

The **ARNOLD**
ARBORETUM
of HARVARD UNIVERSITY



INVENTORY OF LIVING COLLECTIONS

Compiled by the Horticulture Department

February, 2012

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Front cover & title page:

Fagus americana (Fagus grandifolia). Sargent, Charles Sprague, 1947. *The silva of North America: a description of the trees which grow naturally in North America exclusive of Mexico*. Tab. CCCCXLIV. New York: P. Smith. Illus. by Charles Edward Faxon. Library of the Arnold Arboretum. HOLLIS 007216224.

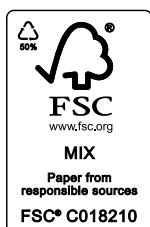
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Carroll E. Wood, Jr., 1974. *A students' atlas of flowering plants: some dicotyledons of Eastern North America*. New York, NY: Harper & Row. Library of the Arnold Arboretum.

Inside back cover:

Fagus grandifolia. Mathews, F. Schuyler, 1915. *Field book of American trees and shrubs: a concise description of the character and color of species common throughout the United States, together with maps showing their general distribution*. New York: Putnam. Library of the Arnold Arboretum. HOLLIS 003172975.

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*This inventory is dedicated to all who have worked
in or for this Arboretum since its inception in 1872.*

INTRODUCTION

The Arnold Arboretum of Harvard University is the oldest public arboretum in North America and one of the world's leading centers for the study of plants. A unique blend of beloved public landscape and respected research institution, it provides and supports world-class research, horticulture, and education programs that foster the understanding, appreciation and preservation of trees. Since its founding in 1872, the Arboretum's goal has been to acquire woody plants (trees, shrubs, and vines) from around the world that are potentially hardy outdoors in the Boston region. To accomplish this, the Arboretum has long supported botanical exploration programs to collect germplasm from documented wild sources. In particular, the floristically rich regions of Eastern Asia and North America are well represented in the living collection. Many plants have also been received from colleagues at sister institutions, correspondents, and commercial sources. This listing is an inventory of the current living collections of the Arnold Arboretum of Harvard University.

OVERVIEW OF THE LIVING COLLECTIONS

As of February 1, 2012, the living collections comprise 15,098 individual plants (including nursery holdings) belonging to 10,267 accessions that represent 3,954 taxa. Taken together, the collections are considered to be one of the largest (Table 1) and best documented (Table 2) woody plant collections in North America and the world. Many of these accessions or accession lineages are of historical and botanical importance, representing the original plant introductions into North America by early Arboretum staff members such as Charles Sprague Sargent, Ernest Henry Wilson, John George Jack, Joseph Rock, and William Purdom, among others.

RANK	NUMBER
Families	97
Genera	338
Species	2,170
Subspecies	86
Varieties	371
Formae	72
Cultivars	1,516
Interspecific Hybrids	452
Intergeneric Hybrids	17

^a Numbers for infraspecific ranks correspond only to those accessions where rank is known.

Table 2. Provenance of Accessions in the Living Collections of the Arnold Arboretum.		
PROVENANCE	TOTAL NUMBER	PERCENT OF TOTAL
Wild		
Direct	2,790	27
Indirect	792	8
Garden	3,227	31
Uncertain ^a	3,458	34

^a Includes 2,051 existing or spontaneous accessions whose provenance cannot be determined.

LOCATION AND CLIMATE

The Arnold Arboretum occupies an area of 265 acres (107 hectares) and is located in the Jamaica Plain section of Boston, Massachusetts (42° 19' north latitude, 71° 05' west longitude). Altitudes range from 46 feet (15 meters) in the meadow across the drive from the Hunnewell Building to 240 feet (79 meters) at the top of Peters Hill. Average annual rainfall for Boston is 43.6 inches (1,102 millimeters); average snowfall, 40.2 inches (1,021 millimeters). Annual mean temperature is 51.5° F (10.8° C); July's mean temperature is 73.5° F (23° C); January's is 29.6° F (-1.3° C). The Arboretum is located in USDA hardiness zone 6 (average annual minimum temperature of 0 to -10° F (-17.7 to -23.3° C)).

THE LIVING COLLECTIONS POLICY

REVIEWED AND APPROVED ON SEPTEMBER 10, 2007

I. INTRODUCTION

A. PURPOSE OF THE LIVING COLLECTIONS POLICY

The Living Collections Policy of the Arnold Arboretum guides the development, management, and enhancement of the institution's Living Collections, and applies to all plants outlined below under Scope of the Living Collections. The Living Collections Policy is written and administered by the Living Collections Committee, which comprises the Curator of Living Collections (Chair of the Committee), Deputy Director, Manager of Horticulture, Manager of Plant Records, Manager of the Dana Greenhouses and Nursery, and Senior Research Scientist; it is further reviewed and approved by the Director. The Living Collections Policy is reviewed every five years and revised as needed. Operational procedures related to implementation of this and related policies are detailed in the Arboretum's *General Procedures for Managing the Flow of Plants through the Department of Horticulture* (January, 2007).

B. PURPOSE OF THE LIVING COLLECTIONS

The Living Collections of the Arnold Arboretum are essential to achieving its mission as a research institution dedicated to improving the understanding, appreciation, and preservation of woody plants. As a national and international resource for research in

the various fields of plant biology and beyond, the Arboretum's Living Collections are actively developed and managed to support scientific investigation and study, as well as key educational and amenity roles.

C. LEGAL AND ETHICAL CONSIDERATIONS

Activities related to the development, management, and use of the Arnold Arboretum's living collections comply with all relevant local, state, federal, and international laws. This includes compliance with all necessary documentation and phytosanitary requirements during acquisition and distribution activities. All taxa are evaluated for their potential invasiveness, and should invasive or potentially invasive plants be retained for their scientific value, additional management procedures are put into place for containment purposes; they are not distributed for horticultural use.

II. SCOPE OF THE LIVING COLLECTIONS

The Living Collections are divided into three primary collection categories: Core, Historic, and Miscellaneous Collections; within each are secondary collections. This organization allows priority to be assigned to all extant, as well as potential, accessions within each category, thus guiding collections development, management, and enhancement. It should be noted that none of the primary, or secondary, collections are mutually exclusive and that many accessions fall into multiple categories.

A. CORE COLLECTIONS

The Core Collections are of highest priority and receive the greatest focus with respect to development, management, and enhancement. In general, these collections are intrinsic to the mission of the institution through their research use, and preference is placed on material of documented wild origin. Exceptions to provenance requirements are made only in specific cases when the value is significant enough to warrant accessioning. By and large, these collections are regarded as obligatory.

1. Biogeographic Collections

Collections representing the floras of eastern North America and eastern Asia have been an important traditional focus, strongly supporting research related to the floristic relationships between these two regions. In particular, eastern North American-Asian disjunct taxa receive high priority with respect to collections development.

2. NAPCC Collections

As part of its commitment to the North American Plant Collections Consortium (NAPCC), the Arboretum maintains and develops collections of botanical taxa within the following genera: *Acer*, *Carya*, *Fagus*, *Stewartia*, *Syringa*, and *Tsuga*. Because they serve as national germplasm repositories, development and maintenance maximizes both inter- and intraspecific diversity.

3. Conservation Collections

As part of its commitment to the Center for Plant Conservation (CPC), the Arboretum maintains and develops collections of the following species: *Amelanchier nantucketensis*, *Diervilla rivularis*, *Diervilla sessilifolia*, *Fothergilla major*, *Ilex collina*, *Rhododendron*

prunifolium, *Rhododendron vaseyi*, *Spiraea virginiana*, and *Viburnum bracteatum*. These species, as well as other taxa of conservation value outside the scope of CPC, are developed and maintained with the goals of preserving as high a level of intraspecific diversity as is practicable.

4. Synoptic Collections

Collections of documented wild-origin species that together provide a synoptic representation of the woody flora of the North Temperate Zone are maintained and developed. Emphasis is first placed on generic diversity, and then inter- and intraspecific diversity as is practicable.

B. HISTORIC COLLECTIONS

The Arboretum's early contributions to plant exploration and horticultural improvement are manifested in a number of Historic Collections. In general, these collections are obligatory and maintained, but not actively developed except in cases where authentic material of Arboretum origin can be repatriated or the material is sufficiently unique to warrant accessioning.

1. Arnold Arboretum Accessions

Plants collected by early Arboretum staff (e.g., C. S. Sargent, E. H. Wilson, J. G. Jack, J. Rock) may lack sufficient documentation, or be of garden origin. However, because they represent important historical chapters in the development of the institution, they are maintained in the Living Collections. In some cases, these accessions may represent genotypes no longer extant in the wild because of local extinction and thus have high conservation value.

2. Nurseries and Horticulturists

Accessions derived from historically significant nurseries, botanical institutions, and horticulturists (e.g., H. J. Veitch, T. Meehan, M. Vilmorin) may lack full documentation, but are maintained in the Living Collections. These often represent the initial introductions of species into cultivation and are, in all probability, wild-collected. In some cases, these accessions may represent genotypes no longer extant in the wild because of local extinction and thus have high conservation value.

3. Distinctive Cultivar Collections

Early in its development, the Arboretum established diverse collections of garden selections now regarded as cultivars within various plant groups (e.g., dwarf conifers, *Malus*, *Rhododendron*, *Syringa*). Because of their period and oftentimes comprehensive nature, these collections are maintained but not developed.

4. Cultivars with names proposed prior to 1953

The Living Collections contain a number of historic cultivars with Latinized names that were proposed in a botanical context prior to 1953. While not developed, these are maintained, particularly when they represent material unique in cultivation.

5. Arnold Arboretum Cultivar Introductions

Throughout its history, the Arboretum has selected and introduced a number of

clones for ornamental use, many of which were initially regarded as botanical formae but are now recognized as cultivars. Because they arose at the Arboretum, they are maintained and development occurs only to repatriate genotypes lost by the Arboretum.

6. Larz Anderson Bonsai Collection

The Larz Anderson Bonsai Collection, while not actively developed, is of high priority within the Arboretum's Living Collections because of its historic and aesthetic value.

C. MISCELLANEOUS COLLECTIONS

In addition to those within the above collection categories, the Living Collections comprise a number of plants grown to achieve display effects, for interpretation, for evaluation, or plants that may fall outside of traditional scope and not even be accessioned. However, because they play important roles in the Arboretum's research, horticultural, and educational work, they are included within the Living Collections. These may be obligatory or discretionary, and development and maintenance decisions are made on a case-by-case basis by the Living Collections Committee.

1. Display Collections

Plants of cultivated origin, particularly cultivars selected for unique traits, serve important research and education roles; however their primary value is for display. Examples include ornamentals with exceptional ornamental qualities, landscape plants well suited to the New England climate (including those with stress-, insect-, and disease-resistance), as well as those under evaluation. These collections are regarded as discretionary and are developed and maintained as needed, with the acknowledgement that accessions may be deaccessioned when their value no longer meets the appropriate standard.

2. Natural Areas

The Arboretum landscape contains several natural areas representative of the New England Flora. Generally, these are maintained through natural regeneration of the present vegetation; however, development may occur under certain circumstances (e.g., restoration following major disturbance).

3. Spontaneous Flora

Spontaneous generation of native, as well as exotic, plants occurs throughout the Arboretum's cultivated landscape. As a matter of course, some of these plants are removed because of their noxious characteristics, some are left in place, while others are accessioned (in particular spontaneous interspecific hybrids or landscape specimens). The forthcoming *Policy on the Spontaneous Flora* addresses this category more thoroughly.

4. Dana Greenhouse and Nursery Collections

A number of plants are cultivated at the Dana Greenhouse and Nursery for experimental, observational, and other programmatic functions outside the scope of production for the accessioned Living Collections. Development and maintenance lies with the primary investigator or other assigned staff member, with the understanding that these may be formally accessioned at a later time.

DEFINITION OF TERMS USED IN THE LIVING COLLECTIONS POLICY

An **accession** is the basic unit of a collection and identified by a unique accession number. By definition it represents a single taxon, from a single source, acquired at one time, and through one means of propagation. An accession may comprise a single plant, or multiple plants, each identified by a letter qualifier following the accession number, or in the case of mass plantings, MASS.

Accessioning is the process of adding specimens to the Arboretum's Living Collection. It occurs at the time of entry regardless of the stage (e.g., plant, cutting, scion, seed) of accessioned material. All accession records are permanent and are not expunged should deaccessioning occur.

Acquisition of new accessions may be through field collection, exchange, gift or purchase. All acquisitions must meet specific collections development goals in accordance with the Scope of the Living Collections detailed in this Living Collections Policy.

A **collection** is operationally defined as a group of accessions organized by a particular category for curatorial, educational, research, display or other use. A collection need not be physically grouped together, and a single accession may be part of multiple collections. From the perspective of commitment, collections may be discretionary or obligatory.

Curation is the process of managing the Living Collections to guarantee its conservation, guide its development, ensure its documentation, and facilitate its enhancement.

Deaccessioning is the process of removing a living specimen from the collection, but does not include the removal of any records related to that accession. Deaccessioning decisions are made by the Curator of Living Collections, in consultation with the Living Collections Committee.

Development is the process by which the Living Collections undergo change through the acquisition of new accessions and the deaccessioning of accessions no longer needed in accordance with the Scope of the Living Collections detailed in this Living Collections Policy.

Discretionary collections can be regarded as temporary or permanent. They meet specific research, display, education or other programmatic needs, but do not necessarily represent collections central to the mission and purpose of the Arboretum.

Enhancement is the process of adding value to the Living Collections through documentation, research, and other means.

The **Living Collections** comprise all plants formally accessioned, and in a broad sense also contain unaccessioned plants in natural areas, spontaneous flora, and research material.

Maintenance, from the standpoint of curating the Living Collections, is the practice of vegetatively repropagating an obligatory accession in order to preserve and perpetuate its genetic lineage. Multiple accessions of the same lineage are genetically identical.

Obligatory collections are considered permanent and represent collections central to the mission and purpose of the Arboretum.

A **taxon** (plural, taxa) is a unit of any rank within the taxonomic hierarchy (e.g., family, genus, species, variety, cultivar).



Fig. 89. *Fagus sylvatica*: a Zw. mit ♂ und ♀ Blst.; b ♂ Bl.; c ♀ Trugdöldchen; d ♀ Bl.; e Querschnitt durch Frkn., die 3 Fächer mit je 2 Sa. zeigend; f Zw. mit aufgesprungenen Fr.; g—h reife Früchte (Bucheckern); i Fr. im Querschnitt (nach HEMPEL et WILH).

Fagus sylvatica from

Schneider, Camillo, 1906. Illustriertes handbuch der laubholz-kunde : charakteristik der in Mitteleuropa heimischen und im freien angepflanzten angiospermen gehölz-arten und formen mit ausschluß der bambuseen und kakteen. Jena: G. Fischer.

Library of the Arnold Arboretum. HOLLIS: 006904734.

CURATORIAL PROCEDURES

Collections management at the Arnold Arboretum ensures the highest level of documentation. Records for each accession in the collection are maintained in a PC-based database application (*BG-BASE*). Mapping software (ESRI Desktop and Mobile GIS) ensures accurate map maintenance and plotting of landscape features. New plantings and hardscape features are georeferenced using a decimeter accurate Global Positioning System (GPS) receiver (Trimble ProXRT, GLONASS option). A grid system overlaid onto the base map divides the property into 70 individual maps, each 400 feet by 600 feet, and each map is further divided into 4 quadrants labeled as NW, NE, SW, SE (see Appendix I, Maps).

For each accession, the database stores information on the source; specific provenance data; date of acquisition; accepted botanical name and its synonyms; size of the plant upon receipt as well as at intervals throughout its existence in the collection; number of plants; map location on the grounds; and the presence of any vouchers in the cultivated herbarium or photographic images. Additional data may include performance observations; unique ornamental characteristics; growth and survival rates; hardiness potential; specific propagation techniques required; a botanical description; taxonomic verifications; and notes on storm damage, susceptibility to insects or diseases, or experimental data. Observations on plant collections are ongoing and formal assessment activities are documented in the Arboretum's *Plant Inventory Operations Manual* (April, 2011), www.arboretum.harvard.edu/wp-content/uploads/plant_inventory_operations_manual.pdf.

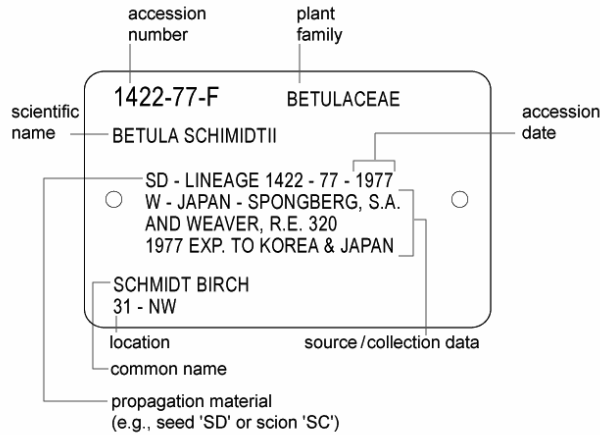
The Living Collections of the Arnold Arboretum are curated to ensure that plants are correctly identified, that contemporary taxonomic or classification schemes are being considered, and lastly, that accurate nomenclature is being applied. A number of activities assist curatorial staff in accomplishing these goals: voucher herbarium specimens are prepared and deposited in the Cultivated Herbarium (www.arboretum.harvard.edu/plants/herbaria/cultivated-herbarium/), the identity and correct name of accessions are researched, and the scientific literature is regularly reviewed. Also, because the collections are a resource for scientists around the world, much "taxonomic progress" (i.e., changes in identification, taxonomy, and/or names) occurs as a result of their research.

Our policy calls for each plant in the collections to be labeled with two anodized aluminum labels that are embossed, using a DataCard 295 embosser, with its accession number, botanical name, family, provenance data, and/or lineage number, and means of propagation and location on the Arboretum grounds. Letter designations are appended to the accession number to identify individuals of a particular accession. An example of a typical records label follows.

In addition, many trees and shrubs bear trunk or display labels of larger format that provide common and scientific names, nativity, and the botanical family to which the genus belongs. Stake labels are used to interpret collections in the Leventritt Shrub and

Vine Garden, Explorers Garden (Chinese Path), Bradley Rosaceous Collection and Hunnewell Building areas.

A Typical Records Label



ACCESS TO THE LIVING COLLECTIONS AND AVAILABILITY OF RESEARCH AND PROPAGATION MATERIALS

The Living Collections of the Arnold Arboretum comprise a valuable genetic resource that represents a large subset of the combined ligneous floras of the North Temperate Zone. The Arboretum strongly encourages and supports the use and distribution of its Living Collections for research and other forms of scholarship. We can provide access to the plants growing in the collection, supply voucher herbarium specimens, furnish fresh or preserved tissue, and collect propagules. Remote access to collections data is provided through the searchable plant inventory, accessed on the Arboretum's web page, www.arboretum.harvard.edu/plants/plant-inventory/. Additional access to the collections is provided through Collection Researcher (www.arboretum.harvard.edu/plants/collection-researcher/), a web application that provides unique access via an interactive map.

Researchers and scholars who wish to access the Living Collections to conduct on-site experiments, make observations, request voucher herbarium specimens or tissue (fresh or dried in silica gel), or other needs should send queries to:

researchrequests@arnarb.harvard.edu. Please include your name and affiliation, nature of the request, and the taxa of interest. To all extents practicable, curatorial staff can also assist researchers in developing their study. Note that permits are required for *all* research and collecting activity, and are issued following review. Access to the collections is provided free of charge, including the cost of shipping material. However, the use of a recipient's courier account (FedEx preferred) is appreciated. For any requests that require intensive curatorial support, particularly over an entire growing season(s), we ask that scholars consider offsetting some of the costs.

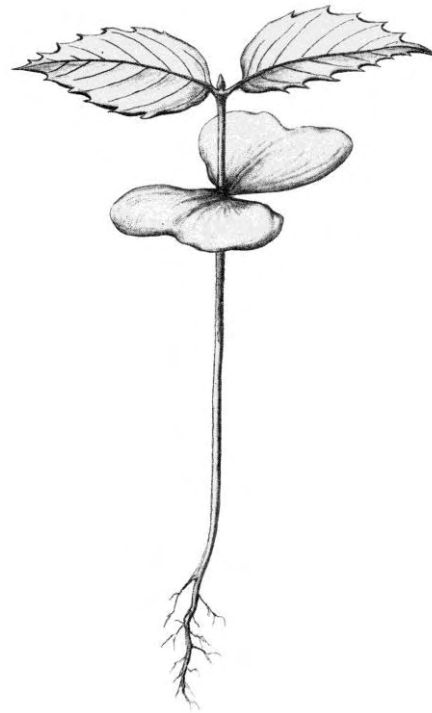
Many of the taxa in the living collections are of conservation value due to their threatened status in the wild. As a consequence, the Arnold Arboretum views its collections as an alternative source of *limited* amounts of propagation material of these as well as more commonplace but little-known plants. However, the Arboretum does not normally supply propagation materials of plants that are known to be generally available from any commercial source in North America. We also retain the right to refuse distribution of propagation material that represents species and/or clones that are planned for introduction by the Arnold Arboretum, those which fall under memoranda of understanding with third parties, or for other curatorial reasons.

With respect to seed requests, it should be noted that seeds collected from Arboretum plants are the result of open pollination, and no guarantee can be made that they will grow true to name. This fact is particularly true for large genera that are represented by many species in our collections. Requests for propagation material should list the botanical name and the approximate amount of plant material desired. Material will be collected and processed by the staff as time and weather permits. Requests via e-mail can be made to: **propagationrequests@arnarb.harvard.edu**. Written requests should be addressed to:

Curator of Living Collections
The Arnold Arboretum of Harvard University
125 Arborway
Boston, MA 02130, United States

Requests for material originating in foreign countries *must* be accompanied by the proper import permits and/or mailing labels for importation purposes. Every effort will be made to supply the requested material, but the number of plants held within our collection and their condition will be the limiting factor. Requests held to a reasonable number, twelve or fewer, will be filled at a greater speed. Except for requests from sister botanical institutions and academic departments, a fee is charged for propagation materials to offset the costs involved in providing them. A fee will be also be added to cover inspection by agents of the United States Department of Agriculture for phytosanitary certificates for all foreign orders. Please visit **www.arboretum.harvard.edu/plants/access/** to review all policies and fees.

We are pleased to be able to share our resources with botanists and horticulturists throughout the world. When propagation material is limited, priority is given to those individuals and organizations that are members of the Friends of the Arnold Arboretum. To receive information about membership in the Friends of the Arnold Arboretum, please contact our Membership Department at **membership@arnarb.harvard.edu** or 617.384.5766, or visit our website at **www.arboretum.harvard.edu/support/membership/**.



Fagus americana (*Fagus grandifolia*) from
Sargent, Charles Sprague, 1947. *The silva of North America: a description of the trees which grow naturally in
North America exclusive of Mexico*. Tab. CCCCXLIV. New York: P. Smith. Illus. by Charles Edward Faxon.
Library of the Arnold Arboretum. HOLLIS 007216224.

HOURS AND CONTACT INFORMATION

The grounds are open from sunrise to sunset every day of the year. There is no admission charge, but donations are welcome.

The Visitor Center in the Hunnewell Building is open:

9am-4pm weekdays
10am-4pm Saturdays
noon-4pm Sundays
closed holidays

The library is located in the Hunnewell Building and is open Monday through Saturday, 10:00am-3:45pm. The Library is closed on Sundays and holidays. Library contact information:

phone: 617.522.1086
fax: 617.524.1418, ATTN Library
email: hortlib@arnarb.harvard.edu

The Cultivated Herbarium is located in the Hunnewell Building and is open, by appointment, Monday through Friday, 10:00am-3:00pm. Please contact the curator at 617.384.5769 to make an appointment. The Herbarium is closed weekends and holidays.

The Seed Herbarium is located at the Dana Greenhouse and is open, by appointment, Monday through Friday, 10:00am-3:00pm. Please contact the Dana Greenhouse staff at 617.384.5665 to make an appointment. The Seed Herbarium is closed weekends and holidays. Greenhouse contact information:

The Dana Greenhouse
The Arnold Arboretum of Harvard University
1050 Centre Street
Boston, MA 02130-3500

The general mailing address, phone number, fax number, and web address of the Arboretum are:

The Arnold Arboretum of Harvard University
125 Arborway
Boston, MA 02130-3500
United States

phone: 617.384.5454
fax: 617.524.1418
web site: www.arboretum.harvard.edu

PLEASE PROTECT OUR PLANT COLLECTIONS

The Arnold Arboretum is intended for the study of plants and the passive appreciation of nature. Activities must be conducted in a manner that does not impact or deter the general public's enjoyment of the Arboretum. Groups and individuals using the Arboretum should be aware of the following rules:

- Picking or destroying plant material is strictly prohibited.
- Climbing trees is not allowed nor is walking in plant beds or mulched areas.
- Dogs must be leashed at all times. Owners are responsible for removal and disposal of their dogs' wastes.
- Motor vehicles are not allowed without a special permit for individuals with mobility issues (contact the Visitor Center at 617.384.5209 for more information).
- Picnicking, fires, and barbecues are prohibited.
- Organized group sports and commercial film crews are prohibited.
- Bicycles are permitted only on paved paths.
- Small wedding ceremonies and other group activities are permitted but are limited to 40 people. See www.arboretum.harvard.edu/visit/hours-services-and-policies/weddings-memorial-services-and-other-group-activities/ for details.



Fagus orientalis from

Schneider, Camillo, 1906. *Illustriertes handbuch der laubholzkunde : charakteristik der in Mitteleuropa heimischen und im freien angepflanzten angiospermen gehölz-arten und formen mit ausschluß der bambuseen und kakteen*. Jena: G. Fischer.

Library of the Arnold Arboretum. HOLLIS: 006904734.

USE OF THIS INVENTORY

The accompanying list represents the current inventory¹ of the Living Collections of the Arnold Arboretum as maintained in its collections management database, *BG-BASE*, on February 1, 2012. It should be noted, however, that the composition of these collections is constantly undergoing change: new accessions are added and deaccessioning for various reasons occurs on a continual basis. Consequently, accessions not listed in this inventory may actually be represented in the collections, while others listed may no longer be included. The searchable inventory of the living collections (www.arboretum.harvard.edu/plants/plant-inventory/) should be consulted for more up-to-date holdings information.

This inventory is arranged alphabetically. An index of genera with their family affiliation (Appendix II) can be found at the conclusion of the inventory.

Under each taxon, there is a numerically arranged list of living accessions. For each accession, the following information is given: accession number, provenance (W = wild origin, Z = garden plant of known wild origin, G = garden origin, U = uncertain origin), country (if wild collected), accession year, and Arnold Arboretum map location(s). Map locations indicate where accessions have been incorporated into the collections, and if multiple individuals of the same accession are planted within the same map location, this column lists the location only once. Examples follow:

Fagus sylvatica 'Tortuosa'
253-80, Z, France, 1980, 45-NW, 57-NW

Rosa 'Duchesse de Montebello'
1395-84, G, 1984, BR

Locations for plants that fall within named garden locations are abbreviated as follows:

- BR - Bradley Rosaceous Collection
- DGB - The beds surrounding the Dana Greenhouse (no public access)
- EG - Explorers Garden
- LARZ - Larz Anderson Bonsai Collection
- LG - Leventritt Shrub and Vine Garden
- WH - Weld Hill
 - WH-INTERIOR – Weld Hill Research Building interior (no public access)

Pinpoint plant collections and explore landscape features via our new interactive map (www.arboretum.harvard.edu/plants/collection-researcher/) or find supplemental location keys in Appendix I, Maps.

¹ Excludes nursery holdings (n = 745 plants), permanent loans grown off-site (n = 3 plants), and extant plants of unknown provenance: *Fagus grandifolia* (n = 35), *Pinus strobus* (n = 383), *Quercus* sp. (n = 26), *Tsuga canadensis* (n = 1,272 within Hemlock Hill boundary; along Hemlock Hill and Valley Roads).

INVENTORY

Abelia chinensis

1023-85, G, China, 1985, 13-SE

Abelia mosanensis

282-2003, G, 2003, LG-2G

591-2003, G, Latvia, 2003, LG-8E

Abelia zanderi

607-89, Z, China, 1989, EG-13

Abeliophyllum distichum

141-2002, Z, Korea, Republic of, 2002, 22-SW

174-2005, G, 2005, LG-1E

422-2002, U, 2002, LG-8C

837-51, Z, Korea, Republic of, 1951, 18-SE

966-87, G, 1987, 14-SE

Abeliophyllum distichum 'Roseum'

178-60, Z, Korea, Republic of, 1960, 14-SE

Abies alba

1092-65, U, 1965, 22-SW

122-74, W, Poland, 1974, 26-NW

196-65, G, 1965, 40-SW

337-87, Z, Poland, 1987, 35-SW

6-54, U, 1954, 34-SE

753-36, G, 1936, 34-SE

Abies balsamea

1204-85, W, United States, 1985, 35-SW

1503-83, W, United States, 1983, 35-NW

610-93, W, United States, 1993, 34-SE, 35-SW

770-93, W, Canada, 1993, 35-SW

988-52, U, 1952, 34-SE

Abies balsamea 'Nana'

1397-64, G, 1964, DGB

Abies × borisii-regis

521-28, W, Greece, 1928, 35-NW

531-79, Z, Greece, 1979, 59-NE

827-27, W, Greece, 1927, 35-SW

Abies cephalonica

12383, G, 1883, 39-NE

12384, U, 1900, 35-NW

12495, U, 1898, 34-SE

229-53, U, 1953, 44-SE

Abies cephalonica (undetermined hybrid)

963-54, U, 1954, 34-SE

Abies cilicica

52-39, U, 1939, 35-SW

614-33, U, 1933, 35-NW

Abies cilicica ssp. *isaurica*

602-57, G, 1957, 34-SE

Abies concolor

12393, U, 1892, 34-SE, 35-NW

12394, U, 1898, 30-SW, 49-NE

12395, U, 1907, 35-SW

21323, G, 1930, 40-NW

Abies concolor 'Candicans'

622-67, G, 1967, 40-NW

Abies concolor 'Conica'

337-70, G, 1970, 31-SW

Abies concolor 'Violacea'

358-63, G, 1963, 40-SE

434-41, G, 1941, 34-NE

Abies fargesii

237-2000, W, China, 2000, 40-NW

411-80, W, China, 1980, 55-SE

Abies fargesii var. *fargesii*

7004, W, China, 1911, 49-SW

130-86, Z, China, 1986, 40-NW, 49-SW

88-86, Z, China, 1986, 34-SE

Abies firma

1043-74, U, 1974, 55-SE

370-33, U, 1933, 34-NE

530-81, W, Japan, 1981, 18-SE

Abies fraseri

1051-87, W, United States, 1987, 30-NW

1349-85, W, United States, 1985, 35-SE
1373-85, W, United States, 1985, 30-NW
416-77, W, United States, 1977, 33-NE
431-73, W, United States, 1973, 35-SW

Abies grandis

12408, W, United States, 1880, 42-NW
12409, W, United States, 1898, 42-SW
1473-81, W, United States, 1981, 52-NE

Abies holophylla

11867, U, 1923, 39-NE
411-89, W, Korea, Republic of, 1989, 40-NW
443-71, W, Korea, Republic of, 1971, 34-SE
603-88, W, Korea, Republic of, 1988, 40-NW

Abies homolepis var. *homolepis*

5675, U, 1908, 34-SE, 39-NE, 40-NE, 40-SW
12410, U, 1882, 40-NW
21780, U, 1928, 40-NW, 40-SW
21781, U, 1902, 35-NW, 35-SW
22767, U, 1923, 40-NW
1299-81, G, 1981, 38-NW
1674-9, U, 1894, 34-SE, 35-NW
294-43, G, 1943, 35-NW

Abies homolepis var. *umbellata*

12417, U, 1891, 34-SE, 49-NW

Abies koreana

10645, W, Korea, Republic of, 1917, 39-NE
20613, U, 1928, 40-NW, 40-SW
308-48, U, 1948, 40-NW
376-2001, W, 2001, Korea, Democratic
People's Republic of, 39-NE
527-77, U, 1977, 55-NE
531-77, U, 1977, 33-NE
557-86, W, Korea, Republic of, 1986, 35-SW
604-88, W, Korea, Republic of, 1988, 35-SW,
49-NW

Abies koreana 'Prostrate Beauty'

913-67, G, 1967, 31-SW

Abies koreana 'Silberlocke'

392-94, G, 1994, LG-PER-S

Abies lasiocarpa

1159-72, W, United States, 1972, 52-SW
639-66, U, 1966, 40-NW

Abies lasiocarpa 'Compacta'

353-73, U, 1973, 40-SE

Abies lasiocarpa var. *lasiocarpa*

22163, U, 1932, 34-SE
48-58, U, 1958, 34-SE
526-79, U, 1979, 59-NE
538-42, W, United States, 1942, 35-SW

Abies magnifica 'Glauca'

1044-71, G, 1971, DGB

Abies mariesii

1377-77, W, Japan, 1977, 31-NW

Abies nephrolepis

8133, W, country unknown, 1917, 39-NE
20614, U, 1928, 40-NW
1045-25, U, 1925, 35-SW
24-95, W, China, 1995, 30-SW, 35-NW
305-93, Z, Korea, Republic of, 1993, 39-NE
308-97, W, China, 1997, 35-SW, 40-NW
377-94, W, China, 1994, 30-SW, 35-SW
413-80, W, China, 1980, 63-NW

Abies nordmanniana

1077-69, U, United Kingdom, 1969, 53-NE
435-93, W, Georgia, 1993, 39-NE

Abies nordmanniana 'Pendula'

787-56, G, 1956, 40-SW

Abies nordmanniana ssp. *bornmuelleriana*

989-70, U, 1970, 34-NE, 34-SE

Abies nordmanniana ssp. *equi-trojani*

1664-81, W, Turkey, 1981, 40-NW
779-65, W, Turkey, 1965, 40-NW

Abies nordmanniana ssp. *nordmanniana*

12427, U, 1903, 35-NW

Abies pindrow

1313-83, W, India, 1983, 35-NW

Abies pinsapo 'Glauca'
192-42, G, 1942, 35-NW

Abies pinsapo (undetermined hybrid)
886-58, U, 1958, 39-NE

Abies pinsapo var. *marocana*
1435-82, W, Morocco, 1982, 35-SE

Abies procera
741-93, W, United States, 1993, 40-NW

Abies recurvata var. *recurvata*
12435, W, China, 1911, 38-NW
131-86, Z, China, 1986, 35-SW, 40-NW

Abies sachalinensis
1696-77, G, Japan, 1977, 34-SW, 53-NE
222-86, Z, Japan, 1986, 39-NE

Abies cf. *sachalinensis*
290-43, U, 1943, 34-NE

Abies sachalinensis var. *mayriana*
500-32, U, 1932, 44-SE

Abies sachalinensis var. *sachalinensis*
12437, W, Japan, 1892, 44-SE
839-53, W, Japan, 1953, 34-SE

Abies sibirica
351-79, W, Russian Federation, 1979, 36-SW,
52-NE

Abies sibirica ssp. *semenovii*
315-90, W, Kyrgyzstan, 1990, 40-NW

Abies squamata
227-2000, Z, China, 2000, 35-SW
86-2000, W, China, 2000, 34-NE

Abies veitchii
1077-86, W, Japan, 1986, 49-NW, 49-SW
458-77, U, 1977, 34-NE

Abies veitchii var. *sikokiana*
1078-86, W, Japan, 1986, 49-SE

Abies veitchii var. *veitchii*
12448, U, 1973, 35-NW
190-59, Z, Japan, 1959, 34-NE
330-87, U, 1987, 39-NE

Acer sp.
530-2008, U, 2008, 4-NE

Acer argutum
640-77, W, Japan, 1977, 8-SW

Acer barbinerve
1040-72, U, 1972, 11-NW
1409-77, G, Korea, Republic of, 1977, 8-SE
313-97, W, China, 1997, 14-NE
318-97, W, China, 1997, 57-NE
355-97, W, China, 1997, 14-NE
538-77, W, Korea, Republic of, 1977, 11-NW
958-80, Z, country unknown, 1980, 34-SE

Acer buergerianum
1488-77, G, Korea, Republic of, 1977, 15-NE,
EG-5
417-37, U, 1937, 11-NE
447-72, U, 1972, 62-NW

Acer buergerianum ssp. *ningpoense*
421-90, U, 1990, 15-NE

Acer buergerianum var. *trinerve*
870-37, U, 1937, LARZ

Acer campestre
172-2001, W, Ireland, 2001, 11-SE
238-98, W, Hungary, 1998, 57-NE
379-2007, W, Czech Republic, WH2-SW
47-99, W, Ireland, 1999, 57-NE

Acer campestre 'Nanum'
558-89, G, 1989, 31-NE

Acer campestre var. *leiocarpum*
12468, U, 1903, 15-NE
1053-76, G, 1976, 11-NE, LG-PER-S
1278-73, U, 1973, 12-SW, 62-NW
1727-66, G, 1966, 15-NE

Acer capillipes
12469-1, G, 1919, 10-SE

Acer cappadocicum
117-2007, W, Georgia, 2007, 12-SW

Acer cappadocicum ssp. *cappadocicum*
1593-67, U, 1967, WH5-NW
239-91, W, Iran, 1991, 10-SW
442-36, U, 1936, 12-SW
699-89, W, Iran, 1989, 11-SE

Acer cappadocicum ssp. *lobelii*
379-77, U, 1977, 11-NE

Acer carpinifolium
10648, U, 1920, 10-SE
10959, W, Japan, 1919, 10-SE
1077-82, U, 1982, 10-SE
354-95, Z, Japan, 1995, 10-SE, 57-NE

Acer caudatifolium
435-84, U, 1984, 47-SW

Acer caudatum ssp. *ukurunduense*
158-2001, W, China, 2001, 57-NE

Acer ceriferum
138-96, W, China, 1996, 15-NE

Acer circinatum
1297-72, U, 1972, 42-SW

Acer cissifolium
10649, W, Japan, 1919, 10-SE
285-2008, W, Japan, 2008, 15-NE, WH5-NE
303-2004, W, Japan, 2004, 10-SE, 15-NE

Acer crataegifolium
296-77, U, 1977, 15-NE

Acer davidii
122-2003, W, China, 2003, 11-SE
126-2003, W, China, 2003, 11-SE
496-2002, W, China, 2002, 8-NW
666-94, W, China, 1994, 11-SE
692-94, W, China, 1994, 14-NE

Acer davidii ssp. *grosseri*
2-95, W, China, 1995, 11-SW

Acer × *dieckii*
181-86, U, 1986, BR-16-NW

Acer diabolicum
2625, W, Japan, 1892, 11-SE
630-77, U, 1977, 8-SE

Acer elegantulum
298-92, W, China, 1992, 14-NE

Acer erianthum
263-84, W, China, 1980, DGB

Acer × *freemanii*
318-2006, G, 2006, 8-SE, WH2-NW
5679, G, 1907, 11-NE
404-40, G, 1940, 11-NE
456-94, G, 1994, 3-NE, BR-FAXON-POND

Acer grandidentatum
458-81, W, United States, 1981, 49-SW
536-92, W, United States, 1992, 57-NE

Acer griseum
12488, W, China, 1907, 12-SW, EG-8
18148, U, 1925, 13-NE
21452, U, 1930, 11-NE
125-91, Z, China, 1991, EG-2
213-91, Z, China, 1991, 11-SE
279-62, U, 1962, 14-NW
767-94, W, China, 1994, 14-NE, EG-9,
LG-PER-N

Acer grosseri
1320-73, U, 1973, EG-4

Acer grosseri var. *hersii*
343-75, U, 1975, 15-NE
626-87, U, 1987, 33-SE, 38-NE

Acer heldreichii
199-85, U, 1985, 11-SE, 11-SW

Acer heldreichii ssp. *trautvetteri*
385-2004, W, Armenia, 2004, 11-SE

Acer heldreichii var. *macropterum*
200-85, U, 1985, 11-NW

Acer henryi
164-83, U, 1983, EG-15

Acer × *hillieri*
245-39, G, 1939, 12-SW

Acer japonicum
1406-77, W, Japan, 1977, 11-SW
151-90, U, 1990, 10-SE
784-38, U, 1938, 11-NW

Acer japonicum 'Aconitifolium'
179-95, G, 1995, LG-2F, LG-PER-E

Acer japonicum 'Takinogawa'
394-74, G, 1974, 31-NE

Acer macrophyllum
438-2008, W, United States, 2008, 32-SE

Acer mandshuricum
12504, U, 1906, 12-SW
1619-81, U, 1981, 11-SE
384-89, W, Korea, Republic of, 1989, 15-NE
399-97, W, China, 1997, 14-NE
807-26, U, 1926, 11-SE

Acer maximowiczianum
206-2010, G, 2010, 53-SW
3337, W, Japan, 1892, 12-SW, 53-NW, 57-SE,
62-NW
124-67, G, 1967, 11-SW
913-58, G, 1958, 10-SE

Acer maximowiczianum × *griseum*
641-91, G, 1991, 11-SE

Acer micranthum
267-2003, G, Japan, 2003, 11-SE, 15-NE

Acer miyabei
3564, W, Japan, 1893, 11-SE
22901, G, 1950, 10-SE
1407-52, G, 1952, 11-SE
32-98, W, Japan, 1998, 40-SW, 57-NE

Acer mono
12538-1, W, Japan, 1919, 58-NW
1360-73, W, Korea, Republic of, 1973,
WH2-SE
1438-52, G, 1952, 11-NE, 12-SW
338-97, W, China, 1997, 57-NE
5358, U, 1902, 11-NW
694-94, W, China, 1994, 14-NE
88-96, W, China, 1996, 53-SE

Acer mono ssp. *okamotoanum*
1620-81, U, 1981, 15-NE

Acer mono var. *mayrii*
12505, W, Japan, 1915, 10-SE, 11-NE
281-88, Z, Japan, 1988, 11-SE, 12-SW, 15-NE

Acer monspessulanum
12507, U, 1910, 12-SW
1491-83, W, France, 1983, 19-SW
264-2004, Z, France, 2004, 11-SE

Acer negundo
107-85, W, United States, 1985, 59-NW

Acer negundo 'Aureo-marginatum'
199-66, G, 1966, 29-SE

Acer negundo 'Nanum'
143-98, G, 1998, 14-NE

Acer negundo 'Violaceum'
197-2001, U, 2001, 57-NE, 57-SE

Acer olivaceum
249-95, U, 1995, 11-SE
409-79, U, 1979, 58-NW

Acer opalus
12109, G, 1911, 54-SW

Acer opalus ssp. *obtusatum*
1371-71, G, 1971, 11-SE

Acer palmatum
156-2011, U, 2011, 13-NE
27-98, W, Japan, 1998, 11-SE
35-98, W, Japan, 1998, 57-NE, 57-SE

399-76, G, 1976, 15-NE
488-37, G, 1937, 11-NW
585-88, W, Korea, Republic of, 1988, 11-SE,
11-SW
871-37, U, 1961, LARZ
872-37, U, 1961, LARZ
875-37, U, 1961, LARZ
888-49, U, 1949, LARZ
889-49, U, 1949, LARZ

Acer palmatum (variant)
1016-62, G, 1962, 11-NW
507-61, G, 1961, 11-NW

Acer palmatum 'Atropurpureum Crispum'
685-36, G, 1936, 11-NW

Acer palmatum 'Bloodgood'
827-60, G, 1960, 11-NW

Acer palmatum 'Burgundy Lace'
152-58, G, 1958, 11-NW

Acer palmatum 'Dissectum'
146-68, U, 1968, 15-NE

Acer palmatum 'Hessei'
12524, G, 1898, 11-NW

Acer palmatum 'Linearilobum'
268-81, G, 1981, 37-SE
424-90, G, 1990, 47-SW

Acer palmatum 'Oktoberfest'
309-81, G, 1981, 37-SW
556-72, G, 1972, 31-NE
57-97, G, 1997, LG-8C

Acer palmatum 'Osakazuki'
1690-81, G, 1981, BR-1C
260-81, G, 1981, 38-NE

Acer palmatum 'Sangokaku'
955-81, G, 1980, DGB

Acer palmatum 'Sanguineum'
12522, G, 1898, 11-NW

Acer palmatum 'Shigitatsu'
266-81, G, 1981, 37-SE

Acer palmatum 'Warwick Red'
901-71, G, 1971, DGB

Acer palmatum 'Yatsubusa'
886-49, U, 1949, LARZ

Acer palmatum ssp. *amoenum*
252-66, U, 1966, 11-NW
256-87, Z, Japan, 1987, 37-SE
403-80, U, 1980, 11-SE
949-51, U, 1951, 11-NW

Acer palmatum ssp. *palmatum*
3901, U, 1898, 11-NW
272-93, G, 1993, 10-SE, 14-NE
560-71, U, 1971, 11-SE, 15-NE

Acer palmatum var. *coreanum*
1062-60, U, 1960, 11-NE

Acer palmatum var. *matsumurae*
148-57, G, 1957, 11-NE, 11-NW

Acer palmatum f. *atropurpureum*
22717, G, 1936, 11-NW

Acer palmatum f. *dissectum* 'Viridis'
554-72, G, 1972, LG-PER-S

Acer pensylvanicum
1331-79, W, United States, 1979, 15-NW
137-2003, W, United States, 2003, 10-SE,
15-NE, 8-NW
4-80, W, United States, 1980, 15-NE
521-80, W, United States, 1980, 41-NW
523-2008, W, United States, 2008, 15-NE

Acer pensylvanicum 'Erythrocladum'
263-81, G, 1981, DGB
478-2002, G, 2002, LG-PER-E

Acer platanoides
1021-57, G, 1957, WH5-NE
12547, U, 1911, 11-SE
23191, U, 1965, 22-SE

Acer platanoides 'Cleveland'
630-48, G, 1948, BR-16-NW

Acer platanoides 'Columnare'
20673, U, 1929, 11-SE

Acer platanoides 'Crimson King'
543-53, G, 1953, BR-16-NW

Acer platanoides 'Dissectum'
207-66, G, 1966, WH5-NE
427-39, G, 1939, 11-NE
553-93, G, 1993, 11-SE

Acer platanoides 'Erectum'
298-50, G, 1950, 11-SE

Acer platanoides 'Faassen's Black'
394-54, G, 1954, BR-16-NW

Acer platanoides 'Goldsworth Purple'
98-65, G, 1965, BR-16-NE

Acer platanoides 'Natorp'
553-53, G, 1953, WH2-SW

Acer platanoides 'Rubrum'
22758, U, year unknown, 11-SE
146-90, U, 1990, 8-SE
495-41, U, 1941, 11-SE

Acer platanoides 'Schwedleri'
22747, U, 1942, 22-SE
12549-1, G, 1883, 11-SE

Acer platanoides 'Stand Fast'
406-82, U, 1982, DGB

Acer platanoides 'Summershade'
907-58, G, 1958, WH2-SW

Acer platanoides 'Superform'
382-63, G, 1963, WH5-NE

Acer platanoides 'Undulatum'
147-90, G, 1990, 11-NE

Acer pseudoplatanus
11256, U, 1910, 11-NE
19634, U, 1925, 11-SE
22858, U, 1950, 2-SE, 14-NW, 24-NW

Acer pseudoplatanus f. *erythrocarpum*
155-57, U, 1957, WH2-SW

Acer pseudoplatanus 'Erectum'
405-91, G, 1991, 8-NE

Acer pseudoplatanus 'Nizetii'
750-55, G, 1955, 53-SE, 57-NE

Acer pseudosieboldianum
1400-77, W, Korea, Republic of, 1977, 8-SW
249-82, Z, Korea, Republic of, 1982, 15-NE
339-97, W, China, 1997, 11-NW
345-97, W, China, 1997, 11-SE

Acer pseudosieboldianum ssp. *takesimense*
1281-83, W, Korea, Republic of, 1983,
57-NE, EG-2
581-87, W, Korea, Republic of, 1987, 11-NE,
11-NW

Acer pseudosieboldianum var. *koreanum*
180-95, Z, Korea, Republic of, 1995, 10-SW
486-83, W, Korea, Republic of, 1983, 62-NW

Acer pubinerve
50-90, W, China, 1990, 15-NE

Acer pubipalmatum
295-94, U, 1994, 15-NE
320-2004, W, China, 2004, 15-NE, 26-SE

Acer rubrum
1196-84, W, United States, 1984, 11-NE, 5-SE
12554, U, 1895, 3-SW
15350, U, 1924, 11-NW
23068, U, 1954, 5-NW
207-2005, W, United States, 2005, 8-NE,
11-NE, 59-SE
505-38, U, 1938, 3-SE

524-2009, U, 2009, 11-SW
525-2009, U, 2009, 11-SW
688-39, U, 1939, 3-SE, 5-NE
875-93, W, Canada, 1993, 5-NE

Acer rubrum 'Armstrong'
491-51, G, 1951, 11-NE

Acer rubrum 'Columnare'
3710, U, 1889, 11-NE

Acer rubrum 'Franksred'
168-2002, G, 2002, LG-PER-W

Acer rubrum 'October Glory'
169-2002, G, 2002, LG-PER-W

Acer rubrum 'Schlesingeri'
3256, G, 1888, 3-NE
408-91, G, 1991, BR-FAXON-POND

Acer rubrum var. *trilobum*
596-39, U, 1939, 3-NE, 3-SE, 5-NE

Acer rufinerve
1430-77, G, Japan, 1977, 11-SE
342-75, U, 1975, 11-SE
674-85, W, Japan, 1985, DGB
972-76, U, 1976, 11-SW

Acer aff. *rufinerve*
116-2001, W, Japan, 2001, 57-NE

Acer saccharinum
12560, U, United States, 1881, 5-SW
22859, U, 1950, 5-SE, 8-SE
1142-85, W, United States, 1985, 8-NW, 8-SW
346-91, W, United States, 1991, 11-SE, 3-SE
357-2010, U, 2010, 52-SW
956-85, W, Canada, 1985, 8-SW

Acer saccharinum 'Beebe Cutleaf Weeping'
555-53, G, 1953, 8-SE

Acer saccharinum 'Lutescens'
677-54, U, 1954, 8-SW

Acer saccharinum f. *laciniatum*
201-55, U, 1955, 8-SW

Acer saccharum
150-2011 - 154-2011, U, 2011, 30-NW
155-2011, U, 2011, 13-NE
157-2011, U, 2011, 13-NW
158-2011, U, 2011, 9-SE
171-82, W, United States, 1982, 49-SE
187-2006, W, United States, 2006, 8-SE,
11-SE, 62-SW, WH5-NW
1203-85, W, United States, 1985, 55-SE
12565, W, United States, 1883, 11-SE
20645, U, 1928, 11-NE
22834, G, United States, 1950, 11-NW, 15-NE
22860, U, 1950, 13-SW
236-2010 - 238-2010, U, 2010, 7-SW
239-2010 - 245-2010, U, 2010, 10-NW
246-2010, U, 2010, 10-SW
531-2008, U, 2008, 4-NE
533-2008, U, 2008, 4-NE
655-93, W, United States, 1993, 20-SE, 26-NE,
33-NW
666-2008, U, 2008, 1-SW
666-2010, 667-2010, 672-2010, 673-2010, U,
2010, 57-SE
683-2010 - 689-2010, U, 2010, 62-NW

Acer saccharum 'Newton Sentry'
2119, U, 1885, 11-NE
374-33, U, 1933, 53-SE

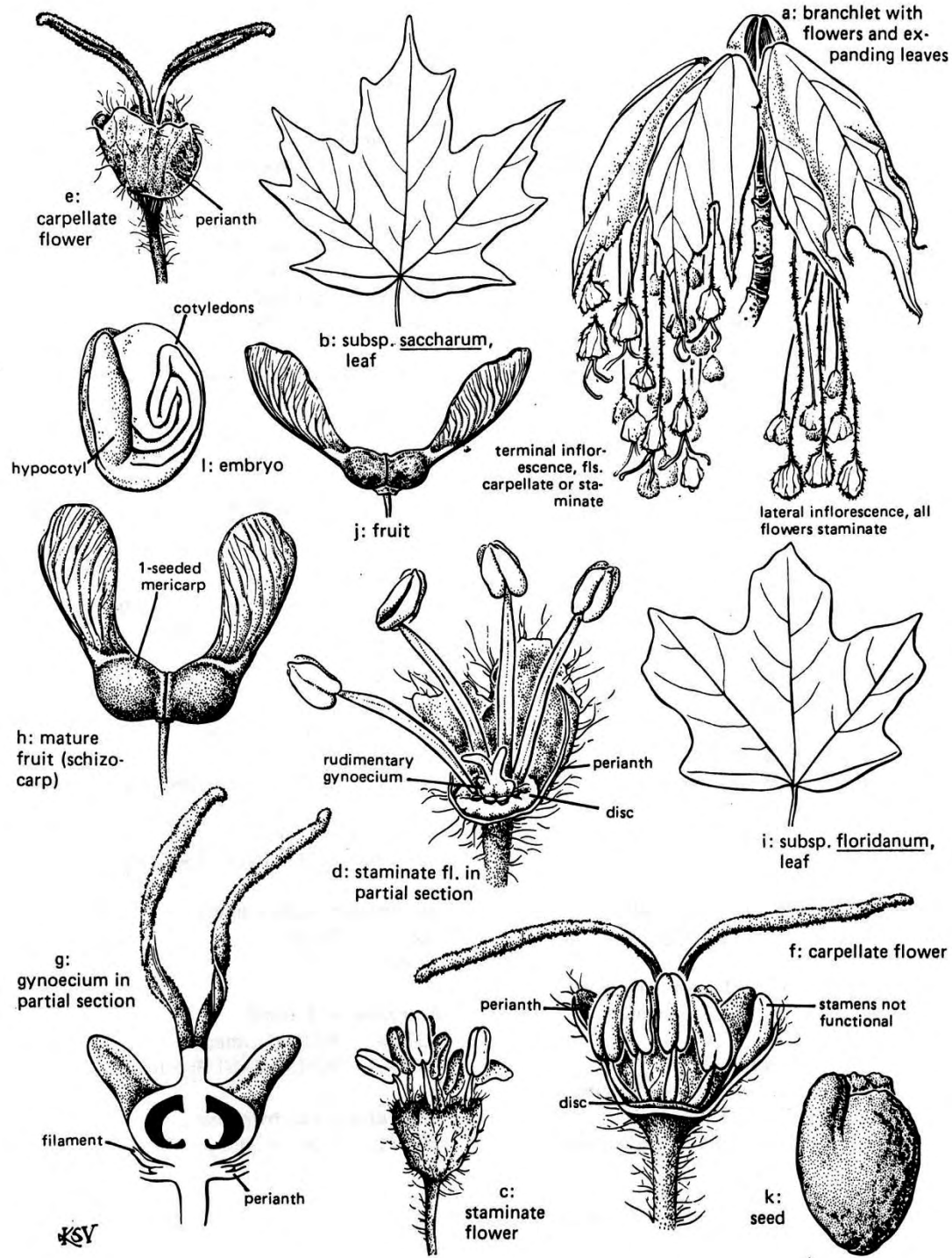
Acer saccharum 'Temple's Upright'
11039, G, 1921, 11-NE

Acer saccharum ssp. *floridanum*
559-2003, W, United States, 2003, BR-16-NW
572-2003, W, United States, 2003, 11-NE
582-2003, W, United States, 2003, 11-NE
621-88, W, United States, 1988, 11-SW, 8-SE

Acer saccharum ssp. *nigrum*
12512, U, 1891, 11-NE
262-86, W, United States, 1986, 12-SW
308-89, W, Canada, 1989, 11-NE

Acer saccharum ssp. *saccharum*
1353-84, W, United States, 1984, 11-NW, 8-SW

ACERACEAE: Acer section Saccharina. a-h, *A. saccharum* subsp. *saccharum*; i-l, subsp. *floridanum*



Acer saccharum var. *rugelii*
1733, U, United States, 1880, 11-NE

Acer semenovii
123-96, G, 1996, 11-SE

Acer shirasawanum 'Palmatifolium'
270-81, U, 1981, 15-NE, EG-2, 57-NE, 57-SE

Acer shirasawanum var. *tenuifolium*
257-81, U, 1981, 15-NE

Acer sieboldianum
3919, U, 1894, 15-NE, 53-SW
189-86, U, 1986, 59-SW

Acer spicatum
124-2005, W, United States, 2005, 15-NE,
42-NE
359-79, W, United States, 1979, 32-NW
603-2008, W, United States, 2008, 11-SE,
42-NE

