,** 1 ---- 57
6314. **Rapanea, rapanea,** 1 ---- 245
239. Sapotaceae, sapodilla family, 5 g., 8 (1)
6361. **Manilkara** (*Achras*), **manilkara,** 1 (1) ---- 170
6368a. **Mastichodendron** (*Sideroxylon*), **mastichodendron,** 1 ---- 171
6373. **Dipholis, bustic,** 1 ---- 123
6374. **Bumelia, bumelia,** 4 ---- 65
6377. **Chrysophyllum, goldenleaf,** 1 ---- 89
240. Ebenaceae, ebony family, 1 g., 2
6406. **Diospyros, persimmon,** 2 ---- 123
241. Styracaceae, snowbell (storax) family, 2 g., 6
6410. **Halesia, silverbell,** 3 ---- 143
6411. **Styrax, snowbell,** 3 ---- 279

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242. Symplocaceae, sweetleaf family, 1 g., 1
6418. **Symplocos, sweetleaf,** 1 ---- 281
243. Oleaceae, olive family, 4 g. (1 g.), 22 (3)
6420. **Fraxinus, ash,** 16 ---- 134
6426. **Osmanthus, osmanthus,** 1 ---- 180
6427. **Forestiera, forestiera,** 4 ---- 132
6430. **Chionanthus, fringetree,** 1 ---- 88
6436. LIGUSTRUM, PRIVET, (3) ---- 162
252. Boraginaceae, borage family, 3 g., 4 (1)
7038. **Cordia, cordia,** 1 (1) ---- 96
7042. **Bourreria, strongback,** 2 ---- 64
7043. **Ehretia, ehretia,** 1 ---- 125
253. Verbenaceae, verbena family (Avicenniaceae), 2 g., 3
7161. **Citharexylum, fiddlewood,** 2 ---- 89
7205. **Avicennia, black-mangrove,** 1 ---- 58
256. Solanaceae, nightshade family, 2 g., 1 (1)
7407. **Solanum, nightshade,** 1 ---- 275
7434. **Nicotiana, tobacco,** (1) ---- 177
257. Scrophulariaceae, figwort family, (1 g.), (1)
7513. PAULOWNIA, PAULOWNIA, (1) ---- 182
258. Bignoniaceae, bignonia family, 4 g., 5
7726. **Chilopsis, desert-willow,** 1 ---- 88
7727. **Catalpa, catalpa,** 2 ---- 78
7733. **Tecoma, trumpet-flower,** 1 ---- 283
7753. **Amphitecna** (*Enallagma*), **black-calabash,** 1 ---- 53
270. Rubiaceae, madder family, 6 g., 7
8129. **Pinckneya, pinckneya,** 1 ---- 187
8219. **Exostema, exostema,** 1 ---- 129
8230. **Cephalanthus, buttonbush,** 1 ---- 81
8290. **Genipa** (*Casasia*), **genip,** 1 ---- 139
8329. **Hamelia, hamelia,** 1 ---- 144
8361. **Guettarda, velvetseed,** 2 ---- 142
271. Caprifoliaceae, honeysuckle family, 2 g., 11
8515. **Sambucus, elder,** 5 ---- 267
8516. **Viburnum, viburnum,** 6 ---- 293
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9358. **Artemisia, sagebrush,** 1 ---- 57

# APPENDIX 8
# SUMMARY OF CHANGED SPECIFIC NAMES

Relatively few changes in specific names or binomials have been made in this checklist from those accepted in the 1953 checklist. The summary compiled here involves only about 50 species, mainly of low economic importance. Most of these changes were accepted in Atlas of United States Trees and were mentioned in the introductions of those volumes.

However, this compilation omits minor changes, such as names reduced to synonyms or varieties, varieties raised to species, differences in varietal names, and revisions of common names. Numerous synonyms in *Crataegus*, hawthorn, are cross-indexed under that genus. Also left out are species added or removed.

Twelve changes in generic names, involving only 16 species in the list below, have been noted with the reasons in Table 3 (page 17). Most of these species retain the same specific epithet when transferred.