Acer stachyophyllum
815-76, U, 1976, 8-SW

Acer stachyophyllum ssp. *betulifolium*
816-76, U, 1976, 11-SE

Acer tataricum ssp. *aidzuense*
1852-77, U, 1977, 15-NE
376-92, U, 1992, 15-NE
542-89, U, 1989, 8-SE, 8-SW

Acer tataricum ssp. *ginnala*
1766-1, G, 1903, 15-NE
377-2001, W, Korea, Democratic People's
Republic of, 2001, 57-NW
701-63, U, 1963, 16-NW
902-85, W, Korea, Republic of, 1985, 15-NE

Acer tataricum ssp. *tataricum*
12476, G, United States, 1883, 15-NE
1115-76, U, 1976, 8-SE
115-2000, W, Russian Federation, 2000,
WH5-NW
1302-80, W, Russian Federation, 1980, 49-NE
239-98, W, Hungary, 1998, 57-NE, 57-SE

78-2000, W, Latvia, 2000, 57-NE, 58-NW
995-82, U, 1982, 63-NW

Acer tegmentosum
1403-77, W, Korea, Republic of, 1977, 49-NE
49-NW
20848, U, 1925, 10-SE
316-97, W, China, 1997, LG-PER-E
33-95, W, China, 1995, LG-PER-E
369-97, W, China, 1997, 57-NE
525-77, W, Korea, Republic of, 1977, 26-SW
531-94, Z, Korea, Republic of, 1994, 11-SE

Acer trautvetteri
1354-80, W, Russian Federation, 1980, 58-SW

Acer triflorum
18866, U, 1923, 10-SE
1201-82, W, Korea, Republic of, 1982, 27-NE,
EG-8, 38-SW
1217-25, W, Korea, Republic of, 1925, 11-NE
1276-83, W, Korea, Republic of, 1983, 40-SE
1439-52, G, 1952, 11-SE
380-97, W, China, 1997, 11-SE, 16-NW
384-97, W, China, 1997, 15-NE, 3-NW
968-80, Z, Korea, Republic of, 1980, 33-SE
976-87, W, Korea, Republic of, 1987, 11-SW,
15-NE
97-77, U, 1977, 3-NW, 49-NE

Acer truncatum
11472, G, China, 1919, 10-SE
21454, U, 1930, 11-NE

Acer tschonoskii ssp. *tschonoskii*
326-97, W, China, 1997, 11-SE
564-71, U, 1971, 11-NE

Acer velutinum
1329-77, W, Armenia, 1977, 11-NE

Acer 'White Tigress'
162-99, G, 1999, LG-PER-E

Acer × *zoeschense*
315-77, U, 1977, 11-NE
753-55, G, 1955, 11-NE, 58-NW

Aconitum sinomontanum
394-95, W, China, 1995, 3-NE

Actinidia arguta
23136, G, 1961, 8-NE
124-40, U, 1940, 3-NE
127-40, U, 1940, 3-NE
403-97, W, China, 1997, LG-10A.9, LG-PER-S
57-78, G, 1978, 5-SE
905-85, W, Korea, Republic of, 1985,
LG-9B.13

Actinidia coriacea
248-86, W, China, 1986, LG-9B.9

Actinidia eriantha
468-87, W, China, 1987, LG-9C.26

Actinidia kolomikta
116-89, G, 1989, LG-10A.8
130-96, W, China, 1996, LG-10B.17
492-83, W, Korea, Republic of, 1983, 1-SW,
LG-9C.2

Actinidia macrosperma
257-2006, Z, China, 2006, LG-9C.16

Actinidia polygama
1237-83, W, Korea, Republic of, 1983,
LG-9C.28
298-2001, W, Russian Federation, 2001,
LG-10A.6
460-83, W, Japan, 1983, LG-10B.11,
LG-PER-S

Actinidia purpurea
593-87, Z, China, 1987, LG-9C.6

Aesculus sp.
274-57, G, 1957, 11-NW

Aesculus × bushii
11681, W, United States, 1913, 11-NW
58-2000, Z, United States, 2000, 10-SE
59-2000, Z, United States, 2000, 10-NE

Aesculus × carnea
323-70, G, 1970, 10-SE

Aesculus × carnea 'Briotii'
237-51, G, 1951, 10-NE
539-88, U, 1988, 10-NE

Aesculus chinensis
27-2009, W, China, 2009, 10-SE

Aesculus chinensis var. *chinensis*
156-2001, W, China, 2001, 10-NE

Aesculus × dupontii
12656, G, 1901, 11-NW
12657, G, 1912, 11-NW
13396, G, 1907, 10-NE
23072, U, 1955, 10-SE
236-51, G, 1951, 10-NE
394-57, G, 1957, 11-NW
644-29, G, 1929, 10-SE
648-29, G, 1929, 11-SW

Aesculus flava
8121, G, 1898, 11-NW
8123, G, 1900, 10-SE
12651, W, United States, 1906, 11-NW,
11-SW, 57-NE
1248-84, W, United States, 1984, 14-NE
925-79, W, United States, 1979, 10-NE

Aesculus glabra
23110, W, United States, 1912, 10-NE
1221-79, W, United States, 1980, 10-NE

Aesculus glabra var. *arguta*
12515, W, United States, 1912, 10-NE
171-87, Z, United States, 1987, 10-NE
176-87, Z, United States, 1987, 10-SW
177-87, Z, United States, 1987, 10-SW
535-88, Z, United States, 1988, 53-SE

Aesculus glabra var. *glabra*
173-87, Z, United States, 1987, 10-NE, 10-SE
262, W, United States, 1873, 38-SE, 38-SW
6621, W, United States, 1901, 10-NE
533-88, Z, United States, 1988, 53-SW
55-53, G, 1953, 10-NE

Aesculus glabra var. *nana*
509-2010, W, United States, 2010, DGB

Aesculus hippocastanum
12648, U, 1901, 10-NE
12650, U, 1907, 10-NE
538-88, U, 1988, 10-NE

Aesculus hippocastanum 'Baumanii'
12655, G, 1896, 10-NE
540-88, U, 1988, 34-NE

Aesculus hippocastanum 'Laciniata'
310-2010, G, 2010, DGB

Aesculus hippocastanum 'Umbraculifera'
376-2010, G, 2010, DGB

Aesculus hippocastanum 'Wessenlink'
378-2010, G, 2010, DGB

Aesculus × *hybrida*
9092, G, 1919, 11-SW
154-54, G, 1954, 10-NE
49-47, G, 1947, 10-NE

Aesculus × *mutabilis*
11817, U, 1922, 11-SW
45-2000, Z, United States, 2000, 10-NE

Aesculus parviflora
12652, G, 1898, 10-SE
1252-79, G, 1980, 26-NW
1393-77, G, 1977, 22-SW
146-98, G, 1998, 53-SE
226-2002, G, 2002, 53-SE
554-2003, W, United States, 2003, 53-SE,
57-NE, 62-SW
558-2003, W, United States, 2003, 10-SE
564-2009, W, United States, 2009, DGB
571-2003, W, United States, 2003, 62-SW
99-98, G, 1998, 53-SE, 57-NE

Aesculus parviflora f. *serotina*
12514, W, United States, 1919, 10-NE

Aesculus pavia
101-2007, W, United States, 2007, 10-NE,
53-SE, 54-SW
504-80, G, 1980, 10-NE, 10-SE
599-93, W, United States, 1993, 10-NE

66-39, G, 1939, 11-SW

Aesculus syloatica
10549, W, United States, 1917, 10-NE
487-2010, W, United States, 2010, DGB
537-88, Z, United States, 1988, 54-SW

Aesculus turbinata
1204-77, G, 1977, 11-NW
1212-77, W, Japan, 1977, 10-NE
219-35, G, 1935, 10-NE
268-84, W, Japan, 1984, 62-NW

Ailanthus altissima f. *erythrocarpa*
695-80, G, United States, 1980, 8-SW

Ailanthus altissima var. *sutchuenensis*
203-35, G, 1935, 8-SW

Ailanthus giraldii
75-67, U, 1967, 47-SW

Ailanthus vilmoriniana
76-67, U, 1967, 47-SW

Akebia quinata
348-2006, G, 2006, LG-9A.6
718-86, U, 1986, 44-NE

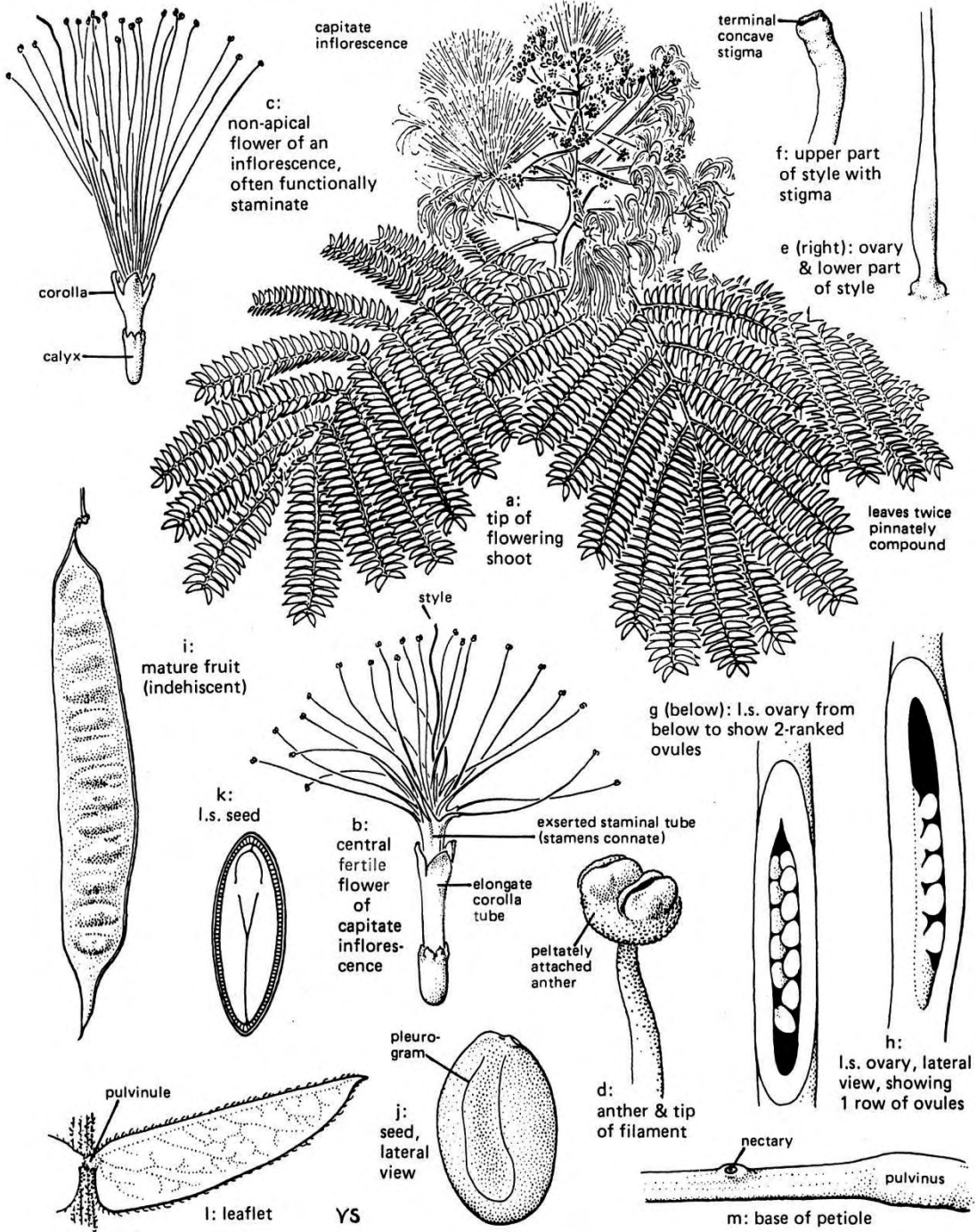
Akebia quinata 'Rosea'
2033-65, G, 1965, 1-SW
753-78, G, 1978, 7-NW

Akebia × *pentaphylla*
729-86, G, 1986, 44-NE

Albizia julibrissin
1158-67, U, 1967, 22-SW
125-35, U, 1935, 26-SE
1442-77, W, Korea, Republic of, 1977, 15-SW
460-67, U, 1967, 3-NW
488-67, U, 1967, 22-SW

Albizia julibrissin 'Ernest Wilson'
13381, W, Korea, Republic of, 1919, EG-9
635-68, Z, Korea, Republic of, 1968, 3-SW

FABACEAE (LEGUMINOSAE) subfamily MIMOSOIDEAE: *Albizia*. a-m, *A. julibrissin*



Albizia kalkora
288-2008, W, China, 2008, EG-11

Alnus crispa
340-75, U, 1975, 8-NE

Alnus firma
385-2008, W, Japan, 2008, 5-SE
400-2007, W, Japan, 2007, 3-SE

Alnus glutinosa
1399-73, U, 1973, 5-SE
223-71, U, 1971, 8-NE
333-72, U, 1972, 5-NE
456-37, U, 1937, 59-SW

Alnus glutinosa 'Holden'
726-62, U, 1962, 59-NW

Alnus glutinosa 'Laciniata'
684-68, G, 1968, 59-NW

Alnus glutinosa ssp. *betuloides*
623-94, W, Turkey, 1994, 3-NE

Alnus hirsuta
1390-77, W, Japan, 1977, 3-NE, 3-SE, 5-NE
1392-77, G, Japan, 1977, 3-SE
71-92, W, Japan, 1992, 3-SE

Alnus hirsuta var. *microphylla*
1431-77, G, Japan, 1977, 8-NE

Alnus hirsuta var. *sibirica*
383-97, W, China, 1997, 30-NW
395-97, W, China, 1997, 19-SE

Alnus incana
312-98, W, Finland, 1998, 59-NW

Alnus incana ssp. *rugosa*
1150-79, W, United States, 1979, 11-NW
123-88, W, United States, 1988, 8-NE
125-2005, W, United States, 2005, 5-SE
544-2008, W, United States, 2008, 8-NE
786-93, W, Canada, 1993, 3-SE

Alnus japonica
1464-77, W, Japan, 1977, 3-SE
216-97, Z, Japan, 1997, 59-NW
293-83, W, China, 1983, 8-NW
432-73, W, Japan, 1973, 3-SE
57-92, W, Japan, 1992, 3-NE

Alnus kamschatica
788-74, U, 1974, 8-NE

Alnus mandshurica
366-97, W, China, 1997, 59-NW

Alnus maritima
1217-4, G, 1923, 5-SE

Alnus × *mayrii*
361-86, W, Korea, Republic of, 1986, 20-NE

Alnus maximowiczii
1386-77, G, Japan, 1977, 5-NE, 8-SE
1462-77, W, Japan, 1977, 8-NE, 8-SE
288-71, U, 1971, 59-SW, 5-SW

Alnus serrulata
142-98, Z, United States, 1998, 20-SE
389-2002, Z, United States, 2002, 8-NE

Alnus sieboldiana
289-2008, W, Japan, 2008, 8-NE
401-2007, W, Japan, 2007, 3-SE

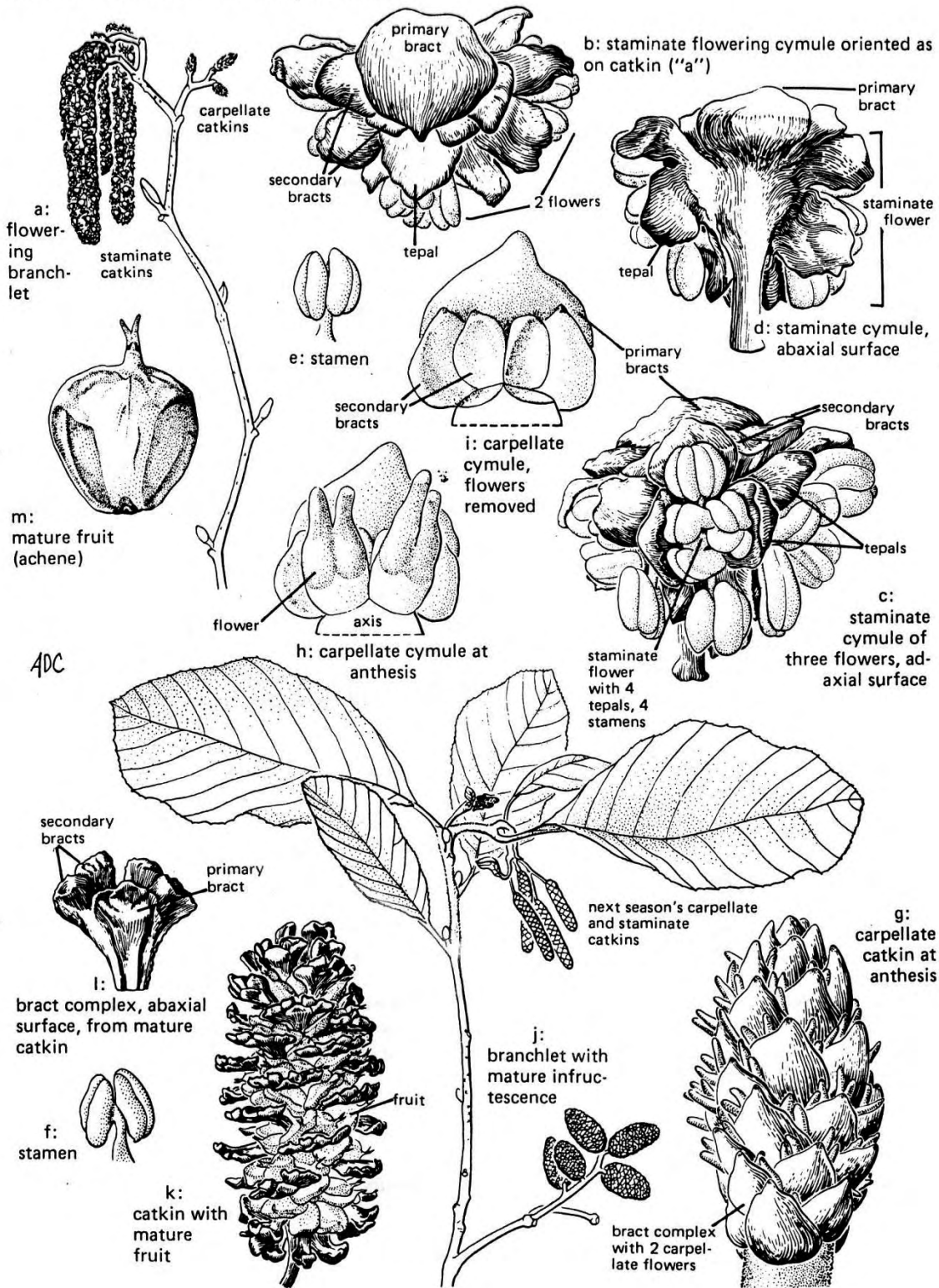
Alnus × *mayrii*
6-2008, Z, Korea, Republic of, 2008, 3-SE

Alnus × *spectabilis*
390-65, U, 1965, 59-NW

Amelanchier sp.
826-2008, U, 2008, 5-SE
869-93, W, Canada, 1993, 5-SW

Amelanchier alnifolia
213-84, W, United States, 1984, BR-11
297-89, W, Canada, 1989, BR-10
353-84, W, United States, 1984, 8-NE, 8-SE

BETULACEAE: *Alnus*. a-m, *A. serrulata*



Amelanchier alnifolia var. *cusickii*
1465-83, W, Canada, 1983, 64-NE
1753-81, W, Canada, 1981, 15-NE

Amelanchier alnifolia var. *pumila*
1321-81, W, United States, 1981, 22-NW

Amelanchier × *aquehongensis*
403-2005, W, United States, 2005, 8-NW

Amelanchier arborea
11312, U, United States, 1919, 8-SE
19100, U, United States, year unknown,
5-SW
22694, U, 1941, 36-SE
22805, U, year unknown, 37-NW, 8-SE
23154, U, year unknown, 11-SW, 14-NE,
14-NW, 24-NE
267-2011, U, 2011, 37-NW
439-67, W, United States, 1967, 8-SE
807-90, W, United States, 1990, 36-SW

Amelanchier asiatica var. *sinica*
11-99, W, China, 1999, 5-SW

Amelanchier bartramiana
486-84, W, Canada, 1984, DGB

Amelanchier canadensis
5215, W, United States, 1902, 3-SW, 8-NE
12630, W, United States, 1883, 5-SW
12632, U, 1913, 5-SW
19106, U, United States, 1915, 8-SE
22903, U, 1950, 32-SW, 37-NW,
BR-FAXON-POND
12630-1, G, 1904, 5-NW, 8-NE
285-97, G, 1997, 11-NE, 11-SW, 37-NW, 8-NE
750-83, U, 1983, 3-NE
985-84, Z, United States, 1984, BR-14

Amelanchier florida
820-76, U, 1976, 22-NE

Amelanchier × *grandiflora* 'Rubescens'
11050, U, 1921, 8-SE

Amelanchier interior
19098, W, United States, 1915, 8-NE

130-77, W, Canada, 1977, 8-NW

Amelanchier intermedia
321-89, W, Canada, 1989, BR-11

Amelanchier laevis
19150, U, 1925, 3-SE
19154, U, 1925, 3-SE
22578, U, 1938, 22-NE
23203, W, United States, 1883, 5-SW
147-87, W, United States, 1987, 15-NE
322-89, W, Canada, 1989, 36-SW, 5-SW

Amelanchier lamarckii
4406, U, Germany, 1892, 5-NW

Amelanchier nantucketensis
256-2001, Z, United States, 2001, LG-1E
394-2004, W, United States, 2004,
BR-DAWSON-POND
400-2003, W, United States, 2003,
BR-DAWSON-POND
434-91, W, United States, 1991, 5-SW
441-91, W, United States, 1991, 5-SW
463-91, W, United States, 1991, 5-SW
583-91, W, United States, 1991, 5-SW
584-91, W, United States, 1991, 5-SW
585-91, W, United States, 1991, 5-SW
586-91, W, United States, 1991, 5-SW
933-89, W, United States, 1989,
BR-DAWSON-POND
934-89, W, United States, 1989,
BR-DAWSON-POND
936-89, W, United States, 1989,
BR-DAWSON-POND
937-89, W, United States, 1989,
BR-DAWSON-POND, LG-7G

Amelanchier ovalis
18-2002, W, Russian Federation, 2002, 5-SW,
8-NW
343-58, U, 1958, 3-SW

Amelanchier sanguinea
6620, U, 1905, 5-NW
7058, U, 1913, 8-SE
13190, U, 1921, 8-SE

Amelanchier spicata
10076, U, 1905, 5-NW
11345, W, United States, 1918, 8-SE
18099, W, United States, 1905, 8-SE
19102, W, Canada, 1917, 8-SE

Amelanchier stolonifera
345-96, G, 1996, LG-PER-E

×*Amelastorbus jackii*
17943, W, United States, 1924, EG-8

Amorpha fruticosa
147-97, Z, United States, 1997, 1-SE, 3-NE
442-2003, Z, United States, 2003, 27-SE

Amorpha nana
337-84, G, 1984, 27-SW

Amorpha paniculata
21533, W, United States, 1926, 18-SE

Ampelopsis megalophylla
188-2007, Z, China, 2007, LG-10B.3

Andrachne colchica
5376, U, 1906, 18-SE
719-78, U, 1978, 31-NE

Andromeda glaucophylla
140-87, W, United States, 1987, DGB
807-93, W, Canada, 1993, LG-6D

Andromeda polifolia 'Blue Ice'
398-2002, G, 2002, LG-6D

Angelica gigas
186-2009, Z, China, 2009,
BR-DAWSON-POND

Aralia cachemirica
825-76, U, 1976, 21-NE

Aralia californica
243-78, W, United States, 1978, 31-NE

Aralia continentalis
341-97, W, China, 1997, 31-NE

Aralia elata
587-88, W, Korea, Republic of, 1988, 21-NE

Aralia racemosa
61-99, W, United States, 1999, 31-NE

Arctostaphylos uva-ursi 'Massachusetts'
144-2006, G, 2006, LG-7A

Arisaema thunbergii ssp. *urashima*
355-96, G, 1996, DGB

Arisaema triphyllum
1017-80, U, 1980, DGB

Aristolochia contorta
19-2002, W, Russian Federation, 2002,
LG-10B.18
309-2001, W, Korea, Republic of, 2001,
LG-9C.12

Aristolochia macrophylla
1112-88, G, United States, 1988, 1-SW
43-92, W, United States, 1992, 1-SE
951-79, W, United States, 1979, 1-NE

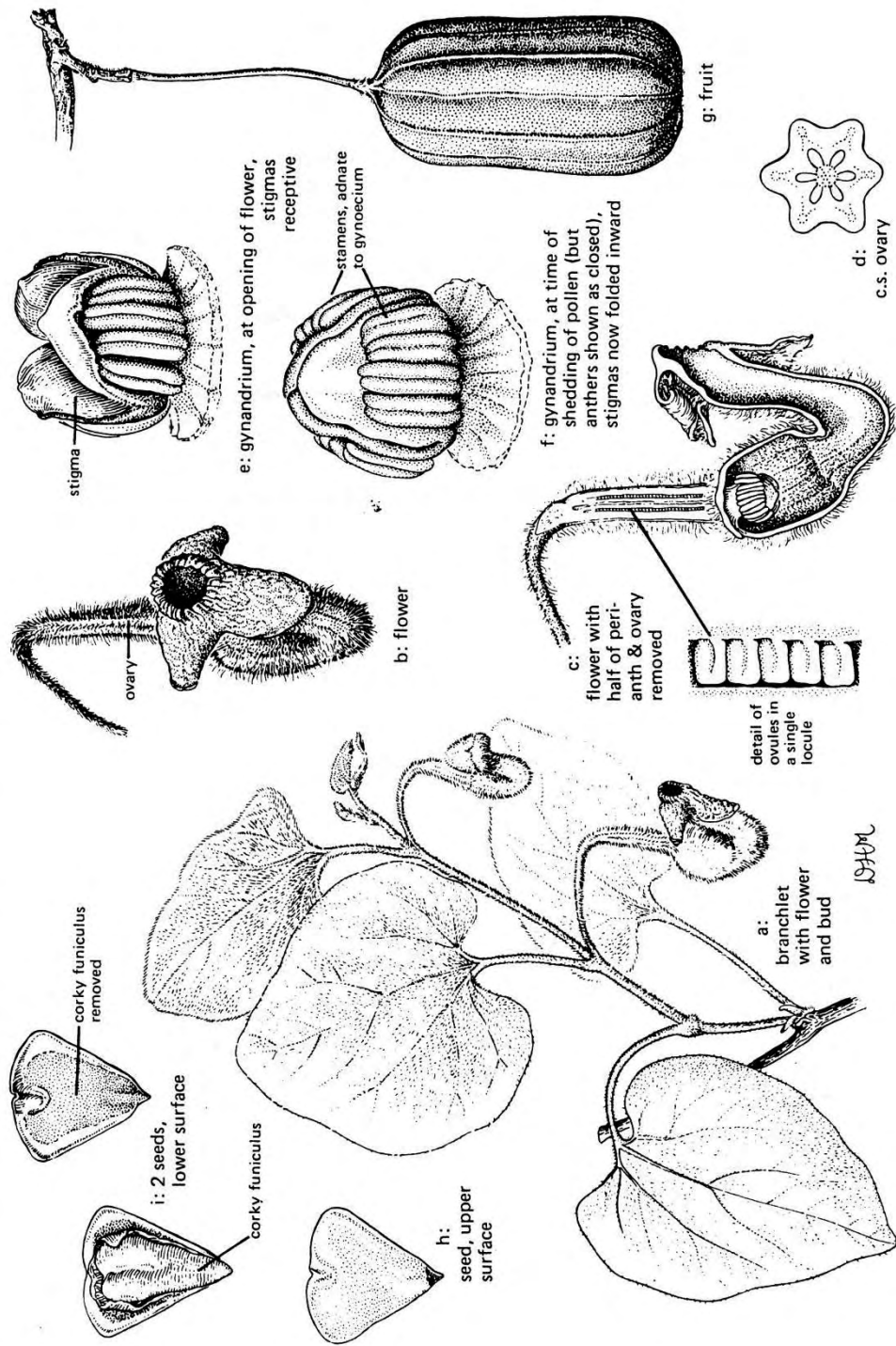
Aristolochia manshuriensis
424-87, W, Korea, Republic of, 1987, 1-SE

Aristolochia tomentosa
197-93, W, United States, 1993, LG-9C.14
668-91, W, United States, 1991, 1-SE

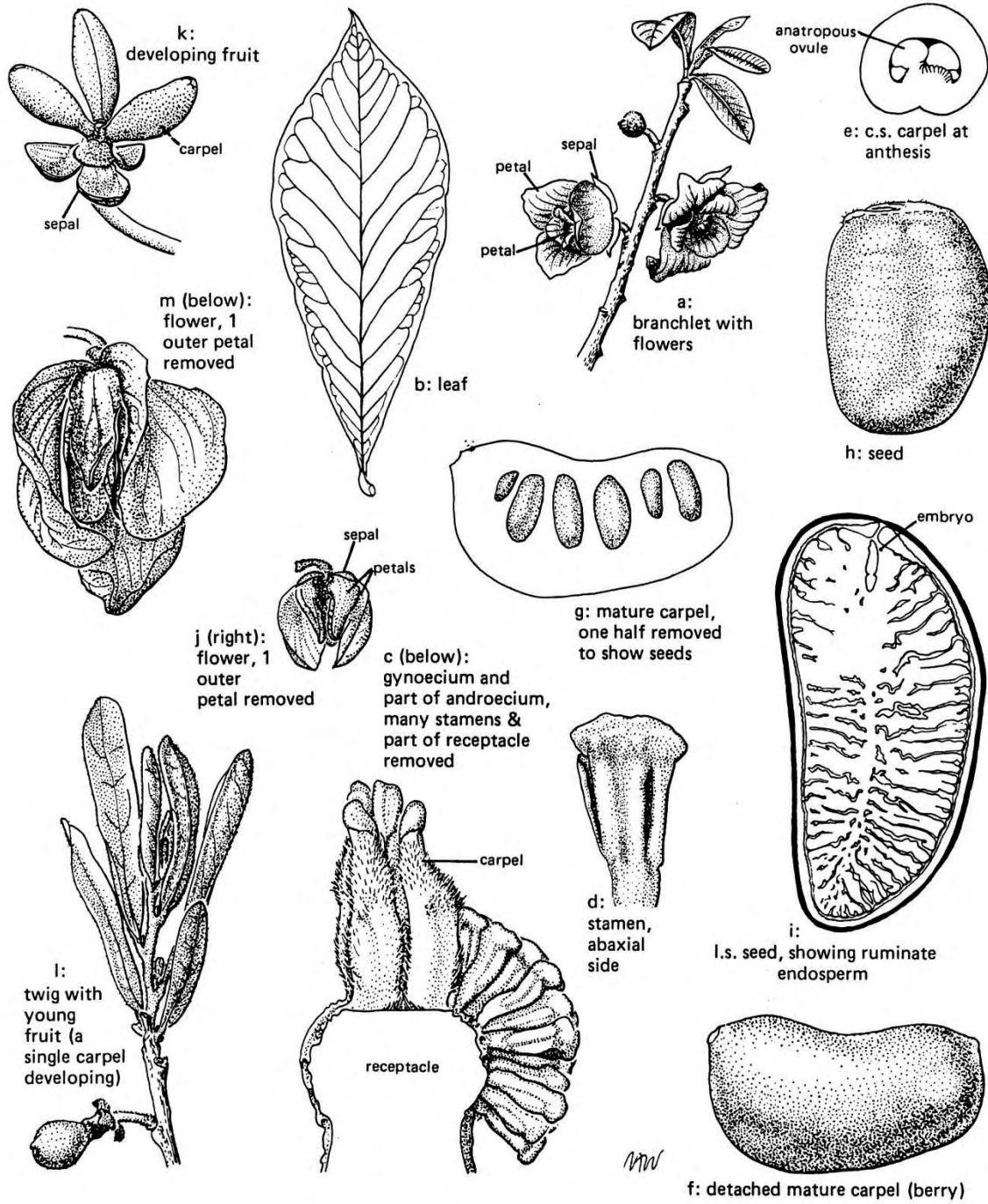
Aronia arbutifolia
14-94, W, United States, 1994, 5-NE

Aronia melanocarpa
1906-81, W, United States, 1981, BR-11
482-97, W, United States, 1997, BR-14

ARISTOLOCHIACEAE: Aristolochia. a-i, *A. tomentosa*



ANNONACEAE: Asimina. a-i, *A. triloba*; j-l, *A. incana*; m, *A. obovata*



Aronia prunifolia
1389-83, W, United States, 1983, 25-NE,
BR-14
578-74, U, 1974, BR-DAWSON-POND

Aruncus dioicus
449-93, U, 1993, 3-NW

Arundinaria gigantea
27-88, W, United States, 1988, 44-NE

Arundinaria pygmaea
262-85, U, 1985, 29-SE

Arundinaria simonii var. *variegata*
366-80, U, 1980, 10-NW

Arundinaria viridi-striata
22510, U, 1936, 10-NE

Asarum canadense
204-2006, G, 2006, LG-7B, LG-7E
443-94, G, 1994, 3-NW

Asarum europaeum
182-2002, G, 2002, LG-8K
202-2006, G, 2006, LG-7E
442-94, G, 1994, 3-NW
544-68, U, 1968, DGB

Asarum splendens
514-91, G, 1991, DGB

Asarum virginicum
678-69, W, United States, 1969, DGB

Asimina triloba
12708, U, 1903, 24-NE
1222-79, W, United States, 1980, 51-NW
143-94, W, United States, 1994, 51-NW
205-91, W, Canada, 1991, 51-NW

Astilbe rivularis
771-94, W, China, 1994, 1-SE, EG-9

Astilbe thunbergii var. *congesta*
329-95, G, 1995, 1-SE

Astilboides tabularis
583-94, G, 1994, 3-NW

Aucuba japonica var. *japonica*
1070-73, G, 1973, 19-NW

Berberis aetnensis
205-89, W, France, 1989, EG-9

Berberis aggregata
449-87, W, China, 1987, 3-SW

Berberis amurensis
140-83, W, Russian Federation, 1983, 3-SW
464-94, W, Russian Federation, 1994, 5-SW

Berberis amurensis var. *latifolia*
582-87, W, Korea, Republic of, 1987, 3-SW,
5-NW

Berberis asiatica
355-92, U, 1992, 4-NE

Berberis brachypoda
978-83, U, 1983, 34-SE, 39-NE

Berberis candidula
787-82, U, 1982, EG-8

Berberis × *chenaultii*
22400, U, 1933, 31-NE

Berberis chitria
364-92, U, 1992, EG-4, EG-5

Berberis crataegina
701-89, W, Iran, 1989, 26-SE

Berberis × *declinata*
358-92, U, 1992, EG-6

Berberis dielsiana
173-83, W, China, 1983, 4-NE
371-92, Z, China, 1992, 7-NW

Berberis × *emarginata*
825-80, U, 1980, 1-SE

Berberis francisci-ferdinandi
370-92, U, 1992, 26-SE

Berberis gilgiana
906-87, Z, China, 1987, 3-SW

Berberis × *gladwynensis* 'William Penn'
250-97, G, 1997, 3-NW
826-80, G, 1980, 3-NW

Berberis gyalaiica
366-92, U, 1992, 32-SE, EG-6

Berberis julianae
6800, W, China, 1908, 18-SE
7178, W, China, 1908, 18-SE
24-83, Z, China, 1983, EG-8
25-83, Z, China, 1983, 2-SE
33-82, Z, China, 1982, EG-6, EG-6
34-82, Z, China, 1982, 4-NE

Berberis julianae 'Nana'
1086-56, G, 1956, 31-NE
1964-77, G, 1977, 3-SW
487-57, G, 1957, 31-NE

Berberis koreana
1135-83, G, Korea, Republic of, 1983, 3-SW
583-87, W, Korea, Democratic People's
Republic of, 1987, 5-NW
791-82, Z, Korea, Republic of, 1982, 2-NE

Berberis lecomtei
488-94, U, 1994, 26-SE

Berberis × *macracantha*
354-92, U, 1992, 32-SE

Berberis × *mentorensis*
792-82, G, 1982, 51-SE

Berberis × *notabilis*
362-92, G, 1992, 26-NW

Berberis × *ottawensis* 'Superba'
975-83, G, 1983, 1-NE

Berberis poiretii
1453-77, W, Korea, Republic of, 1977, 8-NW
2-2001, W, China, 2001, 8-NW

Berberis polyantha
359-92, U, 1992, 4-NE

Berberis quelpaertensis
1265-83, W, Korea, Republic of, 1983, 3-SW
1449-77, G, Korea, Republic of, 1977, 2-NE

Berberis regeliana
1440-77, W, Japan, 1977, 1-NE
1441-77, W, Japan, 1977, 51-SE
363-92, Z, 1992, 26-SE

Berberis thibetica
360-92, Z, China, 1992, 18-SE, EG-7
428-94, Z, China, 1994, 26-SE

Berberis thunbergii
1040-90, W, Japan, 1990, 26-SE

Berberis thunbergii 'Inermis'
372-95, U, 1995, 5-NW

Berberis thunbergii 'Rose Glow'
491-69, G, 1969, DGB

Berberis virescens
950-83, U, 1983, 2-SE

Berberis virgetorum
341-81, U, 1981, 3-SW

Berberis vulgaris
158-94, W, Switzerland, 1994, 7-NW, EG-3
538-78, W, Denmark, 1978, 3-SW

Berberis wilsonae
450-87, W, China, 1987, 4-NE, 4-NW, 5-NW
597-95, W, country unknown, 1995, 26-SE

Berchemia scandens
250-89, W, United States, 1989, LG-10B.8,
LG-PER-S

Betula sp.
260-95, U, 1995, 55-NE

Betula albo-sinensis
121-2007, W, China, 2007, 42-NE, EG-3

Betula alleghaniensis
12843, W, United States, 1900, 14-SW
104-79, W, Canada, 1979, 36-NW
1377-85, W, United States, 1985, 52-SW
299-85, W, United States, 1985, 52-SW
554-91, W, United States, 1991, 20-NW
626-92, W, United States, 1992, 42-NE
629-83, W, United States, 1983, 14-SW,
20-NW

Betula apoiensis
1427-77, W, Japan, 1977, 14-NW
68-92, W, Japan, 1992, 14-NW

Betula × caerulea
242-80, U, 1980, 20-SW
275-89, U, 1989, 14-NW

Betula chichibuensis
389-93, G, Japan, 1993, 26-NW

Betula chinensis
4-95, W, China, 1995, 14-SW

Betula costata
373-97, W, China, 1997, 14-SW
5-95, W, China, 1995, 19-SE
664-79, W, Korea, Republic of, 1979, 19-SE

Betula dahurica
12793, U, 1910, 20-SW
1015-80, W, Japan, 1980, 34-NE
1438-77, G, Korea, Republic of, 1977, 19-NE
1707-77, G, Korea, Republic of, 1977, 20-SW
171-79, W, Korea, Republic of, 1979, 26-NW
364-97, W, China, 1997, EG-3
438-68, W, Korea, Republic of, 1968, 26-NW
499-83, W, Korea, Republic of, 1983, 39-NE

Betula ermanii
1172-88, W, Russian Federation, 1988, 19-NE
276-89, Z, Korea, Republic of, 1989, 13-NE

351-97, W, China, 1997, 13-SE

Betula ermanii var. *ganjuensis*
37-2005, Z, Korea, Republic of, 2005, 13-SE,
19-NE
651-79, W, Korea, Republic of, 1979, 39-NW

Betula globispica
10-88, W, Japan, 1988, 26-NW

Betula grossa
3114, W, Japan, 1893, 26-NW
199-2007, W, Japan, 2007, 20-NW

Betula × jackii
1165-83, G, 1983, 19-SE
492-82, G, 1982, 39-NE

Betula jacquemontii
74-94, W, India, 1994, 14-SW

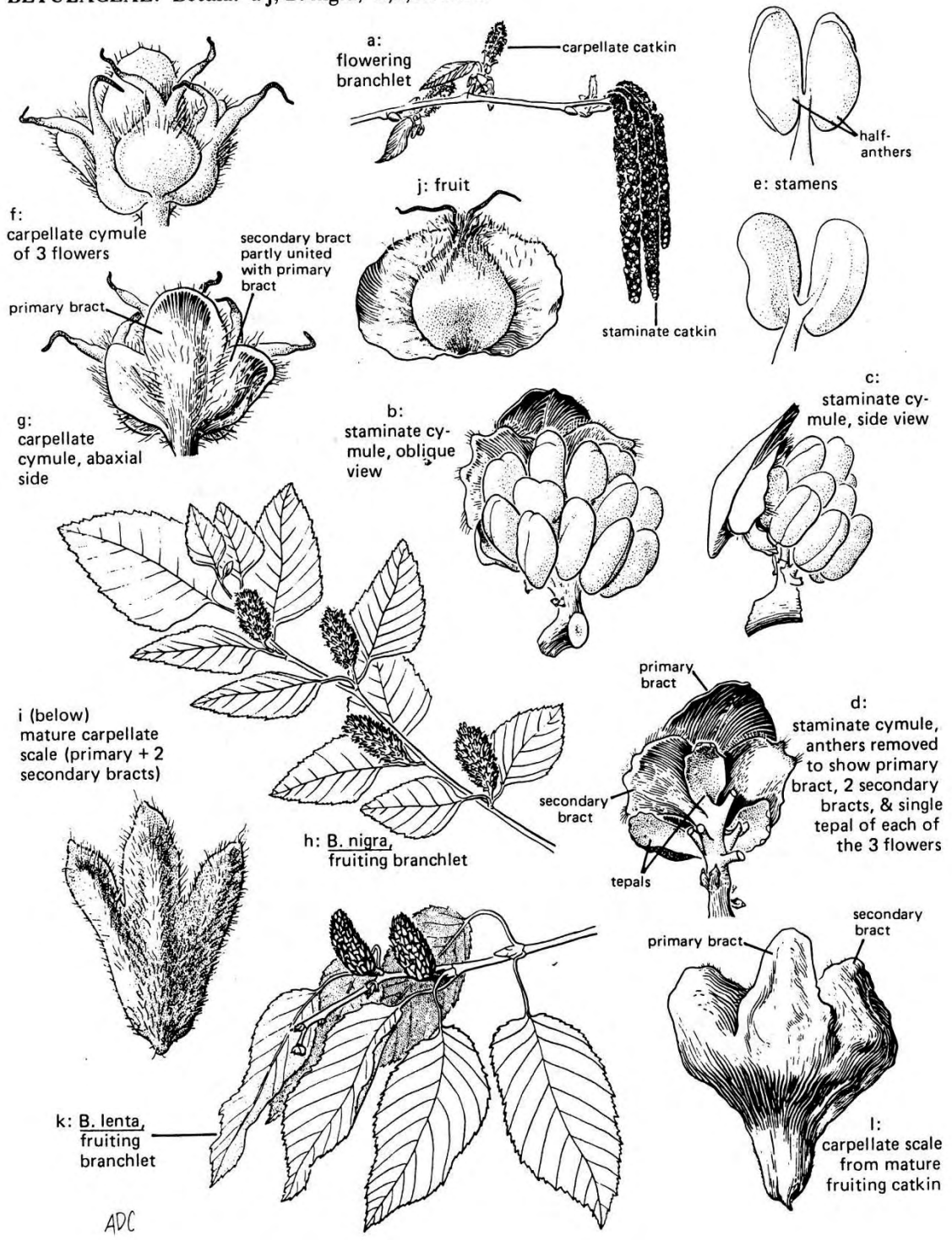
Betula lenta
17679, W, United States, 1904, 14-SW
126-2005, W, United States, 2005, 20-NW
145-2011 – 149-2011, U, 2011, 30-SE, 30-NW
159-2011, U, 2011, 30-SE
215-2011, U, 2011, 31-SW
265-2011, U, 2011, 37-NW
23028, U, year unknown, 37-SW
292-97, G, 1997, 10-SE
499-2009, U, 2009, 11-SW
535-2009, U, 2009, 11-SW
628-88, W, United States, 1988, 13-NE
632-2008, U, 2008, 15-NE

Betula litwinowii
1347-77, W, Armenia, 1977, 26-NW
1374-80, W, Russian Federation, 1980, 39-NE

Betula mandshurica
465-94, W, Russian Federation, 1994, 19-NE

Betula maximowicziana
1078-76, W, Japan, 1976, 13-SE
1118-76, U, 1976, 31-SW

BETULACEAE: *Betula*. a-j, *B. nigra*; k, l, *B. lenta*



ADC

Betula maximowicziana × *ermanii*
16-98, W, Japan, 1998, 14-SW

Betula maximowicziana × *papyrifera*
122-2007, G, 2007, 14-SW

Betula nigra
1199, W, United States, 1877, 13-NE, 13-SE
1251-79, W, United States, 1979, 13-SE
339-95, U, 1995, 19-SE

Betula occidentalis var. *occidentalis*
100-78, W, Canada, 1978, 39-NE
389-2007, Z, Canada, 2007, 38-SW
1314-79, W, United States, 1979, 35-NE

Betula papyrifera
7457, U, China, year unknown, 19-NE
12839, U, 1903, 26-NW
12852, U, 1905, 13-SE, 20-NW
22864, U, year unknown, 57-NE
1201-85, W, United States, 1985, 62-NW
142-85, W, Canada, 1985, 55-SE
1472-83, W, Canada, 1983, 34-SE
573-2008, W, United States, 2008, 20-NW
672-54, G, 1954, 20-NW

Betula papyrifera var. *cordifolia*
298-82, Z, United States, 1982, 41-NE

Betula papyrifera var. *humilis*
980-82, W, Canada, 1982, 58-SW

Betula papyrifera var. *papyrifera*
23249, G, 1969, 30-SW

Betula papyrifera var. *subcordata*
311-88, Z, United States, 1988, 26-NW
594-61, Z, United States, 1961, 19-NE

Betula pendula
105-96, Z, Czech Republic, 1996, 19-SE

Betula aff. *pendula*
1319-85, W, Turkey, 1985, 14-NW

Betula pendula f. *gracilis*
280-89, G, 1989, 20-SW

Betula pendula f. *youngii*
356-71, G, 1971, 13-SE

Betula platyphylla
104-93, W, China, 1993, 19-NE

Betula platyphylla var. *japonica*
72-92, W, Japan, 1992, 19-SE

Betula populifolia
127-2005, W, United States, 2005, 20-NW
1536-83, W, Canada, 1983, 19-NE
1586-81, W, United States, 1981, 39-NW
193-89, W, United States, 1989, 19-SE
595-2008, W, United States, 2008, 20-NW

Betula pubescens
196-86, W, Sweden, 1986, 20-SW
284-95, W, Iceland, 1995, 49-SW
353-93, W, Iceland, 1993, 49-SW
439-85, W, Norway, 1985, 26-NW
569-50, U, 1950, 20-NW
669-51, G, 1951, 14-NW, 20-NW

Betula pubescens ssp. *tortuosa*
410-84, W, Sweden, 1984, 20-NW
438-85, W, Norway, 1985, 20-SW, 26-NW
490-87, W, Sweden, 1987, 14-SW

Betula pubescens var. *carpatica*
1231-50, G, 1950, 20-NW

Betula pumila
800-93, W, Canada, 1993, LARZ-B

Betula schmidtii
7486, U, 1896, 26-NW, 26-SW
1422-77, W, Japan, 1977, 31-NW, 31-SW
241-2001, W, Korea, Republic of, 2001,
14-SW, 20-NW
251-98, W, Russian Federation, 1998, 14-SW,
19-NE

Betula turkestanica
334-2008, W, Tajikistan, 2008, 19-NE

Betula uber
1433-84, Z, United States, 1984, 19-NE

Betula utilis ssp. *utilis*
355-2001, W, China, 2001, 14-SW

Bignonia capreolata
158-88, W, United States, 1988, 1-SW

Bignonia capreolata 'Tangerine Beauty'
349-2006, G, 2006, LG-9A.11

Boehmeria biloba
331-2004, Z, Japan, 2004, LG-7I

Broussonetia kazinoki
362-86, W, Korea, Republic of, 1986, 21-SW

Broussonetia papyrifera
1678-80, W, China, 1980, 20-NE

Buckleya distichophylla
245-46, Z, United States, 1946, 41-SE

Buddleia sp.
652-91, W, United States, 1991, 19-NW

Buddleia albiflora
13-92, G, 1992, 18-NE, 18-NW

Buddleia alternifolia
15605, U, 1923, EG-9
20587, W, China, 1926, 18-SE
14-92, Z, China, 1992, 18-NE
891-81, Z, China, 1981, 18-SE

Buddleia alternifolia 'Argentea'
1129-61, G, 1961, 18-SE
685-88, G, 1988, 18-NE, 31-NE
968-62, G, 1962, EG-9

Buddleia davidii
566-88, W, China, 1988, 18-SE

Buddleia japonica
7-92, Z, Japan, 1992, 18-NE

Bumelia lanuginosa var. *oblongifolia*
12877, W, United States, 1901, 19-NW

Buxus 'Green Gem'
339-2002, G, 2002, LG-2F, LG-8H

Buxus 'Green Mountain'
340-2002, G, 2002, LG-6B

Buxus microphylla
184-2000, G, 2000, LG-1B

Buxus microphylla var. *japonica*
860-79, W, Japan, 1979, 39-NE
863-79, W, Japan, 1979, 7-NE, 7-NW
864-79, W, Japan, 1979, EG-8
865-79, W, Japan, 1979, EG-8

Buxus sempervirens
1120-64, Z, Russian Federation, 1964, 18-SE
113-64, Z, Romania, 1964, 24-NE
116-64, Z, Romania, 1964, 18-SE
131-64, Z, Romania, 1964, 25-NW
17813, U, 1922, 24-NE
21279, U, 1930, 24-NE
21658, G, United States, 1926, 24-NE
22684, U, 1941, 24-NE

Buxus sempervirens 'Aureo-variegata'
410-96, G, 1996, LG-7H

Buxus sempervirens 'Belleville'
1184-63, G, 1963, 18-SE

Buxus sempervirens 'Inglis'
433-43, G, 1943, 24-NE

Buxus sempervirens 'Northern Find'
393-63, G, 1963, 18-SE

Buxus sempervirens 'Pendula'
21074, G, 1930, 24-NE

Buxus sempervirens 'Rotundifolia'
408-97, Z, Japan, 1997, LG-2K
754-34, G, 1934, 24-NE

Buxus sempervirens 'Vardar Valley'
352-35, Z, Macedonia, 1935, 24-NE
417-2002, Z, 2002, LG-2I, LG-7H

Buxus sinica
1401-82, U, 1982, EG-9

Buxus sinica var. *insularis*
11323, W, Korea, Republic of, 1919, EG-8
811-35, U, 1935, 24-NE

Callicarpa bodinieri var. *giraldii*
151-76, U, 1976, 19-NW
31-92, U, 1992, 26-NE
360-76, U, 1976, 15-SE

Callicarpa cathayana
491-2003, U, 2003, LG-7F

Callicarpa dichotoma
145-23, U, 1923, EG-9
321-78, U, 1978, 15-SW
363-86, W, Korea, Republic of, 1986, 49-NE
501-90, W, Japan, 1990, 18-SE
55-90, W, Korea, Republic of, 1990, 14-NE
618-88, W, Korea, Republic of, 1988, 26-SW
985-85, W, Korea, Republic of, 1985, EG-6

Callicarpa japonica
12937, W, Korea, Republic of, 1916, EG-9
355-2004, W, Korea, Republic of, 2004,
LG-2H
379-86, W, Korea, Republic of, 1986, 51-NW
433-2003, Z, Korea, Republic of, 2003, LG-7F
52-92, W, Japan, 1992, 26-NW
862-84, Z, Korea, Republic of, 1984, 27-NE

Callicarpa japonica 'Leucocarpa'
813-88, G, 1988, 26-SW

Callicarpa japonica var. *luxurians*
1224-83, W, Korea, Republic of, 1983, 55-NE

Callicarpa kwangtungensis
203-2000, W, China, 2000, LG-7D

Callicarpa mollis
389-2008, W, Japan, 2008, 15-SE, WH2-SW

Calluna vulgaris
310-98, W, Finland, 1998, DGB

Calluna vulgaris 'Bronze Beauty'
200-2006, G, 2006, LG-8H

Calluna vulgaris 'J. H. Hamilton'
172-2007, G, 2007, LG-8F

Calluna vulgaris 'Marleen'
168-2007, G, 2007, LG-1B

Calluna vulgaris 'Martha Hermann'
171-2007, G, 2007, LG-8H

Calluna vulgaris 'Robert Chapman'
194-2007, G, 2007, LG-6C

Calluna vulgaris 'Silver Knight'
170-2007, G, 2007, LG-8C

Calocedrus decurrens
4000, W, United States, 1898, 42-SW
1531-80, Z, United States, 1980, 5-NE
224-49, Z, United States, 1949, 41-NE
292-80, Z, United States, 1980, 36-NE
381-78, U, 1978, 5-NE
450-86, W, United States, 1986, 56-NW
525-2002, W, United States, 2003, 27-NE

Calycanthus chinensis
607-94, W, China, 1994, LG-3J
785-94, G, China, 1994, 19-NW, 38-NW

Calycanthus floridus
5255, W, United States, 1906, 3-SW
102-2007, W, United States, 2007, 5-NW
157-88, W, United States, 1988, 5-SW
27-81, G, 1981, 5-NE
568-59, W, United States, 1959, 3-NE
866-81, Z, United States, 1981, 2-NE
869-81, Z, United States, 1981, 2-SE
934-79, W, United States, 1979, 3-SW

Calycanthus floridus 'Athens'
257-2000, G, 2000, LG-3F

Calycanthus floridus var. *floridus*
805-57, Z, United States, 1957, 3-SW

Calycanthus floridus var. *laevigatus*
1288-73, U, 1973, 3-SW

Calycanthus 'Michael Lindsey'
406-2002, G, 2002, LG-3J

Calycanthus occidentalis
287-84, W, United States, 1984, 2-NE
373-2006, W, United States, 2006, 19-NW

Calycanthus × *rolstonii* 'Hartlage Wine'
53-2001, G, 2001, LG-3F

Calycanthus 'Venus'
107-2004, G, 2004, LG-3F

Camellia japonica
174-2007, W, Korea, Republic of, 2007, 3-NW
181-2007, W, Korea, Republic of, 2007, 3-NW

Campsis grandiflora
1231-79, W, United States, 1980, 25-NE
810-94, G, China, 1994, LG-9C.9

Campsis radicans
20298, U, 1930, 16-NE
23022, U, 1953, 30-SW
124-32, G, 1932, 39-SE
142-83, W, United States, 1983, 45-NW
206-91, W, Canada, 1991, LG-10B.6
626-91, W, United States, 1991, LG-9C.11

Campsis radicans 'Apricot'
721-86, Z, United States, 1986, 31-NE

Campsis radicans 'Flava'
351-2006, G, 2006, 1-SE, LG-9C.19

Campsis × *tagliabuana* 'Madame Galen'
352-2006, G, 2006, LG-9C.7

Caragana arborescens
1108-83, G, 1983, 27-SW
12949-1, G, 1898, BR-16-NE
912-81, G, 1981, 27-SE

Caragana arborescens 'Lorbergii'
414-92, G, 1992, 27-SE

766-88, U, 1988, 27-SE

Caragana arborescens 'Nana'
2894, G, 1908, BR-14

Caragana arborescens 'Pendula'
1115-83, G, 1983, 27-SW

Caragana boisii
384-95, U, 1995, 27-SW

Caragana brevispina
509-2003, Z, Nepal, 2003, 27-SW
680-86, U, 1986, 27-SE

Caragana decorticans
1100-76, U, 1976, 15-SW
908-81, U, Afghanistan, 1981, 27-SE

Caragana franchetiana
515-2003, U, 2003, LG-2E

Caragana frutex
898-87, G, 1987, 27-SE

Caragana gerardiana
773-82, G, 1982, 27-SE

Caragana microphylla
514-2003, G, China, 2003, 27-SW

Caragana rosea
1120-83, Z, China, 1983, 27-SE
523-84, Z, China, 1984, 21-NW

Carpinus sp.
8-95, W, China, 1995, 30-NW, 31-SE, 32-SW

Carpinus betulus
12883, U, Japan, 1886, 53-NW
103-31, G, 1931, 32-SW
120-74, W, Croatia, 1974, 31-SE, 37-NW
125-74, U, 1974, 32-SW
22053, G, 1932, 31-SE, 32-SW
347-75, U, 1975, 31-SE
377-90, W, Germany, 1990, 31-SE
704-89, W, Iran, 1989, 32-SW

Carpinus betulus 'Fastigiata'
45-90, U, 1990, 36-NE, 37-NW

Carpinus caroliniana

106-79, W, Canada, 1979, 62-SE
121-85, W, United States, 1985, 31-SE
1250-79, W, United States, 1980, 31-SE
293-97, G, 1997, 54-SW, 62-SE
970-79, W, United States, 1979, 31-SE

Carpinus caroliniana var. *virginiana*

18310, U, 1925, 31-SE
22865, U, 1950, 52-SW
1375-83, W, country unknown, 1983,
37-NW
203-71, W, Canada, 1971, 31-SE
467-72, U, 1972, 31-NE

Carpinus cordata

1468-77, W, Japan, 1977, 44-SE, 62-SE

Carpinus fargesiana

703-94, W, China, 1994, 32-SW

Carpinus henryana

207-82, G, 1982, 44-SE

Carpinus japonica

117-91, Z, Japan, 1991, 37-NW
44-2004, Z, Japan, 2004, 32-SW

Carpinus laxiflora

505-83, W, Korea, Republic of, 1983, 31-SE
908-85, W, Korea, Republic of, 1985, 32-SW
973-85, W, Korea, Republic of, 1985, 31-SE,
32-SW

Carpinus monbeigiana

452-87, W, China, 1987, 32-SW

Carpinus orientalis

1223, G, 1873, 32-SW
320-29, U, 1929, 31-SE
39-76, U, 1976, 31-SE, 32-SW, 62-NW
706-89, W, Iran, 1989, 32-SW

Carpinus tschonoskii

111-98, W, Japan, 1998, 37-NW

1231-83, W, Korea, Republic of, 1983, 26-SW
269-2008, W, Japan, 2008, 31-SE
72-68, U, 1968, 31-SE

Carpinus turczaninowii

1295-79, W, China, 1979, 31-SE, 53-NE
137-96, G, China, 1996, 54-SW
1631-81, U, 1981, 47-SW, 54-SW
1951-77, G, Korea, Republic of, 1977, 32-SW
431-80, W, China, 1980, 58-NW
64-97, W, China, 1997, 32-SW
9-95, W, China, 1995, 37-NW
979-85, W, Korea, Republic of, 1985, 32-SW

Carya sp.