Changes in specific names or epithets were made for various reasons. Several concern union with another species named earlier. A few names have been replaced by older ones for the same species. In others, the former name had been misapplied. One species was renamed because of an earlier homonym. Three names rejected in the 1953 checklist as very briefly and inadequately described have been accepted to agree with current usage.

In geographic distribution, most species listed are restricted to States along the southern border of the United States. Tropical species native in southern Florida total 16, while 9 others are limited to Texas, chiefly the southern part. Eight range into California. Seven species are naturalized, 3 of them tropical in southern Florida.

The summary below lists the accepted scientific name first, followed by the former binomial and the approved common name, also former common name if changed.

*Acacia berlandieri* Benth., formerly *A. emoryana* Benth.; guajillo, formerly Emory acacia

*Acoelorrhaphe wrightii* (Griseb. & H. Wendl.) H. Wendl. ex Becc., *Paurotis wrightii* (Griseb. & Wendl.) Britton; paurotis-palm, paurotis

*Amphitecna latifolia* (Mill.) A. H. Gentry, *Enallagma latifolia* (Mill.) Small; black-calabash

*Avicennia germinans* (L.) L., *A. nitida* Jacq.; black-mangrove

*Bourreria radula* (Poir.) G. Don, *B. revoluta* H.B.K.; rough strongback, rough strongbark

CAESALPINIA GILLIESII (Hook.) Dietr., *Poinciana gilliesii* Hook.; PARADISE CAESALPINIA, paradise poinciana

*Caesalpinia mexicana* Gray, *Poinciana mexicana* (Gray) Rose; Mexican caesalpinia, Mexican poinciana

CAESALPINIA PULCHERRIMA (L.) Sw., *Poinciana pulcherrima* L., FLOWERFENCE

*Cercidium texanum* Gray, *C. macrum* Johnst.; Texas paloverde, border paloverde

*Cereus robinii* (Lem.) L. Benson, *Cephalocereus keyensis* Britton & Rose; key tree-cactus, Key West cephalocereus

*Cereus robinii* var. *deeringii* (Small) L. Benson, *Cephalocereus deeringii* Small; Deering tree-cactus, Deering cephalocereus

*Cladrastis kentukea* (Dum.-Cours.) Rudd, C. *lutea* (Michx. f.) K. Koch; yellowwood

*Colubrina elliptica* (Sw.) Briz. & Stern, C. *reclinata* (L'Hér.) Borngn.; soldierwood

*Condalia hookeri* M. C. Johnst., *C. obovata* Hook. (non Ruiz & Pav.); bluewood

*Crataegus intricata* Lange, *C. biltmoreana* Beadle, *C. boyntonii* Beadle, etc.; Biltmore hawthorn