524-2008, U, 2008, 4-NE
525-2008, U, 2008, 4-NE
529-2008, U, 2008, 4-NE

Carya carolinae-septentrionalis

5282, G, 1904, 24-SE

Carya cordiformis

12893, G, 1883, 24-NE, 25-NW
22671, G, year unknown, 10-NW
22672, G, year unknown, 25-NW
22792, G, year unknown, 53-SE
22867, U, 1950, 52-SW
1168-85, W, United States, 1985, 19-NW,
25-SW
12893-1, G, 1925, 25-NW
1495-83, W, Canada, 1983, 25-NW
265-86, W, United States, 1986, 19-SW
303-90, W, United States, 1990, 19-NW
527-2008, U, 2008, 4-NE

Carya glabra

10700, G, 1919, 25-NW
2019, W, United States, 1883, 25-SW
20101, W, United States, 1926, 14-NE
20095, W, United States, 1911, 18-SE
20096, W, United States, 1911, 18-SE
20098, W, United States, 1883, 25-SW
22941, U, 1951, 31-NE
23155, U, 1962, 25-NW
23166, U, 1963, 25-SW
355-2010, U, 2010, 52-SW
6990, W, United States, 1909, 25-SW

7873, W, United States, 1908, 19-NW
8188, W, United States, 1909, 25-SW

Carya glabra var. *megacarpa*
6987, W, United States, 1912, 53-NW
18062, W, United States, 1913, 24-SE

Carya illinoensis
12913, W, United States, 1882, 24-NE
22641, U, 1940, 19-SW
883-88, W, United States, 1988, 13-SW

Carya laciniosa
12898, U, 1882, 19-NW, 19-SW
20094, U, United States, 1882, 19-SW
22673, U, 1940, 10-NW
22866, U, 1950, 14-NW
266-86, W, United States, 1986, 24-NE
806-87, W, United States, 1987, 18-SE,
19-NW, 19-SW

Carya myristiciformis
6048, W, United States, 1909, 24-NE
475-85, W, United States, 1986, 25-SW
553-2007, W, United States, 2007, 18-SE
659-91, W, United States, 1991, 18-SE

Carya × nussbaumeri 'McAllister'
8019, Z, United States, 1919, 25-NW

Carya ovata
12907, W, United States, 1883, 19-NW
12909, G, 1915, 13-SW, 19-NW
22868, U, 1950, 11-SE, 13-NW, 24-NE, 25-SW,
26-NE, 32-NW, 38-NW, 62-NE, 7-NW
223-2011, U, 2011, 31-NW
258-2011, U, 2011, 31-NE
268-86, W, United States, 1986, 24-NE
317-2011, U, 2011, 25-SW
318-89, W, Canada, 1989, 14-NE, 24-SE
6986, W, United States, 1913, 19-SW
672-2008, U, 2008, 27-SW
7321, W, United States, 1911, 13-SW
7947, W, United States, 1911, 19-NW

Carya ovata 'Weiker'
8022, G, 1919, 19-NW

Carya ovata var. *australis*
5258, G, 1904, 24-SE

Carya × schneckii
4392-1, U, United States, 1919, 25-SW

Carya texana
12892, W, United States, 1912, 18-SE, 25-SW

Carya tomentosa
8014, W, United States, 1919, 24-NE
12903, U, 1878, 32-NW
20100, U, 1926, 25-SW, 31-NW
4-85, W, United States, 1985, 19-SW

Caryopteris × clandonensis 'Arthur Simmonds'
138-2004, G, 2004, LG-7G

Caryopteris × clandonensis 'Dark Knight'
217-2006, G, 2006, LG-8A

Caryopteris 'First Choice'
223-2006, G, 2006, LG-8G

Castanea crenata
225-97, G, 1997, 25-SW

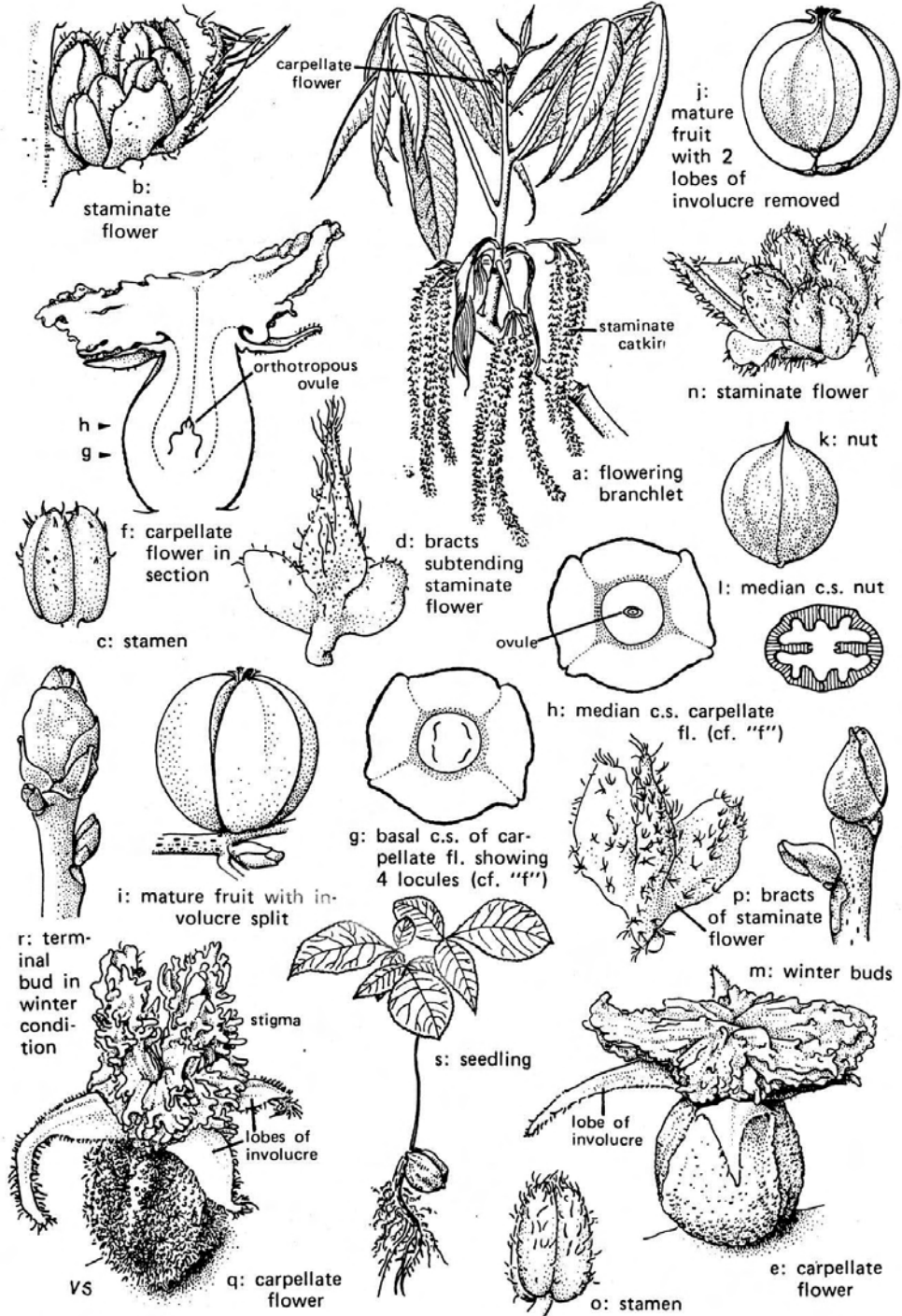
Castanea dentata
1154-50, G, United States, 1950, 54-NE
165-97, Z, United States, 1997, 62-SE
224-97, W, United States, 1997, 25-SW
24-80, W, United States, 1980, 31-NW
304-96, W, United States, 1996, 49-SW
461-51, G, United States, 1951, 54-SE

Castanea dentata × mollissima
194-2001, U, 2001, 53-SW

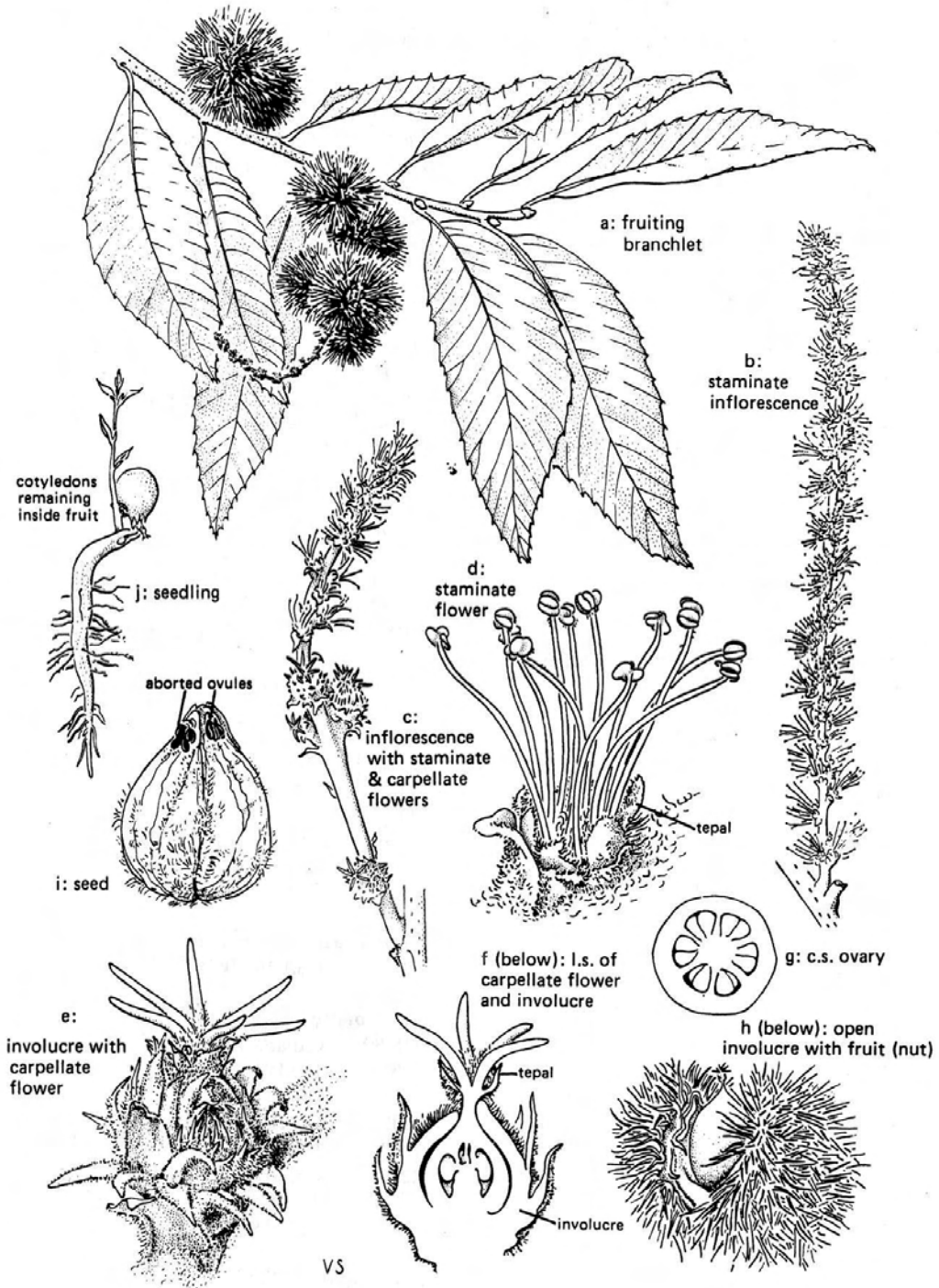
Castanea henryi × mollissima
623-32, G, 1932, 31-NW

Castanea mollissima
205-92, U, China, 1992, 53-SE
269-2011, U, 2011, 31-NW
7892, U, China, 1918, 31-NW
13200, W, China, 1922, 31-NE, 31-NW

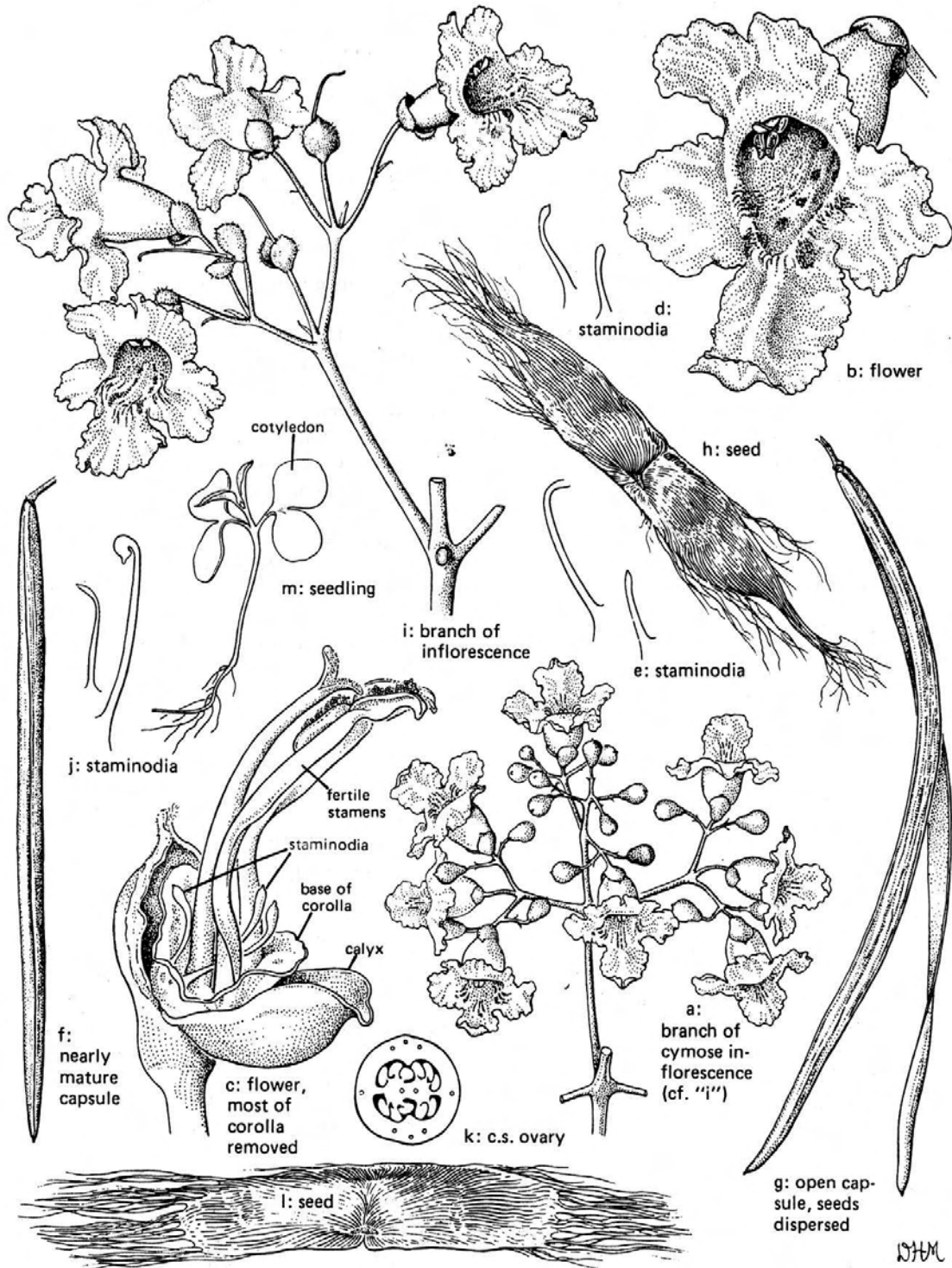
JUGLANDACEAE: *Carya*. a-m, *C. ovata* var. *australis*; n-s, *C. laciniosa*



FAGACEAE: *Castanea*. a-j, *C. pumila*



BIGNONIACEAE: Catalpa. a-h, *C. bignonioides*; i-m, *C. speciosa*



Castanea pumila var. *ozarkensis*
227-97, U, 1997, 62-SE
336-55, U, 1955, 54-NE

Castanea pumila var. *pumila*
10927, U, 1918, 31-NW
21486, W, United States, 1924, 31-NW
22936, U, 1942, 31-NW
1280-5, G, 1912, 31-NW
226-97, W, United States, 1997, 62-SE

Castanea sativa
12924, G, 1916, 31-SE

Castanea × *neglecta*
18436, G, 1923, 31-NW

Catalpa bignonioides
131-54, U, 1954, 21-NW, 21-SW
228-2004, W, United States, 2004, 21-SW
647-86, G, Afghanistan, 1986, 55-NE

Catalpa bignonioides 'Aurea'
174-40, U, 1940, 21-SW
947-74, G, 1974, 21-SW

Catalpa bignonioides 'Nana'
15559, U, United States, 1922, 21-NW
579-86, U, United States, 1986, 52-SW

Catalpa bungei
12927, W, China, 1904, 21-NW
271-65, Z, China, 1965, 21-SW
642-94, W, China, 1994, 21-NW

Catalpa × *erubescens* 'J. C. Teas'
1107-2, G, 1906, 21-SW

Catalpa × *erubescens* 'Japonica'
206-35, U, 1935, 21-SW

Catalpa × *erubescens* 'Purpurea'
649-65, G, 1965, 21-SW
686-88, U, 1988, 21-SW

Catalpa fargesii
17664, U, 1914, 21-NW

Catalpa × *galleana*
925-42, G, 1942, 21-SW

Catalpa ovata
237-2002, W, Korea, Republic of, 2002,
21-NW, 21-SW
290-56, U, 1956, 21-SW
412-61, U, 1961, 21-SW
516-87, W, China, 1987, 21-SW, 27-NW
98-61, U, 1961, 21-SW

Catalpa ovata 'Flavescens'
834-78, U, 1978, 27-NW

Catalpa speciosa
2776, U, 1886, 21-SW
1245-79, W, United States, 1980, 21-NW,
21-SW
927-58, G, 1958, 21-SW

Cathaya argyrophylla
276-98, W, China, 1998, LG-PER-W

Ceanothus × *pallidus* var. *roseus*
146-2000, U, 2000, LG-2G

Cedrela sinensis
12979, U, 1903, 57-NE
480-95, G, 1995, 57-NE
535-94, U, 1994, 8-NW, 8-SW

Cedrus atlantica
666-91, W, Morocco, 1991, 33-NW,
EG-32-NE

Cedrus atlantica 'Glauca'
249-63, U, 1963, 35-NE
755-86, U, 1986, LARZ

Cedrus atlantica 'Glauca Pendula'
601-71, G, 1971, DGB

Cedrus deodara 'Shalimar'
1127-64, W, India, 1964, 3-NW

Cedrus libani
4697, W, Turkey, 1902, 2-SE, 32-SE, 38-NW,
41-SE, EG-33-NW

1008-90, W, Turkey, 1990, 39-NE
1015-90, W, Turkey, 1990, EG-33-NW
131-47, G, 1946, 22-SW
220-60, W, Turkey, 1960, 1-SE, 34-SE,
34-SW, EG-17
271-47, G, 1947, 3-NW
446-48, G, 1948, 22-SW
448-68, W, Turkey, 1960, 3-NW
5-42, G, 1942, EG-17, EG-32-NE

Cedrus libani 'Pendula'
10926, U, 1919, 31-SW

Celastrus angulatus
22144, U, 1927, 24-NE, 24-NW
269-95, W, China, 1995, LG-9B.12

Celastrus orbiculatus
684-67, W, Japan, 1967, BR-16-NE
720-86, Z, China, 1986, LG-10B.13

Celastrus scandens
534-2002, W, United States, 2002, LG-9C.24
746-49, G, 1948, 13-SW

Celtis aurantiaca
1739-77, W, Korea, Republic of, 1977, 20-NE

Celtis australis
1175-74, U, 1974, 20-NE
381-72, U, 1972, 20-NE

Celtis bungeana
10-95, W, China, 1995, 14-NW, 30-NW
643-53, U, 1953, 14-NW

Celtis choseniana
367-86, W, Korea, Republic of, 1986, 20-NE
976-85, W, Korea, Republic of, 1985, 20-NW

Celtis douglasii
21779, U, 1914, 14-NE
1484-52, G, 1952, 14-NW

Celtis glabrata
1123-78, W, Ukraine, 1978, 20-NW

Celtis gracilis
265-77, U, 1977, 20-NE, 20-SE, 21-SW

Celtis jessoensis
7532, W, Japan, 1892, 14-NE
576-68, U, 1968, 10-SE

Celtis koraiensis
974-76, U, 1976, 14-NW

Celtis laevigata
112-54, U, 1954, 14-NW
270-86, W, United States, 1986, 20-NE

Celtis occidentalis
1165, U, 1881, 14-NE
7894, U, 1915, 14-NE
15904, W, United States, 1922, 14-NE
18381, W, United States, 1922, 14-NE
22165, U, 1932, 14-NE
22869, U, 1950, 47-SW
23156, U, 1962, 14-NW
249-79, G, 1979, 20-NW
296-97, G, 1997, 63-SW
356-84, W, United States, 1984, 20-NW
546-31, U, 1931, 14-NE
959-72, U, 1972, 20-NW

Celtis aff. *occidentalis*
367-37, U, 1937, 14-NW
593-56, U, 1956, 14-NW

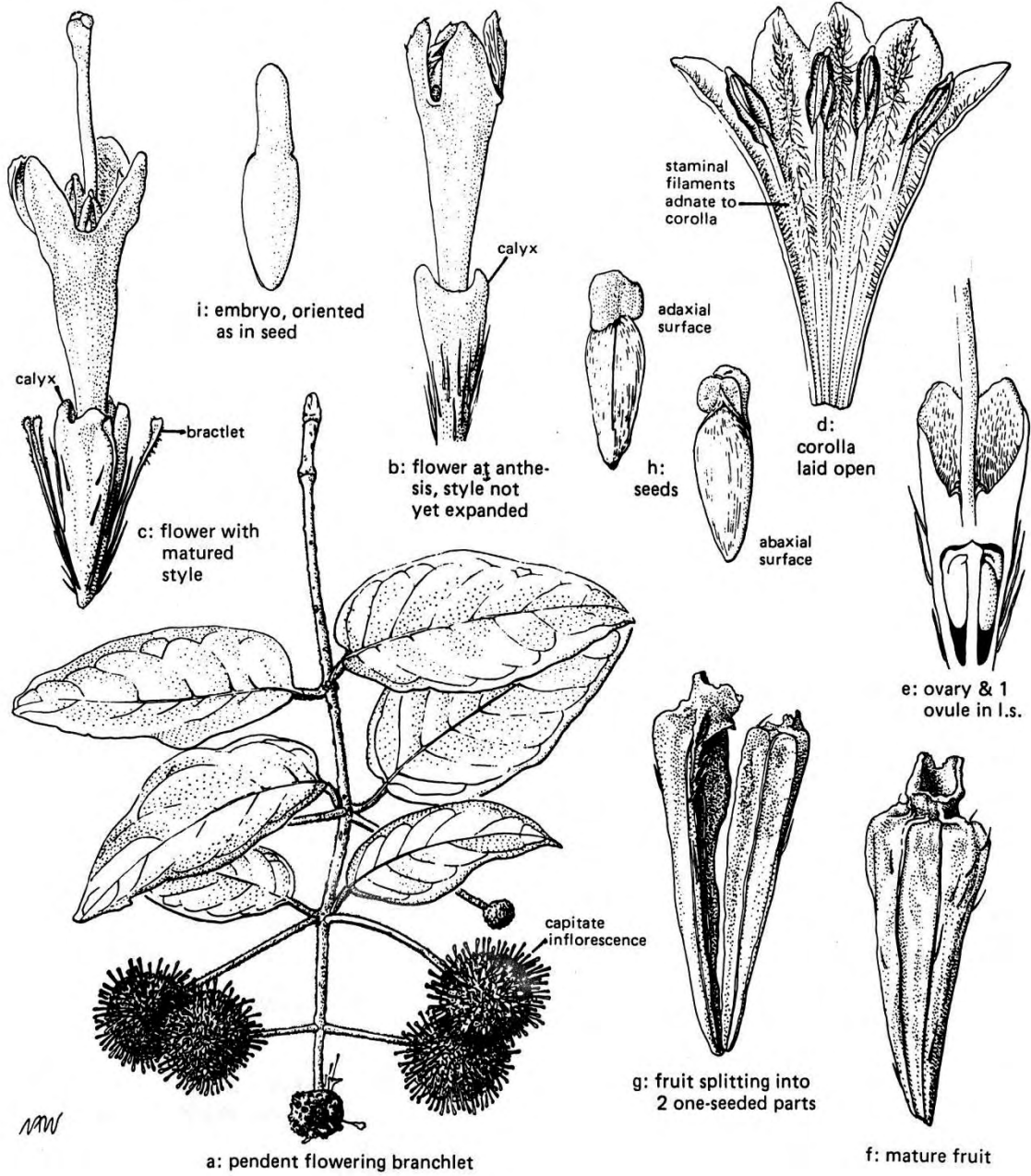
Celtis occidentalis × *laevigata* 'Magnifica'
231-94, G, 1994, 51-SE, 55-NE

Celtis reticulata
1183-72, W, United States, 1972, 20-NE
183-81, W, United States, 1981, 10-SE
505-87, W, United States, 1987, 14-NW
631-83, W, United States, 1983, 20-NW

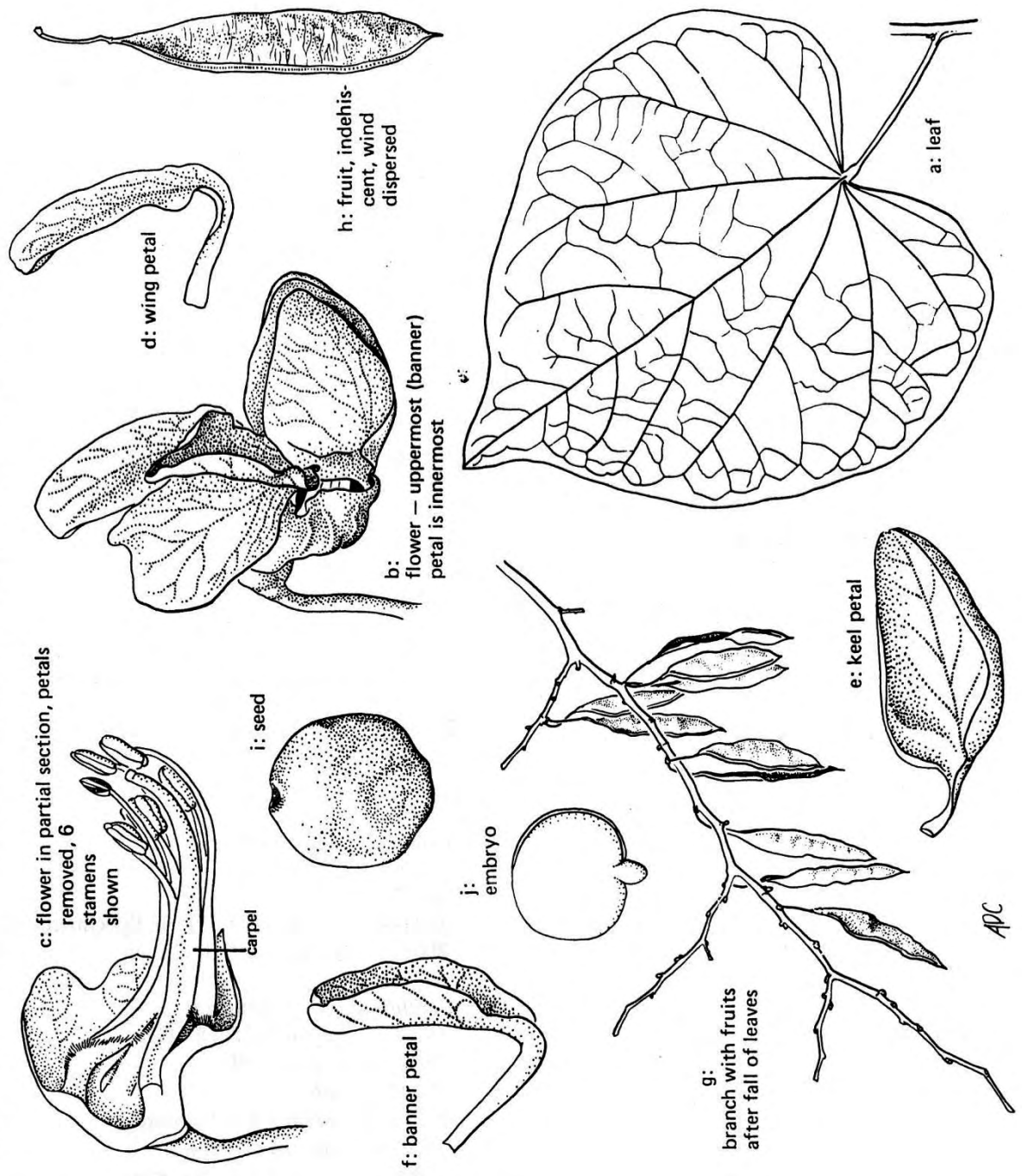
Celtis sinensis
767-84, W, Korea, Republic of, 1984, 47-SW

Celtis tenuifolia
442-86, W, United States, 1986, 14-NW

RUBIACEAE: *Cephalanthus*. a-i, *C. occidentalis*



FABACEAE (LEGUMINOSAE) subfamily CAESALPINOIDEAE: Cercis. a-j, *C. canadensis*



Celtis tournefortii
1264-65, U, 1965, 14-NE

Celtis vandervoetiana
1730-80, W, China, 1980, 14-NW

Cephalanthus occidentalis
245-95, W, United States, 1995, 3-NE
305-85, W, United States, 1985, 50-NW
926-79, W, United States, 1979, 51-NE

Cephalanthus occidentalis var. *occidentalis*
23170, U, 1963, BR-FAXON-POND
123-78, W, United States, 1978, 5-SE
1244-79, W, United States, 1980, 3-SE
631-78, W, United States, 1978, 3-SE

Cephalotaxus fortunei
1061-78, G, 1978, 26-NW
1846-80, W, China, 1980, EG-6
1958-80, W, China, 1980, EG-13
248-2003, W, China, 2003, EG-6

Cephalotaxus harringtonia
127-60, G, 1960, 31-NE
271-2000, Z, Japan, 2000, 36-NW, 40-SW
70-91, G, 1991, LG-PER-W
725-69, G, 1969, 31-NE
926-59, G, 1959, 40-SE

Cephalotaxus harringtonia 'Duke Gardens'
605-2003, G, 2003, LG-3D

Cephalotaxus harringtonia 'Fastigiata'
1957-77, G, 1977, 52-NE

Cephalotaxus harringtonia 'Prostrata'
126-94, G, 1994, LG-2J
1408-67, G, 1967, 9-NE

Cephalotaxus harringtonia var. *nana*
1484-77, W, Japan, 1977, 49-NE, EG-6
20-98, W, Japan, 1998, EG-2

Cephalotaxus koreana
1699-77, G, Korea, Republic of, 1977, 30-SW,
49-SW

Cephalotaxus oliveri
32-2000, U, 2000, EG-14

Cephalotaxus sinensis
7065, W, China, 1907, 1-SW
1889-80, W, China, 1980, EG-9
331-96, U, 1996, EG-3
395-79, U, 1979, EG-6
5-2003, Z, China, 2003, 36-NE, 36-NW
83-2002, W, China, 2002, 33-SW, 36-NE

Cercidiphyllum japonicum
882, W, Japan, 1878, 5-NW
13008, W, Japan, 1886, 4-NE
23185, U, 1964, 3-NE
12-2007, Z, China, 2007, 3-SW
1150-67, U, Japan, 1967, 4-NE
126-2007, W, China, 2007, 32-SE, 3-SW
178-87, G, United States, 1987, 4-NE
19-98, W, Japan, 1998, 51-NE, 51-NW
232-2000, W, Japan, 2000, 5-NW
28-85, W, Japan, 1985, 26-SE

Cercidiphyllum japonicum 'Morioka Weeping'
134-98, G, 1998, 58-SW,
BR-DAWSON-POND, LG-PER-S
698-81, G, Japan, 1981, 4-NE

Cercidiphyllum japonicum f. *pendulum*
'Amazing Grace'
113-2002, G, 2002, LG-8B

Cercidiphyllum magnificum
270-2003, G, Japan, 2003, 4-NE, EG-26-SE
291-2008, W, Japan, 2008, EG-26-SE
292-2008, W, Japan, 2008, 4-NE

Cercis canadensis
9042, G, 1919, 18-SE
21641, G, 1923, 15-SW
22870, U, 1950, 14-NE, 14-NW
10-68, G, 1968, 2-SE, 4-NE
25-70, G, 1970, 11-SW
353-2002, G, 2002, LG-6C
386-43, G, 1943, 15-SW
396-2008, U, 2008, 26-SW
397-2008, U, 2008, 26-SE
403-95, W, United States, 1995, 15-SW
510-95, W, United States, 1995, 25-NW

559-95, W, United States, 1995, 25-NW,
25-SW
624-2008, U, 2008, 4-NE
633-83, W, United States, 1983, 25-NE, 25-SE
671-91, W, United States, 1991, 15-SW
812-83, G, 1983, 32-SW

Cercis canadensis 'Alba'
372-2001, G, 2001, 15-SE

Cercis canadensis 'Forest Pansy'
351-2002, G, 2002, LG-PER-S

Cercis canadensis var. *texensis*
288-93, W, United States, 1993, 15-NW

Cercis chinensis
13011-1, G, 1911, 18-SE

Cercis chinensis 'Don Egolf'
59-2006, G, 2006, 27-SW, LG-3L

Cercis griffithii
94-73, U, 1973, LG-8E

Chaenomeles × *californica* 'Masterpiece'
744-82, G, 1982, BR-11

Chaenomeles cathayensis
336-92, G, 1992, 22-NW

Chaenomeles japonica
1415-83, U, 1983, BR-12

Chaenomeles japonica 'Sargentii'
750-82, G, 1982, BR-11

Chaenomeles japonica var. *alpina*
256-84, U, 1984, BR-8

Chaenomeles speciosa
725-88, U, Japan, 1988, LARZ

Chaenomeles speciosa 'Candidissima'
1182-84, G, 1984, BR-11

Chaenomeles speciosa 'Cardinalis'
517-84, G, 1984, BR-10

Chaenomeles speciosa 'Contorta'
1032-85, G, 1985, BR-16-NW
126-42, G, 1942, BR-16-NW

Chaenomeles speciosa 'Doctor Bang's Pink'
1183-84, G, 1984, BR-16-NW

Chaenomeles speciosa 'Rubra Grandiflora'
885-81, G, 1981, BR-11

Chaenomeles speciosa 'Simmonii'
1203-81, U, 1981, BR-10

Chaenomeles × *superba* 'Crimson Beauty'
733-82, G, 1982, BR-10

Chaenomeles × *superba* 'Foliis Rubris'
545-84, G, 1984, BR-12

Chaenomeles × *superba* 'Mandarin'
281-50, G, 1950, BR-5

Chaenomeles superba 'Vesuvius'
756-82, G, 1982, BR-10

Chamaecyparis lawsoniana
13028, G, 1896, 31-SE
13029, G, 1913, 41-SE
1011-64, U, 1964, 31-NW
1164-71, G, 1971, 31-SE
1625-83, W, United States, 1983, 59-NE

Chamaecyparis lawsoniana 'Alumii'
1477-84, G, 1984, 59-NE, 59-SE

Chamaecyparis lawsoniana 'Erecta Viridis'
1443-60, G, 1960, 31-SE

Chamaecyparis lawsoniana 'Green Hedger'
430-65, G, 1965, 31-NW, 31-SE

Chamaecyparis lawsoniana 'Stilton Cheese'
115-72, G, 1972, 31-SE

Chamaecyparis obtusa
13038, G, 1881, 36-NE
1379-78, G, 1978, 33-NE
671-85, W, country unknown, 1985, 53-SW

770-84, W, Korea, Republic of, 1984, 52-NE
917-85, W, Korea, Republic of, 1985, 53-SW
949-58, G, 1958, 36-NW

Chamaecyparis obtusa 'Aurea'
13473, G, 1923, 36-NW

Chamaecyparis obtusa 'Breviramea'
13475-1, Z, Japan, 1923, 36-NW
987-71, U, 1971, 36-NW

Chamaecyparis obtusa 'Chabo-Hiba'
101-69, G, 1969, LARZ
1100-71, G, 1971, LG-PER-S
877-37, G, 1937, LARZ
878-37, G, 1937, LARZ
879-37, G, 1937, LARZ
880-37, G, 1937, LARZ
881-37, G, 1937, LARZ
890-49, G, 1949, LARZ
892-49, G, 1949, LARZ

Chamaecyparis obtusa 'Compacta'
10135, G, 1920, 31-SW

Chamaecyparis obtusa 'Coralliformis'
245-61, G, 1961, 31-NW

Chamaecyparis obtusa 'Crippsii'
1358-64, G, 1964, 31-SW

Chamaecyparis obtusa 'Filicoides'
988-71, G, 1971, 31-NW

Chamaecyparis obtusa 'Flabelliformis'
1045-71, G, 1971, LG-PER-S
1133-76, G, 1976, LG-PER-S

Chamaecyparis obtusa 'Golden Nymph'
1236-77, G, 1977, LG-PER-S

Chamaecyparis obtusa 'Gracilis Aurea'
1733-66, G, 1966, 31-NW

Chamaecyparis obtusa 'Hage'
1048-71, G, 1971, DGB

Chamaecyparis obtusa 'Kanaamihiba'
1135-76, G, 1976, LG-PER-S

Chamaecyparis obtusa 'Kosteri'
1857-65, G, 1965, LG-PER-S

Chamaecyparis obtusa 'Lycopodioides'
615-92, G, 1992, 36-NW, LG-PER-S

Chamaecyparis obtusa 'Magnifica'
18109, G, 1925, 36-NW

Chamaecyparis obtusa 'Mariesii'
883-62, G, 1962, 31-NW

Chamaecyparis obtusa 'Nana'
1261-68, G, 1968, LG-PER-S

Chamaecyparis obtusa 'Nana Argentea'
116-72, G, 1972, LG-PER-S

Chamaecyparis obtusa 'Nana Gracilis'
13-63, G, 1963, 3-NW
1593-66, G, 1966, DGB
447-38, G, 1938, 31-SW

Chamaecyparis obtusa 'Pygmaea Densa'
1828-65, G, 1965, LG-PER-S

Chamaecyparis obtusa 'Tempelhof'
1523-63, G, 1963, LG-PER-S

Chamaecyparis obtusa 'Tsatsumi'
202-61, G, 1961, 31-SW, 36-NW

Chamaecyparis obtusa var. *formosana*
833-69, W, Taiwan, 1969, 30-NE

Chamaecyparis pisifera
13040, U, Japan, 1891, 36-NE
13041, U, 1879, 31-SE
22799, G, 1894, 36-NE
1025-55, G, 1955, 36-NW
1136-62, G, 1962, 31-SE
13044-1, G, 1890, 36-NE

Chamaecyparis pisifera Plumosa Form Group
1067-38, G, 1938, 31-SW

Chamaecyparis pisifera 'Aurea Nana'
1769-65, G, 1965, 36-NW

Chamaecyparis pisifera 'Boulevard'
1023-59, G, 1959, 31-SE
1092-87, G, 1987, 1-SW
850-56, G, 1956, 36-NW

Chamaecyparis pisifera 'Cream Ball'
362-2007, G, 2007, DGB

Chamaecyparis pisifera 'Filifera'
13045, G, 1881, 36-NE
1323-61, G, 1961, 36-NW

Chamaecyparis pisifera 'Filifera Aurea'
307-51, G, 1951, 31-SW

Chamaecyparis pisifera 'Golden Mop'
1825-65, G, 1965, 31-SW

Chamaecyparis pisifera 'Plumosa'
112-97, G, 1997, 36-NW
16206, G, 1922, 31-SE

Chamaecyparis pisifera 'Plumosa Argentea'
1017-55, G, 1955, 36-NW
567-92, G, 1992, LG-PER-S

Chamaecyparis pisifera 'Plumosa Aurea'
13043-1, G, 1894, 36-NE
265-61, G, 1961, 36-NW
665-41, G, 1941, 36-NW

Chamaecyparis pisifera 'Plumosa Vera'
1817-65, G, 1965, 31-SW

Chamaecyparis pisifera 'Squarrosa'
22527, U, 1936, 36-NW
1073-62, G, 1962, 31-SE
1360-2, G, 1894, 31-SE
899-37, G, 1937, LARZ

Chamaecyparis pisifera 'Squarrosa Aurea'
357-65, G, 1965, 36-SW
883-71, G, 1971, 24-SE

Chamaecyparis pisifera 'Squarrosa Dumosa'
1275-88, G, 1988, 36-NE, 36-NW
21-89, G, 1989, 36-NW

344-73, G, 1973, 31-NW

Chamaecyparis pisifera 'Squarrosa Intermedia'
364-2007, G, 2007, DGB

Chamaecyparis thyoides
13047, W, United States, 1904, 39-NE
1009-85, W, United States, 1985, 5-SE
1022-84, W, United States, 1984, 57-NW
1294-81, W, United States, 1981, 5-NE
1296-81, W, United States, 1981, 5-NE

Chamaecyparis thyoides 'Andelyensis'
1274-88, G, 1988, 36-NE
945-62, G, 1962, 31-SW

Chamaecyparis thyoides 'Qiana'
230-2001, Z, United States, 2001, 27-NE,
36-NE

Chamaedaphne calyculata
315-89, W, Canada, 1989, LG-7A
506-2010, W, United States, 2010, DGB
849-93, W, Canada, 1993, 37-SE
859-93, W, Canada, 1993, 37-SE

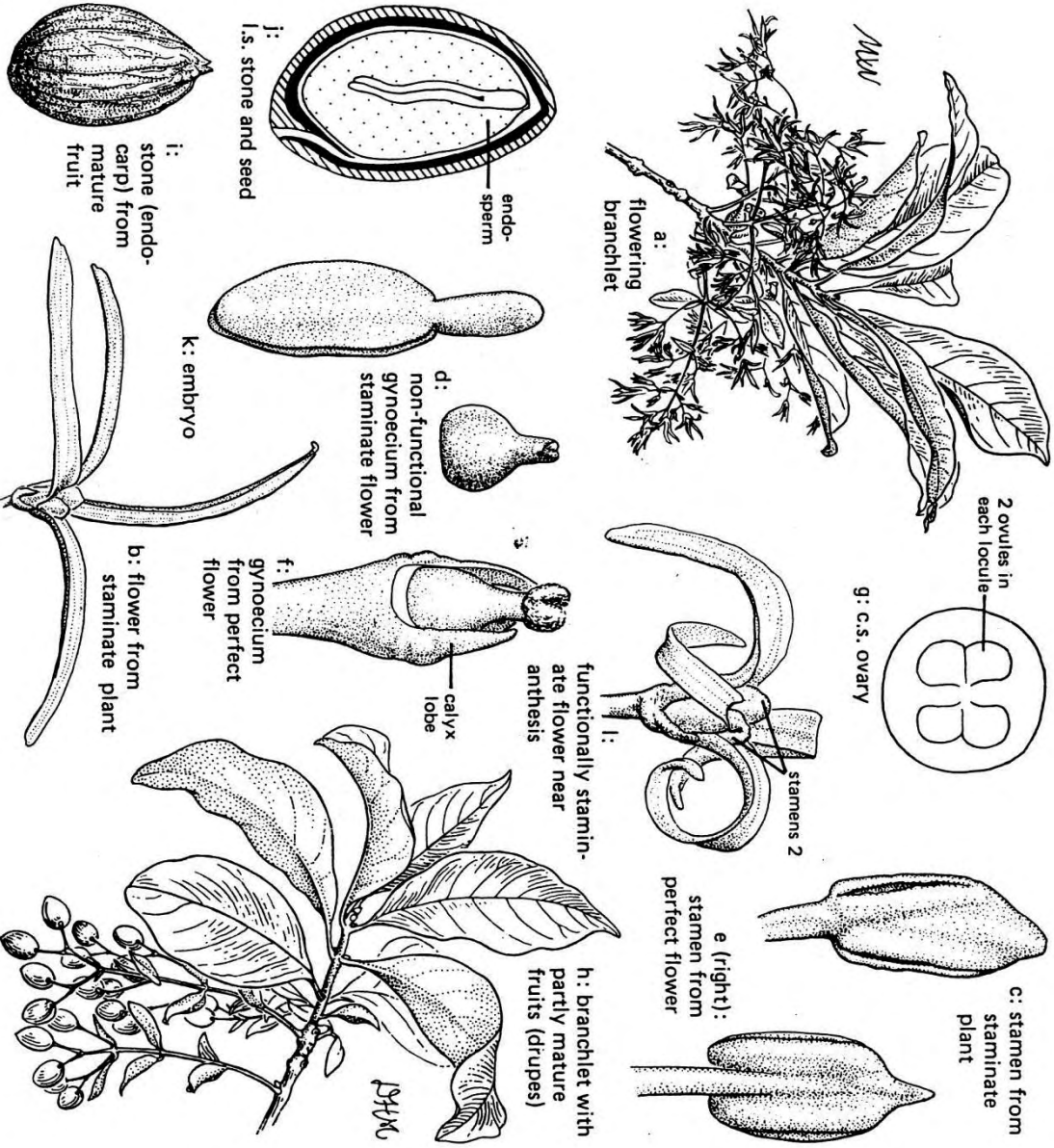
Chamaedaphne calyculata 'Verdant'
166-99, G, 1999, LG-7A

Chimonanthus praecox
236-98, G, 1999, 32-NE

Chionanthus retusus
13051, U, 1901, EG-9
1230-83, W, Korea, Republic of, 1983, 14-SE,
20-NE, 51-NE
285-75, G, 1975, 21-SE
354-2002, G, 2002, LG-4, LG-PER-N
427-87, U, Korea, Republic of, 1987, 31-NE,
EG-2

Chionanthus virginicus
10571, U, 1920, EG-13
1029-88, W, United States, 1988, 21-SW
1074-4, G, 1901, 14-SE, 15-SW, 53-SW, 57-NE
1101-88, W, United States, 1988, 14-SE
875-59, W, United States, 1959, 14-SE
961-88, W, United States, 1988, 25-NW,
LG-PER-N

OLEACEAE: Chionanthus. a-k, C. virginicus; l, C. pygmaeus



Chosenia arbutifolia
176-98, W, Japan, 1998, 37-NW, 8-SW

Chrysanthemum nipponicum
576-93, G, 1993, 3-NE
612-2003, G, 2003, LG-8E

Cimicifuga racemosa
448-93, U, 1993, 3-NW

Cissus incisa
957-76, U, 1976, 11-NE

Cladrastis kentukea
13055, G, 1881, 15-SW
16370, G, 1927, 15-SW
260-2002, G, 2002, LG-PER-S
1003-2009 – 1007-2008, U, 2008, 17-SW
51-87, W, United States, 1987, 15-SW, 27-NE,
50-NE

Cladrastis kentukea 'Perkins Pink'
100-98, G, 1998, 54-SW
379-87, U, 1987, 15-SW

Cladrastis kentukea 'Sweetshade'
101-98, G, 1998, 54-SW

Cladrastis platycarpa
10928, W, Japan, 1919, 15-SW
165-78, W, Japan, 1978, 51-NW
468-70, G, 1970, 15-NW, 15-SW

Clematis sp.
421-87, W, Japan, 1987, LG-3A

Clematis 'Ernest Markham'
330-2006, G, 2006, LG-9A.9

Clematis 'John Huxtable'
331-2006, G, 2006, LG-9C.22

Clematis 'Marie Boisselot'
369-2003, G, 2003, LG-9B.1

Clematis 'Mrs. Cholmondeley'
332-2006, G, 2006, LG-9A.7

Clematis 'Multi Blue'

333-2006, G, 2006, LG-9B.4

Clematis 'Paul Farges'
339-2006, G, 2006, LG-9B.11

Clematis 'Prince Charles'
335-2006, G, 2006, LG-9C.8

Clematis 'Roguchi'
336-2006, G, 2006, LG-9B.2

Clematis 'Starfish'
227-2001, G, 2001, LG-10B.10

Clematis 'Westerplatte'
334-2006, G, 2006, LG-9A.10

Clematis albicoma
8-2002, G, 2002, LG-8A

Clematis alpina 'Blue Dancer'
337-2006, G, 2006, LG-9C.5

Clematis alpina 'Helsingborg'
371-2003, G, 2003, LG-9C.4

Clematis apiifolia
387-2008, W, Japan, 2008, LG-9C.3

Clematis columbiana
79-2006, W, United States, 2006, LG-8A,
DGB

Clematis × *durandii*
262-2003, G, 2003, LG-8B

Clematis hexapetala
24-2002, W, Russian Federation, 2002,
LG-7A

Clematis × *jackmanii* 'Victoria'
286-2007, G, 2007, LG-9C.13

Clematis japonica
454-79, G, Japan, 1979, LG-10B.7

Clematis koreana
769-65, U, 1965, 13-NE

Clematis macropetala 'Bluebird'
190-2002, G, 2002, LG-9A.2

Clematis macropetala 'Markham's Pink'
340-2006, G, 2006, LG-9C.1

Clematis montana var. *rubens*
201-2005, G, 2005, LG-10B.9

Clematis ochroleuca
7-2002, G, 2002, LG-7B

Clematis recta 'Purpurea'
172-2004, G, 2004, LG-8B

Clematis stans
308-71, W, Japan, 1971, EG-9
361-2002, Z, Japan, 2002, LG-8E

Clematis terniflora
1690-77, W, Korea, Republic of, 1977,
LG-9C.30
173-2002, G, 2002, LG-PER-W

Clematis vitalba
733-86, Z, Bulgaria, 1986, LG-10A.1, DGB

Clematis viticella 'Betty Corning'
372-2003, G, 2003, LG-9C.10

Clematis viticella 'Polish Spirit'
343-2006, G, 2006, LG-9C.17

Clematis (Viticella Group) 'Emilia Plater'
329-2006, G, 2006, LG-9B.8

Clerodendrum trichotomum
1702-77, W, Korea, Republic of, 1977, 15-SW
1921-80, W, China, 1980, 26-NW
546-83, W, Korea, Republic of, 1983, 44-NE
552-2007, Z, China, 2007, 1-SE, 3-NE
584-2007, Z, Korea, Republic of, 2007, 47-SE

842-79, U, 1979, 15-SW

Clethra sp.
424-78, G, 1978, 49-NW

Clethra acuminata
110-2008, W, United States, 2008, 18-SE,
WH1-NE, WH2-SW
117-66, U, 1966, 24-SE
121-2008, W, United States, 2008, 18-NE
WH1-NE
130-2005, W, United States, 2005, LG-PER-N

Clethra alnifolia
1295-81, W, United States, 1981, 25-SW
1907-81, W, United States, 1981, 8-NW
20-2006, W, United States, 2006,
BR-DAWSON-POND
287-96, W, United States, 1996, 3-SE, LG-8I

Clethra alnifolia 'Anne Bidwell'
733-93, U, 1993, 3-SE

Clethra alnifolia 'Hokie Pink'
737-93, U, 1993, BR-DAWSON-POND

Clethra alnifolia 'Hummingbird'
426-2002, G, 2002, LG-3N

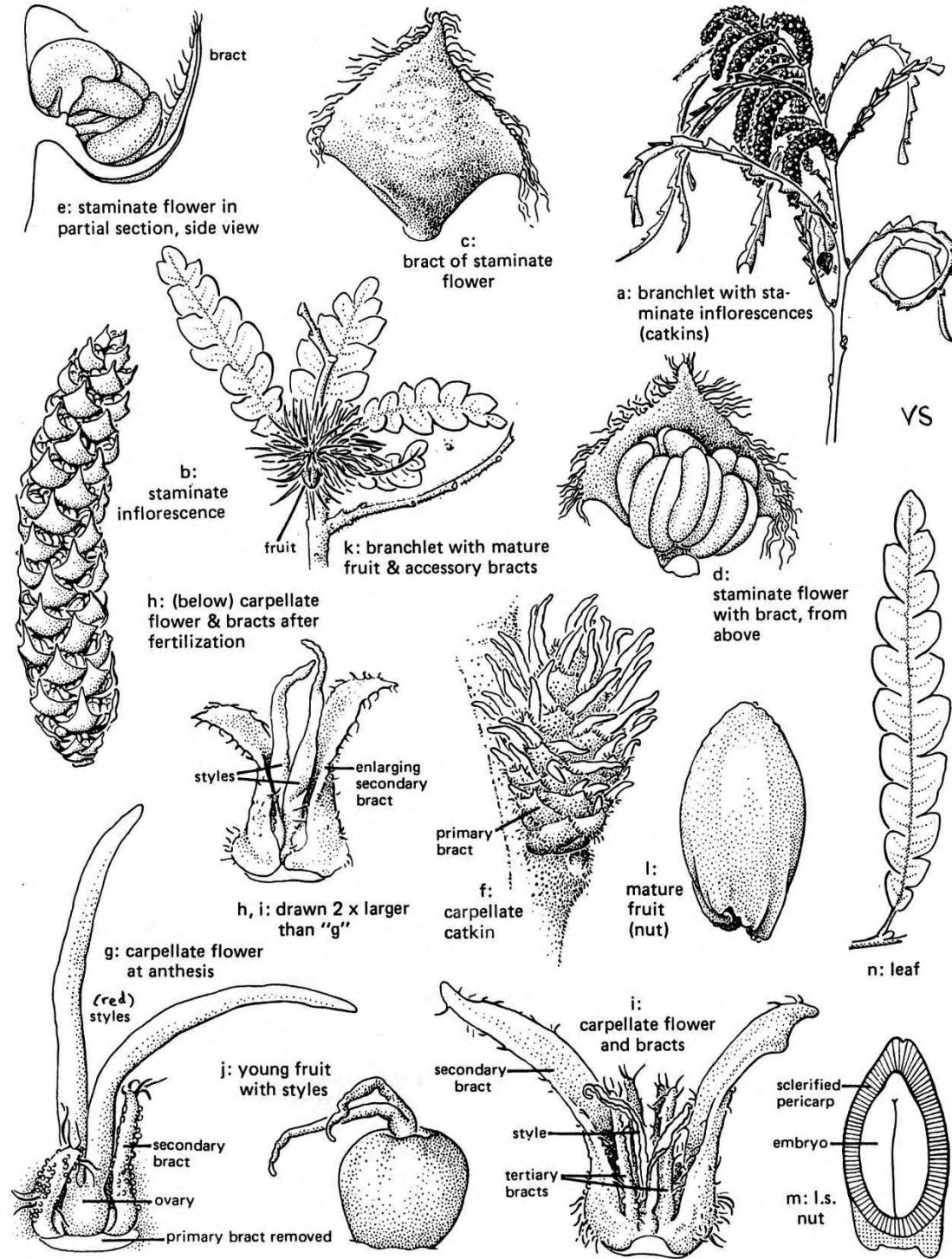
Clethra alnifolia 'Hummingbird' ×
'Anne Bidwell'
326-2006, G, 2006, LG-2L,
BR-DAWSON-POND

Clethra alnifolia 'Pink Spires'
566-85, G, 1985, 3-SE

Clethra alnifolia 'Ruby Spice'
170-2005, G, 2005, LG-3N

Clethra alnifolia var. *alnifolia*
23139, U, 1961, 19-NW
517-82, G, 1982, 3-NE

MYRICACEAE: *Comptonia*. a-n, *C. peregrina*



Clethra alnifolia var. *alnifolia* 'Rosea'
239-47, U, 1947, 11-NW

Clethra barbinervis
13087, U, 1886, 25-SW
13088, W, Japan, 1892, 32-SE
1567-82, W, Japan, 1982, 49-SW
241-96, G, 1996, 49-SW, LG-3N
665-76, U, 1976, 15-NE

Clethra barbinervis × *fargesii*
156-98, G, 1998, 49-SW, LG-3N

Cocculus trilobus
108-2001, W, Japan, 2001, LG-9C.32
163-2002, W, Japan, 2002, LG-9A.8

Colutea arborescens
496-2003, Z, Italy, 2003, 27-SW

Colutea buhsei
16-2003, W, Iran, 2003, 27-SW, EG-9
43-2002, W, Iran, 2002, 27-SW

Colutea persica
493-77, U, 1977, 55-NE

Comptonia peregrina
89-97, W, United States, 1997, 54-SW

Corema album
417-84, G, 1984, DGB

Coriaria japonica
313-98, U, 1999, EG-9

Cornus 'Rutcan'
241-94, G, 1994, 26-NW

Cornus 'Rutdan'
242-94, G, 1994, 26-NE

Cornus 'Rutgan'
244-94, G, 1994, 31-NE

Cornus 'Rutlan'
243-94, G, 1994, 26-NE

Cornus alba
321-97, W, China, 1997, 33-NW

Cornus alba 'Alleman's Compact'
344-2002, G, 2002, LG-7E

Cornus alba 'Bud's Yellow'
345-2002, G, 2002, LG-7E

Cornus alba var. *sibirica*
1028-81, G, 1981, 50-NW

Cornus alternifolia
612-2007, W, United States, 2007, 21-NE, 53-SW, LG-PER-N

Cornus amomum
21402, U, 1930, 21-NE
23137, U, 1961, BR-DAWSON-POND
113-85, W, United States, 1985, 51-NW
1418-83, W, United States, 1983, 50-NE

Cornus × *arnoldiana*
4628-3, U, 1925, BR-FAXON-POND

Cornus australis
41-2002, G, 2002, 21-NE

Cornus bretschnideri
141-2005, W, China, 2005, 21-NE
149-2007, W, China, 2007, 21-NE

Cornus canadensis
189-2007, G, 2007, DGB
201-2006, G, 2006, LG-6C

Cornus controversa
17-98, W, Japan, 1998, 37-NE, LG-PER-E
241-2011, U, 2011, 26-NE
245-2001, W, Korea, Republic of, 2001, LG-PER-E
961-67, U, 1967, 4-SE

Cornus coreana
706-80, G, 1980, 21-NE

Cornus drummondii
1031-80, W, Canada, 1980, 5-NE
1717-81, W, Canada, 1981, 49-NE

366-50, U, 1950, 4-SE
802-49, G, 1949, 4-SE

Cornus × dunbarii

1126-79, G, 1979, 4-SE
44-78, G, 1978, 4-SE
986-77, G, 1977, 4-SE

Cornus florida

10692, U, 1921, 53-SE, 62-NW
11035, G, 1921, BR-1B
22904, G, 1930, 13-NE
18-2000, W, United States, 2000, LG-PER-E,
LG-PER-N
29-68, W, Canada, 1968, 4-NE
160-2011, U, 2011, 31-NE
220-2011, U, 2011, 31-SW
224-2011, U, 2011, 31-NW
226-2011, U, 2011, 31-NE
232-2010, U, 2010, 13-NE
245-2011, U, 2011, 32-NE
248-2011, U, 2011, 31-SE
287-2011, U, 2011, 36-NW
303-2010, U, 2010, BR-17-SW
319-2011, U, 2011, 24-NE
351-2010, U, 2010, 47-SW
353-2010, U, 2010, 50-NE
354-2010, U, 2010, 50-NE
359-2010, U, 2010, 46-SE
364-2003, U, 2003, 26-SW
381-2011, U, 2011, 36-NW
402-2011 – 418-2011, U, 2011, 33-NE, 33-SE,
38-NE, 38-NW, 38-SW,
510-67, G, 1967, 25-SW
523-82, G, 1982, 19-NW, 19-SW, 25-NE,
25-SE, 32-SW
528-2009, U, 2009, 15-NW
621-2008, U, 2008, 1-NE
625-2008, U, 2008, 11-SE
627-2008, U, 2008, 15-NE
628-2008, U, 2008, 15-NE
629-2008, U, 2008, 15-NE
669-2010, U, 2010, 57-SE
679-2010, U, 2010, 62-NW
680-2010, U, 2010, 62-NW
681-2010, U, 2010, 62-NW
682-2010, U, 2010, 62-NW
693-45, G, 1945, 13-SW

704-2010, U, 2010, 62-SW
796-76, G, United States, 1976, 15-NE
811-2008, U, 2008, 53-SE
815-2008, U, 2008, 53-SE
816-2008, U, 2008, 53-SE
820-2008, U, 2008, 53-SW
824-2008, U, 2008, 53-NW

Cornus florida 'Appalachian Spring'

115-2007, W, United States, 2007, 15-NE,
LG-PER-N

Cornus florida 'Fastigiata'

13117-1, U, 1914, 57-NE

Cornus florida f. *rubra*

16247, U, 1925, 13-SE
21306, U, 1930, 15-SW
405-50, U, 1950, 26-SE

Cornus florida 'Pendula'

438-78, G, 1978, DGB

Cornus florida 'Royal Red'

13-61, G, 1961, 3-SW

Cornus florida 'Weaver'

612-50, G, 1950, 4-NE

Cornus florida 'Xanthocarpa'

728-21, G, 1921, 7-SW

Cornus foemina

15-55, U, 1955, 4-SE

Cornus glabrata

1260-66, U, 1966, 4-NE

Cornus hemsleyi

667-76, U, 1976, 21-NE
92-81, W, China, 1980, EG-13, EG-14

Cornus × horseyi

14-55, G, 1955, 4-SE
920-84, G, 1984, 55-SE

Cornus kousa

13123, W, China, 1908, 26-NE

13202, W, China, 1921, 14-SW
18386, U, 1923, 26-SE
1079-89, W, China, 1989, EG-3
1195-68, W, Korea, Republic of, 1968,
BR-17-SW
1207-82, W, Korea, Republic of, 1982, 38-SW
1916-80, W, China, 1980, EG-12, EG-26-SE
255-81, G, 1981, 44-SE
256-81, G, 1981, 44-SE
382-86, W, Korea, Republic of, 1986, 51-SE
524-49, G, 1946, 15-SW, 26-SE, 53-SW
637-68, G, 1968, BR-17-SW
641-68, G, 1968, 34-SW
895-33, G, 1933, 19-SW

Cornus kousa 'Gold Star'
506-82, G, Japan, 1982, 26-SE

Cornus kousa 'Lustgarten Weeping'
1092-78, G, 1978, LG-PER-S

Cornus kousa 'Milky Way'
251-64, G, 1964, 26-SE, 4-NE

Cornus kousa 'Snowboy'
507-82, G, Japan, 1982, 40-NE

Cornus kousa 'Summer Stars'
687-84, G, 1984, BR-1C

Cornus kousa var. *chinensis*
274-2000, W, China, 2000, 40-SW

Cornus kousa 'Variegata'
427-48, G, 1948, 26-NE

Cornus kousa 'Viridis'
22637, G, 1923, 26-SE

Cornus macrophylla
1229-83, W, Korea, Republic of, 1983, 44-SE
1277-83, W, Korea, Republic of, 1983, 63-NW
278-94, W, Korea, Republic of, 1994, 2-SE
422-94, W, Korea, Republic of, 1994, 26-NE

Cornus mas
13126, G, 1883, 21-SE
1153-80, Z, Belgium, 1980, 20-SE

1173-67, W, Czechoslovakia, 1967, 57-NW
1314-85, W, Turkey, 1985, 39-SE
274-33, U, 1933, 26-NE
354-87, Z, Russian Federation, 1987, 52-NE
608-2010, U, 2010, 57-NW
609-2010, U, 2010, 57-NW
645-79, W, France, 1979, 39-SE
748-75, W, Ukraine, 1975, 7-SE
809-83, G, 1983, 49-SW

Cornus mas 'Aurea'
409-50, G, 1950, 7-NW
822-79, G, 1979, 49-NW, 7-SE

Cornus mas 'Flava'
6049, U, 1910, 7-SE
337-40, U, 1940, 26-NE
494-59, U, 1959, 4-SE

Cornus obliqua
110-79, W, Canada, 1979, 21-SE
1467-83, W, Canada, 1983, 59-NE
198-89, W, United States, 1989,
BR-FAXON-POND

Cornus officinalis
8156, U, 1919, 7-SE
8153-1, G, 1922, 7-SE
10933, W, Japan, 1919, 13-SW
127-2007, W, China, 2007, 21-NE
382-2001, U, Korea, Republic of, 2001, 26-SE
918-85, W, Korea, Republic of, 1985, 7-SE

Cornus paucinervis
1235-70, U, 1970, 5-NW

Cornus poliophylla
739-78, U, 1978, 21-SE

Cornus pumila
222-76, U, 1976, 21-SE
228-2000, U, 2000, 26-NE

Cornus racemosa
599, W, United States, 1873, 22-NW
1782-77, G, 1977, 21-SE
212-81, W, United States, 1981, 49-NE
613-74, U, 1974, 21-SE, 4-SE

Cornus sanguinea

136-2002, W, Ukraine, 2002, 62-SW
137-2002, W, Ukraine, 2002, 62-SW
1419-73, U, 1973, 4-SE, 8-NE
205-78, W, Czechoslovakia, 1978, 3-SE
343-78, W, Denmark, 1978, 55-NE

Cornus sanguinea 'Wisley Form'

151-66, G, 1966, 4-SE
310-78, G, 1978, 3-NE
394-2007, G, 2007, BR-DAWSON-POND

Cornus sericea

21028, G, 1928, BR-FAXON-POND
21079, U, 1930, BR-FAXON-POND
21027, G, 1928, BR-FAXON-POND
113-79, W, Canada, 1979, 3-SE
1224-84, W, United States, 1984, 50-NW
175-2005, G, 2005, LG-2J
252-2004, Z, United States, 2004, 39-SE
291-92, W, United States, 1992, LG-2J
678-93, W, United States, 1993,
BR-DAWSON-POND
769-93, W, Canada, 1993, BR-FAXON-POND

Cornus sericea 'Flaviramea'

21027, G, 1928, BR-FAXON-POND

Cornus sericea ssp. *coloradensis*

1143-81, Z, United States, 1981, 14-NW

Cornus walteri

1318-71, U, 1971, 7-SW
1471-77, G, Korea, Republic of, 1977, 21-NE
435-80, W, China, 1980, 32-NE, 49-SW

Corylopsis coreana

248-2006, W, Korea, Republic of, 2006, 18-SE

Corylopsis glabrescens

1030-90, W, Japan, 1990, EG-9, EG-12
113-77, U, 1977, 21-NE
157-81, W, Japan, 1981, EG-12

Corylopsis glabrescens 'Longwood Chimes'

159-99, G, 1999, LG-8J
191-2001, Z, Japan, 2001, LG-PER-E

Corylopsis glandulifera

557-88, W, China, 1988, EG-12
898-81, Z, Japan, 1981, EG-9, EG12

Corylopsis glandulifera var. *hypoglauca*

904-89, W, China, 1989, 1-SW

Corylopsis gotoana

388-2008, W, Japan, 1981, 18-NE, 21-NE
EG-16

Corylopsis pauciflora

10156, W, Japan, 1919, 24-NE
450-94, Z, Japan, 1994, EG-2

Corylopsis sinensis

1648-80, W, China, 1980, 33-SW
198-2002, W, China, 2002, LG-8I
311-2004, W, China, 2004, 19-NW, 21-NE
509-74, U, 1974, 21-NE
642-81, W, China, 1981, 39-NE

Corylopsis sinensis var. *calvoescens*

640-81, W, China, 1981, 24-NE, EG-12
641-81, W, China, 1981, EG-12

Corylopsis sinensis var. *calvoescens* f. *veitchiana*

391-65, U, 1965, 18-SE

Corylopsis sinensis var. *glandulifera*

267-77, U, 1977, EG-3

Corylopsis sinensis var. *sinensis*

7251, W, China, 1908, 18-SE
46-39, G, 1939, 24-NE

Corylopsis spicata

7950, G, 1917, 18-SE
10544, W, Japan, 1919, 24-NE
752-86, G, 1986, LARZ

Corylus americana

1229, W, United States, 1873,
BR-FAXON-POND
36-2000, U, 2000, 25-SW
96-2006, W, United States,
BR-FAXON-POND, WH2-SW

Corylus americana var. *calyculata*
20881, U, 1925, 31-SW
22324, U, 1927, 31-NE

Corylus avellana
22905, U, 1950, BR-FAXON-POND

Corylus avellana var. *grandis*
761-82, U, 1982, 50-NW

Corylus chinensis
1314-38, U, 1938, 31-NW
150-2007, W, China, 2007, 31-SE, 31-SW
493-37, U, 1937, 31-NW
763-82, U, 1982, 31-NW

Corylus colurna
22463, U, 1933, 57-SE, 62-NW

Corylus cornuta
13157, U, year unknown,
BR-FAXON-POND
1250-84, W, United States, 1984, 52-SW

Corylus fargesii
3-98, W, China, 1998, 22-NW
112-98, W, China, 1998, 24-NE
129-2007, W, China, 2007, 31-NE

Corylus heterophylla
7907, U, 1913, 31-SW

Corylus heterophylla var. *sutchuenensis*
15923, W, China, 1922, 31-SW
1094-89, W, China, 1989, BR-15-SE

Corylus heterophylla var. *yunnanensis*
15925, W, China, 1922, 31-NW

Corylus jacquemontii
18147, U, 1923, 31-SW

Corylus mandshurica
386-97, W, China, 1997, 27-SE, 31-SE

Corylus sieboldiana
1473-77, W, Japan, 1977, 31-NE
1479-77, W, Japan, 1977, 31-NE

508-83, W, Korea, Republic of, 1983, 62-SE

Corylus sieboldiana var. *mitis*
518-77, W, Korea, Republic of, 1977, 25-SE

Corylus tibetica
113-98, W, China, 1998, 24-NE, EG-18

Corylus × *vilmorinii*
7549, G, 1911, 19-NW

Cotinus coggygria
276, U, 1876, 8-SW
13160, U, 1909, 26-SW
1465-80, W, Russian Federation, 1980,
11-NW
157-98, W, Russian Federation, 1998, 53-SE,
54-SW
330-2007, W, Italy, 2007, 53-SE
574-88, W, France, 1988, 8-SW
866-87, U, 1987, 39-NE

Cotinus coggygria 'Daydream'
1433-61, G, 1961, 8-SW
749-78, G, 1978, 26-NE

Cotinus coggygria 'Notcutt's Variety'
257-40, G, 1940, 8-SW

Cotinus coggygria 'Purpureus'
13161, U, 1912, 26-SW
708-49, U, 1948, 26-SW

Cotinus 'Grace'
766-83, G, 1983, 8-SW

Cotinus obovatus
1814, U, 1882, 8-SW
146-63, G, 1963, 26-SW
402-95, W, United States, 1995, 54-SW, 8-SW
747-80, U, 1980, 15-SE
993-66, G, 1963, 11-NW

Cotoneaster sp.
1336-71, U, 1971, 32-NE
867-84, U, 1984, BR-12, EG-32-NE

Cotoneaster 'Hessei'
1127-81, G, 1981, 22-NW

Cotoneaster acuminatus
324-64, Z, Nepal, 1964, EG-12

Cotoneaster acutifolius
919-87, Z, China, 1987, BR-14
950-85, Z, China, 1985, BR-12

Cotoneaster acutifolius var. *villosulus*
11261, W, China, 1910, EG-15
13165, W, China, 1908, EG-8

Cotoneaster adpressus
20883, W, China, 1926, EG-8, EG-13
1114-81, Z, China, 1981, BR-14
45-2001, W, China, 2001, LG-1A

Cotoneaster ambiguus
13422, W, China, 1908, EG-8
512-94, Z, China, 1994, BR-12

Cotoneaster apiculatus
7275, W, China, 1911, EG-8
205-2005, G, 2005, LG-3I

Cotoneaster armenus
1363-70, U, 1970, EG-10

Cotoneaster atropurpureus
354-29, G, China, 1929, EG-13

Cotoneaster bullatus var. *floribundus*
169-60, G, 1960, EG-8

Cotoneaster dammeri 'Skogholm'
1031-84, G, 1984, BR-12

Cotoneaster dielsianus
13428, W, China, 1908, EG-8
1795-80, W, China, 1980, BR-14
629-86, Z, China, 1996, BR-14

Cotoneaster divaricatus
6587, W, China, 1907, 26-SE
1416-64, Z, China, 1964, EG-15
538-93, Z, China, 1993, BR-12

631-97, W, China, 1997, BR-14
754-90, Z, China, 1990, BR-16-NE
984-82, U, 1990, BR-11

Cotoneaster foveolatus
13431, W, China, 1907, EG-8, EG-13
1698-80, W, China, 1980, BR-14
333-2002, Z, China, 2002, BR-14
351-70, Z, China, 1970, EG-10
860-84, Z, China, 1984, BR-14

Cotoneaster harrismithii
488-93, W, China, 1993, BR-11
530-71, U, 1971, EG-10
626-97, W, China, 1997, BR-12
66-85, U, 1985, BR-12

Cotoneaster hebephyllus var. *hebephyllus*
68-85, G, 1985, BR-14

Cotoneaster henryanus
701-65, U, 1965, EG-10

Cotoneaster horizontalis
176-2005, G, 2005, LG-3I
1781-80, W, China, 1980, BR-11
75-96, G, China, 1996, LG-3B

Cotoneaster horizontalis 'Robustus'
1981-65, G, 1965, 31-NE
353-36, U, 1936, 31-NE

Cotoneaster horizontalis 'Tom Thumb'
152-2000, G, 2000, LG-1A

Cotoneaster lucidus
3284-2, G, 1919, EG-15
820-60, U, 1960, EG-14
977-65, U, 1965, EG-10

Cotoneaster melanocarpus
1016-87, W, Uzbekistan, 1987, BR-1C
1306-80, W, Russian Federation, 1980, BR-14

Cotoneaster melanocarpus var. *erythrocarpus*
382-79, W, Russian Federation, 1979, BR-11

Cotoneaster microphyllus
 1003-84, G, 1984, BR-1A
 1122-81, G, 1981, BR-12

Cotoneaster microphyllus var. *conspicuus*
 1019-36, U, 1936, 31-SE

Cotoneaster mongolicus
 1007-86, Z, China, 1986, BR-14

Cotoneaster monopyranus
 349-58, U, 1958, EG-11

Cotoneaster morrisonensis
 271-98, W, Taiwan, 1998, LG-6B
 281-98, W, Taiwan, 1998, BR-1C

Cotoneaster moupinensis
 1005-84, U, 1984, BR-12
 628-97, W, China, 1997, BR-12

Cotoneaster multiflorus
 11334, W, China, 1910, EG-8
 471-97, W, China, 1997, BR-11
 676-89, Z, China, 1989, BR-16-NW

Cotoneaster obscurus
 1231-82, Z, China, 1982, BR-12
 596-33, U, 1933, EG-15

Cotoneaster perpusillus
 7157, W, China, 1908, EG-8
 272-85, Z, China, 1985, BR-12

Cotoneaster przewalskii
 245-27, W, China, 1927, EG-15

Cotoneaster racemiflorus
 355-95, U, 1995, BR-14
 1102-82, U, 1982, BR-1A

Cotoneaster racemiflorus var. *soongoricus*
 504-47, G, 1947, 3-NW

Cotoneaster racemiflorus var. *veitchii*
 20075, U, 1913, EG-12
 668-58, U, 1958, EG-11

Cotoneaster reticulatus
 150-2000, U, 2000, BR-1C
 648-97, W, China, 1997, BR-14

Cotoneaster roseus
 1008-84, G, Ukraine, 1984, BR-12

Cotoneaster salicifolius
 1928-80, W, China, 1980, 52-NE
 527-94, Z, China, 1994, BR-12

Cotoneaster sikangensis
 409-84, U, 1984, BR-12

Cotoneaster splendens
 1100-82, G, 1982, BR-12
 1281-72, U, 1972, EG-10

Cotoneaster sternianus
 659-33, U, 1933, EG-11

Cotoneaster submultiflorus
 208-2000, W, China, 2000, LG-2I

Cotoneaster tenuipes
 7276, W, China, 1911, EG-7

Cotoneaster tomentosus
 725-89, W, Iran, 1989, BR-12

Cotoneaster wardii
 633-64, U, 1964, EG-7
 791-68, U, 1968, EG-10

Cotoneaster wilsonii
 585-87, W, Korea, Republic of, 1987, BR-1A

Cotoneaster zabelii
 896-87, Z, China, 1987, BR-12

Crataegus sp.
 235-89, W, United States, 1989, 55-NW
 965-90, W, Mexico, 1990, 59-SW
 966-90, W, Mexico, 1990, 55-NE, 55-NW,
 59-SW

Crataegus almaatensis
 1196-65, U, 1965, 55-SW

34-97, U, 1997, 50-NW, 54-SW

Crataegus amnicola

6328, W, United States, 1906, 59-NW

Crataegus angustata

30-97, U, 1997, 53-NW

588-74, U, 1974, 50-NW

Crataegus anomala

226-95, U, 1995, 53-NE

346-72, U, 1972, 62-SE

Crataegus arnoldiana

91-85, U, 1985, 50-SE

Crataegus brainerdi var. *asperifolia*

188-52, U, 1952, 55-SW

57-98, G, 1998, 55-SE

Crataegus brainerdi var. *scabrida*

14276, U, 1901, 50-NE

Crataegus brumalis

62-73, U, 1973, 59-SW

Crataegus calpodendron

214-89, W, Canada, 1989, 55-SW

261-95, Z, Canada, 1995, 55-SE

293-2004, Z, United States, 2004, 55-NE

Crataegus chrysoarpa var. *bicknellii*

305-2000, W, United States, 2000, 53-NE

99-2001, W, United States, 2001, 55-SW

Crataegus chrysoarpa var. *phoenicea*

30-99, Z, country unknown, 1999, 49-SE

65-2006, Z, country unknown, 2006, 59-NW

749-52, Z, country unknown, 1952, 59-NW

Crataegus coccinoides

194-71, U, 1971, 62-NE

Crataegus coleae

401-72, U, 1972, 62-NE

Crataegus compacta

99-96, Z, Canada, 1996, 59-NE

Crataegus compta

13623, W, country unknown, 1901, 51-SW

271-88, G, 1988, 59-NW

Crataegus crus-galli

463, G, 1875, 25-NW

5029, W, United States, 1903, 55-SW

5053, W, United States, 1903, 55-SW

6321, W, United States, 1908, 59-NW

6355, U, 1906, 59-NW

6500, W, United States, 1909, 59-NW

11905, U, 1908, 55-SE

11913, W, United States, 1901, 55-SW

11914, W, United States, 1901, 55-NE

12079, W, United States, 1902, 55-SW

13600, W, United States, 1900, 55-SE

14015, W, United States, 1903, 55-SW

18912, W, United States, 1906, 59-NW

18918, W, United States, 1916, 59-NW

18920, W, United States, 1903, 55-SW

22149, U, 1932, 59-NW

114-71, U, 1971, 55-NW

170-87, Z, United States, 1987, 30-NW

174-86, Z, United States, 1986, 30-NW

175-86, Z, United States, 1986, 59-NW

176-86, Z, United States, 1986, 52-NW

183-87, Z, United States, 1987, 59-NW

92-85, Z, United States, 1985, 51-SE

Crataegus crus-galli (10 stamen variant)

1544-82, W, Canada, 1982, 55-SW

Crataegus crus-galli (variant)

1253-51, G, 1951, 55-SE

Crataegus crus-galli f. *oblongata*

4851, W, United States, 1901, 55-SE

Crataegus crus-galli f. *rubens*

6765, W, United States, 1909, 55-SW

11990, W, United States, 1908, 55-SW

177-86, Z, United States, 1986, 55-SW

Crataegus crus-galli var. *arbutifolia*

4532, U, 1900, 55-SW

165-87, U, 1987, 50-NW

Crataegus crus-galli var. *bellica*
11944, U, 1903, 55-SW
15239, W, United States, 1906, 59-NW
21789, W, United States, 1902, 55-SW
159-87, Z, United States, 1987, BR-16-NE

Crataegus cuneiformis
100-96, G, Canada, 1996, 59-NE
1572-81, U, Canada, 1981, 51-NW

Crataegus cupulifera
128-46, U, 1946, 55-SW

Crataegus dahurica
250-2000, W, China, 2000, 55-SW
37-95, W, China, 1995, 55-NW
71-73, U, 1973, 59-NW

Crataegus densiflora
124-91, Z, Canada, 1991, 55-SW

Crataegus dilatata
289-80, Z, United States, 1980, 55-NE

Crataegus disperma
4422, W, United States, 1900, 55-SE
15278, W, United States, 1900, 43-SW
161-87, Z, United States, 1987, 22-SW
163-87, Z, United States, 1987, 55-NW

Crataegus dodgei
1730-81, W, Canada, 1981, 39-NE
59-98, Z, Canada, 1998, 49-SE

Crataegus douglasii
1155-72, W, United States, 1972, 62-NE
182-90, W, United States, 1990, 51-SW
196-98, W, United States, 1998, 55-NW
335-71, W, United States, 1971, 62-NE
90-85, Z, United States, 1985, 51-NE

Crataegus dunbarii
4480, U, 1901, 38-SW

Crataegus durobriovensis
112-71, U, 1971, 50-NW

Crataegus ellwangeriana
73-73, U, 1973, 50-NW

Crataegus engelmannii
12053, U, United States, 1902, 55-SW
102-96, G, United States, 1996, 49-SE
106-96, Z, United States, 1996, 55-SE
312-87, Z, United States, 1987, 22-NE

Crataegus exclusa
1218-73, U, 1973, 50-NW
261-76, U, 1976, 49-NE

Crataegus fastosa
534-74, U, 1974, 12-SW, 62-NE

Crataegus faxonii
230-95, U, 1995, 49-SE
778-71, U, 1971, 62-NE

Crataegus flabellata
190-52, U, 1952, 55-SW

Crataegus flavida
1571-81, W, Canada, 1981, BR-16-NE
220-89, W, Canada, 1989, 54-SE, 55-SW

Crataegus fontanesiana
14040, U, 1900, 55-SW

Crataegus fulleriana
1731-81, W, Canada, 1981, 59-SE

Crataegus × *grignonensis*
656-65, G, 1965, 55-SW

Crataegus harbisonii
92-2000, G, United States, 2000, 51-NE

Crataegus heldreichii
238-71, U, 1971, 55-SW
407-95, U, 1995, 59-NW

Crataegus hillii
4478, W, United States, 1901, 50-NE

Crataegus holmesiana
15260, U, 1907, 50-NE
103-96, G, 1996, 51-NE

Crataegus hupehensis
356-81, G, China, 1981, 22-NE

Crataegus intricata
753-64, U, 1964, 55-SW

Crataegus irrasa
43-97, U, 1997, 49-SE
592-71, U, 1971, 62-NE

Crataegus irrasa var. *irrasa*
1325-70, U, 1970, 45-SW
229-95, U, 1995, 53-NE

Crataegus kansuensis
101-2001, Z, China, 2001, 55-NE, 55-NW

Crataegus keepii
1215-73, U, 1973, 49-NE

Crataegus laevigata 'Crimson Cloud'
106-97, G, 1997, 53-NW

Crataegus lanuginosa
1344-70, U, 1970, 59-NW
438-95, U, 1995, 51-SE

Crataegus laurentiana
1069-69, U, 1969, 58-SW
239-95, U, 1995, 55-NW
63-73, U, 1973, 50-NW

Crataegus × *lavalleyi*
868-56, G, 1956, 55-SE

Crataegus lobulata
586-74, U, 1974, 50-NW

Crataegus lucorum
114-96, G, 1996, 53-NE
75-73, U, 1973, 58-SE

Crataegus macauleyae
121-71, U, 1971, 62-NE

Crataegus macracantha
14126, W, United States, 1902, 25-NW
14127, W, Canada, 1899, 50-NW
169-87, Z, Canada, 1987, BR-16-SE

Crataegus magnifolia
122-91, Z, United States, 1991, 59-NW
748-52, Z, United States, 1952, 59-NW

Crataegus maximowiczii
309-97, W, China, 1997, 51-SE

Crataegus mollis
1535-82, W, Canada, 1982, 51-NW

Crataegus monogyna
1373, U, 1899, 4-NE
1576-81, W, Canada, 1981, 51-NE
169-2008, W, Germany, 2008, BR-16-SW
227-89, W, Canada, 1989, 55-SW

Crataegus monogyna (variant)
23211, G, 1968, 34-NE

Crataegus monogyna 'Stricta'
535-50, U, 1950, 51-SE

Crataegus monogyna var. *inermis*
7527, G, 1914, 49-SW
130-94, G, 1994, 49-NW

Crataegus nemoralis
533-69, U, 1969, 59-SW

Crataegus nigra
36-2004, U, 2004, 55-NW

Crataegus nitida
60-98, Z, United States, 1998, 53-NE
661-78, Z, United States, 1978, 49-NW,
49-SW
85-85, Z, United States, 1985, BR

Crataegus nitidula
19054, W, Canada, 1903, 13-NW

Crataegus nuda
178-86, Z, United States, 1986, 64-NE
743-81, Z, United States, 1981, 51-NW

Crataegus opaca
387-96, W, United States, 1996, 55-SE

Crataegus oxyacantha
1526-83, W, Czechoslovakia, 1983, 56-NW
344-2001, W, Sweden, 2001, 59-NE

Crataegus oxyacantha (variant)
695-45, G, 1945, 49-SE

Crataegus oxyacantha 'Charles X'
490-42, G, 1942, 49-SW

Crataegus oxyacantha f. *aurea*
7530, G, 1914, 49-SW

Crataegus oxyacantha f. *rubra*
7531, G, 1914, 49-SW
111-96, G, 1996, 49-NW

Crataegus oxyacantha 'Plena'
6884, G, 1912, 53-NW
61-98, G, 1998, 53-NW

Crataegus oxyacantha var. *auriculata*
275-88, G, 1988, 55-SE

Crataegus paucispina
115-96, G, 1996, 53-NE
1286-73, U, 1973, 58-SW

Crataegus pedicellata
14200, U, 1902, 50-NE
683-74, U, 1974, 50-NW
88-85, Z, United States, 1985, 26-NW

Crataegus pedicellata var. *albicaulis*
759-74, U, 1974, 50-NW

Crataegus pennsylvanica
75-71, U, 1971, 62-NW

Crataegus pentagyna
222-95, Z, Romania, 1995, 53-NE

Crataegus persimilis
5512, W, United States, 1905, 55-SW

Crataegus persimilis 'Prunifolia'
14228-1, G, 1900, 55-SE

Crataegus phaenopyrum
195-52, G, 1952, 59-NW

Crataegus pinnatifida
162-2001, Z, country unknown, 2001, 55-NE

Crataegus poliophylla
12033, W, United States, 1902, 55-NE
186-95, Z, United States, 1995, 55-SE

Crataegus praecoqua
1075-69, U, 1969, 55-SE

Crataegus pratensis
638-74, U, 1974, 54-SW

Crataegus pringlei
1326-70, U, 1970, 62-NW
1530-82, W, Canada, 1982, 22-NW
230-89, W, Canada, 1989, 59-NW
534-69, U, 1969, 55-NW

Crataegus pruinosa
1557-82, W, Canada, 1982, 52-SW
231-89, W, Canada, 1989, 55-SW
664-78, Z, United States, 1978, 50-NW
93-85, Z, United States, 1985, 56-NW, 59-NW

Crataegus × *pseudoambigua*
37-2004, Z, Russian Federation, 2004, 59-NW
793-68, W, Turkmenistan, 1968, 49-SW

Crataegus punctata
5608, U, 1905, 55-NE
14234, W, United States, 1883, 26-NE
14413, G, 1900, 55-NE
132-94, G, 1994, 55-NW
404-85, Z, United States, 1985, 34-NE

Crataegus punctata var. *pausiaca*
6770, U, 1910, 55-NW

Crataegus roanensis
110-71, U, 1971, 58-SE

Crataegus songorica
19865, U, 1926, 50-NW
113-96, G, 1996, 53-NE

Crataegus × *sorbifolia*
15291, U, 1912, 49-SW
112-2000, U, 2000, 53-NE

Crataegus submollis
122-2005, Z, Latvia, 2005, 55-SW
288-72, U, 1972, 62-NE
80-2000, W, Latvia, 2000, 55-SW, 59-NW

Crataegus suborbiculata
240-89, W, Canada, 1989, 54-SE, 55-SW

Crataegus succulenta
14421, U, United States, 1906, 50-NW
164-87, Z, United States, 1987, BR-16-SE
239-89, W, Canada, 1989, 55-NW
304-89, Z, United States, 1989, BR-16-SE
471-85, W, United States, 1985, 22-NE

Crataegus uniflora
1578-81, W, United States, 1981, 51-NW
52-88, W, United States, 1988, 53-NW

Crataegus viridis
6316, W, United States, 1906, 55-NW
104-96, Z, United States, 1996, 53-NW

Crataegus viridis var. *lanceolata*
5557, W, United States, 1903, 55-NE
185-95, Z, United States, 1995, 55-NW

Crataegus viridis var. *ovata*
14177, W, United States, 1910, 51-SE

Crataegus viridis 'Winter King'
620-60, G, 1960, 55-SE

Crataegus vulsa
6473, W, United States, 1906, 55-NW
184-95, Z, United States, 1995, 55-NW
185-98, Z, United States, 1998, 53-NE

Crataegus wilsonii
1959-80, W, China, 1980, BR-14
271-84, W, China, 1984, 51-SE
749-74, U, 1974, 58-SW

+ *Crataemespilus grandiflora*
492-60, G, 1960, 51-NE

Cryptomeria japonica
14460, W, Japan, 1910, 41-SE
1180-50, Z, Japan, 1950, 30-SW
1283-81, G, 1980, 33-SW
811-87, Z, Japan, 1987, 30-SW
838-53, W, Japan, 1953, 30-SW
962-87, Z, Japan, 1987, 30-SW

Cryptomeria japonica 'Lobbii'
545-53, G, 1953, 30-SE

Cryptomeria japonica 'Rein's Dense Jade'
9-97, G, 1997, LG-PER-S
628-68, G, 1968, LG-PER-S

Cryptomeria japonica var. *radicans*
502-86, G, Japan, 1986, 62-SE

Cryptomeria japonica var. *sinensis*
188-94, W, China, 1994, 27-SE, 30-NW

Cudrania tricuspidata
1354-73, W, Korea, Republic of, 1973, 24-NE
919-85, W, Korea, Republic of, 1985, 51-SW

× *Cupressocyparis leylandii* 'Haggerston Grey'
534-67, G, 1967, 41-NE

× *Cupressocyparis notabilis*
1930-80, G, 1980, 26-NW

Cupressus arizonica
751-87, W, United States, 1987, 36-NE
829-60, U, 1960, 36-SE

Cupressus arizonica var. *montana*
165-96, W, Mexico, 1996, 55-NE

Cupressus bakeri
35612, W, United States, 1997, 26-NW

199-63, U, 1963, 30-SW

Cupressus macrocarpa
980-73, G, 1973, 30-SW

Cupressus nootkatensis
1078-28, G, 1928, 36-NE
201-60, G, 1960, 31-SE

Cupressus nootkatensis 'Aurea'
1810-65, G, 1965, 36-NE

Cupressus nootkatensis 'Pendula'
1170-63, G, 1963, 14-SW
935-62, G, 1962, 31-SE

Cupressus nootkatensis 'Viridis'
986-71, G, 1971, 31-NW

Cycas revolute
986-75, G, 1975, WH-INTERIOR

Cycas taitungensis
282-2011, U, Taiwan, 2011, WH-INTERIOR

Cydonia oblonga
829-84, U, 1984, BR-12

Cyrilla racemiflora
15362, G, 1922, EG-9
476-95, G, 1995, 3-SE

Cytisus elongatus
1165-81, G, 1981, 21-NW

Cytisus sessilifolius
14361, G, 1924, EG-9

Cytisus supinus
284-83, U, 1983, 27-SW
413-92, G, 1992, 27-SW
538-2003, G, 2003, LG-7H

Daphne × burkwoodii 'Carol Mackie'
351-2003, G, 2003, LG-6C

Daphne cneorum 'Ruby Glow'
474-2002, G, 2002, LG-1D

Daphne genkwa
417-2003, G, 2003, DGB, LG-6B

Daphne giraldii
272-2004, G, 2004, LG-1C

Daphne mezereum f. *alba*
364-2001, G, 2001, LG-6C

Daphne tangutica
557-2007, G, 2007, LG-1B

Daphne × transatlantica 'Blafra'
558-2007, G, 2007, LG-6C

Davidia involucreta var. *vilmoriniana*
5159, Z, China, 1904, EG-4
14473, W, China, 1911, EG-8
1636-83, G, 1983, 21-SE

Decodon verticillatus var. *laevigatus*
582, W, United States, 1886,
BR-FAXON-POND

Decumaria barbara
579-2003, W, United States, 2003, LG-3K

Decumaria barbara 'Chatooga'
264-2006, G, 2006, DGB

Decumaria sinensis
263-2006, G, 2006, LG-PER-S

Deutzia coreana
460-73, U, 1973, 21-SE

Deutzia discolor
464-87, W, China, 1987, 21-NE

Deutzia × elegantissima
917-81, G, 1981, 27-NE

Deutzia glabrata
160-2001, W, China, 2001, 27-NE
231-2002, W, Korea, Republic of, 2002,
27-NE

Deutzia globosa
957-86, U, 1986, 27-NE, 27-NW

Deutzia gracilis 'Nikko'
427-2002, G, 2002, LG-7C

Deutzia grandiflora
65-97, W, China, 1997, 27-NE

Deutzia longifolia
919-81, G, 1981, 27-NE

Deutzia longifolia 'Elegans'
850-80, Z, China, 1980, 27-NE

Deutzia × *magnifica*
920-81, G, 1981, 27-NE

Deutzia × *magnifica* 'Formosa'
922-81, G, 1981, 27-NE

Deutzia × *magnifica* 'Superba'
841-80, G, 1980, 27-NE

Deutzia mollis
617-74, U, 1974, 27-NE

Deutzia × *myriantha*
9-87, G, 1987, 27-NW

Deutzia ningpoensis
345-92, G, 1992, LG-2K

Deutzia paniculata
197-96, Z, Korea, Republic of, 1996, 27-NE

Deutzia parviflora
63-97, W, China, 1997, 27-NE

Deutzia parviflora var. *amurensis*
294-85, W, country unknown, 1985, 21-NE
402-73, U, 1973, 21-SE

Deutzia pulchra
896-82, G, 1982, 33-NE, 33-SE

Deutzia × *rosea* 'Carminia'
915-81, G, 1981, 27-SE

Deutzia rubens
1003-86, Z, China, 1986, 33-NE

Deutzia scabra
164-78, W, Japan, 1978, 15-SW
230-2008, W, Japan, 2008, 27-SE
402-2007, W, Japan, 2007, 27-SE
403-2007, W, Japan, 2007, 27-SE
714-85, W, Japan, 1985, 62-SE

Deutzia scabra 'Candidissima'
923-81, G, 1981, 27-NE

Deutzia scabra 'Pink Minor'
174-2003, G, 2003, LG-7F

Deutzia scabra var. *prunifolium*
924-81, U, 1981, 27-NE

Deutzia schneideriana
196-96, G, China, 1996, 27-NE
1975-80, W, China, 1980, 27-SE
213-97, Z, China, 1997, LG-3F

Deutzia vilmoriniae
296-2000, W, China, 2000, 27-NE
300-2000, W, China, 2000, 27-NE

Diervilla rivularis
189-2000, Z, United States, 2000, 33-NW
240-2004, Z, United States, 2004, 33-NW
241-2004, Z, United States, 2004, 33-NW
257-2001, Z, United States, 2001, 33-NW
287-2001, Z, United States, 2001, 33-NW
385-2003, Z, United States, 2003, 33-NW
386-2003, Z, United States, 2003, 33-NW
387-2003, Z, United States, 2003, 33-NW
388-2003, Z, United States, 2003, 33-NW
389-2003, Z, United States, 2003, 33-NW
390-2003, Z, United States, 2003, 33-NW
391-2003, Z, United States, 2003, 33-NW
394-2003, Z, United States, 2003, 33-NW
395-2003, Z, United States, 2003, 33-NW
397-2003, Z, United States, 2003, 32-NE
398-2003, Z, United States, 2003, 33-NW
421-2003, Z, United States, 2003, 32-NE
422-2003, Z, United States, 2003, 32-NE
423-2003, Z, United States, 2003, LG-2A

424-2003, Z, United States, 2003, LG-2A
425-2003, Z, United States, 2003, 7-SW
426-2003, Z, United States, 2003, 7-SW
427-2003, Z, United States, 2003, 7-SW
428-2003, Z, United States, 2003, LG-2A
429-2003, Z, United States, 2003, LG-2A
430-2003, Z, United States, 2003, 7-SW

Diervilla sessilifolia

1378-85, W, United States, 1985, 26-NW
198-2004, Z, United States, 2004, LG-2B
199-2004, Z, United States, 2004, LG-2B
200-2004, Z, United States, 2004, 7-SW
201-2004, Z, United States, 2004, LG-2B
202-2004, Z, United States, 2004, LG-2B
207-2004, Z, United States, 2004, 7-SW
208-2004, Z, United States, 2004, 7-SW
209-2004, Z, United States, 2004, 32-NE
217-2004, Z, United States, 2004, 32-NE
218-2004, Z, United States, 2004, 32-NE
220-2004, Z, United States, 2004, 32-NE
229-2004, Z, United States, 2004, 26-SE
230-2004, Z, United States, 2004, 26-SE
231-2004, Z, United States, 2004, 26-SE
243-2004, Z, United States, 2004, 26-SE
341-2005, Z, United States, 2005, 26-SE
406-97, U, 1997, 37-NW
453-2003, Z, United States, 2003, 26-SE
455-2003, Z, United States, 2003, 26-SE
461-2003, Z, United States, 2003, 26-SE
466-2003, Z, United States, 2003, 26-SE
515-2007, Z, United States, 2007, 33-NW
517-2007, Z, United States, 2007, 33-NW
52-87, W, United States, 1987, 57-SE
53-87, W, United States, 1987, 62-NW
752-78, U, 1978, 32-SW

Diospyros lotus

378-86, W, Korea, Republic of, 1986, 55-SE
668-32, U, 1932, 24-NE

Diospyros virginiana

14513, G, 1896, 21-NE, 58-SW
1392-85, W, United States, 1985, 21-NE
152-69, G, 1969, 34-NE
286-97, G, 1997, 59-SE, 63-NW
801-87, W, United States, 1987, 15-SE, 21-NE

Dipelta floribunda

14514, W, China, 1911, EG-14
1650-80, W, China, 1980, EG-13
1884-80, W, China, 1980, 53-NW
433-94, Z, China, 1994, EG-14

Dipelta ventricosa

213-82, G, 1982, EG-14

Dipelta yunnanensis

601-97, W, China, 1997, EG-14

Dirca occidentalis

311-86, Z, United States, 1986, 15-NW

Dirca palustris

155-91, W, United States, 1991, 31-NE
487-2002, G, 2002, LG-1B
838-80, W, United States, 1980, 31-NE

Disporum sessile 'Variegatum'

446-94, G, 1994, 3-NW

Dracunculus vulgaris

627-94, G, 1994, DGB

Ehretia ovalifolia

6901, W, China, 1908, EG-9
1180-83, G, 1983, EG-9
6901-1, Z, China, 1925, EG-3
981-62, G, 1962, EG-9

Elaeagnus lanceolata

453-87, W, China, 1987, 13-NE

Elaeagnus multiflora

1136-3, G, 1881, 14-NW
543-49, G, 1949, 14-NW
738-90, G, 1990, 13-NE

Elaeagnus umbellata

14525, W, Korea, Republic of, 1904, 13-NE
20889, U, 1926, 13-NE
1017-90, W, Japan, 1990, 13-NE
1838-80, W, China, 1980, 59-NE
319-40, Z, Japan, 1940, 14-NW
737-90, Z, Korea, Republic of, 1990, 13-NE
776-75, G, 1975, 14-NW

Elaeagnus umbellata var. *parvifolia*
348-56, G, 1956, 13-NE

Eleutherococcus divaricatus
217-96, Z, Japan, 1996, 13-SW, 19-NW

Eleutherococcus henryi var. *henryi*
789-77, U, 1977, 21-NE
968-86, Z, country unknown, 1986, EG-3

Eleutherococcus leucorrhizus
633-84, G, China, 1984, 62-SE

Eleutherococcus senticosus
306-89, U, 1989, 21-NE

Eleutherococcus seoulensis
570-80, W, Korea, Republic of, 1980, 52-SW

Eleutherococcus sessiliflorus
23165, U, year unknown, 24-NE
1425-77, W, Korea, Republic of, 1977, 21-NE
533-74, U, 1974, 21-NE

Eleutherococcus setchuensis
563-84, W, China, 1984, 21-NE

Eleutherococcus sieboldianus
273-74, U, 1974, 26-NE

Elliottia racemosa
32-99, G, 1999, LG-6D

Elsholtzia stauntonii
928-81, Z, China, 1981, EG-9

Elsholtzia stauntonii 'Alba'
253-2000, G, 2000, LG-8C

Empetrum hermaphroditum
342-2001, W, Sweden, 2001, DGB

Empetrum nigrum
117-2001, W, Denmark, 2001, DGB, LG-6A

Empetrum nigrum 'Compass Harbor'
196-2007, G, 2007, LG-8H

Enkianthus campanulatus
14782, U, 1923, EG-6, 8-NW
23001, U, 1923, EG-6, 8-NW
23087, G, 1956, 8-NW
14528-1, G, 1902, EG-6
393-56, U, 1956, 3-NW
425-30, U, 1930, 8-NW
444-93, U, 1993, 3-NW
535-93, Z, Japan, 1993, 3-NW, 8-NW

Enkianthus campanulatus 'Showy Lantern'
1090-84, G, 1984, 3-NW, 8-NW

Enkianthus campanulatus var. *campanulatus*
507-58, U, 1957, 8-NW

Enkianthus campanulatus var. *palibinii*
1077-76, G, 1976, 32-SE, 33-NW

Enkianthus chinensis
272-2001, Z, China, 2001, 8-NW

Enkianthus deflexus
1368-83, U, 1983, EG-9
387-84, G, 1984, EG-9

Enkianthus perulatus
3591, U, 1890, EG-6
20153, U, 1890, EG-6
975-77, U, 1977, 8-NW

Ephedra minuta
179-2003, G, 2003, LG-8H

Epimedium stellulatum
304-98, Z, China, 1998, DGB

Epimedium × *rubrum*
1172-77, G, 1977, 37-SE

Erica arborea
139-97, G, Spain, 1997, DGB

Erica carnea 'Springwood White'
259-2003, G, 2003, LG-6E

Erica carnea 'Vivelli'
220-2006, G, 2006, LG-8B

Erica darleyensis 'Ghost Hills'
221-2006, G, 2006, LG-8H

Erica spiculifolia
169-2007, G, 2007, LG-2C

Erica vagans 'St. Keverne'
222-2006, G, 2006, LG-8H

Eucommia ulmoides
14538, U, 1907, 4-NE
21931, U, 1929, 18-SE, 4-NE
112-40, U, 1940, 4-NE
494-89, W, Korea, Republic of, 1989, 4-NE
708-68, G, 1968, 18-NE

Euonymus alatus
1089-81, Z, China, 1981, 13-SE
962-85, W, Korea, Republic of, 1985, 19-NE

Euonymus alatus f. *apterus*
14543, W, Korea, Republic of, 1905, 19-NE
21439, U, 1930, 19-NE

Euonymus americanus
393-2004, W, United States, 2004, 13-SE

Euonymus bungeanus
22874, G, 1950, 4-NE
1032-84, Z, China, 1984, 19-SE
506-93, U, 1993, 19-SE
922-85, W, Korea, Republic of, 1985, 19-SE
937-50, G, 1950, 13-SE
94-33, G, 1933, 19-NE

Euonymus bungeanus var. *semipersistens*
344-40, U, 1940, 19-NE
736-90, U, 1990, 19-NE

Euonymus carnosus
363-81, G, China, 1981, 19-SE
373-2001, G, 2002, LG-2G

Euonymus europaeus
1518-83, W, Hungary, 1983, 13-SE, 19-NE
801-88, U, 1988, 19-SE
99-35, U, 1935, 19-NE

Euonymus europaeus 'Atrorubens'
9099, U, 1914, 13-SE

Euonymus europaeus 'Chrysophyllus'
991-85, U, 1985, 19-SE

Euonymus fimbriatus
884-80, U, 1980, 11-SW

Euonymus fortunei 'Carrierei'
6841-1, G, 1925, 14-NE

Euonymus fortunei 'Coloratus'
21105, G, 1930, 3-NE
22677, G, 1940, 14-NE, 14-SE

Euonymus grandiflorus
351-95, G, 1995, 19-SE

Euonymus lanceifolius
373-62, G, 1962, 13-SE

Euonymus latifolius
1481-23, G, 1923, 13-SE

Euonymus maackii
14566-1, G, 1923, 19-NE
353-95, U, 1995, 19-SE
648-89, G, 1989, 19-NE

Euonymus nanus var. *turkestanicus*
742-90, G, 1990, 19-NE

Euonymus oresbius
507-93, U, 1993, 13-SE, 19-NE

Euonymus oxyphyllus
1237-51, G, 1951, 13-SE

Euonymus pauciflorus
627-74, U, 1974, 11-NW

Euonymus phellomanus
877-80, Z, China, 1980, 19-SE

Euonymus przewalskii
649-89, Z, country unknown, 1989, 19-NE

Euonymus sachalinensis
118-2002, G, 2002, 19-SE

Euonymus sieboldianus
22329, U, 1930, 19-NE
1261-83, W, Korea, Republic of, 1983, 55-SE
14576-2, G, 1923, 13-SE
1458-83, W, Japan, 1983, 19-NE
292-76, U, 1976, 11-NW
373-92, Z, Country unknown, 1992, 13-SE, 19-SE
388-86, W, Korea, Republic of, 1986, 55-NE
395-65, U, 1965, 13-SE
874-80, U, 1980, 19-NE

Euonymus yedoensis var. *koehneanus*
760-57, G, 1957, 19-NE

Euptelea polyandra
1610-77, W, Japan, 1977, 4-NE

Exochorda giraldii
1503-52, G, 1952, EG-32-NE

Exochorda giraldii var. *wilsonii*
11626, W, China, 1908, 26-SE
611-79, Z, China, 1979, 22-NE

Exochorda korolkowii
855-70, G, 1970, 26-SE

Exochorda × *macrantha*
6489-1, U, 1924, 24-SE
779-78, U, 1978, 22-NE

Exochorda × *macrantha* 'The Bride'
176-2003, G, 2003, LG-2C

Exochorda racemosa
10169, U, 1907, 26-SE
1237-52, G, 1951, EG-26-SE

Exochorda serratifolia
663-65, G, 1965, 26-SE

Fagus crenata
2122, W, Japan, 1892, 37-SE
23032, G, 1953, 38-SW
23179, G, 1964, 53-SW

24-98, W, Japan, 1998, 38-SW
32-2005, W, Japan, 2005, 47-SW, 58-NW
394-64, G, 1964, 54-SW
535-81, W, Japan, 1981, 37-NE

Fagus crenata var. *multinervis*
429-87, W, Korea, Republic of, 1987, 37-SE
45-2005, Z, Korea, Republic of, 2005, 47-SW,
62-SW

Fagus engleriana
7416, W, China, 1911, 37-NE, 53-NW
383-27, Z, China, 1927, 38-NW
49-2005, Z, China, 2005, 37-NE

Fagus grandifolia
6782, W, United States, 1911, 37-NE
10801, W, United States, 1908, 37-NE
14585, W, United States, 1885, 37-NE,
37-NW
22798, G, 1948, 37-NW, 57-NE, 58-SW
23178, G, 1964, 53-SW
23274, U, 1991, 36-SE
1202-85, W, United States, 1985, 47-SE
26-80, W, United States, 1980, 64-SE

Fagus grandifolia var. *caroliniana*
263-92, W, United States, 1992, 37-NE,
37-NW
75-2005, Z, United States, 2005, 62-SW

Fagus japonica
5277, W, Japan, 1905, 37-NE
14587, U, 1904, 37-NE
23182, G, 1964, 37-NE
144-2003, Z, Japan, 2003, 57-NE
51-2005, Z, Japan, 2005, 37-SE, 58-NW
753-86, G, 1986, LARZ

Fagus lucida
7418, W, China, 1911, 38-NW
23033, G, 1953, 37-NE

Fagus moesiaca
617-92, G, 1992, 37-SE

Fagus orientalis
14586, G, 1912, 38-SW

14586-1, G, 1925, 37-NE
198-87, G, 1987, 38-SW
239-29, G, 1929, 37-SE
240-86, G, 1986, 32-SE
95-2009, W, Georgia, 2009, 33-NW

Fagus sylvatica

14588, G, 1875, 27-SW
18159, G, 1925, 38-SW
22945, G, 1951, 27-NW
186-57, G, 1957, LG-PER-W
2097-65, G, 1965, 58-SW
245-64, G, 1964, 58-NW
290-93, U, 1993, 37-SE
56-2005, W, Switzerland, 2005, 62-SW
58-2005, W, France, 2005, 37-NE
63-2005, U, Switzerland, 2005, 58-NW
667-2008, U, 2008, 1-SW