*Crataegus pulcherrima* Ashe, *C. opima* Beadle, *C. robur* Beadle; beautiful hawthorn
*Dodonaea viscosa* Jacq., *D. microcarya* Small; hopbush, Florida hopbush
*Esenbeckia berlandieri* Baill., *E. runyonii* Morton; Berlandier esenbeckia, Runyon esenbackia
*Eugenia foetida* Pers., *E. myrtoides* Poir., *E. anthera* Small; boxleaf stopper, boxleaf eugenia
*Eysenhardtia texana* Scheele, *E. angustifolia* Pennell; Texas kidneywood
*Ficus citrifolia* Mill., *F. laevigata* Vahl; shortleaf fig
FIRMIANA SIMPLEX (L.) W. F. Wight, *F. platanifolia* (L. f.) Schott; CHINESE PARASOLTREE
*Forestiera angustifolia* Torr., *F. texana* Cory; Texas forestiera
*Fremontodendron californicum* (Torr.) Cav., *Fremontia californica* Torr.; California fremontia
*Fremontodendron mexicanum* A. Davidson, *Fremontia mexicana* (A. Davidson) Macbr.; Mexican fremontia
*Guaiacum angustifolium* Engelm., *Porliera angustifolia* (Engelm.) Gray; Texas lignum-vitae, Texas porliera
*Guapira discolor* (Spreng.) Little, *Torrubia longifolia* (Heimerl) Britton, *T. bracei* Britton, *T. globosa* Small; longleaf blolly, Brace blolly, roundleaf blolly
*Heteromeles arbutifolia* (Lindl.) M. J. Roem., *Photinia arbutifolia* Lindl.; toyon, Christmas-berry
LEUCAENA LEUCOCEPHALA (Lam.) de Wit , *L. glauca* Benth.; LEUCAENA, leadtree
*Lysiloma latisiliquum* (L.) Benth., *L. bahamense* Benth.; Bahama lysiloma
*Malus fusca* (Raf.) Schneid., *M. diversifolia* (Bong.) Roem., Oregon crab apple
MALUS SYLVESTRIS (L.) Mill., *M. pumila* Mill.; apple
*Manilkara bahamensis* (Baker) Lam & Meeuse, *Achras emarginata* (L.) Little; wild-dilly
MANILKARA ZAPOTA (L.) v. Royen, *Achras zapota* L.; SAPODILLA
*Mastichodendron foetidissimum* (Jacq.) H. J. Lam, *Sideroxylon foetidissimum* Jacq.; false-mastic
MELALEUCA QUINQUENERVIA (Cav.) S. T. Blake, *M. leucadendron* (L.) L. CAJEPUT-TREE
*Myrcianthes fragrans* (Sw.) McVaugh, *Eugenia dicrana* Berg; twinberry stopper, twinberry eugenia
*Myricanthes fragrans* var. *simpsonii* (Small) R. W. Long, *Eugenia simpsonii* (Small) Sarg.; Simpson stopper, Simpson eugenia
*Prosopis glandulosa* Torr., *P. juliflora* var. *glandulosa* (Torr.) Cockerell; honey mesquite
*Prosopis velutina* Woot., *P. juliflora* var. *velutina* (Woot.) Sarg.; velvet mesquite
*Psidium longipes* (Berg) McVaugh, *Eugenia longipes* Berg, *E. bahamensis* Kiaersk.; long-stalk stopper, trailing eugenia, Bahama eugenia
*Quercus dunnii* Kellogg, *Q. chrysolepis* var. *palmeri* (Engelm.) Sarg.; Dunn oak, Palmer oak
*Quercus glaucoides* Mart. & Gal., *Q. laceyi* Small; Lacey oak
*Quercus macdonaldii* Greene, *Q. dumosa* var. *macdonaldii* (Greene) Jeps.; McDonald oak
*Quercus rugosa* Née, *Q. reticulata* Humb. & Bonpl.; netleaf oak
*Rapanea punctata* (Lam.) Lundell, *R. guianensis* Aubl.; Florida rapanea, Guiana rapanea
*Sabal mexicana* Mart., *S. texana* (O. F. Cook) Becc.; Mexican palmetto, Texas palmetto
*Sabal minor* (Jacq.) Pers., *S. louisiana* (Darby) Bomhard; dwarf palmetto, Louisiana palmetto
*Sambucus cerulea* Raf., *S. glauca* Nutt.; blue elder, blueberry elder
*Sequoiadendron giganteum* (Lindl.) Buchholz, *Sequoia gigantea* (Lindl.) Decne.; giant sequoia
*Solanum erianthum* D. Don, *S. verbascifolium* L.; mullein nightshade
TAMARIX CHINENSIS Lour., *T. gallica* L.; TAMARISK, five-stamen tamarisk
*Thrinax morrisii* H. Wendl., *T. microcarpa* Sarg.; key thatchpalm, brittle thatchpalm
*Thrinax radiata* Lodd. ex J. A. & J. H. Schult., *T. parviflora* Sw..; Florida thatchpalm, Jamaica thatchpalm
*Yucca schidigera* Roezl ex Ortgies, *Yucca mohavensis* Sarg.; Mohave yucca

# INDEX OF COMMON NAMES

Page numbers of approved common names in text headings (set in heavy or boldface type) are in ordinary (roman) type. Numbers for other common names are in italics. Species mentioned in notes have been included. Indexing is under the last word, except for names from Spanish or other foreign languages. No index of scientific names is needed, as accepted species are arranged alphabetically by scientific names and as cross references have been inserted.


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