Fagus sylvatica f. *tortuosa*

228-93, G, 1993, 25-SW, 27-SW

Fagus sylvatica 'Asplenifolia'

14593, G, 1886, 37-NE

Fagus sylvatica 'Atropunicea'

308-43, G, 1943, 38-SW
452-51, G, 1951, LG-PER-N

Fagus sylvatica 'Bornyensis'

246-64, G, 1964, 58-SW

Fagus sylvatica "Boswick"

695-53, G, 1953, 33-SW

Fagus sylvatica 'Fastigiata'

14591, G, 1913, 37-NE
241-86, G, 1986, 37-SE

Fagus sylvatica 'Grandidentata'

14592, G, 1912, 37-SE

Fagus sylvatica 'Laciniata'

5361, G, 1903, 53-NW
14595, G, 1886, 38-SW

Fagus sylvatica 'Pendula'

14597, G, 1903, 38-SW

22746, G, 1942, 27-SW
77-98, G, 1998, 37-SE

Fagus sylvatica 'Purpureo-Pendula'

78-98, G, 1998, 37-NE

Fagus sylvatica 'Riversii'

233-94, G, 1994, 37-SW
327-48, G, 1948, 37-NE
600-64, G, 1964, 33-SE

Fagus sylvatica 'Rohanii'

357-49, G, 1949, 33-SW

Fagus sylvatica 'Roseo-Marginata'

495-95, G, 1995, 27-SW

Fagus sylvatica 'Spaethiana'

1419-51, G, 1951, LG-PER-N

Fagus sylvatica 'Tortuosa'

2420, Z, France, 1885, 38-SW
14599, Z, France, 1888, 37-NE
253-80, Z, France, 1980, 45-NW, 57-NW
405-80, Z, France, 1980, 27-SW

Fagus sylvatica 'Zlatia'

17867, Z, country unknown, 1912, 38-NW
530-75, Z, country unknown, 1975, 37-SE

Fallopia aubertii

167-2007, G, 2007, LG-9B.10

Fargesia murielae

1239-60, U, 1960, 34-SW

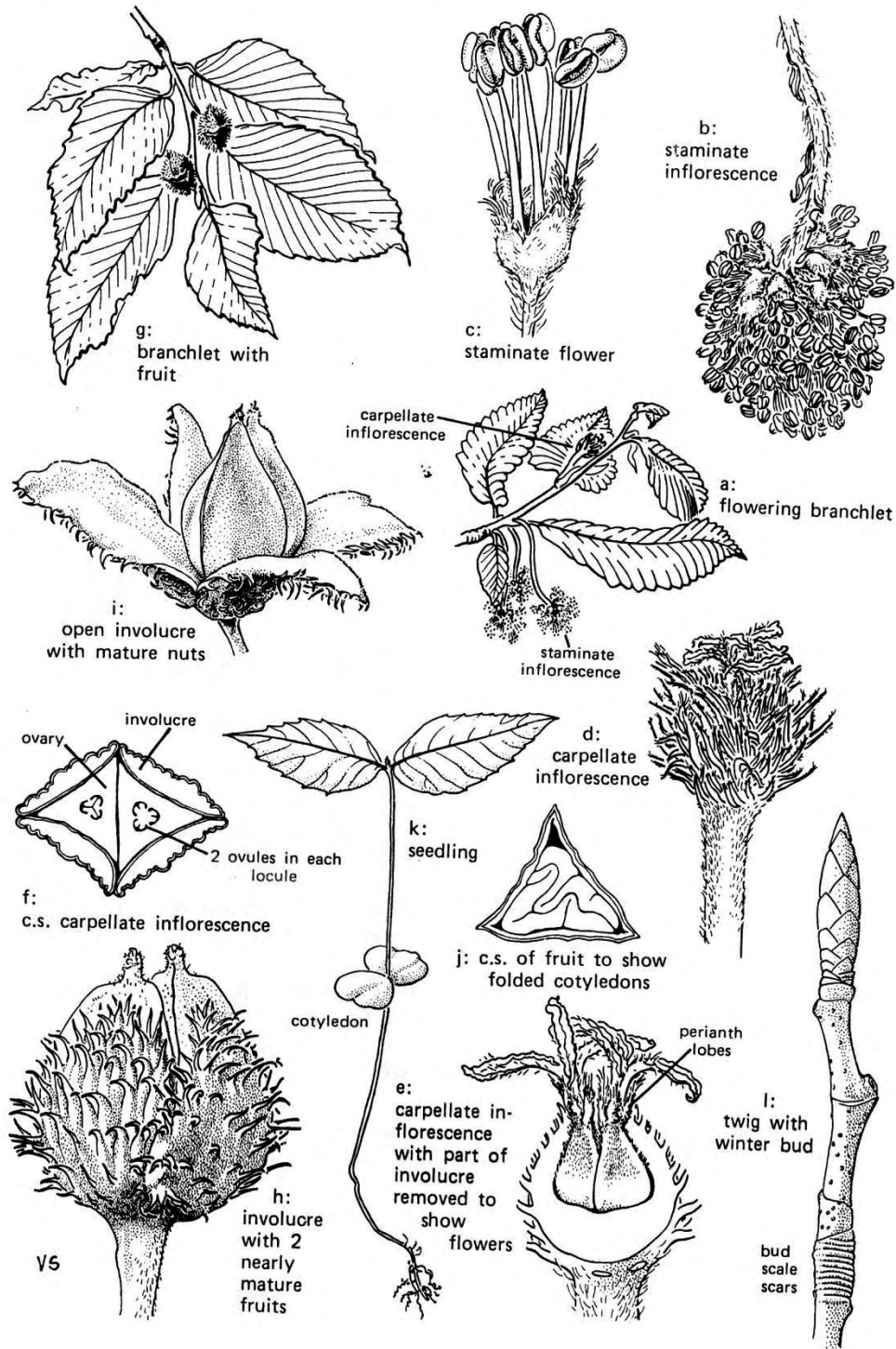
Flueggea suffruticosa

13379, W, China, 1923, 18-SE
12-92, Z, China, 1992, 18-SE
1875-77, W, Korea, Republic of, 1977, 26-SW
454-87, W, China, 1987, 18-SE
625-85, W, Korea, Democratic People's
Republic of, 1985, 59-NE
918-82, U, 1982, 31-NE
95-99, Z, Korea, Republic of, 1999, 19-NW

Fontanesia fortunei

1542-80, W, China, 1980, 27-SE

FAGACEAE: *Fagus*. a-l, *F. grandifolia*



Fontanesia philliraeoides var. *philliraeoides*
1730, G, 1980, 24-NE
274-58, U, 1958, 22-SW

Forestiera acuminata
341-96, G, 1996, 20-NE

Forestiera neo-mexicana
342-96, G, 1996, 20-NE

Forsythia (undetermined hybrid)
275-2005, G, 2005, 22-SW
276-2005, G, 2005, 22-SW

Forsythia 'Arnold Dwarf'
1250-50, G, 1950, 26-NE
218-2005, G, 2005, 21-SE
520-70, G, 1970, WH3-NE

Forsythia 'Beatrix Farrand'
1504-66, G, 1966, 27-SE
150-2008, G, 2008, 22-SW
55-2007, G, 2007, 22-SW
785-81, G, 1981, 39-NE

Forsythia 'Helios'
182-93, G, 1993, 21-SE

Forsythia 'Kanarek'
177-93, G, 1993, 21-SE

Forsythia 'Meadowlark'
1192-83, G, 1983, 39-NE
198-2007, G, 2007, 21-SE
273-2002, G, 2002, 21-SE

Forsythia 'Northern Sun'
215-87, G, 1987, 21-SE

Forsythia europaea
1100-84, G, 1984, 21-SE
594-87, U, 1987, 21-SE

Forsythia giraldiana
12-38, W, China, 1938, 21-SE, 27-NE
129-93, W, China, 1993, 21-SE
208-2007, Z, China, 2007, 21-SE

Forsythia × *intermedia* 'Arnold Brilliant'
1121-71, G, 1971, 27-SE
281-2005, G, 2005, 21-SE, LG-7H

Forsythia × *intermedia* 'Arnold Giant'
206-2007, G, 2007, 22-SW
967-71, G, 1971, 27-SE

Forsythia × *intermedia* 'Courdijau'
178-93, G, 1993, LG-3B

Forsythia × *intermedia* 'Courtasol'
180-93, G, 1993, LG-8A

Forsythia × *intermedia* (Farrand Hybrids
Group)
590-59, G, 1959, 22-SW

Forsythia × *intermedia* 'Karl Sax'
253-2005, G, 2005, 21-SE, LG-2L
961-71, G, 1971, 27-SE

Forsythia × *intermedia* 'Lynwood'
964-71, G, 1971, 27-SE, 3-NW

Forsythia × *intermedia* 'Nana'
260-2005, G, 2005, 21-SE

Forsythia × *intermedia* 'Primulina'
1190-71, G, 1971, 21-SE, 27-SE

Forsythia × *intermedia* 'Spectabilis'
146-40, G, 1940, 1-NW
348-2005, G, 2005, 22-SW

Forsythia × *intermedia* 'Spring Glory'
246-2005, G, 2005, 21-SE
912-87, G, 1987, 45-SW
966-71, G, 1971, 27-SE, 3-NW

Forsythia × *intermedia* 'Tremonia'
216-2005, G, 2005, 21-SE

Forsythia japonica
101-2005, U, 2005, 22-SW

Forsythia mandshurica
261-2005, U, 2005, 22-SW
93-68, U, 1968, 22-SW

Forsythia ovata
1062-86, Z, Korea, Republic of, 1986, 33-NW
204-2007, G, 2007, 22-SW
219-2005, Z, Korea, Republic of, 2005, 21-SE
320-2005, Z, Korea, Republic of, 2005, 22-SW
962-71, G, 1971, 27-SE

Forsythia ovata 'Dresdner VonFruhling'
617-94, G, 1994, 21-SE

Forsythia ovata 'French's Florence'
203-2007, Z, Korea, Republic of, 2007, 22-SW
553-67, Z, Korea, Republic of, 1967, 27-SE

Forsythia ovata 'Tetra Gold'
1027-66, G, 1966, 22-SW
259-2005, G, 2005, 21-SE

Forsythia suspensa
224-2005, W, China, 2005, 27-NE
708-42, G, 1942, 3-NW

Forsythia suspensa 'Atrocaulis'
278-2005, G, 2005, 22-SW

Forsythia suspensa 'Decipiens'
353-2005, G, 2005, 22-SW

Forsythia suspensa 'Nyman's Variety'
284-2005, G, 2005, 21-SE
90-57, G, 1957, 27-SE

Forsythia suspensa 'Pallida'
267-2005, G, 2005, 22-SW

Forsythia suspensa var. *fortunei*
277-2005, G, 2005, 22-SW
968-71, G, 1971, 27-SE

Forsythia suspensa var. *sieboldii*
247-2005, U, 2005, 21-SE
32-53, U, 1953, 17-SW

Forsythia × *variabilis* 'Volunteer'
274-2005, G, 2005, 22-SW

Forsythia viridissima
1223-85, U, 1985, 27-NE
309-67, U, 1967, 27-SE
597-84, W, China, 1984, 21-SE, 33-NW

Forsythia viridissima var. *koreana*
1241-68, Z, Korea, Republic of, 1968, 27-SE

Fortunearia sinensis
438-80, W, China, 1980, 32-SE
580-79, U, 1979, 24-SE

Fothergilla (undetermined hybrid)
709-67, G, 1967, 32-SE

Fothergilla gardenii
1044-67, G, 1967, 32-SE
1055-67, G, 1967, 37-SE
498-2010, W, United States, 2010, DGB

Fothergilla gardenii 'Blue Mist'
306-92, U, 1992, DGB

Fothergilla gardenii 'Harold Epstein'
681-88, W, United States, 1988, LG-2K

Fothergilla × *intermedia* 'Mt. Airy'
182-96, G, 1996, 26-SE, 3-NW
429-2002, G, 2002, LG-8I
738-93, U, 1993, 26-SE

Fothergilla major
4163, U, 1899, 32-SE
23195, G, 1966, 32-SE
103-2007, W, United States, 2007, 19-NE
1102-88, W, United States, 1988, 26-SE
123-85, W, United States, 1985, 26-NE, 26-SE
165-98, Z, United States, 1998, LG-1C
299-74, G, 1974, 26-SW
33-87, W, United States, 1987, 26-NE
459-42, W, United States, 1942, 26-SE
560-95, W, United States, 1995, LG-1C,
LG-1F
660-91, W, United States, 1991, 26-SE
694-34, G, 1934, 3-NE

777-88, W, United States, 1988, 26-SE
789-78, G, 1978, 26-SE
966-88, W, United States, 1988, 26-SE
968-88, W, United States, 1988, 32-SE
970-88, W, United States, 1988, 26-SE

Franklinia alatamaha
2428-3, U, 1905, EG-9
254-81, G, 1981, 26-NE

Fraxinus sp.
12209, G, China, 1920, 21-SW

Fraxinus americana
22876, U, 1950, 26-NE
527-2008, U, 2008, 4-NE
636-88, W, United States, 1988, 20-NE
968-79, W, United States, 1979, 27-NE

Fraxinus americana (undetermined hybrid)
20-35, G, 1935, 27-NW

Fraxinus americana var. *americana*
252-38, U, 1938, 21-SW

Fraxinus americana var. *biltmoreana*
305-86, Z, United States, 1986, 27-NE,
27-NW
319-82, Z, United States, 1982, 26-NE

Fraxinus angustifolia 'Monophylla'
14661, G, 1911, 21-SW

Fraxinus angustifolia ssp. *angustifolia*
5847-1, G, 1922, 27-SW

Fraxinus angustifolia ssp. *oxycarpa*
18881, G, 1925, 27-SW
1220-73, U, 1973, 33-NW
160-90, U, 1990, 21-SW, 27-NE, 27-NW
1624-65, U, 1965, 21-SW
200-86, U, 1986, 20-NW
215-86, U, 1986, 20-NE
307-58, G, 1958, 21-SW, 27-NW
716-77, W, Republic of Montenegro, 1977,
27-NE
799-83, U, 1983, 20-NE

Fraxinus angustifolia ssp. *pannonica*
1081-80, U, 1980, 20-SE

Fraxinus angustifolia ssp. *syriaca*
330-2008, W, Israel, 2008, 27-NW

Fraxinus bungeana
14625, W, China, 1882, 27-SW

Fraxinus caroliniana
84-89, U, 1989, 49-SE

Fraxinus chinensis
14615, W, China, 1906, 26-SE
19546, W, China, 1910, 27-NE
422-49, G, 1949, 27-NW
439-80, W, China, 1980, 27-NW
572-79, U, 1979, 50-NE

Fraxinus chinensis var. *rhynchophylla*
8159, U, 1907, 27-NW
10673, W, Korea, Republic of, 1905, 27-SW
22781, G, 1946, 26-SE
1210-82, W, Korea, Republic of, 1982, 27-NW
428-96, W, China, 1996, 27-SW
429-96, W, China, 1996, 21-SE, 27-SW
613-85, W, Korea, Democratic People's
Republic of, 1985, 27-NW
910-77, W, Korea, Republic of, 1977, 21-SW,
27-NW

Fraxinus excelsior
1394-80, W, Russian Federation, 1980, 20-NE
1440-84, U, 1984, 55-NE
1483-83, W, Czechoslovakia, 1983, 49-NE
241-91, W, Iran, 1991, 20-NE, 20-NW

Fraxinus excelsior ssp. *excelsior*
14630, U, 1886, 21-SW
1085-64, U, Afghanistan, 1964, 27-SW

Fraxinus excelsior 'Aurea'
254-65, U, 1965, 27-NW

Fraxinus excelsior 'Crispa Variegata'
263-65, G, 1965, 21-SW

Fraxinus excelsior 'Diversifolia Pendula'
409-37, G, 1937, 27-NE

Fraxinus excelsior 'Doorenbos'
260-65, G, 1965, 27-NW

Fraxinus excelsior 'Hessei'
257-65, G, 1965, 27-NW

Fraxinus excelsior 'Westhof's Glorie'
264-65, G, 1965, 21-SW, 27-NW

Fraxinus insularis
19-2009, W, China, 2009, 27-SW

Fraxinus lanuginosa
1103-76, U, 1976, 21-SW
1313-78, U, 1978, 27-NE
715-88, W, Japan, 1988, 21-NW

Fraxinus latifolia
1390-83, W, United States, 1983, 20-SE
512-71, U, 1971, 27-NW
637-88, W, United States, 1988, 20-SE

Fraxinus longicuspis
5278, W, Korea, Republic of, 1906, 53-NE
5278-2, Z, Korea, Republic of, 1919, 27-NW
14627, U, 1910, 27-SW
23151, G, 1956, 53-SE
1255-80, W, Japan, 1980, 20-SE, 26-NE
263-82, Z, Korea, Republic of, 1982, 20-SE
446-58, G, 1958, 21-SW, 27-NW, 27-SW
536-81, W, Japan, 1981, 27-SE
538-71, U, 1971, 26-SE

Fraxinus mandshurica
1258-80, W, Korea, Republic of, 1980, 27-SE
1265-79, W, China, 1979, 14-SW, 20-NE,
20-NW, 20-SE, 51-NW
337-97, W, China, 1997, 27-NW, 33-NW
450-49, G, 1949, 27-NW
618-93, U, 1993, 27-NW
911-77, W, Korea, Republic of, 1977, 27-NW

Fraxinus nigra
405-88, W, Canada, 1988, 20-NE, 20-SE

Fraxinus ornus
415-84, W, Switzerland, 1984, 20-NE, 20-NW
416-84, W, Switzerland, 1984, 59-NW
620-74, U, 1974, 21-SW
676-90, W, Hungary, 1990, 14-SE
682-76, U, 1976, 21-NW

Fraxinus pallisae
817-32, W, Bulgaria, 1932, 27-NW

Fraxinus pennsylvanica
1422-83, W, United States, 1983, 20-NE
1468-83, W, Canada, 1983, 63-NW
186-82, W, Canada, 1982, 21-SW, 59-NW
312-90, W, Canada, 1990, 27-NW

Fraxinus pennsylvanica var. *subintegerrima*
198-59, U, 1959, 21-SW
27-36, U, 1936, 27-NW
683-84, W, United States, 1984, 56-SW

Fraxinus pennsylvanica var. *subintegerrima*
'Marshall's Seedless'
626-54, G, 1964, 27-NW

Fraxinus pennsylvanica var. *subintegerrima*
'Summit'
495-60, G, 1960, 26-NE

Fraxinus pennsylvanica var. *subintegerrima*
'Vinton'
617-60, G, 1960, 21-SE

Fraxinus platypoda
141-96, Z, China, 1996, 21-SW
441-80, W, China, 1980, 55-SW

Fraxinus potamophila
136-94, Z, Kyrgyzstan, 1994, 27-NW

Fraxinus quadrangulata
14654, W, United States, 1881, 27-NW

Fraxinus sieboldiana
353-2004, W, Korea, Republic of, 2004,
26-NE, 27-NW
537-81, W, Japan, 1981, 27-NW
538-81, W, Japan, 1981, 27-NW

539-81, W, Japan, 1981, 27-SE

Fraxinus tomentosa

7033, W, United States, 1922, 27-SW
23177, G, 1964, 27-SW
306-86, Z, United States, 1986, 27-NW
638-88, W, United States, 1988, 20-NE
746-74, U, 1974, 33-NE

Fraxinus velutina

532-74, U, 1974, 27-NE

Gaylussacia baccata

19-79, W, United States, 1979, 37-SE
876-93, W, Canada, 1993, LG-1D
877-93, W, Canada, 1993, LG-1D

Gaylussacia brachycera

332-2004, U, 2004, LG-1D
411-2004, Z, United States, 2004, LG-1D
651-69, W, United States, 1969, DGB

Genista tinctoria

184-2001, W, Ukraine, 2001, LG-7G
185-2001, W, Ukraine, 2001, LG-7G
302-2005, W, Belgium, 2005, DGB

Geranium maculatum 'Album'

326-95, G, 1995, 1-SE

Ginkgo biloba

13414, G, 1899, 44-NE
14670, W, Korea, Republic of, 1904, 39-SE
16439, G, 1928, 39-SE, 40-SW
18827, G, 1924, 39-SE
20499, G, 1927, 39-SE, 40-SW
23063, G, 1958, 44-NE
1072-89, W, China, 1989, 39-SE, 62-NE,
WH1-NE
1073-89, W, China, 1989, 39-SE
1113-89, W, China, 1989, 59-SW,
WH1-NE
1114-89, W, China, 1989, 58-SE, 59-SW,
WH2-SW
1115-89, W, China, 1989, 62-SW,
WH1-NE
1116-89, W, China, 1989, 58-SE, 62-NE
1122-89, W, China, 1989, EG-3

1223-89, W, China, 1989, 39-SE

205-93, G, Korea, Republic of, 1993, 58-SE,
62-SE

221-97, W, China, 1997, 40-SW
222-97, W, China, 1997, 40-SW
232-93, G, China, 1993, 58-SE, 62-NE
25-92, U, 1992, 45-NW
456-89, W, China, 1989, LARZ
458-2008, W, China, 2008, 62-NE
462-2002, W, China, 2002, 62-NE
465-2002, W, China, 2002, 58-SE
466-2002, W, China, 2002, 58-SE
467-2002, W, China, 2002, 58-SE
539-35, W, China, 1935, 44-NE

Ginkgo biloba 'Akebono'

822-83, G, 1983, 32-SE, 3-SW

Ginkgo biloba 'Chi-Chi'

671-77, U, 1977, LARZ

Ginkgo biloba 'Fastigiata'

144-39, G, United States, 1939, 40-SW

Ginkgo biloba 'Hayanari'

824-83, G, 1983, 3-SW

Ginkgo biloba 'Santa Cruz'

1175-81, U, 1981, 40-SE

Gleditsia aquatica

200-93, W, United States, 1993, 49-NE
201-93, W, United States, 1993, 15-NW,
21-NE, 26-NE

Gleditsia caspica

272-72, U, 1972, 54-NW, 54-SW
461-78, W, Iran, 1978, 53-NE
88-77, U, 1977, 15-SE

Gleditsia ferox

724-74, U, 1974, 49-SE

Gleditsia japonica

13-38, G, 1938, 21-NE
148-79, G, 1979, 53-SE
1603-77, G, Korea, Republic of, 1977, 53-NE
209-79, U, 1979, 54-NW

22-76, U, 1976, 54-NW
291-94, U, 1994, 54-NW
357-81, W, China, 1981, 54-SW
84-74, G, 1964, 53-NE

Gleditsia japonica var. *koraiensis*
226-96, G, Korea, Republic of, 1996, 53-NE

Gleditsia macracantha
227-96, G, Korea, Republic of, 1996, 54-SW

Gleditsia sinensis
491-93, W, China, 1993, 54-NW, 54-SW
573-79, G, 1979, 54-SW

Gleditsia triacanthos
13218, W, United States, 1922, 21-NE
14681, G, 1905, 21-NE
14681-1, G, 1923, 21-NE
21588, U, 1929, 21-NE
22514, U, 1881, 21-NE
22907, G, 1950, 33-NE
1237-79, W, United States, 1980, 49-SE,
53-NE, 54-SW
1589-51, G, 1951, 53-SE
141-56, U, 156, 53-NE
78-46, U, 1946, 21-NE

Gleditsia triacanthos 'Beatrice'
357-55, G, 1955, 53-NE

Gleditsia triacanthos 'Calhoun'
530-50, G, 1950, 58-NW

Gleditsia triacanthos 'Beatrice'
357-55, G, 155, 53-NE

Gleditsia triacanthos 'Calhoun'
530-50, G, 1950, 58-NW

Gleditsia triacanthos 'Emerald Cascade'
128-2002, G, 2002, 53-NE

Gleditsia triacanthos 'Imperial'
484-56, G, 1956, 53-NE

Gleditsia triacanthos 'Majestic'
486-56, G, 1956, 53-NE

Gleditsia triacanthos 'Millwood'
531-50, G, 1950, 57-NE

Gleditsia triacanthos 'Moraine'
106-48, G, 1948, 21-NE, 34-SW

Gleditsia triacanthos 'Nana'
19817, G, 1926, 21-NE
139-56, G, 1956, 53-NE

Gleditsia triacanthos 'Park'
557-61, G, 1961, 53-NE

Gleditsia triacanthos 'Shademaster'
906-58, G, 1958, 53-NE

Gleditsia triacanthos 'Sieler'
351-51, G, 1951, 21-NE

Gleditsia triacanthos 'Skyline'
485-56, G, 1956, 53-NE

Gleditsia triacanthos 'Stephens'
558-61, G, 1961, 53-NE

Gleditsia triacanthos 'Sunburst'
543-54, G, 1954, 21-NE, 54-NW

Gleditsia triacanthos var. *inermis* 'Draves'
116-2009, G, 2009, LG-PER-W

Gleditsia vestita
326-96, U, 1996, 49-SE, 53-NE

Grewia biloba
166-2000, Z, China, 2000, 7-NE
373-86, W, Korea, Republic of, 1986, 4-NE
386-86, W, Korea, Republic of, 1986, 4-SE

Grewia biloba var. *parviflora*
925-85, W, Korea, Republic of, 1985, 4-NE

Gymnocladus dioicus
324, U, 1873, 15-SE
20644, G, 1928, 21-NE
102-98, G, 1998, 54-SW
1181-83, G, 1983, 15-SE
137-87, W, United States, 1987, 15-NW

230-94, G, 1994, 44-NE, 54-SW
440-67, W, United States, 1967, 15-SE

Hakonechloa macra var. *aureola*
1034-89, U, 1989, DGB

Halesia diptera
31-81, G, 1981, 24-NE

Halesia diptera var. *magniflora*
389-96, W, United States, 1996, EG-6
81-89, U, 1989, 18-NE, 19-NW

Halesia tetraptera
925, U, 1878, 37-NW
19630, W, United States, 1924, 19-NW
1249-84, W, United States, 1984, 49-SE,
62-NW
6-66, G, 1966, 19-NW
14-2000, W, United States, 2000, 15-SE
250-36, G, 1936, 18-SE
720-58, Z, United States, 1958, 13-SW
959-37, G, 1937, 19-NW, 19-SW
969-79, W, United States, 1979, 21-NE, 21-SE

Halesia tetraptera var. *monticola*
21577, W, United States, 1923, 18-SE
273-96, G, 1996, 21-SE, 3-SW
274-96, G, 1996, 27-SE
587-95, W, United States, 1995, 26-SE
663-61, W, United States, 1961, 19-NW

Halesia tetraptera var. *monticola* 'Rosea'
7307, G, 1907, 18-NE
20228, G, 1919, 19-NW

Hamamelis × intermedia
1173-28, G, 1928, 18-SE
1201-66, G, 1966, 11-SW
353-92, G, 1992, 22-SW
835-59, G, 1959, 11-SW
876-70, G, 1970, 15-NW

Hamamelis × intermedia 'Arnold Promise'
195-2005, G, 2005, LG-2L
380-94, G, 1994, 22-SW, 37-SE
396-69, G, 1969, 3-NW
803-83, G, 1983, 17-SW

852-66, G, 1966, 15-NW
94-2000, G, 2000, 13-SW
95-2000, G, 2000, 19-NW

Hamamelis × intermedia 'Diane'
928-89, G, 1989, 62-NW

Hamamelis × intermedia 'Feuerzauber'
198-78, G, 1978, 15-NE

Hamamelis × intermedia 'Hiltingbury'
598-77, G, 1977, 26-NE

Hamamelis × intermedia 'Jelena'
317-94, G, 1994, 1-SE
462-65, G, 1965, 11-SW, 24-SE

Hamamelis × intermedia 'Moonlight'
270-78, G, 1978, 15-NW

Hamamelis × intermedia 'Ruby Glow'
464-65, G, 1965, 15-NW, 24-NE

Hamamelis japonica
475-90, G, Japan, 1990, LG-2I

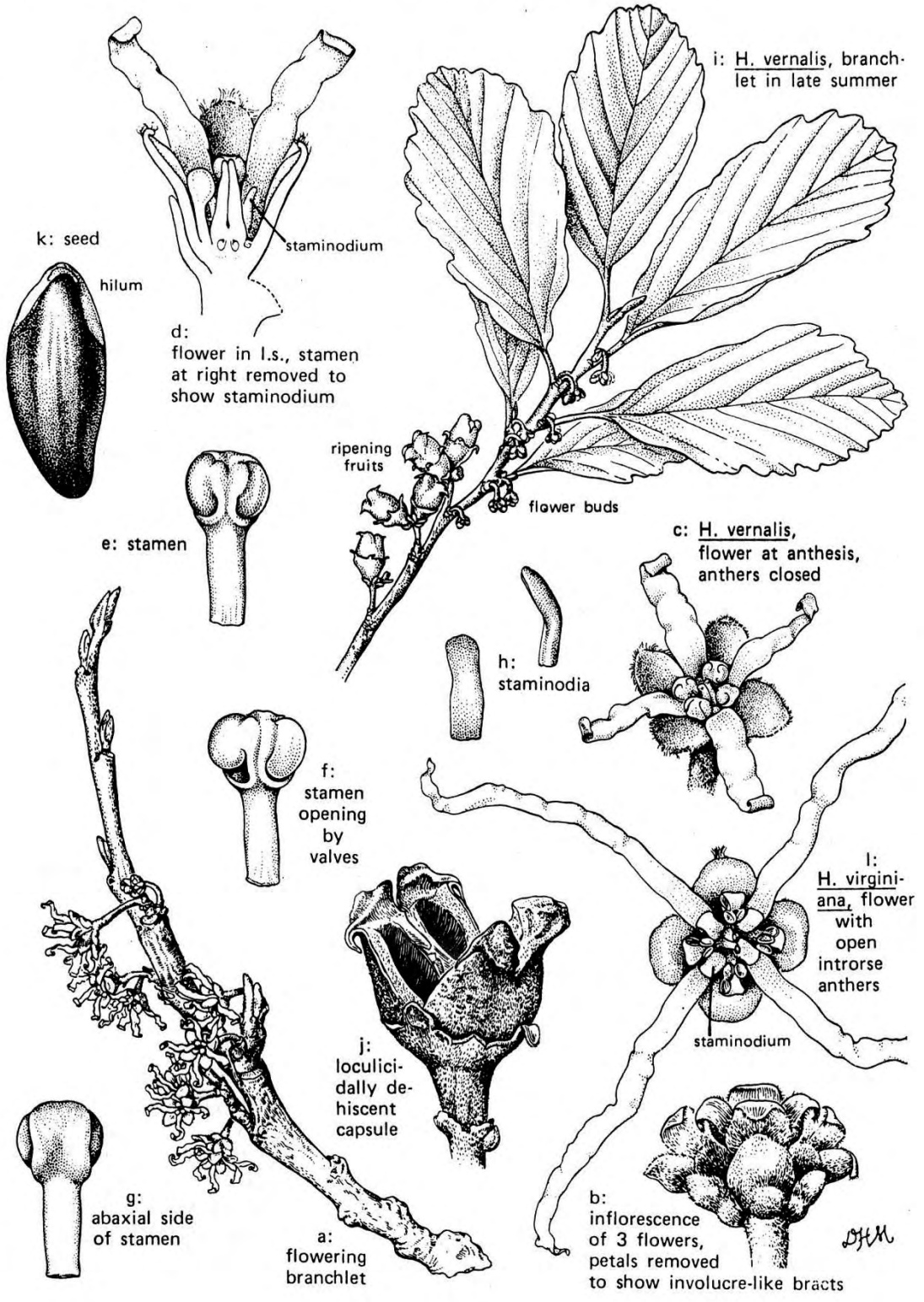
Hamamelis japonica f. *flavopurpurascens*
10161, W, Japan, 1919, 24-NE
621-79, Z, Japan, 1979, 8-NW

Hamamelis mollis
5281, G, 1902, 24-NE
215-2000, W, China, 2000, 8-SW
273-29, G, 1929, 24-NE
362-76, U, 1976, 21-SE, 32-NE
697-94, W, China, 1994, 15-NE
698-94, W, China, 1994, 11-SW

Hamamelis mollis 'Brevipetala'
211-58, G, 1958, 24-NE
245-65, G, 1965, 11-SW
678-89, G, 1989, 15-NW

Hamamelis mollis 'Pallida'
261-89, G, 1989, 22-SW

HAMAMELIDACEAE: Hamamelis. a-k, *H. vernalis*; l, *H. virginiana*



Hamamelis mollis 'Princeton Gold'
338-2002, G, 2001, LG-PER-E

Hamamelis ovalis
113-2009, Z, United States, 2009, LG-PER-E
114-2009, Z, United States, 2009, LG-PER-E
115-2009, Z, United States, 2009, 24-NE

Hamamelis vernalis
6099, U, 1908, 1-SE, 22-NW
336-89, W, United States, 1989, 15-NW

Hamamelis vernalis 'Carnea'
18886, U, 1908, 1-SE
900-80, U, 1980, 25-SW

Hamamelis vernalis f. *tomentella*
18885, U, 1908, 1-SE
902-80, U, 1980, 33-NE

Hamamelis vernalis 'Lombart's Weeping'
1110-67, G, 1967, 15-NW

Hamamelis vernalis 'Orange Glow'
489-63, G, 1963, 24-NE

Hamamelis vernalis 'Sandra'
302-80, G, 1980, 24-SE

Hamamelis virginiana
14693, W, United States, 1883, 21-NE, 32-SW
18314, U, 1925, 19-SW
22878, G, 1950, 13-SW, 24-NE, 31-NW,
43-NE
22947, G, 1951, 25-SW, 31-NE, 3-NW
2-2002, U, 2002, 32-SW
1195-84, W, United States, 1984, 15-NW
1308-68, G, 1968, 15-NW
1337-85, W, United States, 1985, 15-NW
151-85, W, Canada, 1985, 11-SW
164-88, W, United States, 1988, 11-SW
206-2006, G, 2006, LG-3M
294-97, G, 1997, 15-NW
493-2009, U, 2009, 25-SW
513-88, W, United States, 1988, 15-NW
526-2009, U, 2009, 11-SW
527-2009, U, 2009, 11-SW
938-37, G, 1937, 15-NW

Hamamelis virginiana 'Champlin'
368-2001, G, 2001, LG-PER-E

Hamamelis virginiana f. *rubescens*
527-92, W, United States, 1992, 22-SW

Hamamelis virginiana f. *rubescens*
'Mohonk Red'
121-96, W, United States, 1996, 15-NE,
25-NE, 25-NW

Hedera colchica
134-2003, W, Georgia, 2003, LG-7I
819-78, Z, Georgia, 1978, 26-SW

Hedera helix
133-2003, W, Georgia, 2003, LG-7H

Hedera helix 'Hibernica'
91-57, G, 1957, 1-SW

Hedera helix 'Rumania'
1073-56, Z, Romania, 1956, 26-NE
127-54, Z, Romania, 1954, 26-NE

Hedera helix 'Thorndale'
944-57, G, 1957, 26-NE

Helwingia japonica
912, U, 1880, EG-9

Hemerocallis dumortieri
334-97, W, China, 1997, 1-SW, 26-SE

Hemerocallis fulva var. *disticha*
628-69, G, Japan, 1969, 5-NW

Hemiptelea davidii
14698, W, Korea, Republic of, 1904, 14-NW
1047-52, Z, Korea, Republic of, 1952, 21-SW
226-2005, W, China, 2005, 20-SE
382-91, Z, Korea, Republic of, 1991, 14-SW
387-92, Z, Korea, Republic of, 1992, 14-NE
393-92, Z, Korea, Republic of, 1992, 14-NE

Heptacodium miconioides
1549-80, G, China, 1980, 13-SW, DGB

171-2005, G, 2005, LG-1D
181-96, G, 1996, 13-SW, EG-14
365-2001, G, 2001, LG-7E
425-91, G, China, 1991, EG-14

Hibiscus moscheutos ssp. *palustris*
1475-83, W, Canada, 1983,
BR-DAWSON-POND
1724-81, W, Canada, 1981,
BR-DAWSON-POND
521-92, W, United States, 1992,
BR-DAWSON-POND

Hibiscus syriacus
1142-81, Z, Korea, Republic of, 1981, 19-SE
341-53, W, Korea, Republic of, 1953, 27-SE

Hosta montana 'Aurea Marginata'
1035-89, G, 1989, DGB

Hovenia dulcis
19571, U, 1924, 18-SE
1612-77, W, Korea, Republic of, 1977, 34-SW
87-33, U, 1933, 24-NE

Humulus lupulus
171-2008, W, Germany, 2008, LG-5

Humulus lupulus 'Aurea'
281-2007, G, 2007, LG-9B.7

Humulus lupulus 'Brewer's Gold'
242-2009, G, 2009, WH2-SW-T.7

Humulus lupulus 'Canadian Red Vine'
340-2009, G, 2009, LG-5, WH1-SE-T.1

Humulus lupulus 'Cascade'
433-2008, G, 2008, LG-10B.2

Humulus lupulus 'Columbia'
334-2009, G, WH1-SE-T.2, WH1-SE-T.10

Humulus lupulus 'Hallertauer Tradition'
339-2009, G, 2009, WH1-SE-T.4

Humulus lupulus 'Northern Brewer'
243-2009, G, 2009, LG-5 WH1-SE-T.16

Humulus lupulus 'Nugget'
434-2008, G, 2008, WH1-SE-T.3

Humulus lupulus 'Shinsuwase'
335-2009, G, 2009, LG-5, WH2-SW-T.9

Humulus lupulus 'Swiss Tettanager'
336-2009, G, 2009, WH1-SE-T.5,
WH2-SW-T.8

Hydrangea anomala
18269, U, 1923, 1-SW

Hydrangea anomala ssp. *petiolaris*
10-98, W, Japan, 1998, LG-5
204-90, W, Japan, 1990, 3-NW
360-2007, Z, Japan, 2007, 47-SW, DGB

Hydrangea anomala ssp. *petiolaris*
'Skylands Giant'
181-2006, G, 2006, 3-NW

Hydrangea arborescens
415-2002, W, United States, 2002, LG-3M
589-95, W, United States, 1995, 19-SW
930-81, U, 1981, 15-NE

Hydrangea arborescens 'Dardom'
288-2003, G, 2003, LG-3M

Hydrangea arborescens ssp. *arborescens*
120-85, W, United States, 1985, 15-NE

Hydrangea arborescens ssp. *discolor*
80-2001, W, United States, 2001, 15-NE

Hydrangea aspera
594-97, W, China, 1997, EG-7

Hydrangea bretschneideri
131-96, W, China, 1996, LG-3E
495-2002, W, China, 2002, LG-3I

Hydrangea heteromalla
16-99, W, China, 1999, 15-NE
173-76, U, 1976, 15-SE
532-84, Z, China, 1984, 15-NE
662-90, Z, China, 1990, EG-7

Hydrangea macrophylla 'Claudie'
179-2006, G, 2006, LG-3A

Hydrangea macrophylla ssp. *serrata*
1109-82, U, 1982, 15-NE

Hydrangea macrophylla ssp. *serrata*
'Blue Billow'
389-2001, G, 2001, LG-3M

Hydrangea macrophylla ssp. *serrata* 'Rosalba'
2003-65, G, 1965, 31-NE

Hydrangea macrophylla ssp. *serrata*
'Tokyo Delight'
1136-84, G, 1984, 15-NE
380-69, G, 1969, 19-NW

Hydrangea paniculata
23250, G, 1969, 42-NW
111-2001, W, Japan, 2001, 15-NE, LG-3L
274-84, W, Japan, 1984, 44-SE
31-77, U, 1977, 32-SE, 32-SW
540-81, W, Japan, 1981, BR-16-NW
575-84, W, China, 1984, 15-NE, 52-NW
912-86, W, Japan, 1986, 15-NE
94-92, W, Japan, 1992, 15-NE

Hydrangea paniculata 'Bulk'
180-2006, G, 2006, LG-8E

Hydrangea paniculata 'Grandiflora'
1110-83, G, 1983, 15-NE

Hydrangea paniculata 'Praecox'
14714, W, Japan, 1892, BR-22-NE
14714-1, Z, Japan, 1905, BR-22-NE
397-83, Z, Japan, 1983, 15-NE
412-92, Z, Japan, 1992, EG-26-SE
990-80, Z, Japan, 1980, 15-NE

Hydrangea paniculata 'Tardiva'
1172-83, G, 1983, 15-NE
989-78, G, 1978, 15-NE

Hydrangea quercifolia
104-2007, W, United States, 2007, 15-NE,
38-SW, LG-3M

1206-89, W, United States, 1989, 3-NW
1396-85, W, United States, 1985, 15-NE
277-96, G, 1996, 26-SE, 26-SW

Hydrangea quercifolia 'Pee Wee'
193-2005, G, 2005, LG-3M

Hydrangea quercifolia 'Snow Queen'
184-96, G, 1996, 15-NW
318-94, G, 1994, 1-SE, 3-NE
592-93, G, 1993, 15-NW

Hydrangea radiata
116-2008, W, United States, 2008, LG-PER-N
416-76, W, United States, 1976, 15-SE

Hydrangea sikokiana
40-98, W, Japan, 1998, EG-8

Hypericum sp.
279-2004, Z, United States, 2004, LG-7D

Hypericum buckleyi
22-2000, W, United States, 2000, LG-8I

Hypericum frondosum
13-2012, Z, United States, 2012, DGB
492-2010, W, United States, 2012, DGB

Hypericum frondosum 'Sunburst'
250-2003, G, 2003, LG-8G

Hypericum kalmianum 'Ames'
319-2001, G, 2001, LG-8D

Hypericum 'Hidcote'
166-2007, G, 2007, LG-8D

Ilex sp.
1225-79, W, United States, 1980, 22-SW

Ilex 'Howard Dorsett'
295-69, G, 1969, 24-SE

Ilex 'Lydia Morris'
1172-60, G, 1960, 24-NE
731-69, G, 1969, 4-NE, 4-SE

- Ilex amelanchier*
258-79, G, 1979, 8-SE
- Ilex aquifolium*
110-67, G, 1967, 18-SE
1265-73, G, 1973, 11-NW, 2-SE, 4-NE
1266-73, G, 1973, 4-NE
165-91, Z, Morocco, 1991, 25-NW
278-82, W, Republic of Montenegro, 1982,
2-SE, 57-SE
654-2007, Z, Morocco, 2007, 25-SW
848-75, Z, Germany, 1975, 57-NW
977-71, W, Germany, 1971, 2-SE
- Ilex × aquipernyi*
1446-71, G, 1971, 24-SE
1544-63, G, 1963, 18-SE
- Ilex × aquipernyi* 'San Jose'
1816-81, G, 1981, 52-NE
262-2002, G, 2002, LG-PER-S
431-68, G, 1968, 4-SE
- Ilex bioritsensis*
1742-66, G, 1966, 24-SE
357-74, G, 1974, 24-SE
- Ilex ciliospinosa*
1-70, G, 1970, 11-NW
1011-54, G, 1954, 11-NW
224-50, G, 1950, 18-SE
- Ilex ciliospinosa* × (*aquifolium* × *pernyi*)
'September Gem'
58-73, G, 1973, 11-NW
- Ilex collina*
1039-86, W, United States, 1986, 8-SW
1042-86, W, United States, 1986, 26-NE
1045-86, W, United States, 1986, 8-SW,
LG-2E
1049-86, W, United States, 1986, 11-NW
1050-86, W, United States, 1986, 11-NW
1061-87, W, United States, 1987, LG-8F
1062-87, W, United States, 1987, 8-SW
1063-87, W, United States, 1987, 26-NE
1072-86, W, United States, 1986, 11-NW
1073-86, W, United States, 1986, 11-NW,
8-SW, LG-8F
1074-86, W, United States, 1986, 11-NW
1075-86, W, United States, 1986, 11-NW
1089-86, W, United States, 1986, 11-NW
1366-78, G, 1978, 11-NW
- Ilex coriacea*
1330-85, W, United States, 1985, 18-NE
- Ilex crenata*
1126-88, W, Korea, Republic of, 1988, 19-NW
1127-88, W, Korea, Republic of, 1988, 19-NW
667-53, G, 1953, 18-SE
- Ilex crenata* × *yunnanensis*
1021-76, G, 1976, EG-9
- Ilex crenata* 'Convexa'
20069, W, Japan, 1919, 18-SE
1547-83, Z, Japan, 1983, 62-NW, 62-SW
283-74, G, 1974, 26-NW
- Ilex crenata* 'Dwarf Pagoda'
671-75, G, 1975, LG-PER-S
- Ilex crenata* f. *watanabeana*
1182-60, U, 1960, 24-NE
- Ilex crenata* 'Glass'
52-50, G, 1950, 24-NE, 24-SE
- Ilex crenata* 'Glory'
368-2002, G, 2002, LG-2F, LG-8D
- Ilex crenata* 'Green Dragon'
323-74, G, 1974, LG-PER-S
- Ilex crenata* 'Helleri'
418-2002, G, 2002, LG-6C
- Ilex crenata* 'Ivory Hall'
311-76, G, 1976, 31-NE
- Ilex crenata* 'Schwoebel's Compact'
371-2002, G, 2002, LG-3M
- Ilex crenata* var. *paludosa*
4-2003, Z, Japan, 2003, 24-NE

543-81, W, Japan, 1981, 2-SE, 52-NE

Ilex decidua

151, G, 1878, 10-SE
1056-57, U, 1957, 10-SE
1242-79, W, United States, 1980, 10-SE
125-69, W, United States, 1969, 10-SE
127-69, W, United States, 1969, 14-NE
1285-28, G, 1928, 18-SE
128-69, W, United States, 1969, 10-SE
130-69, W, United States, 1969, 10-SE
545-60, G, 1960, 10-SE
641-28, W, United States, 1928, 18-SE
745-65, G, 1965, 10-SE

Ilex fargesii ssp. *fargesii*

1830-80, W, China, 1980, 19-NW
1918-80, W, China, 1980, 18-SE, EG-9
1978-80, W, China, 1980, EG-9

Ilex glabra

1029-84, W, United States, 1984, DGB
150-2, G, 1903, 36-SE
652-70, G, 1970, 3-SW
699-77, G, 1977, 11-NW
851-59, G, 1959, 41-NE
929-88, W, Canada, 1988, 3-NE

Ilex glabra 'Compacta'

1051-70, G, 1970, 1-SE, 3-NE
745-69, G, 1969, 3-NE

Ilex glabra f. *leucocarpa*

1489-82, Z, United States, 1982, 39-SE
323-61, Z, United States, 1961, 41-NE

Ilex glabra 'Nigra'

1464-82, U, 1982, DGB

Ilex glabra 'Peggy's Cove'

3-2002, Z, Canada, 2002, 5-SW, DGB
500-2007, Z, Canada, 2007, LG-3H

Ilex glabra 'Viridis'

1488-82, G, 1982, DGB

Ilex longipes

15728, W, United States, 1916, 11-NW

Ilex macropoda

984-89, W, Japan, 1989, 19-NW

Ilex maximowicziana

168-97, G, 1997, 25-NW, LG-PER-S
778-65, G, 1965, 24-SE
995-78, G, 1978, 18-SE

Ilex × *meserveae* 'Blue Girl'

568-73, G, 1971, 18-SE

Ilex × *meserveae* 'Blue Prince'

603-73, G, 1973, 18-SE, 4-SE

Ilex montana

14740, U, 1908, 10-SE

Ilex opaca

14741, G, 1910, 41-NE
22683, G, 1941, 41-NE
219-97, W, United States, 1997, LG-PER-W
558-39, G, 1939, 36-NW
667-64, U, 1964, 24-SE
668-64, Z, United States, 1964, 31-NE
707-49, G, 1948, LG-PER-S
812-33, G, 1933, 41-NW

Ilex opaca 'Albert Pride'

811-67, G, 1967, 31-NE

Ilex opaca 'Barberry'

1415-63, G, 1963, 25-SW
312-62, G, 1962, LG-PER-S

Ilex opaca 'Carol'

302-62, G, 1962, LG-PER-S

Ilex opaca 'Dias No. 1'

1414-63, G, 1963, 24-SE

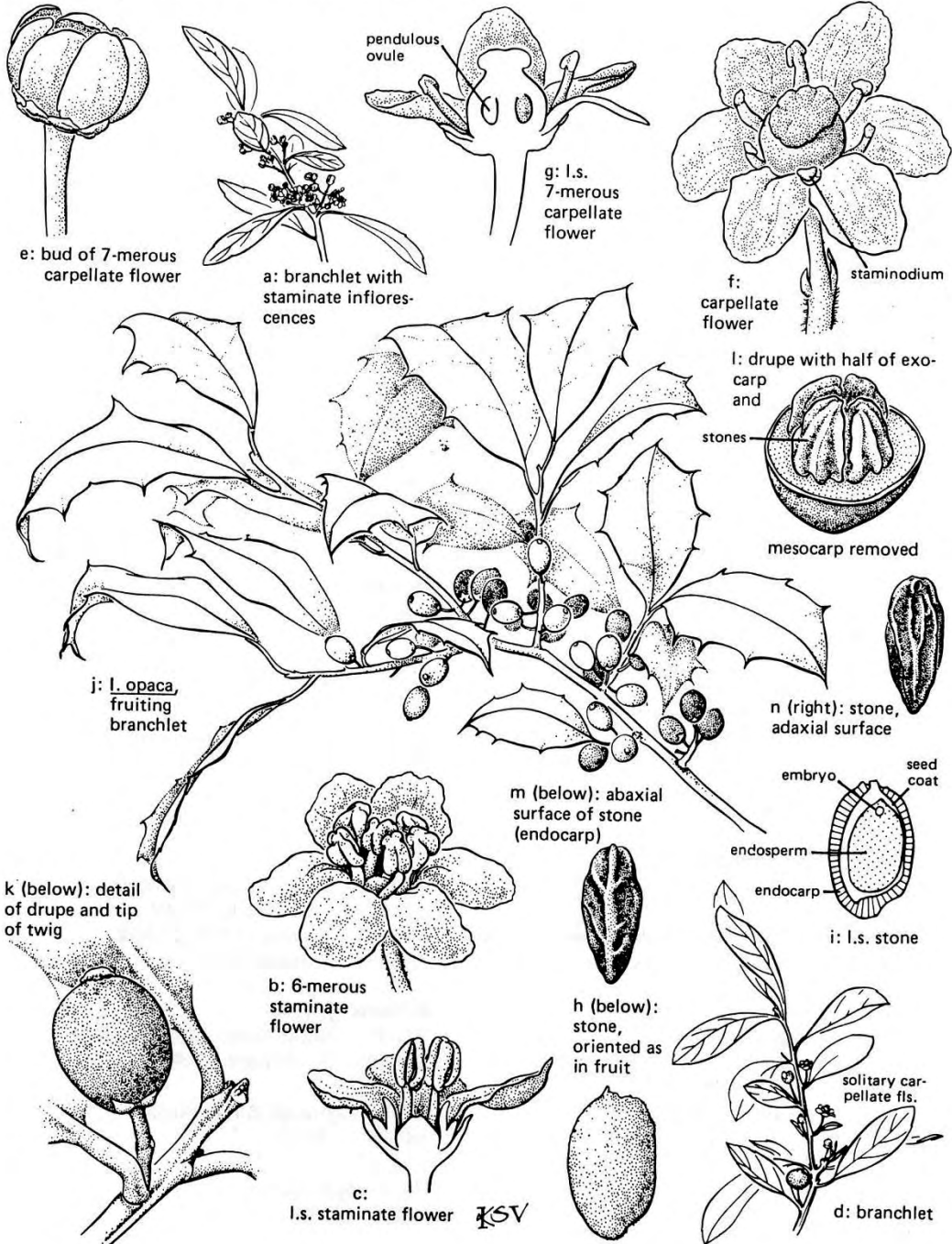
Ilex opaca 'Emily'

301-62, G, 1962, LG-PER-S
929-67, G, 1967, 24-SE

Ilex opaca 'Freeman'

1410-63, G, 1963, 24-SE

AQUIFOLIACEAE: *Ilex*. a-i, *I. glabra*; j-n, *I. opaca*



Ilex opaca 'Gee'
1109-71, G, 1971, 24-SE

Ilex opaca 'Goldie'
1408-63, G, 1963, LG-PER-S

Ilex opaca 'Laura Thomas'
1413-63, G, 1963, 24-SE

Ilex opaca 'Miss Butler'
1080-72, G, 1972, 31-NE
46-65, G, 1965, 31-NE

Ilex opaca 'Nelson West'
502-68, G, 1968, 24-SE

Ilex opaca 'Robin Tree'
314-62, G, 1962, LG-PER-S

Ilex opaca 'Santa Claus'
679-70, G, 1970, 24-SE

Ilex opaca 'St. Ann'
1007-54, G, 1954, 31-NE

Ilex opaca 'St. Mary'
320-62, G, 1962, LG-PER-S
886-67, G, 1967, LG-PER-S
936-67, G, 1967, 24-SE

Ilex opaca 'Stumphouse'
758-54, G, 1954, 31-NE

Ilex opaca 'Vera'
1313-63, G, 1963, LG-PER-S

Ilex opaca 'Yule'
677-70, G, 1970, 25-SW

Ilex pedunculosa
14743, G, 1898, 24-NE
1568-77, G, 1977, EG-8
280-82, W, Japan, 1982, EG-8
281-82, W, Japan, 1982, EG-8
287-2007, G, 2007, 5-NW, 5-SW
412-2004, G, 2004, 24-SE
784-54, G, 1954, 24-SE, 3-NE
787-34, G, 1934, 1-SE

882-52, G, 1952, 24-NE
969-49, G, 1949, 24-SE, 3-NE

Ilex pernyi
596-74, U, 1974, 2-SE

Ilex rugosa
10-2002, G, 2002, LG-2I
1270-88, G, 1988, DGB
134-99, G, 1999, LG-8H
184-89, U, 1989, DGB
402-2002, G, 2002, LG-2L
967-87, G, 1987, 19-NW

Ilex rugosa × *cornuta* 'Mesdob'
341-2002, G, 2002, LG-3E, LG-PER-S

Ilex rugosa × *cornuta* 'Mesog'
342-2002, G, 2002, LG-PER-S

Ilex serrata
14748, G, 1912, 18-SE
1591-77, W, Japan, 1977, 11-SW
1646-77, W, Japan, 1977, 11-SW, LG-PER-S
270-2008, W, Japan, 2008,
BR-DAWSON-POND
426-77, G, 1977, 11-NW
486-90, G, Japan, 1990, LG-PER-S
986-89, W, Japan, 1989, 19-NW

Ilex (serrata × *verticillata)* 'Apollo'
214-75, G, 1975, 38-SW

Ilex (serrata × *verticillata)* 'Sparkleberry'
1463-82, G, 1982, 39-SE
169-73, G, 1973, 3-SE
213-75, G, 1975, 38-SW

Ilex shennongjiaensis
395-2001, Z, China, 2001, 24-SE, EG-15
397-2001, Z, China, 2001, 14-NW, 32-SE

Ilex verticillata
147, W, United States, 1872, 10-SE, 18-SE
12157, W, United States, 1919, 10-SE
14749, W, United States, 1876, 37-SW
20642, G, 1928, 10-SE
22879, G, 1950, 11-NW, 1-SE, 26-NW, 3-NE,

4-SE
1297-80, W, United States, 1980, 51-NW
1424-83, W, United States, 1983, 34-NE
223-81, W, United States, 1981, LG-PER-S
298-85, W, United States, 1985, 36-SE
362-79, W, United States, 1979, 8-NE, 8-SE
374-73, G, 1973, 1-SE
743-63, U, 1963, 11-SW, 31-SE
897-52, G, 1952, 10-SE

Ilex verticillata 'Afterglow'
120-98, G, 1998, 3-NE

Ilex verticillata f. *aurantiaca*
22755, G, 1928, 10-SE
721-53, G, 1953, 10-SE

Ilex verticillata f. *chrysocarpa*
1205-57, U, 1957, 11-NW
650-58, U, 1958, 10-SE
659-62, U, 1962, 37-SW

Ilex verticillata 'Polycarpa'
443-38, G, 1938, 10-SE

Ilex verticillata 'Red Sprite'
274-2003, G, 2003, LG-3I

Ilex verticillata 'Southern Gentleman'
129-98, G, 1998, 3-NE
281-2002, G, 2002, LG-PER-S

Ilex verticillata 'Sunsplash'
411-2002, G, 2002, LG-3I

Ilex verticillata 'Winter Red'
227-2002, G, 2002, LG-PER-S
328-79, G, 1979, 3-NE

Indigofera decora 'Rosea'
509-85, G, 1985, 27-SE

Indigofera kirilowii
251-2004, Z, Korea, Republic of, 2004, LG-3A
486-2003, G, 2003, LG-3A

Indigofera pseudotinctoria 'Rose Carpet'
409-2004, G, 2004, LG-2L

Indocalamus tessellatus
1354-83, U, 1983, EG-6

Itea virginica
198-2006, G, 2006, LG-7C

Itea virginica 'Henry's Garnet'
771-75, Z, United States, 1975, 18-SE

Itea virginica 'Longspire'
739-93, U, 1993, EG-9

Itea virginica 'Morton'
183-2006, G, 2006, LG-7D

Itea virginica 'Saturnalia'
167-2003, G, 2003, LG-8B
218-2006, G, 2006, LG-7D

Itea virginica 'Sprich'
254-2003, G, 2003, LG-7B

Jasminum nudiflorum
603-81, U, 1981, EG-9
654-2003, U, 2003, LG-7B

Jeffersonia diphylla
490-95, G, 1995, 3-NE

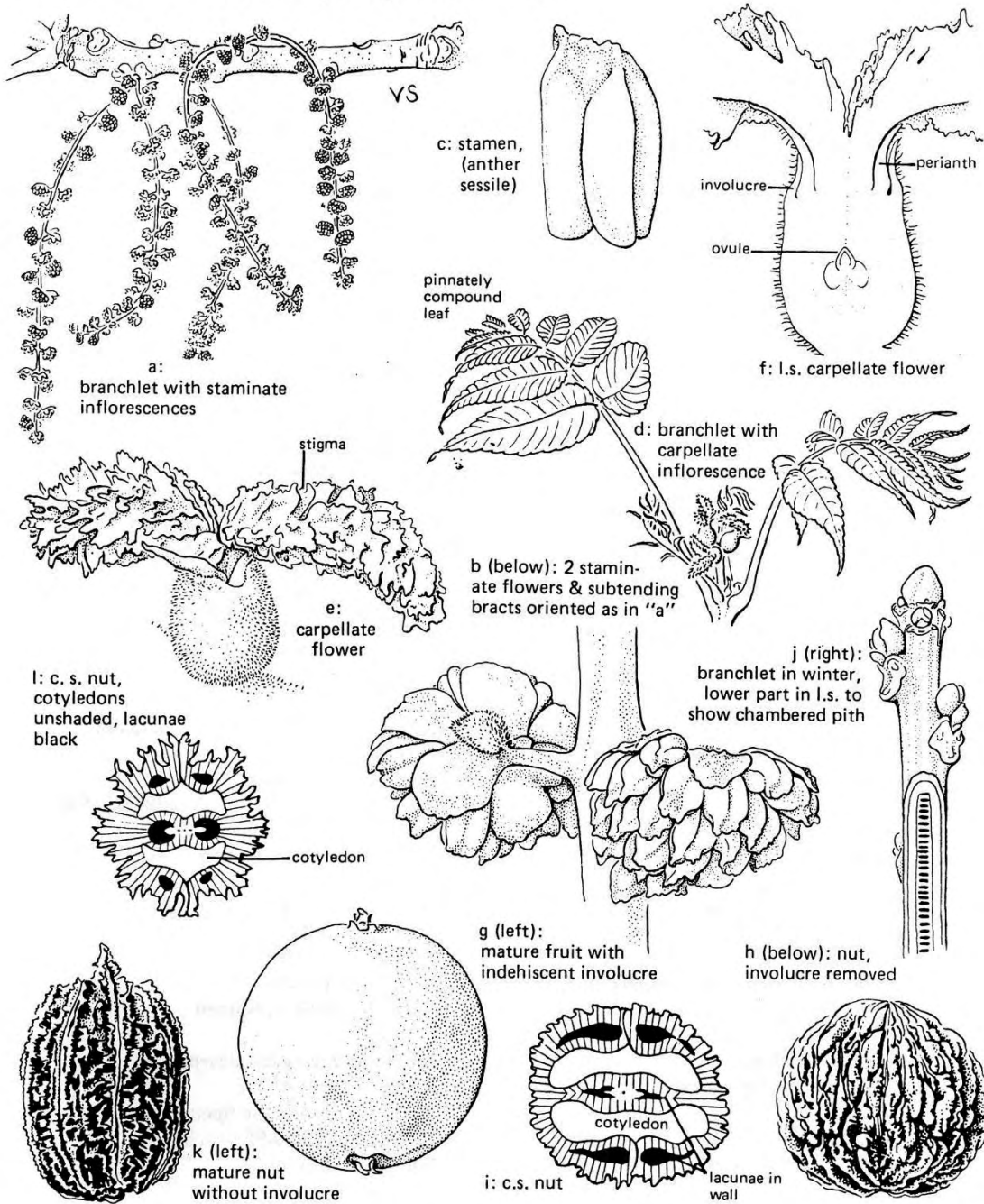
Juglans ailantifolia
14779, G, 1892, 25-NE
235-2008, W, Japan, 2008, 19-NE
391-2008, W, Japan, 2008, 19-SW

Juglans × bixbyi
617-61, U, 1961, 19-SE

Juglans cathayensis
250-98, W, Taiwan, 1998, 19-SW, 25-NW
76-97, W, China, 1997, 19-SE
807-52, U, 1952, 19-SE

Juglans cinerea
1287-80, W, United States, 1980, 25-NW
294-98, W, United States, 1998, 19-SE, 25-NE

JUGLANDACEAE: Juglans. a-j, *J. nigra*; k, l, *J. cinerea*



Juglans major
 10968, U, 1919, 19-SE
 107-92, W, United States, 1992, 19-SE
 1428-81, W, United States, 1981, 50-NE
 14766-2, G, 1913, 19-SE

Juglans mandshurica
 487-97, W, China, 1997, 19-SE, 25-NW

Juglans microcarpa
 10546, U, 1919, 19-SE
 10574, U, United States, 1920, 19-SE

Juglans nigra
 1181, G, 1874, 19-NW, 19-SW
 14761, G, 1893, 19-NW
 22880, G, 1950, 13-NW
 14760-1, G, 1906, 19-SW

Juglans nigra 'Laciniata'
 110-51, G, 1951, 19-NE
 299-50, G, 1950, 19-NW
 85-98, G, 1998, 19-SW

Juglans regia
 14767, G, China, 1907, 19-SE
 1372-63, G, 1963, 25-NE
 278-70, G, 1970, 19-NE
 421-62, G, China, 1962, 19-SE
 692-52, G, 1952, 19-NE

Juniperus sp.
 630-95, Z, Nepal, 1995, 36-NE
 819-94, Z, Nepal, 1994, 36-NE

Juniperus 'Grey Owl'
 1136-61, G, 1961, 37-NW

Juniperus ashei
 276-86, W, United States, 1986, 36-NE
 616-95, Z, United States, 1995, 36-SE
 889-88, W, United States, 1988, 37-NW

Juniperus chinensis
 7477, W, Korea, Republic of, 1905, 36-NE
 9068, G, 1919, 36-NE
 14809, G, 1908, 36-NE
 14811, G, 1903, 37-NW

1017-38, G, 1938, 36-NE
 265-33, U, 1933, 36-NE
 609-38, G, 1938, 36-NE
 690-36, G, 1936, 36-NE

Juniperus chinensis 'Blaauw'
 4-2000, G, 2000, 36-NE
 418-58, G, 1958, 36-SE

Juniperus chinensis 'Columnaris'
 23-55, G, 1955, 36-NE, 36-SE, DGB

Juniperus chinensis 'Excelsior'
 41-43, G, 1943, 36-NE

Juniperus chinensis 'Globosa'
 374-62, G, 1962, 36-SE

Juniperus chinensis 'Iowa'
 2-2000, G, 2000, 36-NE
 15-49, G, 1949, 36-SE

Juniperus chinensis 'Japonica'
 926-52, G, 1952, 36-NE

Juniperus chinensis 'Mas'
 11249, G, 1919, 36-NE
 1141-79, G, 1979, 36-NE

Juniperus chinensis 'Obelisk'
 431-97, G, 1997, 36-NE
 878-62, G, 1962, 37-NW

Juniperus chinensis 'Olympia'
 1014-64, G, 1964, 36-SE

Juniperus chinensis 'Pfitzer Matthews Blue'
 1-51, G, 1951, 36-NE

Juniperus chinensis 'Plumosa Aurea'
 219-61, G, 1961, 36-SE
 974-69, G, 1969, 36-NE

Juniperus chinensis 'Pyramidalis Nana'
 235-49, G, 1949, 37-NW

Juniperus chinensis 'San Jose'
879-62, G, 1962, 36-SE

Juniperus chinensis 'Veroides'
794-38, G, 1938, 37-NW

Juniperus chinensis 'Watereri'
10935, G, 1919, 36-NE

Juniperus communis
1434-80, W, Russian Federation, 1980, 36-NE
168-99, Z, Norway, 1999, 36-NE
181-99, Z, Norway, 1999, 36-NE
221-78, W, Norway, 1978, 36-NE
50-77, Z, China, 1977, 36-NE
824-94, Z, China, 1994, 36-SE

Juniperus communis 'Ashfordii'
872-87, U, 1987, 37-NW

Juniperus communis 'Berkshire'
16-2002, U, 2002, DGB

Juniperus communis 'Bruns'
1374-64, G, 1964, 36-SE

Juniperus communis 'Candelabrifomis'
827-94, G, 1994, 56-NW

Juniperus communis f. *oblonga*
519-64, G, 1964, 36-NE

Juniperus communis 'Laxa'
49-66, G, 1966, 36-NE
82-95, G, 1995, 59-NE

Juniperus communis 'Oblonga Pendula'
4176-1, U, 1907, 36-NE
4176-2, U, 1924, 36-NE

Juniperus communis 'Pendula'
14838, G, 1885, 36-NE

Juniperus communis var. *depressa*
1466-83, W, Canada, 1983, 52-NE
1471-82, U, 1982, 36-NE, 39-NE
180-99, Z, Canada, 1999, 36-NE

Juniperus excelsa
17-2003, W, Iran, 2003, 36-NE

Juniperus formosana
14857, W, China, 1908, 36-NE
280-98, W, Taiwan, 1998, 32-NE

Juniperus horizontalis
1164-56, U, 1956, 31-NE

Juniperus × *media* 'Armstrongii'
404-53, G, 1953, 36-SE

Juniperus × *media* 'Fruitland'
118-67, G, 1967, 37-SW

Juniperus × *media* 'Mint Julep'
1675-66, G, 1966, 36-SE

Juniperus × *media* 'Old Gold'
183-62, G, 1962, 36-NE

Juniperus × *media* 'Ozark Compact'
284-63, G, 1963, 37-NW

Juniperus × *media* 'Pfitzeriana'
14830, G, 1911, 36-NE
14834, G, 1900, 37-NW

Juniperus × *media* 'Pfitzeriana Argentea'
74-42, G, 1942, 36-NE, 37-NW

Juniperus × *media* 'Pfitzeriana Aurea'
672-38, G, 1938, 36-NE

Juniperus × *media* 'Pfitzeriana Hetzii'
817-67, G, 1967, 36-SE, 37-SW

Juniperus × *media* 'Pfitzeriana Hugh's'
315-58, G, 1958, 36-SE

Juniperus × *media* 'Richeson'
639-48, G, 1948, 36-NE

Juniperus occidentalis
265-2002, W, United States, 2002, 37-NW,
37-SW
587-2003, W, United States, 37-SW

Juniperus pinchotii
642-88, W, United States, 1988, 36-NE

Juniperus procumbens
762-86, U, 1986, LARZ

Juniperus procumbens 'Nana'
139-2002, G, 2002, LG-3B

Juniperus rigida
14866, W, Japan, 1892, 36-NE
172-99, Z, Japan, 1999, 27-NE
550-53, W, Japan, 1953, 36-NE, 36-SE
981-87, Z, Japan, 1987, 36-NE

Juniperus sabina
14868, W, Uzbekistan, 1904, 36-NE

Juniperus sabina 'Cupressifolia'
857-65, G, 1965, 36-NE

Juniperus sabina 'Fastigiata'
995-71, G, 1971, WH4-SW

Juniperus sargentii
23069, G, 1954, 41-NE

Juniperus sargentii 'Glauca'
575-49, G, 1949, 36-SE

Juniperus scopulorum 'Moonlight'
211-57, G, 1957, 36-NE

Juniperus scopulorum 'Silver Glow'
917-60, G, 1960, 36-NE

Juniperus squamata 'Meyeri'
10316, U, 1919, 36-NE
20-89, U, 1989, LG-PER-S
249-42, U, 1942, 36-NE

Juniperus squamata 'Wilsonii'
1010-64, U, 1964, 37-NW

Juniperus virginiana
10772, G, 1921, 36-NE
14886, G, 1903, 37-NW
14887, G, 1903, 36-NE

14890, G, 1910, 37-NW
23251, G, 1969, 31-SW
11-2002, W, United States, 2002, 36-NE,
37-NW
109-2006, W, United States, 2006, 36-SE
128-2011, U, 2011, 38-NW
1229-79, W, United States, 1980, 37-NW
1746-81, Z, United States, 1981, 37-NW

Juniperus virginiana 'Burkii'
51-54, G, 1954, 31-SE

Juniperus virginiana 'Cinerascens'
4714, G, 1901, 37-NW

Juniperus virginiana 'Cupressifolia'
389-61, G, 1961, 37-NW

Juniperus virginiana 'Deforest Green'
417-56, G, 1956, 36-NE

Juniperus virginiana 'Elegantissima'
4981, G, 1901, 37-NW
14878, G, 1910, 36-NE

Juniperus virginiana 'Fastigiata'
18252, G, 1925, 37-NW
826-94, G, 1994, 55-SE

Juniperus virginiana 'Glauca'
14880, G, 1901, 36-NE
14882, G, 1903, 36-NE

Juniperus virginiana 'Hillii'
1182-89, G, 1989, 36-NE

Juniperus virginiana 'Kosteri'
14884, G, 1916, 36-NE

Juniperus virginiana 'Nevin's Blue'
390-43, G, 1943, 36-NE

Juniperus virginiana 'Pendula'
11376, G, 1918, 36-NE

Juniperus virginiana 'Pyramidalis'
20967, G, 1929, 37-NW

Juniperus virginiana 'Reptans'
13527, U, 1913, 36-NE

Juniperus virginiana 'Schottii'
14893, G, 1901, 36-NE

Juniperus virginiana 'Tripartita'
1745-81, G, 1981, 36-NE
38-82, G, 1982, 39-NE

Kalmia buxifolia
105-2007, W, United States, 2007, 8-NW

Kalmia latifolia
20943, G, 1929, 38-NE
21292, G, 1930, 38-NE
1079-72, U, 1972, 41-NE
1129-74, G, 1974, 36-SE
128-96, G, 1996, 26-SE
132-98, Z, United States, 1998, 26-SE
150-58, G, 1958, 41-NW
232-46, G, 1946, 41-NW
35-40, W, United States, 1940, 41-NW
39-60, G, 1960, 41-NE
425-74, G, 1974, 36-SE
440-66, G, 1966, 41-NW
46-18, G, 1918, 41-NW
572-64, G, 1964, 37-SW
667-66, G, 1966, 41-NE
673-69, G, 1969, 36-SE
680-56, G, 1956, 42-NW
685-70, G, 1970, 1-SE, 1-SW, 41-NE
721-79, G, 1979, 26-SE
728-56, G, 1956, 41-NE
817-54, G, 1954, 42-NW

Kalmia latifolia f. *rubra*
728-54, G, 1954, 41-NE, 41-NW, 41-NE

Kalmia latifolia 'Fuscata'
166-70, G, 1970, 36-SE
761-39, G, 1939, 40-NE

Kalmia latifolia 'Polypetala'
2458, U, 1885, 41-NE, 41-NW, 42-NW
1126-68, U, 1968, 41-NW

Kalmia latifolia 'Red Bud'
631-75, G, 1975, 22-NE

Kalmia latifolia 'Silver Dollar'
1128-74, G, 1974, 41-NE

Kalmia latifolia 'Twenty'
802-78, G, 1978, 41-NE

Kalopanax septemlobus
12453, W, Japan, 1892, 53-SE
841-81, G, 1981, 22-NW

Kerria japonica
236-2008, W, Japan, 2008, 3-NE, 17-SW
237-2008, W, Japan, 2008, 17-SW,
WH2-SW
409-2007, W, Japan, 2007, EG-14

Kerria japonica 'Golden Guinea'
430-2002, G, 2002, LG-7F

Koelreuteria paniculata
13-2007, W, Korea, Republic of, 2007, 11-SW
14-2007, G, China, 2007, 29-SE
14928-1, G, 1899, 11-NW
1605-77, W, Korea, Republic of, 1977, 11-NW
293-2008, W, China, 2008, 11-SW
337-2002, W, China, 2002, 15-NW
378-2001, W, Korea, Democratic People's
Republic of, 2001, LG-PER-N
670-41, G, 1941, 3-NW

Koelreuteria paniculata 'Fastigiata'
87-60, G, 1960, 11-SW

Koelreuteria paniculata f. *laciniata*
15-2007, Z, Korea, Republic of, 2007, 11-NW

Koelreuteria paniculata 'Rose Lantern'
133-98, G, 1998, LG-PER-N
577-66, G, 1966, 11-NW
771-68, G, 1968, 25-NE

Koelreuteria paniculata 'September' ×
Koelreuteria bipinnata
118-94, G, 1994, 54-SW

Kolkwitzia amabilis
18090, G, 1925, 14-SW
20447, G, 1926, EG-14
181-2005, G, 2005, LG-1E
816-84, Z, China, 1984, EG-15
915-87, Z, China, 1987, 55-NE

Kolkwitzia amabilis 'Rosea'
88-68, G, 1968, EG-13

+ *Laburnocytisus* 'Adamii'
837-85, G, 1985, 15-SW

Laburnum alpinum
207-86, W, Germany, 1986, 24-NE

Laburnum anagyroides
466-88, W, Czechoslovakia, 1988, 15-SW

Laburnum × *watereri* 'Vossii'
267-74, G, 1974, 26-NE

Larix sp.
326-2010 – 336-2010, U, 2010, 44-NE

Larix decidua
2775, U, 1886, 39-NE, 44-NE
14937, W, Poland, 1900, 44-SE
19708, G, 1926, 39-NE
1171-67, W, Czechoslovakia, 1967, 39-NE
1296-83, W, Republic of Montenegro, 1983,
51-SE

Larix decidua 'Pendula'
251-2003, G, 2003, LG-3B
804-33, G, 1933, 39-SE, 62-NE

Larix gmelinii var. *japonica*
611-61, U, 1961, 39-NE
710-65, U, 1965, 39-SE

Larix gmelinii var. *olgensis*
10-96, W, China, 1996, 62-SE
247-75, U, 1975, 39-NE, 39-NW
365-97, W, China, 1997, 40-NW
378-94, W, China, 1994, 56-NW
447-80, W, China, 1980, 59-NW

Larix gmelinii var. *principis-rupprechtii*
14936, W, China, 1909, 62-NW
18503, W, China, 1923, 62-NE
21784, W, China, 1914, 58-SE, 62-NE
640-67, G, 1967, 39-NE

Larix kaempferi
1097, W, Japan, 1892, 39-SE
10496, G, 1920, 58-SE
11276, U, 1922, WH3-SE, WH3-NE,
WH4-NW, WH4-SW
14939, W, Japan, 1892, 39-SE
23171, G, 1963, 44-NE
23208, G, 1967, 33-SE, 38-NE, 38-NW
152-79, Z, Japan, 1979, 39-NE
852-33, G, 1933, 39-NE

Larix laricina
202-80, W, Canada, 1980, 59-NE
349-82, U, 1982, 35-NW

Larix laricina 'Blue Sparkler'
255-2003, G, 2003, LG-8B

Larix × *marschlinsii*
6103, U, 1910, 58-SE
11278, U, 1920, 44-NE
129-32, G, 1932, 62-NE

Larix occidentalis
1559, U, 1881, 39-NE
11-2003, W, United States, 2003, 39-NE,
59-SW

Larix sibirica
14948, W, country unknown, 1900, 39-NE
1188-63, U, 1963, 34-NE, 34-SE, 40-NW
269-77, U, 1977, 39-NE
395-93, W, Russian Federation, 1993, 39-NE,
39-SE
445-60, Z, Russian Federation, 1960, 39-NE
639-67, G, 1967, 40-NW
751-75, G, Ukraine, 1975, 39-NE

Lavandula angustifolia
14-2003, G, 2003, LG-1A, LG-8H
63-2006, G, 2006, DGB

Ledum palustre
389-97, W, China, 1997, DGB, LG-6D

Leitneria floridana
244-97, U, 1997, 11-SW
29-96, Z, United States, 1996, 11-SW
30-96, Z, United States, 1996, 11-SW

Leptodermis oblonga
420-2003, G, 2003, LG-8D

Lespedeza bicolor
165-2000, G, 2000, LG-8J

Lespedeza bicolor 'Natob Strain'
189-2001, G, 2001, LG-8I

Lespedeza maximowiczii
10181, W, Korea, Republic of, 1917, 16-NE

Lespedeza thunbergii
969-81, G, 1981, 27-SE

Lespedeza × *angustifolioides*
356-75, G, 1975, BR-16-SE

Leucosceptrum stellipilum
330-95, G, 1995, 3-NW

Leucothoe sp.
1397-85, W, United States, 1985, 37-SE

Leucothoe axillaris
178-2001, Z, United States, 2001, 26-SE
322-94, G, 1994, 1-SE, 3-NE
620-2003, G, 2003, LG-6D

Leucothoe fontanesiana
22997, G, 1953, 36-SE
279-74, G, 1974, 26-SE
817-1, G, 1905, 37-SE, 42-NE, 42-NW

Leucothoe fontanesiana 'Girard's Rainbow'
1030-57, G, 1957, 36-SE

Leucothoe fontanesiana 'Nana'
1343-62, G, 1962, 31-NE
179-2002, G, 2002, LG-6E

Leucothoe racemosa
814, W, United States, 1876
BR-DAWSON-POND
14916, U, 1879, EG-8
503-93, W, United States, 1993
BR-DAWSON-POND
833-85, Z, United States, 1985, 39-SE

Leucothoe recurva
1224-88, W, United States, 1988, LG-6D

Ligustrum acutissimum
1917-80, W, China, 1980, 27-NE
24-97, U, 1997, 21-SE
344-92, Z, China, 1992, 21-SE
363-2005, U, 2005, 62-SW
610-84, W, China, 1984, 45-NW

Ligustrum amurense
1259-81, U, 1981, 27-SE

Ligustrum compactum
1640-81, U, 1981, 33-NW
2043-77, U, 1977, 27-NE

Ligustrum foliosum
1623-77, G, Korea, Republic of, 1977, 27-SE

Ligustrum ibota
544-81, W, Japan, 1981, 27-NE
545-81, W, Japan, 1981, 27-NE

Ligustrum japonicum
201-2000, Z, Korea, Republic of, 2000,
EG-15

Ligustrum massalongianum
1003-77, G, 1977, 21-SE

Ligustrum obtusifolium
14980, W, Korea, Republic of, 1905, 27-NE
342-92, Z, Japan, 1992, 21-SE

Ligustrum obtusifolium var. *regelianum*
1264-81, U, 1981, 51-SE

Ligustrum ovalifolium
1265-81, U, 1981, 27-SE

499-90, W, Japan, 1990, 14-SE
602-88, W, Korea, Republic of, 1988, 27-NE

Ligustrum quihoui
341-92, Z, China, 1992, EG-15

Ligustrum salicinum
1588-77, G, Korea, Republic of, 1977, 21-SE,
27-NE

Ligustrum sinense
839-82, U, 1982, 52-NW

Ligustrum tschonoskii
500-90, W, Japan, 1990, 27-NE
840-82, Z, Japan, 1982, 52-NW

Ligustrum tschonoskii var. *macrocarpum*
841-82, U, 1982, 62-SE

Ligustrum vulgare
486-88, W, Czechoslovakia, 1988, 27-NE
718-84, W, Czechoslovakia, 1984, 52-SW
901-85, W, Germany, 1985, 27-NE

Ligustrum vulgare var. *insulense*
1589-77, G, Korea, Republic of, 1977, 27-SE

Ligustrum vulgare var. *italicum*
1273-81, U, 1981, 27-SE

Ligustrum × *ibolium*
1260-81, G, 1981, 27-SE

Lindera angustifolia
740-75, U, 1975, 14-SE

Lindera benzoin
108-97, U, 1997, 14-SE
122-86, W, United States, 1986, 14-NE
522-2009, U, 2009, 11-SW
701-93, W, United States, 1993, 14-SE

Lindera benzoin f. *rubra*
371-2001, Z, United States, 2001, 14-NW

Lindera benzoin var. *benzoin*
417-1, G, 1908, BR-FAXON-POND

Lindera erythrocarpa
177-79, W, Korea, Republic of, 1979, 14-NE
776-84, W, Korea, Republic of, 1984, 14-SW
777-84, W, Korea, Republic of, 1984, 49-SW

Lindera glauca
1633-77, G, Korea, Republic of, 1977, 14-SE

Lindera obtusiloba
1255-83, W, Korea, Republic of, 1983, 44-SE
EG-13
1619-82, W, Korea, Republic of, 1982, 49-SW
1626-77, W, Korea, Republic of, 1977, 15-SW
298-78, W, Japan, 1978, 15-SW
376-86, W, Korea, Republic of, 1986, 49-SW
931-85, W, Korea, Republic of, 1985, 39-NE,
EG-11

Lindera obtusiloba var. *obtusiloba*
2602, W, Japan, 1892, 14-SE
1195-70, W, Japan, 1970, 15-NW

Lindera praecox
12711, U, 1912, 24-NE
529-94, U, 1994, 14-SE
962-81, U, 1981, EG-9

Lindera umbellata
552-91, G, 1991, 14-SE

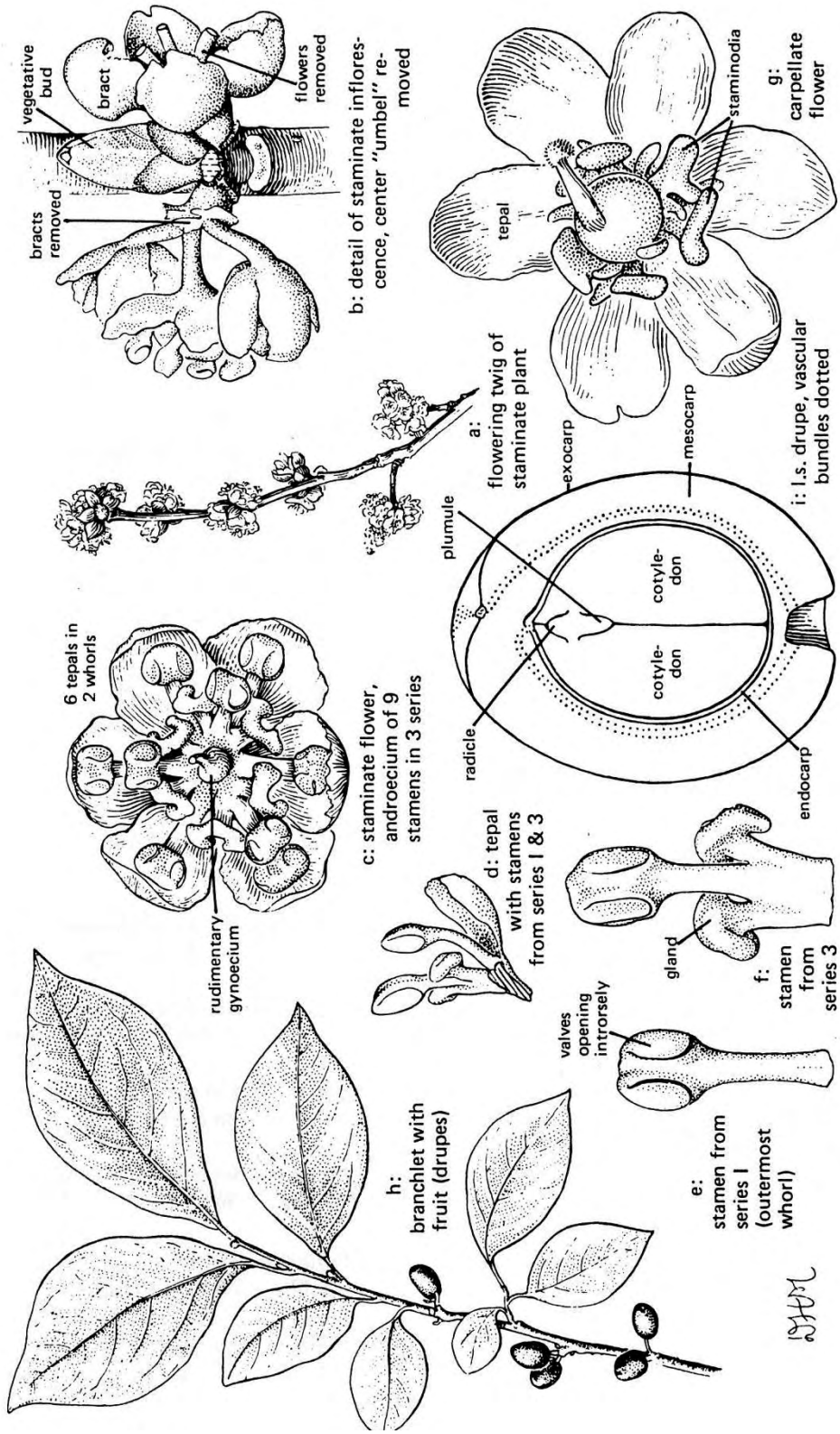
Liquidambar acalycina
148-98, Z, China, 1998, 25-NW,
EG-32-NE
1634-80, W, China, 1980, 19-SW

Liquidambar formosana
450-80, W, China, 1980, 50-SE

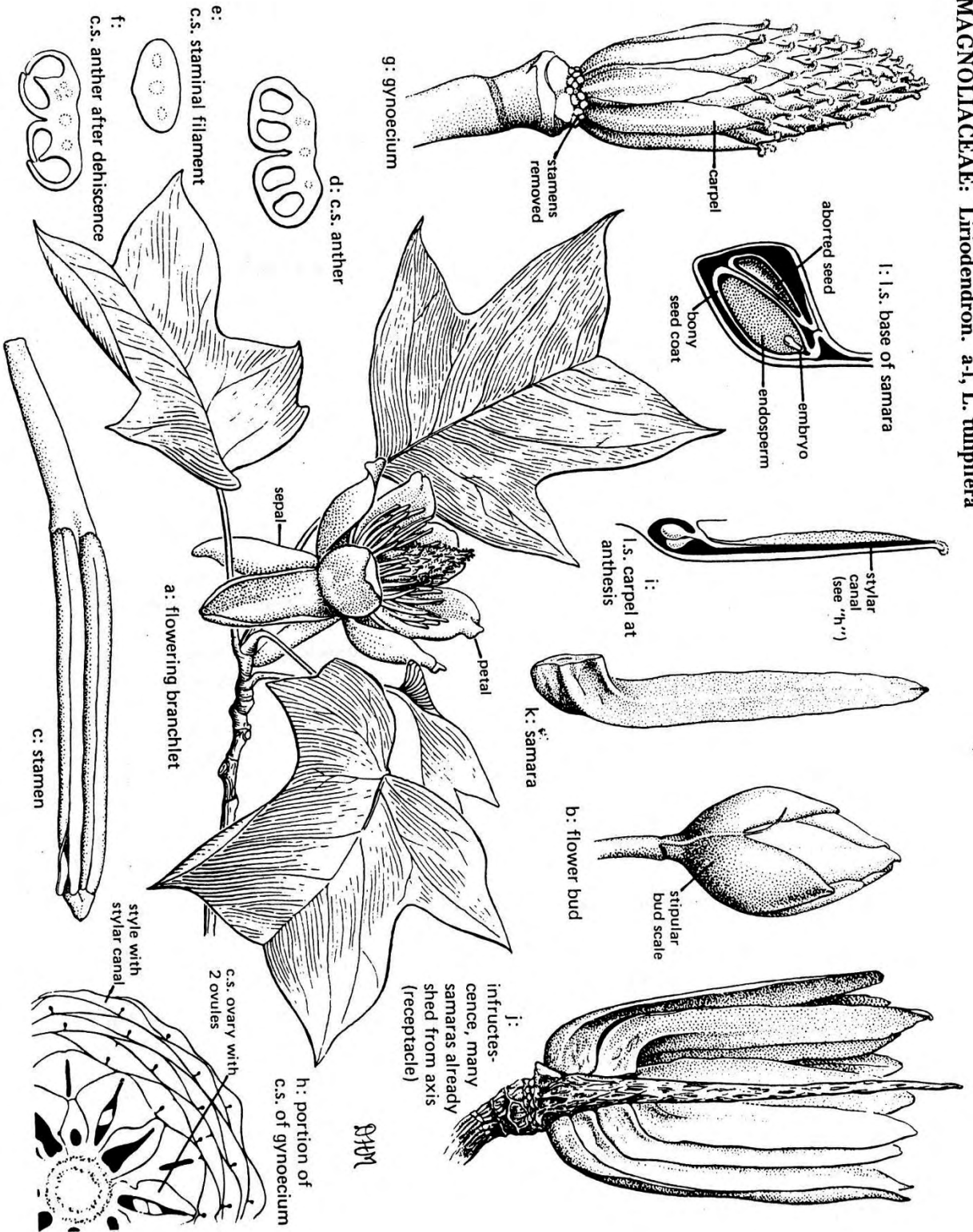
Liquidambar styraciflua
581, U, 1880, 27-NE
14991, U, 1891, 53-SW
22096, U, 1906, 62-NW
1248-79, W, United States, 1980, 19-NE,
19-SE, 19-SW
135-38, U, 1938, 19-NE

Liquidambar styraciflua var. *aurea*
370-50, U, 1950, 53-NE

LAURACEAE: *Lindera*. a-i, *L. benzoin*



MAGNOLIACEAE: *Liriodendron*. a-1, *L. tulipifera*



Liriodendron chinense
234-2004, Z, China, 2004, 3-SW
265-79, U, 1979, 3-SW
451-80, W, China, 1980, 3-SW

Liriodendron tulipifera
787, W, United States, 1875, 57-NE, 57-SE
58-SW
14992, U, 1894, 2-SE, 3-SW
15330, U, 1924, 53-SW, 57-NE, 57-NW
22882, U, 1950, 33-SW, 43-SE
23118, U, 1959, 2-SE
1038-80, W, Canada, 1980, 2-SE
1357-85, W, United States, 1985, 51-SE
143-87, W, United States, 1987, 2-SE
396-2005, W, United States, 2005, 2-SE, 3-SW
605-2010, U, 2010, 58-NE
773-81, G, United States, 1981, 3-SW

Liriodendron tulipifera × *chinense*
147-2000, G, 2000, 3-SW
222-93, G, 1993, 3-SW
584-81, G, 1981, 3-NE

Liriodendron tulipifera 'Aureomarginatum'
473-89, Z, United States, 1989, 2-NE

Liriodendron tulipifera 'Fastigiatum'
1637, U, 1889, 2-SE
1637-2, U, 1900, 3-SW
393-2007, U, 2007, 3-SW

Liriope muscari
1097-89, W, China, 1989, EG-9

Lithocarpus henryi
784-77, G, 1977, 38-NW

Lonicera alpigena f. *nana*
1310-84, U, 1984, 31-NE

Lonicera × *amoena*
415-83, G, 1983, 13-SE
505-93, G, 1993, 27-NW

Lonicera × *bella*
10087, G, 1919, 21-NE
392-92, G, 1992, 33-NW, 33-SW

Lonicera × *bella* 'Atrorosea'
1337-84, U, 1984, 14-NW

Lonicera × *bella* 'Candida'
3475, G, 1889, 21-SE
3475-1, G, 1905, 7-SW

Lonicera bracteolaris
1234-84, U, 1984, 13-SE

Lonicera caerulea var. *altaica*
249-96, G, 1996, 13-SW

Lonicera caerulea var. *dependens*
615-86, Z, Russian Federation, 1986, 33-NW

Lonicera caerulea var. *edulis*
1336-84, U, 1984, 33-SW

Lonicera chrysantha
1149-83, Z, Russian Federation, 1983, 13-NE
1644-77, W, Korea, Republic of, 1977, 4-SE
199-2005, Z, Korea, Republic of, 2005, 62-SW
691-88, W, China, 1988, 13-NW
973-81, Z, Russian Federation, 1981, 14-NW

Lonicera chrysantha f. *regeliana*
695-86, U, 1986, 33-NW

Lonicera chrysantha f. *villosa*
693-86, U, 1986, 59-NW

Lonicera chrysantha var. *longipes*
1331-84, Z, China, 1984, 13-SW
630-74, U, 1974, 7-SW
794-74, U, 1974, 7-SW

Lonicera deflexicalyx
338-92, U, 1992, 33-NE

Lonicera demissa
975-72, U, 1972, 7-SW

Lonicera etrusca
543-93, G, 1993, LG-10B.1

Lonicera ferdinandi
18169, W, China, 1911, EG-14
18360, U, 1924, 7-SW
1066-79, U, 1979, EG-17
1113-83, Z, China, 1983, 62-NW
563-87, Z, China, 1987, EG-13
695-88, W, China, 1988, 33-NW, 33-SW

Lonicera floribunda
240-96, Z, Iran, 1996, 13-SW

Lonicera graebneri
219-2000, W, China, 2000, 7-NW

Lonicera gynochlamydea
15032, W, China, 1908, EG-14
132-81, W, China, 1980, 51-NE
1723-80, W, China, 1980, 7-SW
1776-80, W, China, 1980, 13-NE

Lonicera × *heckrottii* 'Goldflame'
350-2006, G, 2006, LG-9C.15

Lonicera hemsleyana
124-99, Z, China, 1999, EG-15
776-94, W, China, 1994, EG-15

Lonicera henryi
1792-80, W, China, 1980, 26-NE
1969-80, W, China, 1980, 26-SE
418-2008, W, China, 2008, LG-3A
419-2008, W, China, 208, LG-8A

Lonicera heteroloba
838-76, U, 1976, 7-NW, 7-SW

Lonicera iberica
39-2002, W, Iran, 2002, 7-NE
486-95, W, Iran, 1995, 13-SW

Lonicera koehneana
5976, U, 1907, 7-SW
815-84, Z, China, 1984, 33-NW

Lonicera korolkowii
10083-2, G, 1927, 7-NE

Lonicera korolkowii var. *aurora*
858-82, G, 1982, 59-SW

Lonicera maackii
7190, W, China, 1908, EG-13
12319, W, China, 1920, 10-NE
15109-2, U, 1905, 3-NW
178-83, W, China, 1983, EG-17
806-84, U, 1984, 33-NW
904-87, G, 1987, EG-26-SE

Lonicera maackii var. *podocarpa*
10085, U, 1919, 21-NE
21268, W, Japan, 1929, 7-NE

Lonicera maximowiczii var. *sachalinensis*
381-83, Z, Korea, Republic of, 1983, 13-NE

Lonicera × *minutiflora*
1335-84, U, 1984, 13-SE

Lonicera modesta var. *lushanensis*
14-87, Z, China, 59-SW

Lonicera morrowii
15086, U, 1911, 15-SE
368-95, U, 1995, 13-SW
525-84, Z, Japan, 1984, 13-NE

Lonicera morrowii var. *xanthocarpa*
1329-84, U, 1984, 13-SE

Lonicera × *muendeniensis*
4996, G, 1902, 7-NW
1311-84, U, 1984, 4-SE

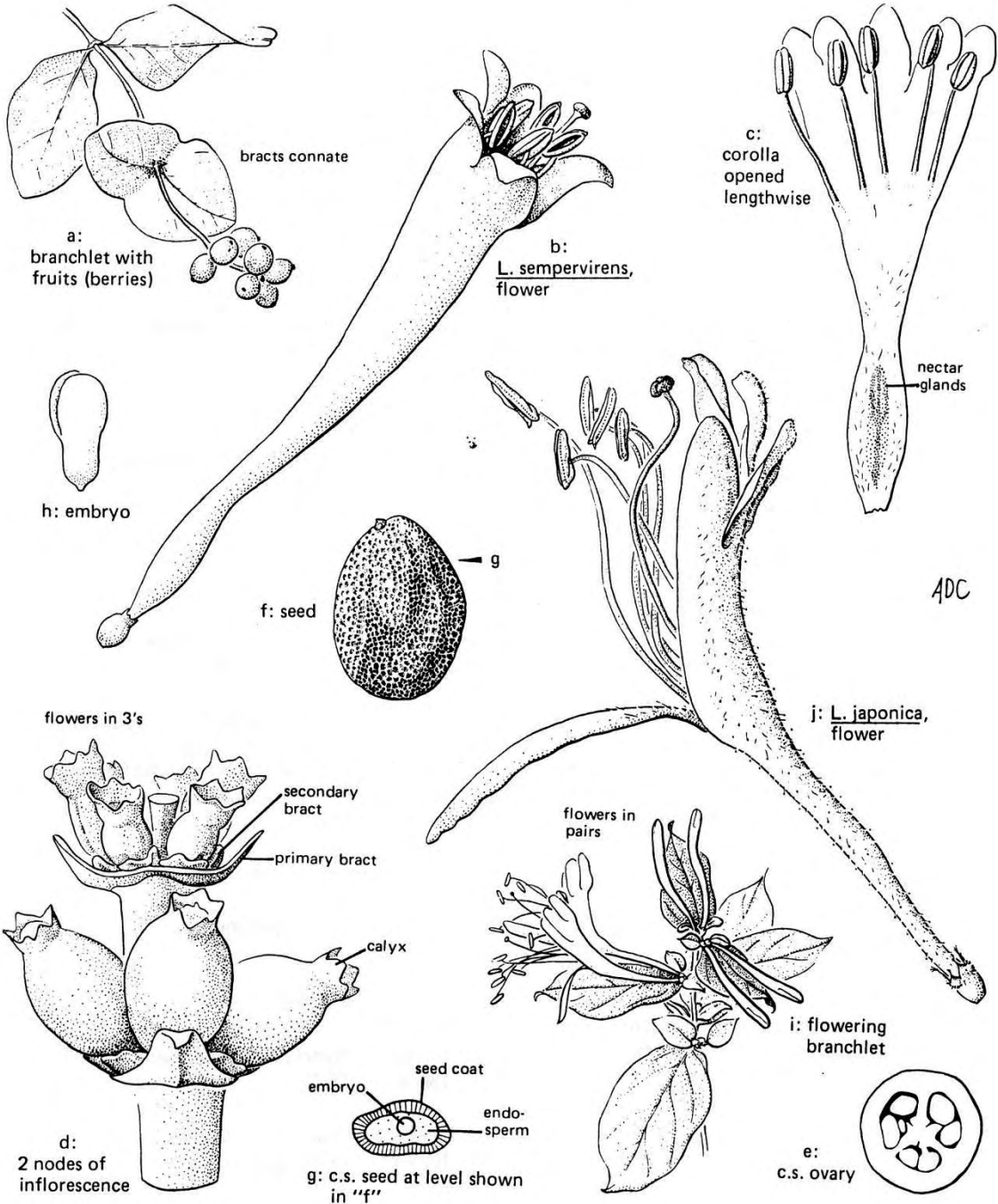
Lonicera × *muscaviensis*
11822, G, 1923, 21-NE

Lonicera nervosa
95-81, W, China, 1980, 62-SE

Lonicera nigra
118-2000, W, France, 2000, 7-NW

Lonicera cf. *nitida*
469-97, W, China, 1997, LG-7I

CAPRIFOLIACEAE: Lonicera. a-h, *L. sempervirens*; i-j, *L. japonica*



Lonicera × notha
707-80, U, 1980, EG-18

Lonicera × notha 'Alba'
171-97, G, 1997, 13-SW
969-4, G, 1905, 7-NW

Lonicera × notha 'Carnea'
1065-79, G, 1979, 7-NW

Lonicera × notha 'Carneo-rosea'
3743, U, 1893, 7-SW

Lonicera nummulariifolia
250-96, Z, Turkmenistan, 1996, 13-NW

Lonicera orientalis var. *caucasica*
364-29, U, 1929, 7-SW
607-87, U, 1987, 4-SE

Lonicera orientalis var. *longifolia*
1240-84, U, 1984, 4-SE

Lonicera periclymenum
259-2000, G, 2000, LG-10B.12
67-2000, W, Denmark, 2000, LG-9B.3

Lonicera periclymenum 'Graham Thomas'
276-2007, G, 2007, LG-9B.5

Lonicera pileata
18-92, U, 1992, 1-SW

Lonicera praeflorens
657-26, U, 1926, 4-SE

Lonicera × purpusii
1315-84, G, 1984, 13-SE
252-96, G, 1996, 13-NW

Lonicera modesta var. *lushanensis*
14-87, Z, China, 1987, 59-SW

Lonicera quinquelocularis
436-72, U, 1972, 7-NE

Lonicera ramosissima
1059-65, U, 1965, 7-SW

Lonicera ruprechtiana
694-88, W, China, 1988, 33-NE

Lonicera ruprechtiana var. *calvoescens*
1325-84, U, 1984, 49-SW

Lonicera × salicifolia
1312-84, U, 1984, 14-NW

Lonicera sempervirens
393-96, W, United States, 1996, LG-10A.4

Lonicera sempervirens 'Magnifica'
358-2006, G, 2006, LG-9B.6

Lonicera similis
359-2001, W, China, 2001, 32-SE

Lonicera sovetkiniae
796-74, U, 1974, 7-NW

Lonicera standishii
15118-3, U, 1921, EG-13
860-82, U, 1982, 13-SW

Lonicera standishii f. *lancifolia*
6669-1, Z, China, 1923, EG-13
861-82, Z, China, 1982, 62-NW

Lonicera standishii 'Rosea'
1094-83, Z, China, 1983, 49-NE

Lonicera steveniana
694-83, Z, Russian Federation, 1983, 4-SE

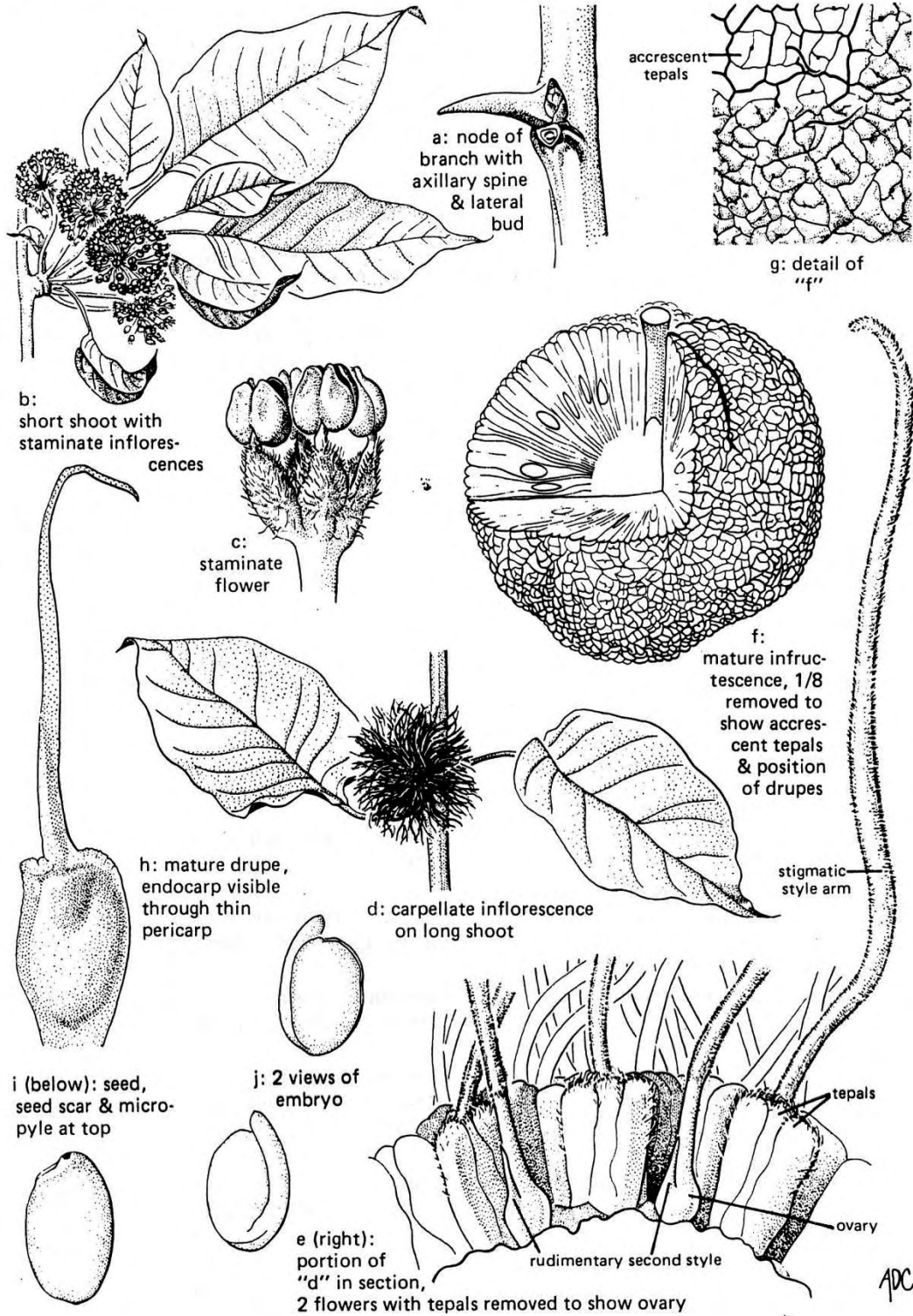
Lonicera subsessilis
1652-77, W, Korea, Republic of, 1977, 7-NW,
7-SW

Lonicera tatarica
299-78, W, Tajikistan, 1978, 7-SW
365-2004, Z, Tajikistan, 2004, 7-NW

Lonicera tatarica 'Angustifolia'
4035, U, 1907, BR-4

Lonicera tatarica 'Arnold Red'
1092-83, G, 1983, 55-NE
452-94, G, 1994, 13-SW

MORACEAE: *Maclura*. a-j, *M. pomifera*



Lonicera tatarica 'Elegans'
1314-84, U, 1984, 13-SE

Lonicera tatarica f. *roseo-alba*
1342-84, U, 1984, 13-SE

Lonicera tatarica 'Sibirica'
3771-1, U, 1905, 7-SW
609-87, U, 1987, 33-NW

Lonicera tatarica var. *pallens*
6701, U, 1905, 7-SW

Lonicera tatsienensis
347-92, U, 1992, 13-NW

Lonicera vesicaria
239-75, U, 1975, 7-SW

Lonicera webbiana
220-2000, W, China, 2000, 7-NW

Lonicera × *xylosteoides*
5406, U, 1907, 7-NW
15141, G, 1909, 7-SW

Lonicera xylosteum
856-84, Z, Austria, 1984, 57-SE

Lonicera xylosteum 'Claveyi'
1019-83, G, 1983, 62-SW
505-93, G, 1993, 27-NW

Loropetalum chinense
200-90, U, 1990, LARZ

Lycium halimifolium
488-2003, U, 2003, LG-8B

Lyonia ligustrina
153-88, W, United States, 1988, 8-NW

Lyonia ligustrina var. *ligustrina*
15129, W, United States, 1883, 5-SW

Maackia amurensis
103-98, G, 1998, 54-SW
115-98, W, China, 1998, 15-NW, 15-SW

303-70, G, 1970, BR-16-NE
475-78, W, Korea, Republic of, 1978, EG-9,
59-NE

Maackia amurensis var. *buergeri*
22337, G, 1926, 15-SW
36-98, W, Japan, 1998, 26-SE
610-61, G, 1961, 15-SW

Maackia chinensis
6962-1, G, 1921, 15-SW
708-77, Z, China, 1977, 15-SW

Maackia fauriei
644-87, W, Korea, Republic of, 1987, 15-NW
661-60, G, 1960, 15-SW

Maclura pomifera
108-99, Z, United States, 1999, 20-SE
200-75, G, 1975, 20-NE
471-36, G, 1936, 18-SE
566-87, U, 1987, 18-SE
79-46, G, 1946, 63-NW

Maddenia hypoleuca
665-65, U, 1965, 19-NW

Magnolia 'Betty'
995-68, G, 1968, 3-NW

Magnolia 'Big Dude'
474-2010, G, 2010, DGB

Magnolia 'Elizabeth'
120-78, G, 1978, 3-SW

Magnolia 'Freeman'
830-75, G, 1975, 18-NE

Magnolia 'Galaxy'
157-74, G, 1974, 1-NE
531-2003, G, 2003, 1-NW, 1-SE

Magnolia 'Judy'
992-68, G, 1968, 49-NE

Magnolia 'Pastel Beauty'
478-2010, G, 2010, DGB

Magnolia 'Pegasus' × *Magnolia dawsoniana*
17-2010, G, 2010, DGB
22-2010, G, 2010, DGB
27-2010, G, 2010, DGB

Magnolia 'Randy'
993-68, G, 1968, 3-NW

Magnolia 'Silver Parasol'
1144-77, G, 1977, 5-NE
1280-27, G, 1927, 1-NE
530-2003, G, 2003, 1-SE

Magnolia 'Snowflake'
477-2010, G, 2010, DGB

Magnolia acuminata
15154, G, 1880, 1-NE, 1-NW, 1-SE
15156, U, 1918, 1-SE
136-99, W, United States, 1999, 2-SE
137-99, W, United States, 1999, 3-SW
487-40, U, 1940, 1-NW, 1-SE
71-88, W, United States, 1988, 38-NW

Magnolia acuminata var. *subcordata*
15157, G, 1890, 1-NE, 1-NW
732-90, G, 1990, 1-SE

Magnolia acuminata var. *subcordata*
'Miss Honeybee' × *Magnolia figo*
188-2004, G, 2004, 3-NW, DGB

Magnolia amoena
59-96, Z, China, 1996, 32-NE

Magnolia bohuashense
329-2004, G, China, 2004, 3-NW, EG-32-NE

Magnolia × *brooklynensis* 'Solar Flair'
479-2010, G, 2010, DGB

Magnolia cylindrica
1096-89, W, China, 1989, 44-SE
158-83, U, 1983, 2-SE
397-81, U, 1981, 2-NE, 3-NW

Magnolia denudata
1165-84, G, China, 1984, 2-SE, 59-NE, 62-NW
138-2007, G, China, 2007, 3-NW

344-81, G, China, 1981, 2-NE, 39-NE

Magnolia denudata 'Banana'
445-96, G, 1996, 3-NW

Magnolia fraseri
23-88, W, United States, 1988, 19-SW, 2-SE
57-2009, W, United States, 2009, DGB
964-79, W, United States, 1979, 1-NW, 2-SE
999-79, W, United States, 1979, 5-SE

Magnolia grandiflora
'Bracken's Brown Beauty'
278-98, G, 1998, 3-SW

Magnolia grandiflora 'Pendarvis'
1183-83, U, 1983, 1-SW

Magnolia kobus
1199-77, W, Japan, 1977, 3-NW, 5-NE
141-41, G, 1941, 1-NW
294-57, U, 1957, 1-NW

Magnolia liliiflora
374-2001, G, 2001, 34-SW
375-2001, G, 2001, 1-NW

Magnolia × *loebneri*
1179-71, G, 1971, 3-SW
761-35, G, 1935, 1-NE

Magnolia × *loebneri* 'Fastigiata'
473-2010, G, 2010, DGB

Magnolia × *loebneri* 'Leonard Messel'
1892-65, G, 1965, 1-SE
74-98, G, 1998, 11-SW

Magnolia × *loebneri* 'Merrill'
367-42, G, 1942, 3-NW
541-58, G, 1958, 3-NW

Magnolia × *loebneri* 'Spring Snow'
260-73, G, 1973, 43-NE

Magnolia macrophylla ssp. *ashei*
1067-64, G, 1964, 25-NW

396-96, W, United States, 1996, 25-NW,
25-SW

Magnolia macrophylla ssp. *macrophylla*
299-2001, W, United States, 2001, 24-NE
959-89, W, United States, 1989, 25-NW
960-89, W, United States, 1989, 25-NW
961-89, W, United States, 1989, 25-NW

Magnolia obovata
470-90, W, Japan, 1990, 2-SE

Magnolia officinalis
158-96, W, China, 1996, 2-NE
472-2010, U, 2010, DGB

Magnolia officinalis var. *biloba*
159-83, U, 1983, 63-SW
160-96, W, China, 1996, 2-SE
398-81, U, 1981, 2-NE

Magnolia salicifolia
1004-61, G, 1961, 1-SE
393-49, U, 1949, 1-SE
51-63, G, 1963, 1-SE
766-68, U, 1968, 3-NE, 3-SE
874-28, U, United States, 1928, 3-NW
979-86, W, Japan, 1986, 32-NE

Magnolia salicifolia 'Wada's Memory'
1179-66, G, 1966, 34-SE
471-82, G, 1982, 1-SE
86-98, G, 1998, 32-NE

Magnolia sargentiana
155-96, W, China, 1996, 25-NW

Magnolia sieboldii
274-91, U, 1991, 3-SE
404-97, G, China, 1997, 24-NE, 24-NW,
25-NW
589-87, U, Korea, Republic of, 1987, 3-NE

Magnolia × soulangiana 'Alexandrina'
1207-66, G, 1966, 1-NW

Magnolia × soulangiana 'Andre Leroy'
1069-67, G, 1967, 34-NE

Magnolia × soulangiana 'Brozzonii'
15177, G, 1912, 1-SE
21685, G, 1931, 3-NW

Magnolia × soulangiana 'Candolleana'
15160, G, 1895, 3-NW

Magnolia × soulangiana 'Rustica Rubra'
930-61, U, 1961, 1-NE

Magnolia × soulangiana 'Speciosa'
265-57, G, 1957, 1-NW

Magnolia × soulangiana 'Verbanica'
21691, G, 1931, 3-NW
393-69, G, 1969, 3-NW

Magnolia sprengeri
228-2005, W, China, 2005, 18-NE

Magnolia stellata
15185, U, 1903, 3-NW
1046-78, W, Japan, 1978, 2-SE
50-54, U, 1954, 1-SW
803-86, W, Japan, 1986, 2-NE, 2-SE, 3-SW

Magnolia stellata 'Centennial'
170-2002, G, 2002, LG-3H
325-93, G, 1993, 3-NW

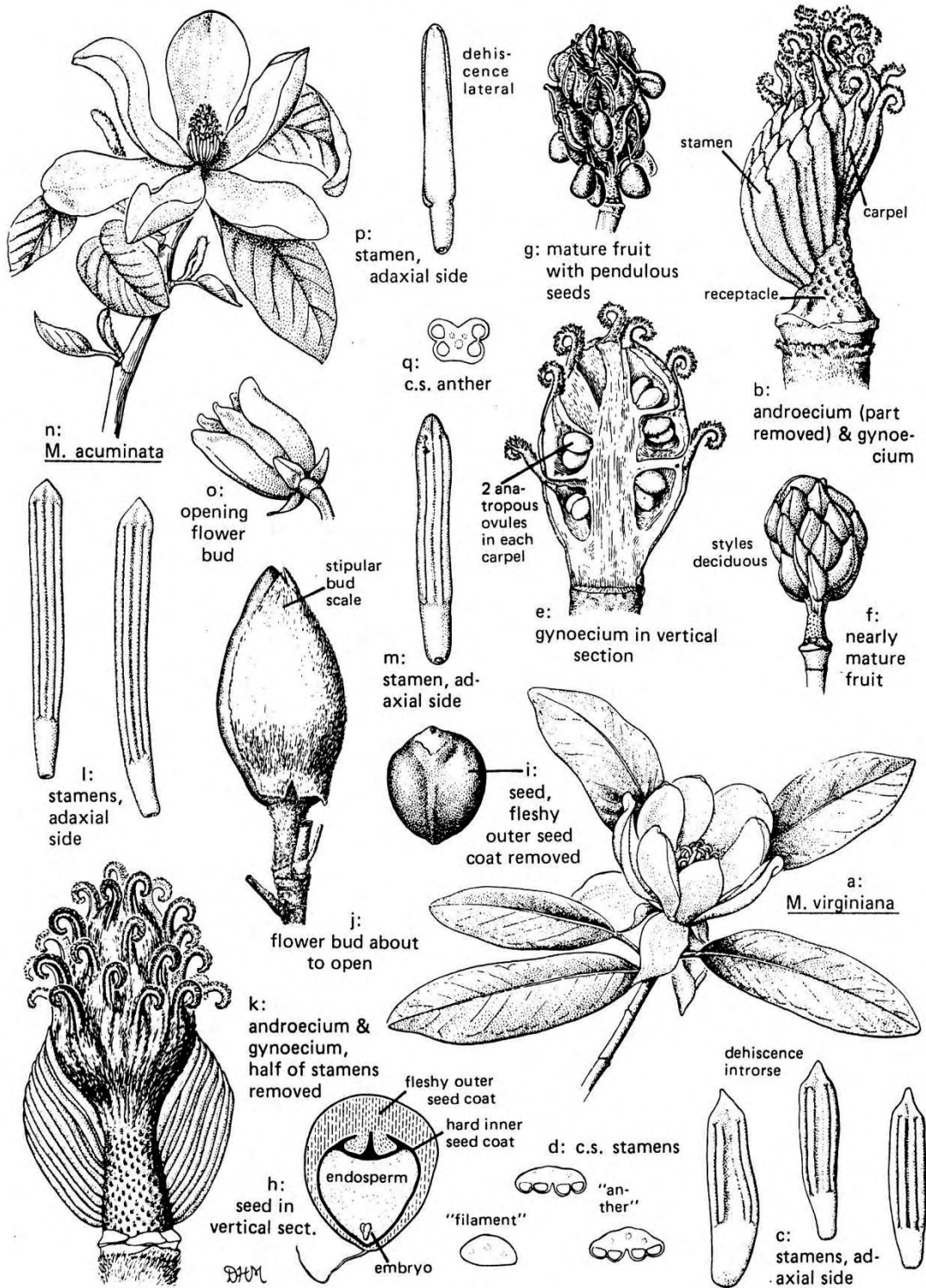
Magnolia stellata 'Rosea'
15187, G, 1915, 3-NE

Magnolia stellata 'Waterlily'
1377-67, G, 1967, 3-NW
475-2010, G, 2010, DGB

Magnolia stellata 'White Star'
808-60, G, 1960, 1-SE

Magnolia × thompsoniana 'Cairn Croft'
174-98, G, 1998, 11-SW, 3-SW

MAGNOLIACEAE: Magnolia. a-i, *M. virginiana*; j-l, *M. grandiflora*; m, *M. tripetala*; n-q, *M. acuminata*



Magnolia tripetala
370-42, G, 1942, 1-SE
426-76, W, United States, 1976, 3-SW
766-58, G, 1958, 1-NE
933-76, G, 1976, 2-SE

Magnolia virginiana
15163, G, 1890, 1-SE
15163-1, G, 1907, 1-SE
287-44, G, 1944, 1-NE
420-92, W, United States, 1992, 3-NE
535-2002, W, United States, 2002, 1-SE, 3-SW
613-39, W, United States, 1939, 1-SE
762-83, U, 1983, 3-NE
831-59, G, 1959, 1-NE, 1-SE

Magnolia virginiana (undetermined hybrid)
833-59, G, 1959, 1-SE

Magnolia virginiana 'Milton'
400-85, G, 1985, 3-NE

Magnolia virginiana 'Satellite'
145-96, G, 1996, 3-NW

Magnolia virginiana var. *australis*
1275-80, G, 1980, 39-SE

Magnolia virginiana × *virginiana* 'Milton'
779-87, G, 1987, 1-SE, 3-NW, 3-SW

Magnolia zenii
314-2006, Z, China, 2006, EG-32-NE
430-91, Z, China, 1991, 3-NE
549-2009, G, 2009, DGB

Magnolia zenii 'Pink Parchment'
476-2010, G, 2010, DGB

× *Mahoberberis neubertii*
11821, U, 1923, 18-SE
73-93, U, 1993, 1-SE

Mahonia aquifolium
148-84, W, Canada, 1984, 31-NE
284-74, U, 1974, 26-SE

Mahonia bealei
772-94, W, China, 1994, 32-SE

Mahonia japonica
939-73, U, 1973, 37-SE

Mahonia repens
766-87, W, United States, 1987, 3-NW

Malus sp.
22712, G, 1938, 33-NW
22922, G, 1951, 23-NW
23009, G, 1953, 22-SW
23010, G, 1953, 22-SW
23016, G, 1953, 22-SW
23217, G, 1968, 27-SE
23227, G, 1968, 33-NE
23237, G, 1942, 29-SE, 34-NE, 34-SW
12-97, G, 1997, 54-NW
128-58, U, 1958, 51-SE
185-52, G, 1952, 50-SW
187-92, G, 1992, 51-SW
312-57, G, 1957, 51-SW
347-2010, U, 2010, 51-NW
358-2010, U, 2010, 49-NE
466-40, G, 1940, 59-NE
467-94, W, Russian Federation, 1994, 54-NW
491-85, U, 1985, 51-NW, 51-SW
515-94, G, 1994, BR-16-SE
77-54, U, 1954, 54-NE
780-52, G, 1952, 50-SE, 50-SW
917-59, G, 1959, 51-SW

Malus 'Adams'
873-50, G, 1950, 50-NE

Malus 'Adirondack'
307-95, G, 1995, 50-NE, 51-NW

Malus 'Ames White'
161-52, G, 1949, 50-SE

Malus 'Arrow'
782-35, G, 1935, 45-SW

Malus 'Barbara Ann'
94-96, G, 1996, 22-NW

Malus 'Beauty'
776-52, G, 1952, 50-NE

Malus 'Beverly'
248-64, G, 1964, 50-SW

Malus 'Blanche Ames'
22994, G, 1953, 22-NE
23007, G, 1953, 22-SW
166-52, G, 1949, 50-NE, 50-SE

Malus 'Bob White'
319-69, G, 1969, 22-NE
401-69, G, 1969, 51-SW, 54-NW

Malus 'Burton's Yellow Fruited'
757-60, G, 1960, 50-SE

Malus 'Caramel'
283-64, G, 1964, 50-SW

Malus 'Centennial'
567-61, G, 1961, 51-SW

Malus 'Chestnut'
325-59, G, 1959, 51-SW

Malus 'Cowichan'
460-52, G, 1952, 51-SW
542-94, G, 1994, 50-SW

Malus 'David'
308-95, G, 1995, 50-SE
570-61, G, 1961, 50-SW

Malus 'Dolgo'
23011, G, 1953, 22-SW
160-52, G, 1952, 50-SE, 50-SW

Malus 'Donald Wyman'
23254, G, 1970, 59-NW
889-71, G, 1971, 54-NW

Malus 'Dorothea'
177-52, G, 1952, 50-SE
338-88, G, 1988, 22-NW
70-44, G, 1944, 45-NW, 55-SE

Malus 'Doubloons'
309-95, G, 1995, 50-SE, 54-NE

Malus 'E. H. Wilson'
165-52, G, 1952, 50-SE

Malus 'Elise Rathke'
56-99, G, 1999, 59-SE

Malus 'Ellwangeriana'
310-50, G, 1950, 51-SW
617-50, G, 1950, 50-NE

Malus 'Evelyn'
223-54, G, 1954, 51-SW

Malus 'Florence'
173-52, G, 1952, 50-SE

Malus 'Frau Luise Dittman'
596-50, G, 1950, 50-SE

Malus "Giant"
162-52, G, 1952, 50-SW

Malus 'Golden Hornet'
742-55, G, 1955, 50-SE, 59-NE

Malus 'Goldfinch'
1245-64, G, 1964, 54-NE

Malus 'Henrietta Crosby'
207-93, G, 1993, 34-SW
531-49, G, 1949, 23-NW

Malus 'Henry F. DuPont'
22957, G, 1952, 22-NE
159-52, G, 1952, 50-SE
206-93, G, 1993, 54-NW

Malus 'Henry Kohankie'
604-61, G, 1961, 50-SW

Malus 'Hillier'
660-50, G, 1950, 23-NW, 59-NE

Malus 'Honeywood #7'
440-59, G, 1959, 54-NE

Malus 'Hyslop Sport'
151-42, G, 1942, 51-SE

Malus 'Indian Summer'
311-95, G, 1995, 54-NE

Malus 'Jay Darling'
314-50, G, 1950, 29-SE

Malus 'Jenison'
247-73, G, 1973, 55-SE

Malus 'Jewelberry'
312-95, G, 1995, 50-NE

Malus 'Joan'
84-58, G, 1958, 50-SE

Malus 'John Downie'
556-61, G, 1961, 50-SE

Malus 'Jubilee'
583-61, G, 1961, 54-NE

Malus 'Katherine'
23018, G, 1953, 23-NW
122-94, U, 1994, 50-SW
176-52, G, 1952, 51-SW
224-37, G, 1937, 55-NE

Malus 'Kerr'
591-61, G, 1961, 50-SW

Malus 'Lady Northcliffe'
264-60, G, 1960, 54-NE

Malus 'Makamik'
345-43, G, 1943, 22-NE, 55-NE

Malus 'Marshall Oyama'
163-52, G, 1952, 50-SE

Malus 'Mary Potter'
23013, G, 1953, 22-SW
181-52, G, 1952, 51-SW

Malus 'Masek'
618-73, G, 1973, 50-SE

Malus 'Morden Rosy Bloom'
132-45, G, 1945, 55-SE

Malus 'Mrs. Bayard Thayer'
589-66, G, 1966, 22-NE

Malus 'Oakes'
965-50, G, 1950, 50-SE

Malus 'Oporto'
147-62, G, 1962, 50-SW, 55-SE

Malus 'Ottawa 524'
179-52, G, 1952, 50-SE, 55-NW

Malus 'Peachblow'
211-39, G, 1939, 55-SE

Malus 'Pink Perfection'
435-70, G, 1970, 51-SW

Malus 'Piotosh'
443-55, G, 1955, 50-SE

Malus 'Prairifire'
313-95, G, 1995, 54-NE

Malus 'Pretty Marjory'
294-58, G, 1958, 50-SE
307-65, G, 1965, 23-NW

Malus 'Prince Georges'
22990, G, 1953, 22-NE
58-2001, G, 2001, 16-NE

Malus 'Professor Sprenger'
314-95, G, 1995, 50-SE

Malus 'Profusion'
338-50, G, 1950, 50-SE

Malus 'Purple Prince'
315-95, G, 1995, 55-NW, 55-SW

Malus 'Quaker Beauty'
325-50, G, 1950, 51-SE

Malus 'Queen's Choice'
84-76, G, 1976, 50-SW

Malus 'Rambo'
58-99, G, 1999, 51-SE

Malus 'Red Jade'
532-75, G, 1975, 50-NE

Malus 'Red Splendor'
313-59, G, 1959, 54-NE

Malus 'Red Tip'
265-60, G, 1960, 50-SW

Malus 'Redford'
277-42, G, 1942, 51-NW

Malus 'Rodney'
517-70, G, 1970, 54-NW

Malus 'Rosseau'
459-52, G, 1952, 55-SE

Malus 'Rudolph'
516-55, G, 1955, 50-SW

Malus 'Snowbank'
263-40, G, 1940, 23-NW
462-40, G, 1940, 59-NE

Malus 'Snowcloud'
436-70, G, 1970, 51-SW

Malus 'Snowdrift'
366-70, G, 1970, 54-NE

Malus 'Spring Snow'
676-66, G, 1966, 50-SW

Malus 'Strathsmore'
966-50, G, 1950, 51-NW

Malus 'Strawberry Parfait'
316-95, G, 1995, 50-SE

Malus 'Tolsteme'
419-68, G, 1968, 50-SW

Malus 'Turesi'
249-64, G, 1964, 50-NE, 50-SE

Malus 'Van Eseltine'
304-50, G, 1950, 59-NE

Malus 'Veitch's Scarlet'
539-66, G, 1966, 54-NW

Malus 'White Angel'
1245-60, G, 1960, 50-SE
317-95, G, 1995, 54-NE, 55-NW

Malus 'Whitney'
416-68, G, 1968, 50-SE

Malus 'Wynema'
412-50, G, 1950, 50-SE

Malus arborescens
23-99, Z, China, 1999, 45-SW, 50-NW
397-67, Z, Japan, 1967, 45-NW
526-81, Z, Japan, 1981, BR
704-81, Z, Japan, 1981, 59-NW

Malus argentea
709-72, U, 1972, 50-NE
79-71, U, 1971, 51-SE

Malus × *arnoldiana*
20416, G, 1927, 45-NW
116-91, G, 1991, 22-NW
1645-52, G, 1952, 45-NW, 51-SW
319-49, G, 1949, 17-SW

Malus × *arnoldiana* ×
M. pumila var. *niedzwetzkiana*
203-93, G, 1993, 51-SE, 51-SW
225-44, G, 1944, 22-NE

Malus × *asiatica*
20407, G, 1927, 45-SW
142-77, Z, China, 1977, 49-NW
199-92, Z, Korea, Republic of, 1992,
51-NW, 51-SW
529-50, G, 1950, 50-SE
580-81, Z, China, 1981, 55-SE
96-96, Z, Korea, Republic of, 1996, 45-NW

Malus × astracanica
90-51, G, 1951, 51-SW

Malus baccata
1195-65, U, 1965, 51-NE
1843-80, W, China, 1980, 44-SE,
50-NW, BR-12, BR-16-SE
43-95, W, China, 1995, 12-SW, 54-NW
494-63, G, 1963, 51-SW
782-84, W, Korea, Republic of, 1984, 45-SW,
55-NW

Malus baccata 'Alexis'
444-55, G, 1955, 50-NW

Malus baccata 'Flavescens'
754-55, U, 1955, 50-SE

Malus baccata 'Jackii'
300-87, Z, Korea, Republic of, 1987, 51-SW

Malus baccata 'Yellow Siberian'
709-72, U, 1972, 50-NE

Malus baccata var. *gracilis*
208-97, Z, China, 1997, 45-NW, 45-SW

Malus brevipes
1850-2, U, 1901, 51-SW
107-90, U, 1990, 29-SE
1850-2, U, 1901, 51-SW
192-92, U, 1992, 54-NW
392-91, U, 1991, 54-NW

Malus coronaria
658-68, U, 1968, 45-SW
899-63, Z, United States, 1963, 51-SE

Malus × dawsoniana
102-89, Z, United States, 1989,
BR-DAWSON-POND
318-87, Z, United States, 1987, 51-SW,
55-NW
566-61, Z, United States, 1961, 51-NW

Malus floribunda
20405, U, 1927, 22-NE, 45-NW
22996, G, 1953, 22-NE

430-83, G, 1983, 55-NW

Malus fusca
231-80, W, Canada, 1980, 51-SE
525-81, U, Canada, 1981, 53-SE

Malus glabrata (undetermined hybrid)
688-52, G, 1952, 51-SW

Malus glaucescens
268-60, U, 1960, 50-SW

Malus × gloriosa
260-56, G, 1956, 51-NW
51-2001, G, 2001, 59-SE

Malus halliana
1734-80, W, China, 1980, 32-NW,
BR-16-NE, BR-16-SE
1974-80, W, China, 1980, 49-NW, 49-SW

Malus halliana 'Parkmanii'
458-94, U, 1994, BR-16-NE, BR-16-NW

Malus halliana var. *spontanea* (variant)
49-98, Z, Japan, 1998, 45-SW

Malus hupehensis
7241, W, China, 1908, 22-NE
15326, G, 1902, 50-NE
20414, G, 1927, 45-NW
1052-84, Z, China, 1984, 20-SE, 26-SW
17474-1, Z, China, 1921, EG-32-NE
1951-80, W, China, 1980, 50-NE
210-2001, W, China, 2001, 45-NW
21-96, G, 1996, BR-16-NW
324-55, G, 1955, 50-SW

Malus ioensis
22516, G, 1936, 51-SE

Malus kansuensis
178-95, Z, China, 1995, 45-NW
200-2001, W, China, 2001, BR-16-NW
487-85, W, China, 1985, BR-16-NE

Malus kansuensis f. *calva*
134-43, U, 1943, 49-SE

1690-80, W, China, 1980, 55-SE
337-50, G, 1950, 49-SE

Malus kirghisorum
119-73, U, 1973, 58-NW

Malus lancifolia × *sylvestris*
691-52, G, 1952, 51-SW

Malus × *magdeburgensis*
48-98, G, 1998, 54-NW
544-66, G, 1966, 50-SE

Malus mandshurica
1643-81, U, 1981, EG-18
191-78, U, 1978, 44-NE
466-94, W, Russian Federation, 1994,
BR-16-NE, BR-16-NW
783-84, W, Korea, Republic of, 1984, 24-NE,
27-NW, 33-SW

Malus × *micromalus*
1263-83, W, Korea, Republic of, 1983, 55-NE
3202-3, G, 1906, 22-NE, 51-NW
341-57, G, 1957, 51-NW

Malus × *moerlandsii* (variant)
646-38, G, 1938, 55-NE

Malus orientalis
1330-77, W, Armenia, 1977, 44-SE
212-2001, W, Russian Federation, 2001,
59-SW
213-2001, W, Russian Federation, 2001,
45-SW
295-89, Z, Armenia, 1989, 22-NE

Malus orthocarpa
117-90, U, 1990, 50-NW

Malus × *platycarpa*
134-2004, Z, United States, 2004,
51-NW
138-2008, Z, United States, 2008
51-SW

Malus platycarpa var. *hoopesii*
51-98, G, 1998, 22-NE, 50-SW

Malus prattii
34-73, U, 1973, 53-SE

Malus prunifolia 'Fastigiata'
23216, G, China, 1968, 27-SE
433-83, G, China, 1983, BR-16-SW

Malus prunifolia 'Microcarpa Lutea'
19297, G, 1925, 45-NW

Malus prunifolia 'Xanthocarpa'
254-80, G, 1980, 49-NW
324-50, G, 1950, 17-SW, 50-SE

Malus prunifolia var. *costata*
502-43, G, 1943, 50-SE
513-94, G, 1994, 34-SW

Malus prunifolia var. *rinkii*
10795, W, Korea, Republic of, 1918, 32-NE

Malus pumila
341-88, Z, 1988, 44-SE
434-83, U, 1983, 62-NE
521-81, U, 1981, 62-NE
82-36, U, 1936, 45-SW
88-36, U, 1936, 55-SE, 59-NE
90-36, U, 1936, 45-SW

Malus pumila 'Translucens'
320-49, U, 1949, 55-SE

Malus pumila var. *niedzwetzkyana*
530-48, G, 1948, 55-SE
64-53, G, 1953, 29-SE, 51-NE, 51-NW

Malus × *purpurea*
335-88, G, 1988, 51-NW
351-86, U, 1986, 20-SW
448-83, G, 1983, 47-SW
647-36, G, 1936, 50-NW
904-31, G, 1931, 23-NW

Malus × *purpurea* 'Aldenhamensis'
11785, G, 1923, 22-NE
303-50, G, 1950, 51-NW

Malus × purpurea 'Eleyi'
34-2004, G, 2004, 55-NE
822-49, G, 1949, 17-SW

Malus × purpurea 'Kornicensis'
221-39, G, 1939, 55-NE

Malus × purpurea 'Lemoinei'
184-38, G, 1938, 59-NE
320-87, G, 1987, 44-SE, 49-NE

Malus × robusta
236-37, G, 1937, 55-NE, 55-SE
2553-1, G, 1886, 50-NE
45-98, G, 1998, 45-SW, 59-NE

Malus × robusta (variant)
23088, G, 1957, 40-NE
204-93, G, China, 1993, 54-NW,
BR-16-SE
347-88, Z, China, 1988, BR-12
435-83, Z, China, 1983, 59-NW

Malus × robusta 'Arnold-Canada'
172-52, G, 1952, 50-SE

Malus × robusta 'Erecta'
90-2001, Z, China, 2001, 50-NW

Malus × robusta 'Persicifolia'
10011, W, China, 1909, 51-NE
141-2008, Z, China, 2008, 51-SW

Malus × robusta var. *xanthocarpa*
116-46, G, 1946, 51-NE
85-58, G, 1958, 54-NE

Malus sargentii
4681, W, Japan, 1892, 17-SW
20408, G, 1927, 44-NE, 45-SW, 51-NW
1054-84, Z, Japan, 1984, BR-16-NW
109-91, G, 1991, 51-SW
286-89, Z, Japan, 1989, EG-32-NE
4681-5, G, 1921, 51-SE
537-85, Z, Japan, 1985, BR-16-NW
93-96, G, 1996, 54-NW

Malus sargentii × atrosanguinea
335-44, G, 1944, 23-NW

Malus sargentii 'Rosea'
129-40, U, 1940, 17-SW

Malus sargentii 'Rosea' × *M.* 'Hopa'
23017, G, 1953, 22-SW
331-55, G, 1955, 54-NW
57-2007, G, 2007, 51-SW

Malus sargentii 'Rosea' × *M.* 'MacIntosh'
335-55, G, 1955, 50-SW
545-94, G, 1994, 54-NW

Malus × scheideckeri
197-58, G, 1958, 51-NW
52-2001, G, 2001, 50-SE

Malus sieboldii
1464-83, W, Japan, 1983, 26-NW, 38-NE
524-81, Z, Japan, 1981, 55-SE
606-88, W, Korea, Republic of, 1988,
BR-16-NW
623-55, W, Japan, 1954, 49-SE
915-89, W, China, 1989, BR-11

Malus sieboldii 'Fuji'
418-68, G, 1968, 51-SE, 51-SW

Malus sieboldii var. *zumi*
31-98, W, Japan, 1998, 44-NW, 44-SE

Malus sikkimensis
22928, G, 1951, 51-SW, 55-NW
50-36, G, 1936, 55-SE
509-94, Z, China, 1994, 50-SW, 54-NW
BR-16-SE
83-34, G, China, 1934, 55-SE

Malus × soulardii
17-97, G, 1997, 45-NW, 50-SW
421-85, U, 1985, 22-NE
545-57, G, 1957, 51-NE

Malus spectabilis
1039-51, U, 1951, 51-NE
1292-52, G, 1952, 50-NE

429-42, G, 1942, 50-NE
743-32, U, 1932, 51-SE
94-91, G, 1991, 50-NE, 50-NW

Malus spectabilis f. *albiplena*
286-57, U, 1957, 50-NE

Malus spectabilis var. *plena*
318-50, G, 1950, 50-NE

Malus spectabilis var. *riversii*
91-59, G, 1959, 50-NW

Malus spontanea
10796, W, Japan, 1919, 22-NE
10796-1, Z, Japan, 1921, 51-NW
10796-2, Z, Japan, 1920, 50-NW
46-98, Z, Japan, 1998, 22-NE

Malus × *sublobata*
140-2008, Z, Japan, 2008, BR-9
173-72, Z, India, 1972, 54-SW
344-86, Z, Japan, 1986, 57-NE
786-62, G, 1962, 51-NE

Malus sylvestris
11330, W, Denmark, 1920, 51-SE
13231, U, 1923, 23-NW

Malus toringoides
17475, W, China, 1908, 32-NE
201-2001, W, China, 2001, BR-16-NW
202-2001, W, China, 2001, 50-NW
47-98, Z, China, 1998, 45-SW

Malus tschonoskii
3678, W, Japan, 1892, 17-SW, 22-NE
62-2007, Z, Japan, 2007, 51-SW,
BR-16-SW
98-2007, Z, Japan, 2007, 51-SW,
BR-16-SW

Malus yunnanensis
22962, U, 1952, 22-NE
1738-80, W, China, 1980, 33-NE

Malus yunnanensis var. *veitchii*
1740-80, W, China, 1980, 27-NE

Malus × *zumi*
510-94, U, 1994, BR-12

Malus × *zumi* 'Calocarpa'
20404, G, 1927, 45-SW
196-97, G, 1997, 45-NW, 50-SW

Malus × *zumi* (variant)
696-55, G, 1955, 51-NW
77-2001, G, 2001, 50-NW

Meliosma dilleniifolia ssp. *tenuis*
442-72, U, 1972, 19-NW

Menispermum canadense
547-94, G, 1994, LG-10B.15

Menispermum dauricum
548-94, G, 1994, LG-9C.31

Menziesia pilosa
141-2000, G, 2000, DGB

Mespilus germanica
230-91, W, Iran, 1991, BR-10
727-89, W, Iran, 1989, BR-11

Metasequoia glyptostroboides
3-48, W, China, 1948, 35-NE
379-92, Z, China, 1992, 38-SW, 57-NW
455-93, W, China, 1993, 51-NE
458-93, W, China, 1993, EG-32-SE
460-93, W, China, 1993, 51-NE
461-93, W, China, 1993, EG-32-SE
462-93, W, China, 1993,
BR-DAWSON-POND
524-48, W, China, 1948, 37-NW, 39-NE, 3-SE,
3-SW, 42-NW, 43-NW, 63-NW
584-79, U, 1979, 35-NW, 3-NE, 3-SE
632-92, W, China, 1992, EG-32-SE
633-92, W, China, 1992, 3-NE
634-92, W, China, 1992, 53-SW
635-92, W, China, 1992, 57-NW, 62-NE,
EG-32-NE, BR-37-NE
638-92, W, China, 1992, 51-NE
639-92, W, China, 1992, 3-NE
640-92, W, China, 1992, EG-32-SE
641-92, W, China, 1992, EG-32-SE

642-92, W, China, 1992, 57-NW, 59-SW
643-92, W, China, 1992, EG-32-SE
644-92, W, China, 1992, 37-NE, 53-SW
645-92, W, China, 1992, 59-SW, 62-NE,
EG-32-SE
646-92, W, China, 1992, 62-NE, EG-32-SE
647-92, W, China, 1992, EG-37-NE
648-92, W, China, 1992, 53-SW, 57-NW
649-92, W, China, 1992, EG-32-SE
650-92, W, China, 1992, 57-NW, 62-NE
652-92, W, China, 1992, 51-NE, 57-NW,
EG-32-SE
653-92, W, China, 1992, 62-NE
654-92, W, China, 1992, 32-SE, 53-SW, EG-15
655-92, W, China, 1992, 51-NE
656-92, W, China, 1992, 51-SE, 57-NW
EG-32-SE
657-92, W, China, 1992, 53-SW
658-92, W, China, 1992, 59-SW
659-92, W, China, 1992, 62-NE
660-92, W, China, 1992, 63-NW, BR-32-SE
661-92, W, China, 1992, 51-NE
662-92, W, China, 1992, 51-NE, 62-NE,
BR-32-SE
664-92, W, China, 1992, 62-NE
666-92, W, China, 1992, EG-5
667-92, W, China, 1992, 59-SW
668-92, W, China, 1992, 57-NW
669-92, W, China, 1992, 51-NE
670-92, W, China, 1992, EG-32-SE
672-92, W, China, 1992, EG-32-SE
673-92, W, China, 1992, 62-NE
674-92, W, China, 1992, 51-SE, 57-NW
740-62, Z, China, 1962, 3-NE
814-62, Z, China, 1962, 3-NE
815-62, Z, China, 1962, 3-NE, 3-SE

Metasequoia glyptostroboides 'National'
704-60, G, 1960, 3-SE

Microbiota decussata
180-2002, G, 2002, LG-8E
186-2001, Z, Russian Federation, 2001,
LG-7H

Miscanthus sinensis 'Variegatus'
934-77, G, 1977, 1-SW

Mitchella repens
575-2008, W, United States, 2008, LG-6E

Morus alba
17672, G, 1907, 21-NW
174-41, U, 1941, 20-NE
47-67, G, 1967, 27-SW
909-58, G, 1958, 21-NW

Morus alba 'Pendula'
5165, G, 1903, 21-NW
424-66, G, 1966, 27-SE

Morus alba 'Stribling'
427-59, G, 1959, 21-SW

Morus alba 'Venosa'
533-93, G, 1993, 21-NW

Morus australis
7422, W, China, 1907, 21-NW
679-87, Z, China, 1987, 21-NW

Morus bombycis
20187, U, 1924, 21-NW

Morus bombycis 'Unryu'
69-79, G, Japan, 1979, 14-SE

Morus rubra
192-58, U, 1958, 21-NW
787-85, W, United States, 1985, 20-NE
796-85, W, United States, 1985, 21-NW

Mukdenia rossii
445-94, G, 1994, 3-NW

Myrica gale
283-2007, W, United States, 2007, 5-SW,
8-NW
366-94, W, Canada, 1994, 22-NW

Myrica heterophylla var. *heterophylla*
361-2003, U, 2003, LG-8I

Myrica pensylvanica
22883, G, 1950, 32-SE
19-96, W, United States, 1996, 54-SW

333-96, W, United States, 1996,
BR-FAXON-POND

Neillia affinis
695-87, U, 1987, BR-13

Neillia ribesioides
454-84, U, 1984, BR-14

Neillia sinensis
113-81, W, China, 1980, BR-14
114-81, W, China, 1980, BR-14
1337-79, Z, China, 1980, 22-NE

Neillia tibetica
469-83, U, 1983, BR-13

Neillia uekii
7820, W, China, 1907, BR-17-SW
758-78, Z, China, 1978, 22-NE, BR-1B

Neviusia alabamensis
18097-1, G, 1917, BR-17-SW
398-96, W, United States, 1996, BR-14

Nyssa sp.
982-79, W, United States, 1979, 38-SW,
51-NE

Nyssa aquatica
374-94, W, United States, 1994, 11-SW,
21-NE
89-88, W, United States, 1988, 15-SE

Nyssa sinensis
374-81, U, China, 1981, 21-NE

Nyssa sylvatica
22420, W, United States, 1879, 10-SE
654-2008, U, 2008, BR-FAXON-POND
655-2008, U, 2008, 15-SE
966-79, W, United States, 1979, 22-SW

Nyssa sylvatica var. *sylvatica*
509-38, U, 1938, 3-SE
605-2, G, 1893, 21-NE, 21-SE, 4-NE, 7-NE,
7-NW

Nyssa sylvatica 'Pendula'
1094-84, G, 1984, BR-DAWSON-POND

Nyssa sylvatica 'Zydeco Twist'
466-2010, G, 2010, DGB

Oemleria cerasiformis
89-89, W, United States, 1989, BR-14

Ophiopogon chekiangensis
1101-89, W, China, 1989, EG-9

Orixa japonica
15740, W, Japan, 1892, 25-SW
115-2001, W, Japan, 2001, LG-8I

Osmanthus americanus
1140-85, G, 1985, DGB
311-2000, G, 2000, LG-7I
312-2000, G, 2000, EG-7

Ostrya carpinifolia
106-2000, W, Austria, 2000, 31-SE
1295-83, W, Czechoslovakia, 1983, 31-NE,
31-SE
265-2005, W, France, 2005, 31-SE, LG-PER-N
30-2001, W, Italy, 2001, 31-SE
302-2002, W, Georgia, 2002, 31-SE
398-75, W, Croatia, 1975, 31-NE

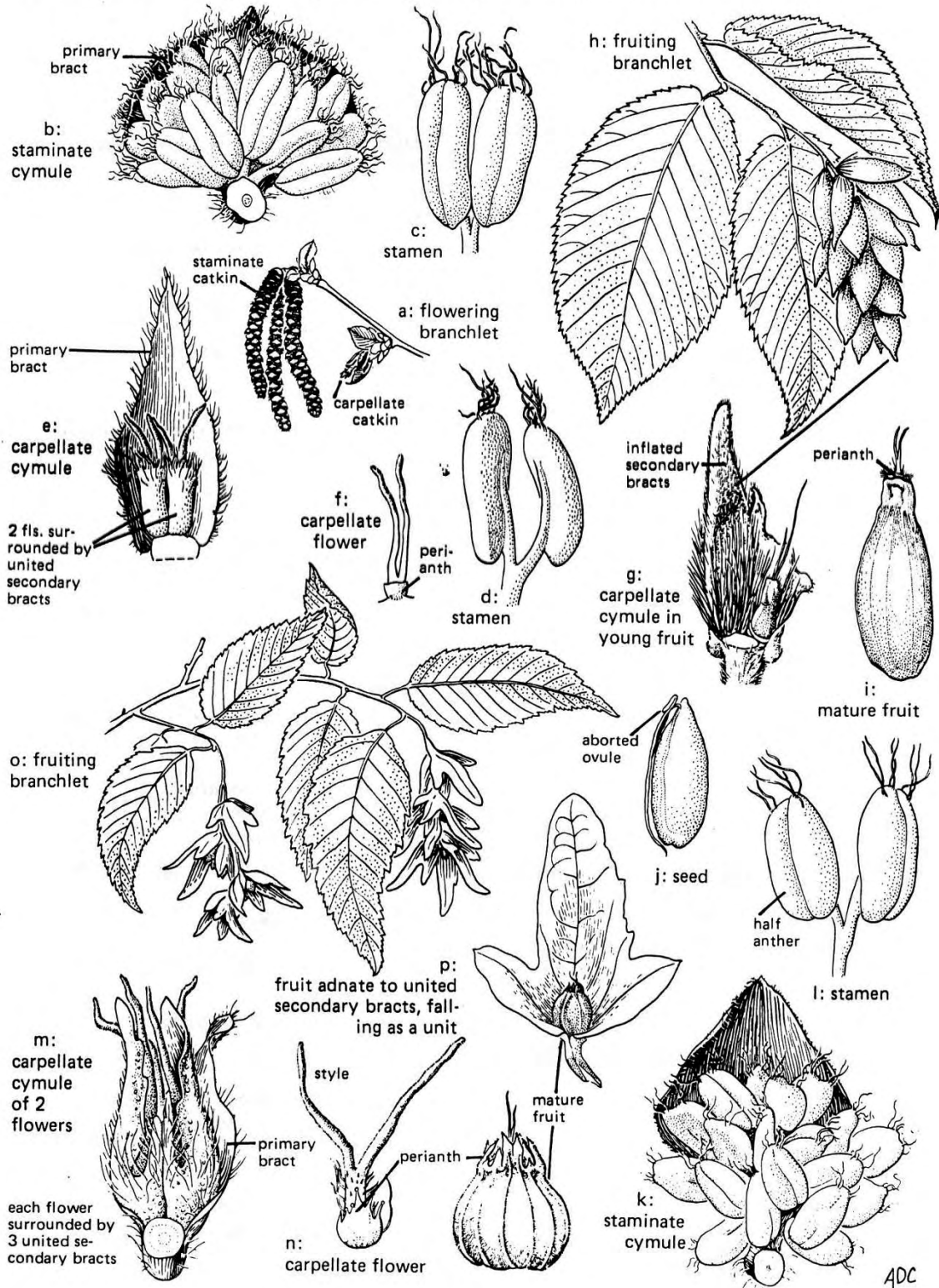
Ostrya japonica
3359, U, 1888, 31-SE
11414, U, 1920, 31-SE, 33-NE

Ostrya rehderiana
108-2002, W, China, 2002, 31-SE

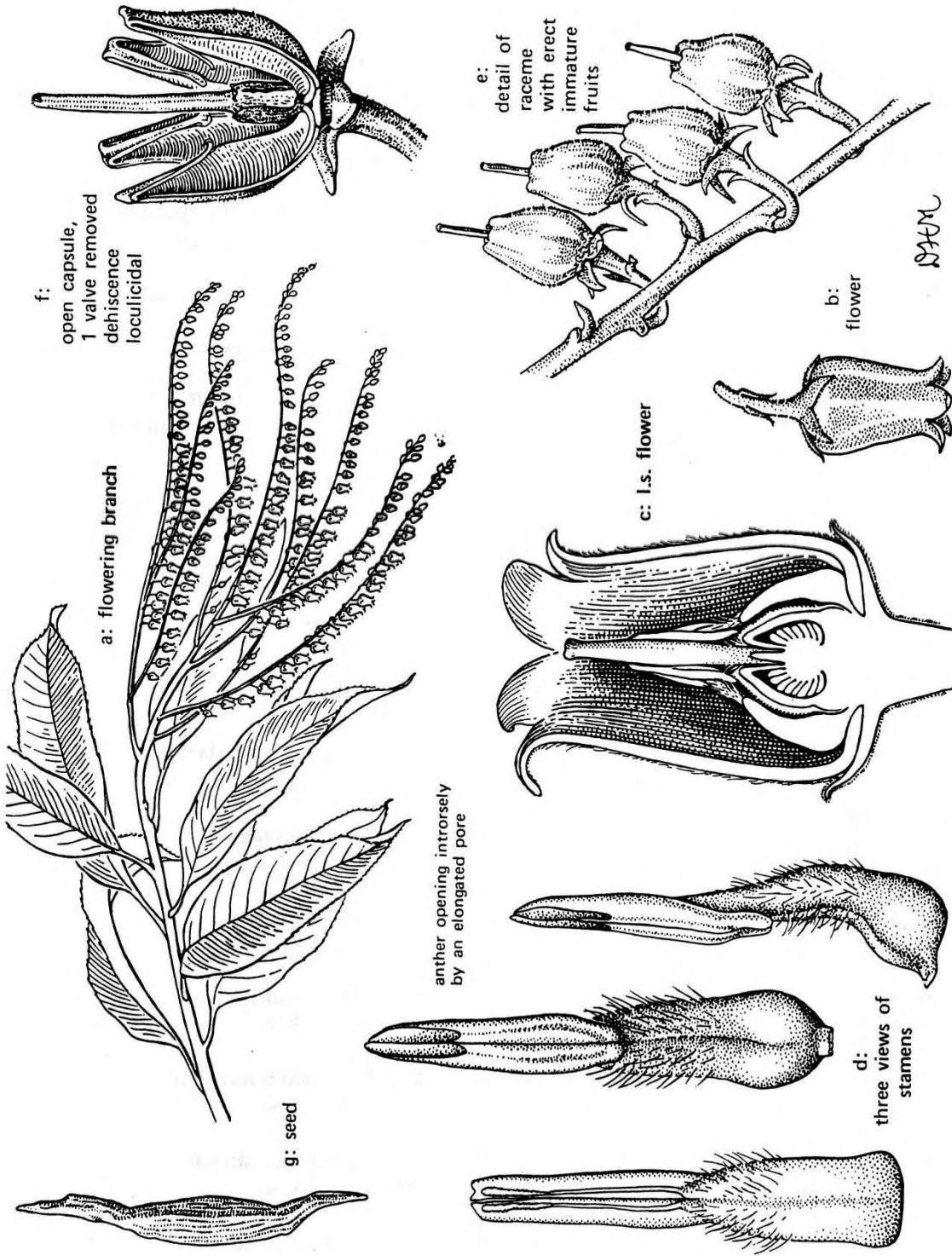
Ostrya virginiana
1373-83, W, Canada, 1983, 15-NW
154-78, W, United States, 1978, 31-NE
1583-83, W, United States, 1983, 31-SE
325-2011, U, 2011, 34-NE
476-2002, W, United States, 2002, 31-NE

Ostrya virginiana f. *glandulosa*
17658, U, 1888, 31-SE
1141-56, G, 1956, 31-SE

BETULACEAE: *Ostrya* & *Carpinus*. a-j, *O. virginiana*; k-p, *C. caroliniana*



ERICACEAE: *Oxydendrum*. a-g, *O. arboreum*



Ostrya virginiana var. *virginiana*
1226, W, United States, 1873, 11-SW
7660, U, 1888, 31-SE
11030, U, 1921, 53-SE
22884, U, 1950, 47-SW, 52-NW, 52-SW

Oxydendrum arboreum
15131, U, 1898, 41-NE
20954, U, 1929, 11-SW, 13-SW, 42-NE
106-2007, W, United States, 2007, 42-NE
270-97, U, 1997, DGB
480-43, U, 1943, 11-SW, 15-NE, 19-NE
510-38, U, 1938, 36-SW, 37-SW, 40-NW
598-39, U, 1939, 1-SW
60-99, W, United States, 1999, 8-NW

Pachysandra procumbens
444-43, U, 1943, 1-SE, 37-SE
681-61, U, 1961, 21-NW, 31-NE

Paeonia 'Adzuma-Shibori' (Dappled Pattern
of the East)
845-62, G, 1962, 13-NE

Paeonia 'Athena'
378-2003, G, 2003, LG-7H

Paeonia 'Black Douglas'
830-62, G, 1962, 13-NE

Paeonia 'Chromatella'
1145-53, G, 1953, EG-9

Paeonia 'Crinkled Linens'
383-2003, G, 2003, LG-7H

Paeonia 'Flambeau'
891-74, G, 1974, DGB

Paeonia 'Fushakin'
573-48, G, 1948, 13-NE

Paeonia 'Gold Sovereign'
1066-56, G, 1956, EG-9

Paeonia 'Gyoku-shokaku' (Palace where
Jewels are Kept)
879-74, G, 1974, EG-9

Paeonia 'Haku-gan' (White Wild Geese)
834-62, G, 1962, EG-9

Paeonia 'Hakuo-jishi' (White Tailed Lion)
1132-53, G, 1953, EG-9

Paeonia 'Harlequin'
1068-56, G, 1956, 13-NE
820-64, G, 1964, 13-NE

Paeonia 'Hephestos' (God of Fire) (Lutea
Hybrid Group)
119-2002, G, 2002, EG-9

Paeonia 'Hira-no-yuki' (Snow of Hira)
549-48, G, 1948, EG-9

Paeonia 'Hozan' (Treasure Mountain)
1052-61, G, 1961, 13-NE
833-62, G, 1962, 13-NE
857-41, G, 1941, EG-9
887-74, G, 1974, EG-9

Paeonia 'Impu-mon' (Gate of Impu)
1049-61, G, 1961, 13-NE

Paeonia 'Kinda Cute'
382-2003, G, 2003, LG-8A

Paeonia 'Konron-koku' (Land of Konron)
840-62, G, 1962, 13-NE

Paeonia 'La Lorraine'
710-58, G, 1958, EG-9
883-74, G, 1974, DGB

Paeonia 'Nike' (Goddess of Victory)
121-2002, G, 2002, EG-9

Paeonia 'Raspberry Sundae'
379-2003, G, 2003, LG-7H

Paeonia 'Roman Gold'
120-2002, G, 2002, EG-9
122-2002, G, 2002, LG-8A

Paeonia 'Suisho-haku' (Crystal Palace)
545-48, G, 1948, EG-9

Paeonia 'Taiyo Sun' (Great Emperor)
 848-62, G, 1962, 13-NE

Paeonia 'Tama-midori' (Green Jade)
 1151-53, G, 1953, 13-NE

Paeonia 'Velours Rouge'
 692-58, G, 1958, 13-NE

Paeonia 'White Charm'
 380-2003, G, 2003, LG-7H

Paeonia 'Yellow Emperor'
 123-2002, G, 2002, 32-NE

Paeonia ludlowii
 829-58, G, 1958, EG-9

Paeonia ostii
 221-2000, W, China, 2000, EG-9

Paeonia rockii (doubled flowered form)
 270-2002, G, 2002, LG-8A

Paeonia suffruticosa 'Angelet'
 936-70, G, 1970, EG-9

Paeonia suffruticosa 'Bijou de Chusan'
 831-62, G, 1962, 32-NE

Paeonia suffruticosa 'Boreas' (God of North Wind)
 271-2002, G, 2002, LG-7H

Paeonia suffruticosa 'Mrs. Anna Smirnow'
 1300-78, G, 1978, EG-9

Paeonia suffruticosa 'Vesuvian'
 937-70, G, 1970, 13-SE

Paeonia suffruticosa var. *papaveracea*
 502-94, W, China, 1994, EG-9

Parrotia persica
 2230, G, 1881, 24-NE
 358-57, G, 1957, 24-NE
 490-77, W, Iran, 1977, 24-NE

541-75, W, Iran, 1975, 24-NE
 633-79, G, 1979, 25-SW
 689-75, G, 1975, 49-NW

Parrotia persica 'Pendula'
 1321-85, U, 1985, 25-SW
 375-92, U, 1992, 19-SW
 629-87, U, 1987, 25-SW

Parrotia persica 'Vanessa'
 620-92, G, 1992, 18-SE

Parrotia subaequalis
 245-2005, Z, China, 2005, LG-PER-E
 304-2004, Z, China, 2004, 25-SW, 32-SE
 357-2006, G, Japan, 2006, 18-SE

Parrotiopsis jacquemontiana
 656-75, U, 1975, 19-SW
 765-65, U, 1965, EG-5

Parthenocissus henryana
 218-2003, G, 2003, LG-5

Parthenocissus inserta
 587-93, W, United States, 1993, 62-SW
 682-63, U, 1963, BR-16-SE
 844-90, W, Canada, 1990, LG-5

Parthenocissus quinquefolia
 23126, G, 1960, 17-SW
 78-2008, W, United States, 2008, 39-SE

Parthenocissus quinquefolia var. *hirsuta*
 282-93, W, Mexico, 1993, LG-5

Parthenocissus quinquefolia var. *saint-paulii*
 5839, G, 1909, BR-17-SW

Parthenocissus tricuspidata
 22577, G, 1938, 3-NW

Parthenocissus tricuspidata 'Veitchii Robusta'
 174-2002, G, 2002, LG-PER-W
 474-68, G, 1968, 1-SW

Paulownia tomentosa
 452-71, W, Japan, 1971, 33-NE
 796-78, G, 1978, 32-SE

Paulownia tomentosa 'Coreana'
1703-77, W, Korea, Republic of, 1977,
21-NW, 21-SE
730-77, W, Korea, Republic of, 1977, 21-NW

Persea palustris
138-2010, W, country unknown, 2010, DGB

Petasites hybridus
656-2008, U, 2008, 3-SE

Petasites japonicus
648-2008, U, 2008, 3-NE

Petteria ramentacea
235-85, Z, Croatia, 1985, 27-SW

Phellodendron amurense
1769-77, W, Japan, 1977, 7-SE
181-79, W, Korea, Republic of, 1979, 7-SE
401-56, U, 1956, 7-NE
590-87, W, Korea, Republic of, 1987, 7-SE

Phellodendron amurense var. *amurense*
13232, U, 1923, 8-SW
23080, G, 1956, 26-NE
143-6, U, 1882, 7-SE

Phellodendron amurense var. *lavallei*
7544, W, Japan, 1905, 10-NW, 5-SW, 7-SE
10724, W, Japan, 1919, 7-SE

Phellodendron amurense var. *sachalinense*
12202-1, U, 1919, 11-NW
362-54, W, Japan, 1952, 7-SE

Phellodendron chinense
7245, U, China, 1907, 7-SE
6963-2, G, 1923, 10-NE

Phellodendron piriforme
21607, U, 1926, 8-SW
1242-57, U, 1957, 10-NE

Philadelphus 'Miniature Snowflake'
416-67, G, 1967, 21-NW

Philadelphus 'Slavinii'
498-76, G, 1976, 27-SE

532-76, G, 1976, 27-SE

Philadelphus caucasicus
214-77, W, country unknown, 1977, 21-SE

Philadelphus confusus
449-94, G, 1994, 13-SW

Philadelphus × *congestus*
539-76, G, 1976, 27-SE

Philadelphus cordifolius
340-92, U, 1992, 13-SW

Philadelphus coronarius
21326, U, 1930, 21-NW
530-76, U, 1976, 21-SE, 27-NE
537-76, Z, United States, 1976, 27-SE
552-74, U, 1974, 27-NE

Philadelphus coronarius 'Primulaeflorus'
620-86, U, 1986, 58-SW

Philadelphus coronarius 'Zeyheri'
6964, G, 1910, 21-NE
474-76, G, 1976, 21-SE

Philadelphus coulteri
132-2000, G, 2000, 27-NE

Philadelphus delavayi
295-85, W, China, 1985, 21-NE

Philadelphus edsonii
343-92, U, 1992, 27-NE

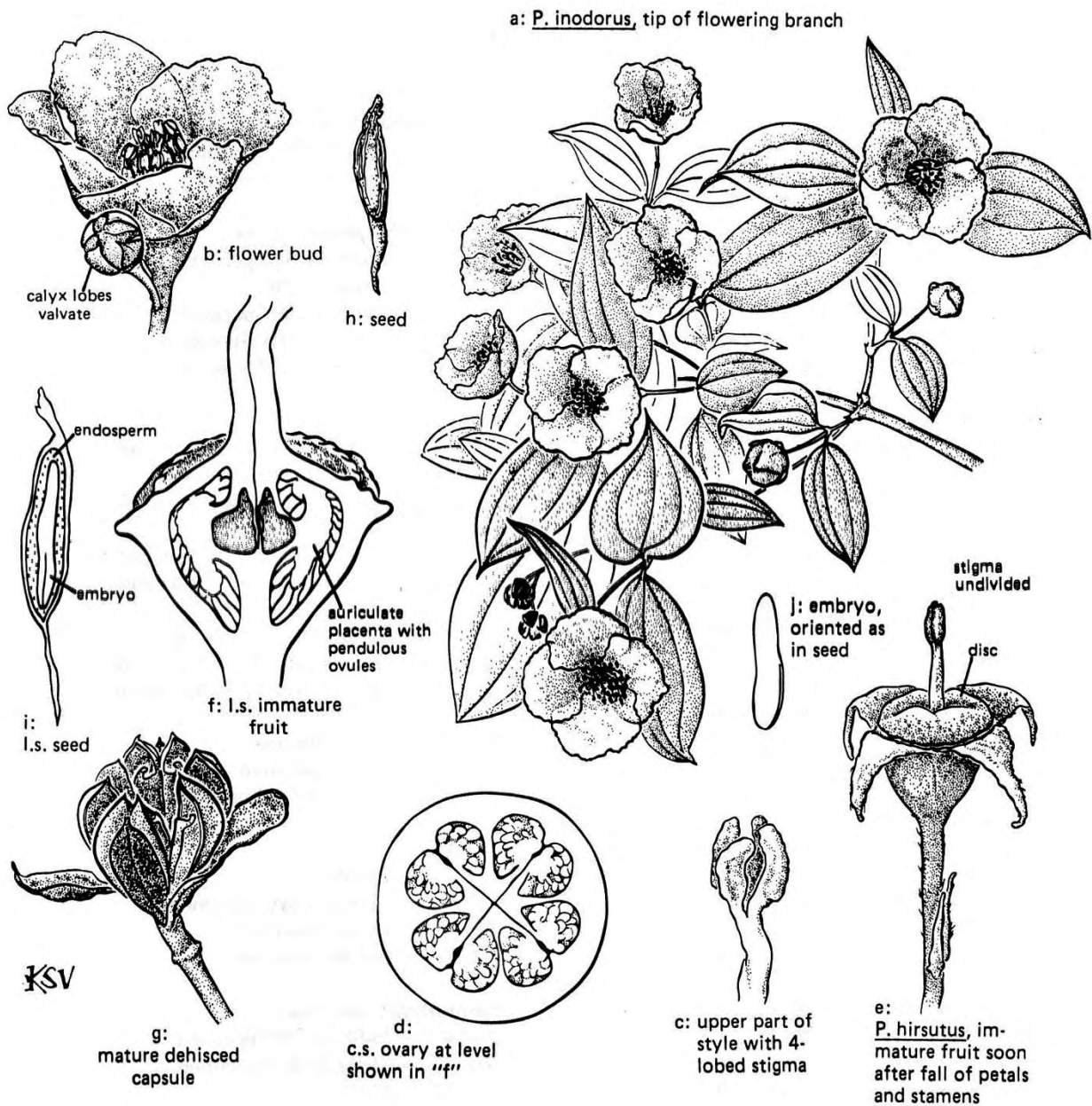
Philadelphus × *falconeri*
340-92, U, 1992, 13-SW

Philadelphus hirsutus
18346, W, United States, 1924, 15-SW

Philadelphus hirsutus var. *grandifolia*
494-2010, W, United States, 2010, DGB

Philadelphus incanus
15366, U, 1907, 21-NE
1842-80, W, China, 1980, 27-NE
584-76, U, 1976, 15-SW
602-84, W, China, 1984, 59-SW

SAXIFRAGACEAE: Philadelphus. a-d, *P. inodorus*; e-j, *P. hirsutus*



- Philadelphus inodorus*
320-79, W, United States, 1979, 21-NW
481-76, U, 1976, 21-NW
482-76, G, 1976, 27-SE
875-84, Z, United States, 1984, 38-NW
- Philadelphus kansuensis*
815-80, Z, China, 1980, 33-SW
- Philadelphus* × *maximus*
6601, G, 1885, 21-NE
- Philadelphus* × *monstrosus*
899-84, G, 1984, 39-NE
- Philadelphus pekinensis*
20085, W, China, 1920, 15-SW
14-95, W, China, 1995, 13-SW
45-95, W, China, 1995, 13-NW, 13-SW
64-90, W, Korea, Republic of, 1990, 21-SE
711-94, W, China, 1994, 13-NW
- Philadelphus* × *polyanthus* 'Gerbe de Neige'
4158, G, 1900, 15-SW
876-84, G, 1984, 59-SE
- Philadelphus pubescens*
702-80, Z, United States, 1980, 52-NE
- Philadelphus pubescens* var. *intectus*
703-80, Z, United States, 1980, 33-SW
- Philadelphus purpurascens*
127-95, W, China, 1995, 13-SW
216-77, W, China, 1977, 21-SE
874-84, G, 1984, 62-NW
- Philadelphus satsumi*
112-2001, W, Japan, 2001, 21-SE
- Philadelphus schrenkii*
306-97, W, China, 1997, 21-SE
519-89, W, China, 1989, 21-NE
605-87, Z, Korea, Republic of, 1987, 27-NW
812-80, U, 1980, 55-NE
838-69, W, Korea, Republic of, 1969, 15-SW
877-84, Z, Korea, Republic of, 1984, 21-NE
- Philadelphus schrenkii* var. *jackii*
1717-77, W, Korea, Republic of, 1977, 21-SE
351-92, Z, Korea, Republic of, 1992, 27-NE
- Philadelphus sericanthus*
217-77, U, 1977, 21-SE
563-88, W, China, 1988, 21-NE
- Philadelphus subcanus*
218-77, W, China, 1977, 27-SE
454-83, W, China, 1983, 52-SW
459-73, U, 1973, 21-SE
848-80, Z, China, 1980, 27-SE
96-74, G, 1974, 21-NE, 21-SE
- Philadelphus subcanus* var. *magdalanae*
540-76, U, 1976, 21-NW
647-57, U, 1957, 15-SW
- Philadelphus tenuifolius*
15653, U, 1923, 15-SW
418-89, W, Korea, Republic of, 1989, 21-NE
519-76, U, 1976, 27-SE
612-88, W, Korea, Republic of, 1988, 21-NE
- Philadelphus texensis* var. *coryanus*
517-90, W, United States, 1990, 21-SE
- Philadelphus triflorus*
233-96, G, 1996, 13-SW
- Photinia* sp.
619-97, W, China, 1997, 22-NE
- Photinia beauverdiana*
1733-80, W, China, 1980, BR-16-SE
- Photinia parvifolia*
106-52, W, Japan, 1952, 51-NE
998-75, U, 1975, BR-FAXON-POND
- Photinia villosa*
283-82, W, Japan, 1982, BR-8
391-86, W, Korea, Republic of, 1986, 41-NE
60-90, W, Korea, Republic of, 1990, BR-12
67-90, W, Korea, Republic of, 1990, BR-12
785-84, W, Korea, Republic of, 1984, BR-11
934-85, W, Korea, Republic of, 1985, BR-10

Photinia villosa var. *laevis*
1239-70, U, 1970, 52-NW
1266-72, U, 1972, 15-SE

Photinia villosa var. *sinica*
18197, W, China, 1923, 19-NW
7801-2, G, 1916, 51-NE

Photinia villosa var. *villosa*
22298, U, 1930, 52-NW
15427-1, G, 1922, 51-NE
806-32, G, 1932, 51-NE
995-37, G, 1937, 19-NE

Photinia villosa var. *zollingeri*
500-85, U, 1985, BR-16-NW

× *Phylliopsis* 'Sugar Plum'
559-2007, G, 2007, LG-7B
67-2007, G, 2007, DGB

Phyllostachys angusta
457-88, G, 1988, 34-SW

Phyllostachys aureosulcata
707-77, U, 1977, 32-SE, EG-3

Phyllostachys bambusoides
369-80, U, China, 1980, 34-SE

Phyllostachys bissetii
1405-84, U, 1984, 26-NW

Phyllostachys congesta
371-80, Z, China, 1980, 34-SE

Phyllostachys dulcis
1019-89, G, United States, 1989, 51-SE
405-68, G, United States, 1968, 10-NE

Phyllostachys flexuosa
373-80, G, 1980, 34-SW
532-80, U, 1980, 34-SW

Phyllostachys glauca
458-88, Z, China, 1988, 44-NE

Phyllostachys makinoi
374-80, U, 1980, 34-SW

Phyllostachys meyeri
375-80, Z, China, 1980, 34-SW

Phyllostachys nigra 'Hale'
492-80, U, 1980, 34-SW

Phyllostachys nigra 'Henon'
971-89, G, 1989, 45-NW

Phyllostachys nuda
369-85, U, 1985, 47-SE

Phyllostachys viridis
380-80, U, 1980, 34-SW

Physocarpus sp.
510-78, W, Canada, 1978, 23-NW

Physocarpus amurensis
126-79, G, 1979, 23-NW

Physocarpus bracteatus
1235-85, U, 1985, BR-10

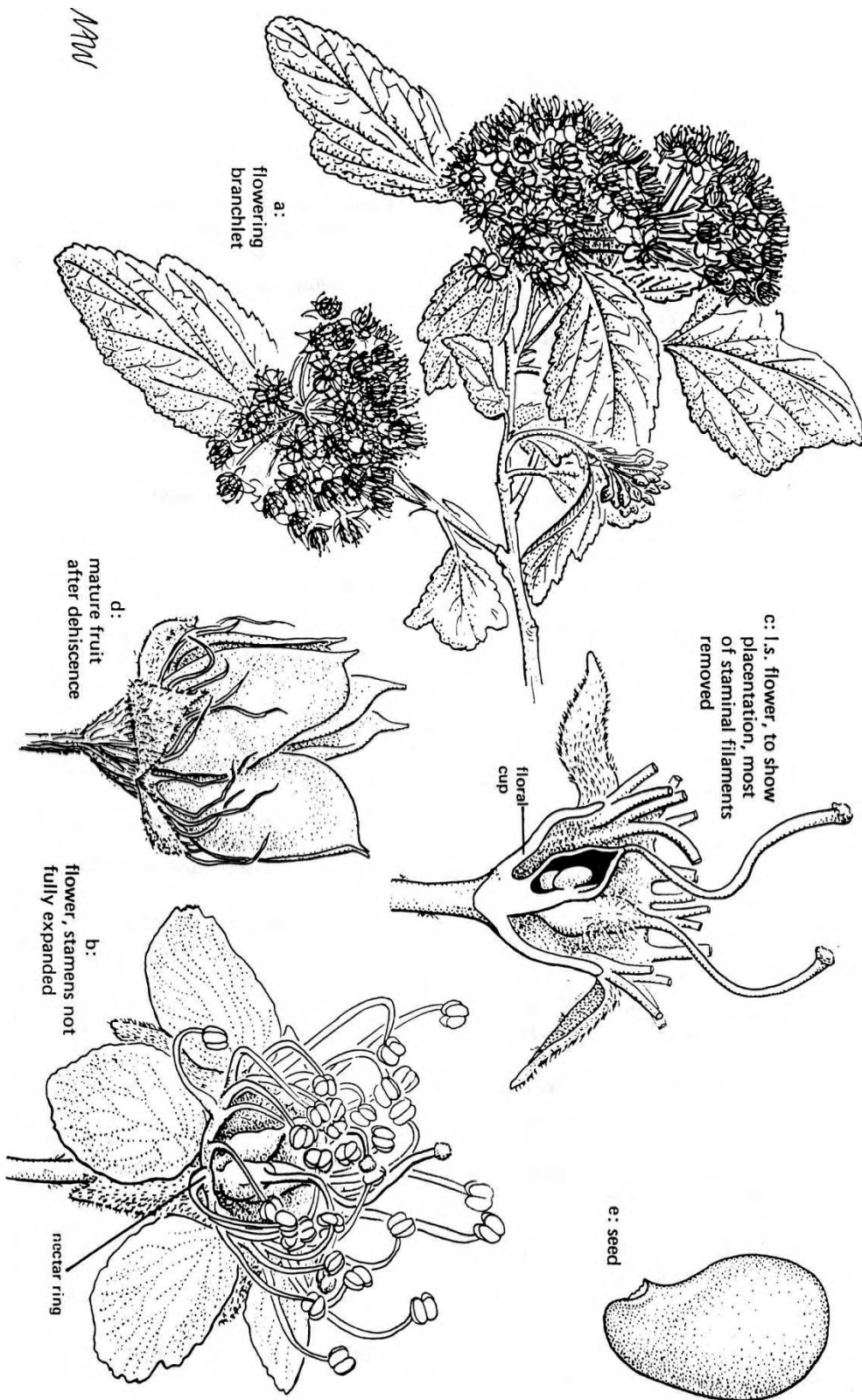
Physocarpus capitatus
136-83, W, United States, 1983, BR-8
201-98, W, United States, 1998, BR-10

Physocarpus malvaceus
549-80, U, 1980, 23-NW

Physocarpus opulifolius
15432, U, 1884, BR-16-NE
1279-82, W, United States, 1982, BR-8
1811-77, G, 1977, 22-NE
1983-77, U, 1977, BR-16-SE
203-89, W, United States, 1989, BR-10

Physocarpus opulifolius 'Dart's Gold'
717-83, G, 1983, 17-SW

ROSACEAE subfamily SPIRAEIOIDEAE: Physocarpus. a-e, *P. opulifolius*



Physocarpus opulifolius 'Luteus'
2160-1, G, 1903, BR-16-NE

Physocarpus opulifolius var. *intermedius*
590-64, G, 1964, BR-16-NE
650-88, W, United States, 1988, BR-10

Physocarpus opulifolius var. *nanus*
538-67, G, 1967, BR-16-NE

Picea sp.
1700-77, W, Japan, 1977, 52-SW
327-2006, U, 2006, DGB
568-2010, - 571-2010, U, 2010, 44-NE
880-85, W, United States, 1985, 52-SW

Picea abies
5921, G, 1910, 35-SW
22885, G, 1950, 33-NE
23026, G, 1953, 30-SW, 33-NE, 35-NW,
35-SW, 49-NE, 49-SW
1053-24, U, 1924, 40-NW
277-87, W, Norway, 1987, 41-SE
307-85, W, Norway, 1985, 41-SE, 52-SW
379-2010, U, 2011, 30-SW
380-2011, U, 2011, 30-SW
517-28, U, 1928, 34-SE
571-28, U, 1928, 49-SW
872-82, G, 1923, 35-SW

Picea abies (variant)
23209, G, 1965, 31-SW
1002-69, U, 1969, 34-NW, 53-SE
1211-83, G, 1983, 31-SW
392-43, G, 1943, 35-NW
461-38, G, 1938, 35-SW
979-69, U, 1969, 34-NE

Picea abies 'Clanbrassiliana'
79-40, G, 1940, 31-SW

Picea abies 'Crippsii'
512-79, G, 1979, LG-PER-S

Picea abies 'Cupressina'
5915, G, 1910, 35-SW

Picea abies 'Elegantissima'
4819, G, 1903, 35-NW

Picea abies 'Ellwangeriana'
22682, G, 1941, 35-SE

Picea abies 'Finedonensis'
507-37, G, 1937, 35-SW

Picea abies f. *acrocana*
475-36, G, 1936, 31-SW

Picea abies f. *conica*
15437, G, 1910, 35-SW
69-89, G, 1989, 35-SW
73-89, G, 1989, 31-SW

Picea abies f. *recurvata*
1031-64, G, 1964, 34-NE

Picea abies 'Gregoryana Parsonsii'
1948, G, 1883, 35-NW

Picea abies 'Inversa'
15441, G, 1907, 35-NW, 35-SW
378-88, U, 1988, 31-NW

Picea abies 'Maxwellii'
12467, G, 1916, 31-NW
21277, G, 1930, 31-NW
621-20, G, 1920, 31-SW

Picea abies 'Microsperma'
15380, G, 1919, 31-SW

Picea abies 'Mucronata'
1411-78, G, 1978, 31-NW

Picea abies 'Nidiformis'
685-41, G, 1941, 31-SW
696-83, G, 1983, LG-PER-S

Picea abies 'Parviformis'
5000, G, 1901, 35-SW

Picea abies 'Pendula'
490-57, G, 1957, 35-SW

Picea abies 'Reflexa'
648-67, G, 1967, 35-NW

Picea abies 'Remontii'
15463, G, 1903, 35-NW, 35-SW

Picea abies 'Stricta'
2190-25, G, 1925, 35-SW

Picea abies 'Virgata'
7318, G, 1913, 35-SW
1701-65, G, 1965, 30-SW
359-88, G, 1988, 34-SW, 44-SE

Picea alcoquiana
5317, U, 1902, 35-NW
16472, U, 1903, 35-SW

Picea alcoquiana var. *acicularis*
60-2001, G, 2001, 39-NE
650-67, G, 1967, 35-NW

Picea alcoquiana var. *reflexa*
651-67, G, 1967, 35-NW

Picea asperata
6284, W, China, 1911, 27-SW, 2-NE, 2-SE,
33-NE, 38-NW, 49-NE, 49-SW
21774, W, China, 1910, 38-NW, 49-SE
23198, G, 1966, 34-SE
260-94, Z, China, 1994, 49-NE
262-94, Z, China, 1994, 35-SW
280-80, Z, China, 1980, 34-SW
388-87, Z, China, 1987, 35-SW
78-27, W, China, 1927, 49-SW

Picea asperata var. *aurantiaca*
577-57, Z, China, 1957, 35-SE
578-57, Z, China, 1957, 35-SW

Picea asperata var. *heterolepis*
6996, W, China, 1911, 49-SW
1263-82, G, 1982, 33-SW
245-92, Z, China, 1992, 34-NE
362-88, Z, China, 1988, 3-NW
374-88, Z, China, 1988, 2-SE

Picea asperata var. *notabilis*
6992, W, China, 1909, 33-NE, 33-SE, 38-NW,
49-SW

16469, W, China, 1911, 2-NE, 33-SW
12-96, Z, China, 1996, 40-NW
252-92, Z, China, 1992, 34-NE
393-88, Z, China, 1988, 49-SW

Picea asperata var. *ponderosa*
6998, W, China, 1911, 27-SE, 27-SW, 33-SW,
49-SW
392-88, Z, China, 1988, 2-NE, 2-SE

Picea brachytyla
458-80, W, China, 1980, 59-NE

Picea chihuahuana
315-88, W, Mexico, 1988, 39-NE, 39-NW
625-89, W, Mexico, 1989, 39-NE
734-78, U, 1978, 34-NE

Picea crassifolia
1274-79, W, China, 1979, 52-SW
459-80, W, China, 1980, 31-NW, 33-NW,
65-NW

Picea engelmannii
15877, W, United States, 1922, 35-SE, 35-SW
16477, W, United States, 1879, 35-SE
21300, U, 1930, 35-SE
1148-72, W, United States, 1972, 47-SW
1149-72, W, United States, 1972, 52-NE
118-77, W, United States, 1977, 26-NW
1310-79, W, Canada, 1980, 53-NE, 63-NW
1349-78, W, Canada, 1978, 59-SE

Picea engelmannii × *glauca* var. *albertiana*
13417, W, United States, 1918, 34-NE
377-85, G, 1985, 35-SE
393-87, Z, United States, 1987, 35-SE, 35-SW

Picea engelmannii × *pungens*
817-39, G, 1939, 35-SW

Picea × *fennica*
15464, U, Sweden, 1901, 30-SW

Picea glauca
23199, U, 1966, 40-NE
1000-82, W, United States, 1982, 36-SW,
49-NE
1145-72, W, United States, 1972, 62-NE
1147-72, W, United States, 1972, 35-SE
1351-78, W, Canada, 1978, 59-SE
263-90, W, Canada, 1990, 40-NE
611-93, W, United States, 1993, 40-NE

Picea glauca var. *albertiana* f. *conica*
11586, U, 1922, 31-SW
182-2005, G, 2005, LG-2L

Picea glauca var. *densata*
16481, U, 1907, 34-NE, 35-NW

Picea glauca × *mariana*
1477-60, U, 1960, 34-NE

Picea glehnii
16485, U, 1894, 35-NW, 49-NE
392-86, W, Japan, 1986, 35-SW
721-80, W, country unknown, 1980, 55-NE
906-86, W, Japan, 1986, 49-SW

Picea jezoensis
1275-79, W, China, 1979, 35-SE, 40-NE
1452-66, U, 1966, 59-NE
489-2002, W, China, 2002, 44-NE
502-77, W, Korea, Republic of, 1977, 31-NW,
52-NE
925-86, W, Japan, 1986, 35-SW

Picea jezoensis var. *komarovii*
47-95, W, China, 1995, 39-NE
488-2002, W, China, 2002, 44-NE

Picea koraiensis
1276-79, W, China, 1979, 52-NE
1289-60, U, 1960, 29-SE, 30-SW, 35-NW
1350-78, W, 1978, 59-NE
389-88, Z, Korea, Democratic People's
Republic of, 1988, 40-NE
459-77, U, 1977, 55-SE, 59-SE
460-80, W, Korea, Democratic People's
Republic of, 1980, 34-NE
503-40, W, Korea, Democratic People's
Republic of, 1940, 34-SE

Picea koyamai
7707, W, Japan, 1915, 27-SE, 2-NE, 2-SE,
33-NE
10979, G, 1921, 34-SE
11031, U, 1921, 34-SE
15821, G, 1923, 35-SW
244-92, Z, Japan, 1992, 34-NE
261-94, Z, Japan, 1994, 40-NW
370-88, Z, Japan, 1988, 2-NE, 2-SE

Picea likiangensis
175-65, U, 1965, 35-NW
209-95, Z, China, 1995, 40-NW
461-80, W, China, 1980, 59-NE
654-67, G, 1967, 35-NW

Picea likiangensis var. *montigena*
6704, W, China, 1911, 27-SE, 33-NE, 49-SW,
53-NW
243-92, Z, China, 1992, 39-NE, 39-SE
379-88, Z, China, 1988, 39-NE

Picea mariana
1336-78, W, Canada, 1978, 35-NW
250-92, Z, Canada, 1992, 34-SE
771-93, W, Canada, 1993, 34-SE

Picea mariana 'Doumetii'
277-80, G, 1980, 31-SW

Picea mariana 'Ericoides'
1169-24, W, Canada, 1924, 35-NW

Picea mariana 'Nana'
1162-68, G, 1968, DGB
251-65, G, 1965, 1-SW
889-69, G, 1969, DGB

Picea × *mariorika*
585-68, G, 1968, 30-SW, 34-NE
655-67, G, 1967, 39-NE

Picea mexicana
621-89, W, Mexico, 1989, 35-NW

Picea meyeri

1341-78, W, 1978, 35-NW
20-48, Z, Russian Federation, 1948, 35-NW
228-43, Z, China, 1943, 34-NE

Picea × notha

13406, G, 1894, 35-NW

Picea obovata

7709, W, country unknown, 1911, 34-SE
1335-78, W, 1978, 56-SW
311-98, W, Finland, 1998, 27-NE, 35-SW
354-79, W, Russian Federation, 1979, 40-NE,
40-NW

Picea omorika

11143, G, 1919, 34-NE
504-70, G, 1970, 35-NW, 3-SW

Picea omorika 'Expansa'

605-71, G, 1971, 34-NE
641-72, G, 1972, 30-SW

Picea omorika 'Pendula'

1429-64, G, 1964, 34-NE

Picea orientalis

1491, U, 1873, 35-SW
16503, W, country unknown, 1903, 35-SE
17639, U, 1874, 35-NE, 35-SE
23031, G, 1953, 33-NE
378-85, Z, country unknown, 1985,
35-NW

Picea orientalis 'Atrovirens'

656-67, G, 1967, 35-NW

Picea orientalis 'Compacta'

348-68, G, 1968, 30-SW

Picea orientalis 'Gowdy'

152-56, G, 1956, 34-SE
184-59, G, 1959, 35-NW
381-66, G, 1966, 35-NW

Picea orientalis 'Nutans'

789-56, U, 1956, 44-SE

Picea polita

16505, U, 1895, 34-SE
419-87, U, 1987, 39-NE, 39-NW
420-87, U, 1987, 39-NE

Picea pungens

1476, W, United States, 1874, 35-SE
16508, U, 1899, 35-NW
1331-81, W, United States, 1981, 30-SW

Picea pungens (variant)

458-57, U, 1957, 50-NW
958-66, G, 1966, 31-SW

Picea pungens 'Argentea'

346-68, G, 1968, 40-NE

Picea pungens 'Compacta'

16509, G, 1890, 40-NE
372-85, G, 1985, 31-SW, LG-PER-S

Picea pungens 'Glauca'

22808, W, United States, 1874, 35-SE

Picea pungens 'Glauca Compacta'

1409-67, G, 1967, 40-NE

Picea pungens 'Hoopsii'

436-64, G, 1964, 40-NE

Picea pungens 'Hunnewelliana'

20809, G, 1929, 31-SW
1277-78, G, 1978, LG-PER-S

Picea pungens 'Iseli's Fastigiata'

2073-77, G, 1977, 14-NW

Picea pungens 'Koster'

827-64, G, 1963, 35-SE, 40-NW

Picea pungens 'Moerheimii'

21273, G, 1930, 35-SE, 40-NE
100-58, G, 1958, 35-SE
230-49, G, 1949, 35-SE

Picea pungens 'Royal Blue'

384-69, G, 1969, 40-NE

Picea pungens 'Speks'
659-67, G, 1967, 40-NW

Picea pungens 'Thompson Blue'
1175-61, G, 1961, 35-SE

Picea purpurea
6995, W, China, 1911, 38-NW, 44-SE
11269, G, 1922, 34-SE
1277-79, W, China, 1979, 65-NW
462-80, W, China, 1980, 63-SW, 65-NW

Picea rubens
16511, W, United States, 1895, 40-NE,
40-NW, 44-SE
1221-85, W, United States, 1985, 34-NE
1343-78, W, 1978, 35-SE
1348-78, W, 1978, 34-NE
1369-85, W, United States, 1985, 35-SW
1372-85, W, United States, 1985, 30-SW
247-92, Z, United States, 1992, 35-SW
612-93, W, United States, 1993, 34-SE, 49-SE

Picea schrenkiana
1278-79, W, China, 1979, 39-NE
556-86, W, Uzbekistan, 1986, 35-SW, 40-NW

Picea sitchensis
1344-78, W, 1978, 59-NE
166-93, W, United States, 1993, 35-SE
203-80, W, Canada, 1980, 33-NE, 35-SE
651-88, W, United States, 1988, 34-SE, 35-SE
686-93, W, United States, 1993, 49-SE

Picea smithiana
349-84, W, Pakistan, 1984, 39-NE

Picea wilsonii
7599, W, China, 1910, 40-NW
16515, W, China, 1909, 33-NE, 38-NW,
49-SW
16520, W, China, 1912, 27-SE, 33-NE, 40-NW
16521, W, China, 1908, 3-NW
1264-82, G, 1982, 33-SW
1279-79, W, China, 1979, 33-SE, 52-NE,
65-NW
863-89, W, China, 1989, 35-SW

Picrasma quassioides
1493-67, Z, Korea, Republic of, 1967, EG-5
585-79, G, 1979, 8-SW
610-83, U, 1983, 50-NE
673-70, Z, Korea, Republic of, 1970, 24-NE
683-75, Z, Korea, Republic of, 1975, 8-SW
684-75, Z, Korea, Republic of, 1975, 8-SW

Pieris 'Brouwer's Beauty'
1502-77, G, 1977, 37-SW
195-2006, G, 2006, LG-6A
607-2003, G, 2003, LG-6A
925-76, G, 1976, 36-SE

Pieris floribunda
14919, U, 1885, 36-SE
14921, U, 1903, 36-SE
18144, U, 1925, 36-SE
19448, U, 1926, 36-SE
21301, U, 1930, 37-SW
311-74, G, 1974, 26-SE

Pieris floribunda 'Millstream'
609-63, G, 1963, 37-SW
857-69, G, 1969, 37-SW

Pieris japonica
1253-62, G, 1962, 37-NW
1255-62, G, 1962, 37-SW
1440-63, G, 1963, 37-NW
1441-63, G, 1963, 37-NW
281-74, G, 1974, 26-SW
526-82, G, 1982, 32-SW

Pieris japonica 'Compacta'
1481-63, G, 1963, 3-NE

Pieris japonica 'Geisha'
1977-81, G, 1981, DGB

Pieris japonica 'Mountain Fire'
280-2003, G, 2003, LG-6B

Pieris japonica 'Scarlet O'Hara'
348-71, G, 1971, DGB

Pieris japonica 'Variegata'
1146-79, G, 1979, DGB

Pieris japonica 'White Cascade'
109-63, G, 1963, 1-SE
736-69, G, 1969, DGB

Pinus aristata
134-86, W, United States, 1986, 31-NW
168-44, W, United States, 1944, 31-SW
653-88, W, United States, 1988, 31-NW
721-61, G, 1961, LG-PER-S

Pinus arizonica
1081-90, W, Mexico, 1990, 39-NE
375-67, W, United States, 1967, 30-SE

Pinus armandii
17-99, W, China, 1999, 35-NE
239-2000, W, China, 2000, 32-SE, 36-NW
24-49, W, China, 1949, 30-SW
472-54, G, 1954, 30-SW, 35-SW

Pinus armandii × *lambertiana*
534-59, G, 1959, 34-SE

Pinus ayacahuite var. *brachyptera*
309-82, W, Mexico, 1982, BR-16-NE

Pinus banatica
77-71, U, 1970, 22-SW

Pinus banksiana
1380-83, W, Canada, 1983, 35-NE
350-82, U, 1982, 59-SE

Pinus bungeana
244-2000, W, China, 2000, 32-NE
245-2000, W, China, 2000, EG-21-NE
466-80, W, China, 1980, 32-NE
566-79, G, 1979, 53-SW
663-49, U, 1949, 35-NW
79-2002, W, China, 2002, 36-NW
80-2002, W, China, 2002, 36-NW

Pinus cembra
13411, G, 1912, 35-NE

Pinus contorta
938-88, W, United States, 1988, 36-SW

Pinus contorta var. *latifolia*
12-2003 W, United States, 2003, 36-SW
1323-81, W, United States, 1981, 59-NE

Pinus densiflora
11373, W, Korea, Republic of, 1917, 45-SW
16536, W, Japan, 1892, 35-NE
1724-77, W, Japan, 1977, 36-SW
436-84, Z, Japan, 1984, 36-SW
521-88, Z, Korea, Republic of, 1988, 35-NE
524-88, Z, Japan, 1988, 35-NE
64-98, Z, Japan, 1998, 44-SE

Pinus densiflora 'Umbraculifera'
477-57, G, 1957, 44-SE
618-38, G, 1938, 31-NW

Pinus densiflora × *nigra* ssp. *nigra*
735-83, U, 1983, 52-SW

Pinus echinata
16541, W, United States, 1898, 30-SW

Pinus flexilis
16546, U, 1892, 49-SW
254-79, Z, United States, 1979, 30-SE
397-88, U, 1988, 39-SE
499-51, U, 1951, 35-NE
531-88, Z, United States, 1988, 30-SW
606-57, U, 1957, 31-SW
611-57, U, 1957, 35-NE
63-98, Z, United States, 1998, 35-NE

Pinus flexilis 'Glauca'
351-71, G, 1971, 30-SE

Pinus flexilis 'Glauca Pendula'
203-2003, U, 2003, 31-NW

Pinus heldreichii
1276-64, W, Republic of Montenegro, 1964,
45-SW

Pinus henryi
297-2000, W, China, 2000, 36-NW

Pinus × *holfordiana*
407-80, G, 1980, 16-NE

431-54, G, 1954, 30-SW
479-57, G, 1957, 31-SW, 34-SE
726-83, G, 1983, 16-SE

Pinus × holfordiana × parviflora
497-30, G, 1930, 35-NW

Pinus hwangshanensis
1282-79, W, China, 1979, 53-SE
368-76, U, 1976, 29-SE, 57-NW

Pinus jeffreyi
16548, U, 1908, 36-NW
522-2002, W, United States, 2002, 31-SW,
35-NE

Pinus koraiensis
1932, G, 1883, 49-NE
10940, G, 1921, 36-SW
11242, W, Korea, Republic of, 1918, 30-SW
1264-83, W, Korea, Republic of, 1983, 16-NE,
34-SE
1476-60, U, 1960, 31-SW
378-97, W, China, 1997, 36-NW
379-2001, W, Korea, Democratic People's
Republic of, 2001, 21-SE, 35-NE
402-97, W, China, 1997, 21-SE, 30-SE, 36-NW
49-95, W, China, 1995, 36-NW, 36-SW
538-90, W, Korea, Republic of, 1990, 44-SE
651-93, W, China, 1993, 35-NE

Pinus koraiensis 'Glauca'
239-66, G, 1966, 30-SE

Pinus lambertiana
16552, G, 1884, 36-SW
530-88, G, 1988, 30-SW, 35-NE

Pinus leucodermis
478-57, G, 1957, 34-SE, 35-SW

Pinus monophylla
400-88, Z, United States, 1988, LG-PER-S

Pinus monticola
16561, G, 1886, 36-SW
16562, U, 1900, 35-NW, 49-NE
3-84, W, United States, 1984, 44-SE

1244-78, W, Canada, 1978, 16-NE
1420-5, G, 1884, 34-SE, 36-SW
734-83, U, 1983, 16-NE, 16-SE

Pinus monticola × parviflora var. *himekomatsu*
266-46, G, 1946, 2-NE, 3-NW
269-46, G, 1946, 34-SE

Pinus monticola × strobus
267-46, G, 1946, 35-NE

Pinus mugo
723-77, W, Slovenia, 1977, 25-SW

Pinus mugo var. *mugo*
8098, U, 1918, 31-SW
1242-73, G, 1973, 31-SW
213-61, G, 1961, 25-SW
274-50, G, 1950, 31-NW
276-53, G, 1953, 25-SW
667-50, G, 1950, 31-NW

Pinus mugo var. *mugo* 'Prostrata'
426-57, G, 1957, 31-NW

Pinus nigra (variant)
356-88, Z, Turkey, 1988, 31-NW

Pinus nigra 'Arnold Sentinel'
192-86, W, Turkey, 1986, 39-NE
263-95, Z, Turkey, 1995, LG-PER-W
Pinus nigra 'Pyramidalis'
482-57, G, 1957, 36-NW

Pinus nigra ssp. *nigra*
4802, W, Bosnia and Herzegovina, 1902,
44-SE, 53-NW
304-78, W, Bosnia and Herzegovina, 1978,
26-NW

Pinus nigra ssp. *pallasiana*
1013-90, W, Turkey, 1990, 35-NE
1038-65, W, Ukraine, 1965, 35-NE
565-66, W, Ukraine, 1966, 31-SW
575-94, W, Turkey, 1994, 30-NW, 35-NW,
55-SE
686-67, W, Russian Federation, 1967, 30-NE

Pinus nigra ssp. *salzmannii*
5717, U, 1907, 44-SE
16567, U, 1901, 35-NW
305-92, G, 1992, LG-PER-W
481-57, G, 1957, 34-SE

Pinus parviflora
1539-71, U, 1971, 26-SE
1732-77, W, Japan, 1977, 27-SE, 58-NW
192-90, U, 1990, LARZ
759-86, U, 1986, LARZ
893-49, U, 1949, LARZ

Pinus parviflora × *strobilus*
263-46, G, 1946, 33-SW

Pinus parviflora 'Glauca'
551-72, G, 1972, DGB

Pinus parviflora var. *himekomatsu*
16568, U, 1894, 44-SE
43-96, G, 1996, 35-NE

Pinus parviflora var. *pentaphylla*
1421, G, 1881, 35-NE
195-65, G, 1965, 31-SW
62-98, G, 1998, 35-NE

Pinus peuce
1936, U, 1883, 34-SE
131-74, W, Macedonia, 1974, 26-NE
396-88, Z, Bulgaria, 1988, 35-NE, 36-NW
420-32, U, 1932, 49-NW

Pinus peuce 'Jeddoloh'
383-76, G, 1976, 27-NE

Pinus peuce 'Westbury'
1374-67, G, 1967, DGB

Pinus pinaster 'Aberdoniae'
768-76, U, 1976, 30-NW

Pinus ponderosa
9-2003, W, United States, 2003, 30-SE, 62-NE
521-2002, W, United States, 2002, 25-SW,
62-NE
689-93, W, United States, 1993, 36-NW, 56-NW

Pinus ponderosa var. *ponderosa*
16547, U, 1902, 44-SE
1311-79, W, Canada, 1980, 59-NE
205-80, W, United States, 1980, 59-NE
424-86, W, United States, 1986, 35-NW
92-89, W, United States, 1989, 44-SE

Pinus ponderosa var. *scopulorum*
1225-84, W, United States, 1984, 35-NE

Pinus pumila
1148-86, W, Japan, 1986, 36-SW
903-86, W, Japan, 1986, 31-NE
947-86, W, Japan, 1986, 31-NE

Pinus pumila 'Typica'
1061-71, U, 1971, DGB

Pinus pungens
10706, U, 1921, 35-NE
355-79, W, United States, 1979, 34-NE
580-2007, W, United States, 2007, 35-NE

Pinus resinosa
16573, W, United States, 1879, 36-SW
18126, G, 1925, 45-NW
273-47, G, 1947, 2-NE, 3-NW
730-39, G, 1939, 27-SE

Pinus rigida
16574, G, 1883, 35-NE
22950, G, 1951, 36-NW
112-2006, W, United States, 2006, 30-NW
1315-82, G, 1982, 31-SW, 36-NW
899-70, W, United States, 1970, LARZ

Pinus × *schwerinii*
264-46, G, 1946, 33-NE, 33-SE
265-46, G, 1946, 33-SE
445-62, G, 1962, 35-NE

Pinus sibirica
1283-79, W, China, 1979, 44-SE
1451-66, U, 1966, 34-NE
356-79, W, Russian Federation, 1979, 35-NW
469-80, W, China, 1980, 30-SW
953-26, U, 1926, 30-SW

Pinus strobiformis

1063-90, W, Mexico, 1990, 26-SE
704-28, W, United States, 1928, 34-SE
991-70, G, 1970, 31-SW, 35-NE

Pinus strobus

1017-85, U, 1985, 36-NW
107-43, G, 1943, 35-NE, 36-NW
163-50, G, 1950, 31-SW
25-2001, Z, United States, 2001, 31-NW
264-47, G, 1947, 22-SE
265-74, G, 1974, 26-SE
313-63, W, United States, 1963, 31-NW
537-41, G, 1940, 22-SE
589-75, W, United States, 1975, 23-NW
873-93, W, Canada, 1993, LG-PER-W

Pinus strobus 'Alba'

267-65, G, 1965, 31-SW

Pinus strobus 'Blue Shag'

209-2007, G, 2007, LG-PER-S

Pinus strobus 'Brevifolia'

5334, G, 1905, 31-SW

Pinus strobus 'Contorta'

788-52, G, 1952, 31-SW
86-56, G, 1956, 35-NE

Pinus strobus 'Fastigiata'

4013, G, 1897, 44-SE
11354, G, 1920, 36-SW
22788, G, 1947, 39-SE
167-2002, G, 2002, LG-PER-W
394-88, G, 1988, BR-16-SE, BR-17-SW
426-2008, G, 2008, 27-NE, 28-NW

Pinus strobus 'Ontario'

231-51, G, 1959, 31-NW

Pinus strobus 'Pendula'

209-51, G, 1951, 36-NW
85-56, G, 1956, DGB

Pinus strobus 'Umbraculifera'

12466, G, 1931, 31-NW

Pinus strobus 'White Mountain'

288-76, G, 1976, 36-NW

Pinus sylvestris

16587, G, 1887, 35-NW, 36-SW
22535, G, 1936, 36-NW
22802, G, 1948, 31-SW
1530-83, W, Norway, 1983, 51-SE, 59-SE
308-85, W, Norway, 1985, 30-SE, 35-NE
436-57, G, 1957, 36-NW
438-57, U, 1957, 35-NE, 36-NW
488-88, W, Czechoslovakia, 1988, 30-NW
497-28, U, 1928, 30-SW

Pinus sylvestris f. *hamata*

1292-61, W, Afghanistan, 1961, 30-SE
224-93, Z, Afghanistan, 1993, 30-SW
44-96, Z, Afghanistan, 1996, 44-SE
947-26, U, 1926, 30-SW

Pinus sylvestris 'Moseri'

1642-67, G, 1967, 30-SE

Pinus sylvestris 'Watereri'

488-57, G, 1957, 31-NW, 36-NW

Pinus sylvestris var. *lapponica*

16589, W, Finland, 1899, 30-NW, 30-SW
89-58, Z, Finland, 1958, 44-SE

Pinus sylvestris var. *mongolica*

1284-79, W, China, 1979, 59-NE
652-93, W, China, 1993, 36-NW, 56-NW,
56-SW
996-79, U, 1976, 29-SE

Pinus sylvestris var. *sylvestriiformis*

401-97, W, China, 1997, 31-SW, 35-NE,
36-SW

Pinus tabuliformis

11372, W, China, 1918, 49-NE
16576, W, China, 1909, 31-SW
246-82, G, 1982, 27-SE
289-64, W, China, 1964, 31-SW
545-59, G, 1959, 31-SW
739-83, Z, China, 1983, 54-SW

Pinus tabuliformis var. *densata*
467-80, W, China, 1980, 36-NW

Pinus thunbergii
11371, W, country unknown, 1919, 35-NE,
44-SE, 49-NW, 49-SW
16592, W, Japan, 1893, 49-SW
175-91, U, 1991, 44-SE
1767-77, W, Japan, 1977, 35-NE, 35-SE
294-92, Z, Japan, 1992, 35-NE, 36-SW
451-84, Z, country unknown, 1984, 35-NE
58-96, Z, Japan, 1996, 36-NW
960-85, W, Korea, Republic of, 1985, 36-NW

Pinus torreyana
98-85, W, United States, 1985, 26-NW

Pinus uncinata
240-2001, W, France, 2001, 31-NW

Pinus virginiana
1413, G, 1873, 35-NE
22533, G, 1936, 35-NE

Pinus wallichiana
163-86, U, United States, 1986, 53-SW
268-46, G, 1946, 34-SE
468-72, G, 1972, 35-NE
83-94, W, India, 1994, 1-SW, 26-SE
84-94, W, India, 1994, 30-SW, 49-NE

Pistacia chinensis
1073-79, G, 1979, 8-SW
501-2002, W, China, 2002, 8-SW

Platanus × acerifolia
16593, G, 1885, 13-SW
16594, G, 1894, 13-SW
16595, G, 1891, 13-SE
22167, G, 1932, 13-SE
336-39, G, 1939, 13-SW
516-37, G, 1937, 19-NW

Platanus × acerifolia 'Pyramidalis'
338-63, G, 1963, 13-SW

Platanus × acerifolia 'Suttneri'
1984-65, G, 1965, 19-NE

Platanus occidentalis
12111, G, 1918, 54-SW
22040, G, 1904, 13-NW, 13-SE
111-58, W, United States, 1958, 13-SW
1236-79, W, United States, 1980, 19-NE,
19-NW
1726-81, W, Canada, 1981, 13-SE, 38-SW

Platanus orientalis
735-79, G, 1979, 13-SW, 19-NW

Platycarya strobilacea
1747-77, W, Japan, 1977, 24-SE, 25-NE
1781-77, W, Korea, Republic of, 1977, 24-SE

Platycladus orientalis
155-83, U, 1983, 52-NE
18-99, W, China, 1999, 31-SW
618-95, Z, China, 1995, 31-SW

Platycladus orientalis 'Aurea Nana Raffels'
998-73, G, 1973, 31-SW

Platycladus orientalis 'Goodwin'
100-61, G, 1961, 36-NW

Poliathyrsis sinensis
1036-85, Z, China, 1985, EG-9
637-81, W, China, 1981, 33-NE

Polygonatum multiflorum 'Weihenstefan'
494-95, G, 1995, 1-SE

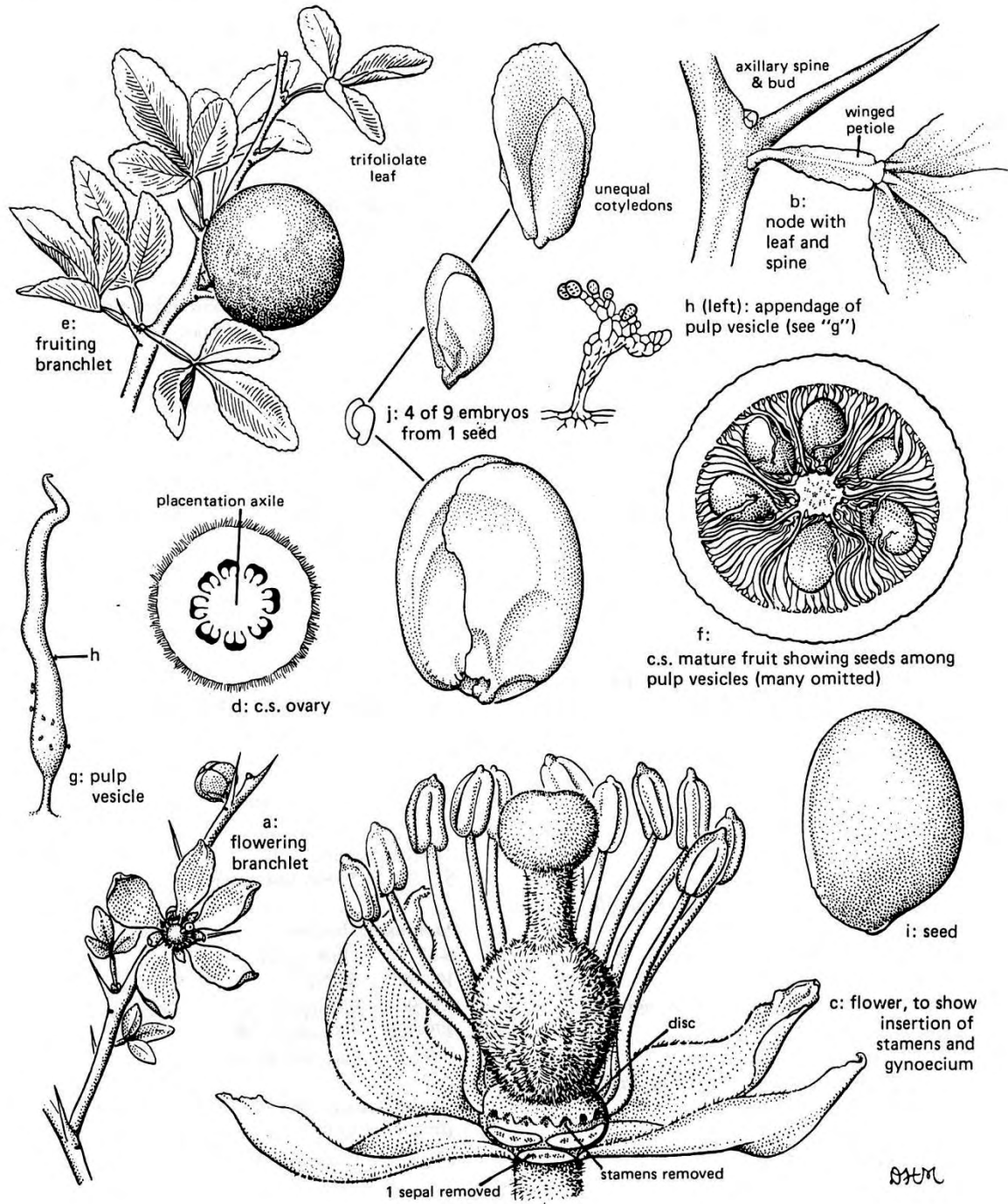
Poncirus trifoliata
1138-79, G, 1980, 7-SW

Populus 'Roxbury'
549-34, G, 1934, 55-NE

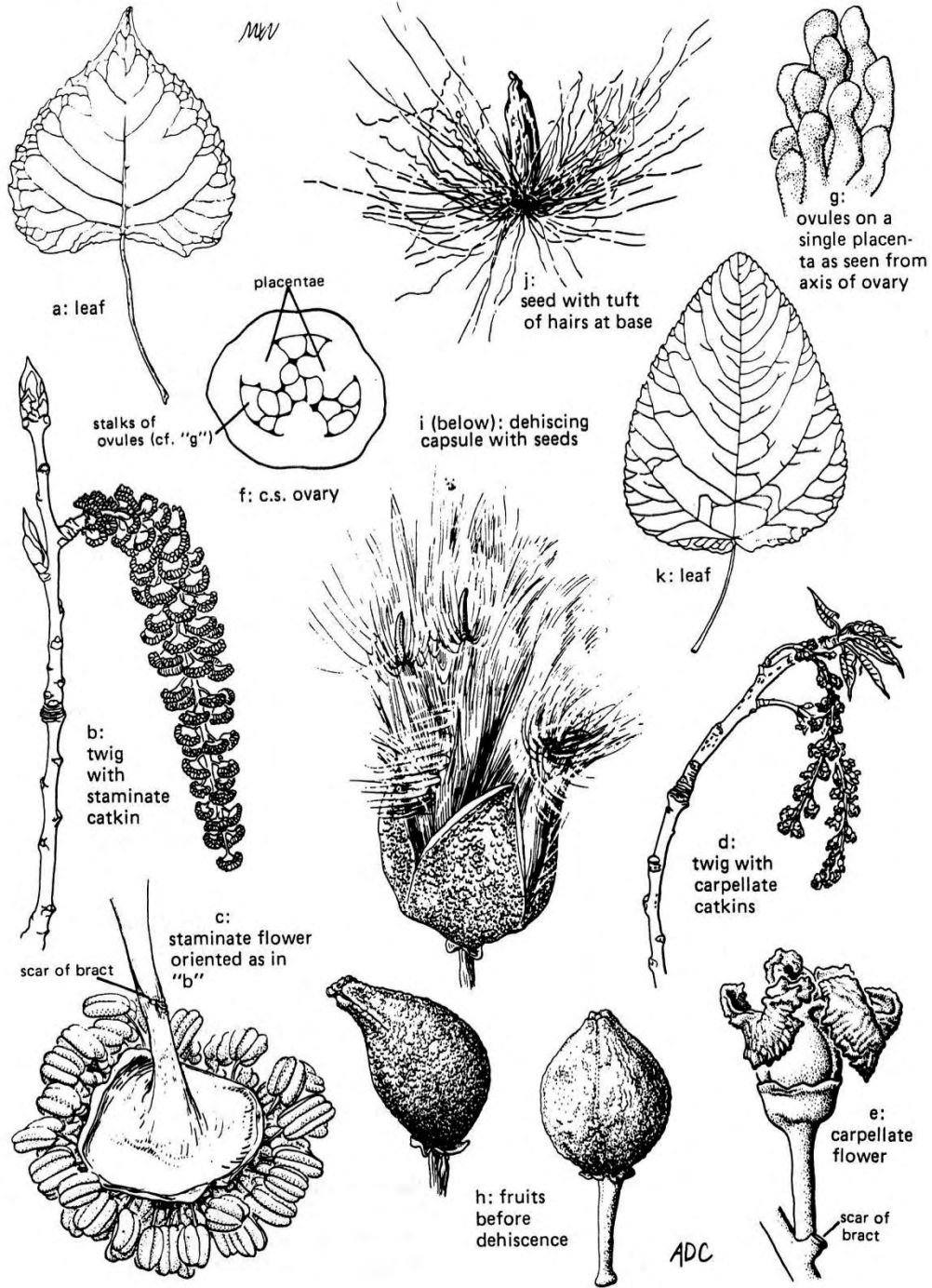
Populus × canadensis 'Aurea'
1093-85, U, 1985, 56-NW

Populus deltoides
448-94, W, Canada, 1994, 55-NE

RUTACEAE: *Poncirus*. a-j, *P. trifoliata*



SALICACEAE: *Populus*. a-j, *P. deltoides*; k, *P. heterophylla*



Populus deltoides ssp. *deltoides*
16611, W, Canada, 1895, 51-SE, 55-NE
22099, W, United States, 1911, 55-NE

Populus deltoides ssp. *monilifera*
1007-84, G, 1984, 55-NE

Populus × *generosa*
13274, G, 1923, 52-SE
194-80, Z, United States, 1980, 51-SE
393-2003, G, 2003, 55-NE

Populus koreana
203-96, Z, China, 1996, 51-SE

Populus maximowiczii
1160-80, G, 1980, 52-SW

Populus tremula
547-59, G, 1959, 59-SW

Populus tremuloides 'Kaibab'
102-97, G, 1997, 43-NE

Populus trichocarpa
5-89, Z, United States, 1989, 51-SE, 55-NE
508-2007, Z, Canada, 2007, 55-NE

Populus ussuriensis
281-92, W, China, 1992, 52-SW

Potentilla dickinsii
110-2004, G, Japan, 2004, DGB

Potentilla fruticosa
390-97, W, China, 1997, LG-8A
772-93, W, Canada, 1993, BR-5

Potentilla fruticosa 'Abbotswood'
718-83, G, 1983, 22-SW

Potentilla fruticosa 'Moonlight'
991-81, G, 1981, 22-NW

Potentilla fruticosa 'Primrose Beauty'
1256-81, G, 1981, 22-NW

Potentilla fruticosa 'Pumila'
1559-66, G, 1966, 31-NE

Potentilla fruticosa var. *veitchii*
604-86, G, 1986, BR-1C

Potentilla tridentata
195-2007, G, 2007, LG-1C, LG-8C

Prinsepia sinensis
642-86, U, 1986, BR-13
749-88, U, 1988, BR-13

Prinsepia uniflora
7188, W, China, 1911, 26-SE

Prunus sp.
23210, G, 1967, 34-SW
296-88, Z, United States, 1988, BR-16-SE
516-94, U, 1994, 49-NW
700-2010, U, 2010, 51-NW

Prunus 'Autumn Royal'
208-72, G, 1972, 49-SE

Prunus 'Hally Jolivette'
278-2007, G, 2007, BR-16-SE,
EG-32-NE

Prunus 'Karl Sax'
57-2000, G, 2000, 49-NE, EG-26-SE

Prunus 'Okame'
109-2000, G, 2000, BR-16-SW

Prunus alleghaniensis
20-88, W, United States, 1988, BR-16-SE
431-67, U, 1967, 49-SE
963-88, W, United States, 1988, BR-16-SE

Prunus alleghaniensis var. *davisii*
398-85, Z, United States, 1985, BR-17-SW

Prunus apetala
357-78, G, 1961, BR-22-NE
399-61, G, 1961, 49-NE, 49-SE

Prunus armeniaca
236-94, Z, Turkey, 1994, 26-NW
636-87, W, Turkey, 1987, 20-NW, 53-SE

Prunus armeniaca 'Mikado'
382-92, G, 1992, 49-NE

Prunus armeniaca var. *ansu*
7-76, U, 1976, 49-SE

Prunus cerasifera
501-64, U, 1964, 49-SE
975-82, W, Denmark, 1982, BR-22-NE

Prunus cerasifera 'Atropurpurea'
403-85, G, 1985, BR-22-NE

Prunus cerasifera 'Drupis Atroviolaceis'
418-67, G, 1967, 49-NE
859-27, G, 1927, 19-NE

Prunus cerasifera 'Kok-Sultan'
229-92, G, 1992, 49-NE, 49-SE
430-67, G, 1967, 49-NE

Prunus cerasifera var. *divaricata* × *spinosa*
886-84, U, 1984, BR-22-NE

Prunus cerasifera var. *divaricata*
283-60, U, 1960, 26-NW

Prunus cyclamina
602-79, G, 1979, EG-4
706-31, G, 1931, BR-22-NE

Prunus depressa 'Gus Mehlquist'
727-90, W, United States, 1990, DGB

Prunus × *fontanesiana*
23-2001, G, 2001, 49-SE

Prunus glandulosa
81-91, U, 1991, BR-22-NE

Prunus grayana
16694, W, Japan, 1915, BR-16-SE
1191-77, G, Japan, 1977, BR-16-SE
1698-77, W, Japan, 1977, BR-17-SW

1777-77, W, Japan, 1977, 26-NW, 59-NE

Prunus × *hillieri*
401-61, G, 1961, 49-SE

Prunus hortulana
226-94, Z, United States, 1994, 49-NE

Prunus incisa f. *serrata*
172-95, G, 1995, BR-15-SE
204-2004, G, 2004, 26-NW

Prunus × *juddii*
601-79, G, 1979, 21-SE

Prunus kansuensis
299-88, G, 1988, 45-SW
565-38, U, 1938, 26-NW

Prunus lanata
181-95, Z, United States, 1995, 49-SE
227-94, Z, United States, 1994, 26-NW
499-66, Z, United States, 1966, 49-SE

Prunus lannesiana var. *speciosa*
343-80, U, 1980, 20-SW

Prunus laurocerasus 'Otto Luyken'
355-2002, G, 2002, LG-8K

Prunus laurocerasus 'Schipkaensis'
889-72, U, 1972, 1-SE

Prunus maackii
100-2008, Z, China, 2008, BR-16-SE
315-2008, Z, China, 2008, BR-16-SE
340-97, W, China, 1997, 49-NE
388-61, W, China, 1961, 20-SW

Prunus mahaleb
1372-84, W, Czechoslovakia, 1984, 25-SW,
27-SW, 51-SW
301-94, W, Italy, 1994, 56-SW
355-94, W, France, 1994, 59-NE

Prunus maritima
240-32, W, United States, 1932, 26-NW

523-54, G, 1954, 26-NW
731-45, G, 1945, 26-NW

Prunus maritima 'Brier Sunshine'
298-96, Z, United States, 1996, BR-22-NE

Prunus maritima f. *flava*
262-92, W, United States, 1992, 49-NE

Prunus maritima var. *plena*
587-89, U, 1989, 49-NE

Prunus maximowiczii
16395, W, Japan, 1892, 53-SW
218-94, Z, Japan, 1994, BR-DAWSON-POND

Prunus mume
233-2002, G, 2002, BR-16-SE

Prunus munsoniana
183-95, G, 1995, 26-NW
434-67, G, 1967, 49-SE

Prunus nigra
107-78, W, Canada, 1978, 49-SE
1165-74, U, 1974, BR-DAWSON-POND

Prunus nipponica
272-89, G, 1989, BR-17-SW
293-87, G, 1987, BR-10

Prunus × *orthosepala*
76-91, U, 1991, 20-SW

Prunus padus var. *glauca*
764-88, U, 1988, BR-16-SE

Prunus pennsylvanica
322-2007, W, United States, 2007, 26-NW
BR-16-SE

Prunus prostrata
78-91, U, 1991, BR-14

Prunus salicina
137-2000, Z, China, 2000, 49-SE
667-97, W, China, 1997, 49-NE

Prunus sargentii
583-89, U, 1989, BR-DAWSON-POND
794-28, G, 1928, BR-22-NE
958-71, U, 1971, 3-NW

Prunus sargentii 'Columnaris'
160-42, G, 1942, BR-16-SE
36-47, G, 1947, 34-NE
931-51, G, 1951, BR-16-SW

Prunus scopulorum
297-88, G, 1988, 58-NW

Prunus serotina
15548, W, United States, 1923, 19-NE
1495-61, G, 1961, 49-SE
183-2008, W, United States, 26-SW
BR-16-SE
321-2011, U, 2011, 34-NE
354-2, G, 1895, BR-17-SW
81-2008, W, United States, 2008, 26-SW
BR-16-SE

Prunus serotina 'Cartilaginea'
1162-80, U, 1980, BR-22-NE

Prunus serrulata 'Jo-nioi'
444-56, G, 1956, 49-NE

Prunus serrulata 'Kwanzan'
831-67, U, 1967, 34-NW

Prunus serrulata 'Washi-no-o'
119-96, G, Japan, 1996, BR-16-SW

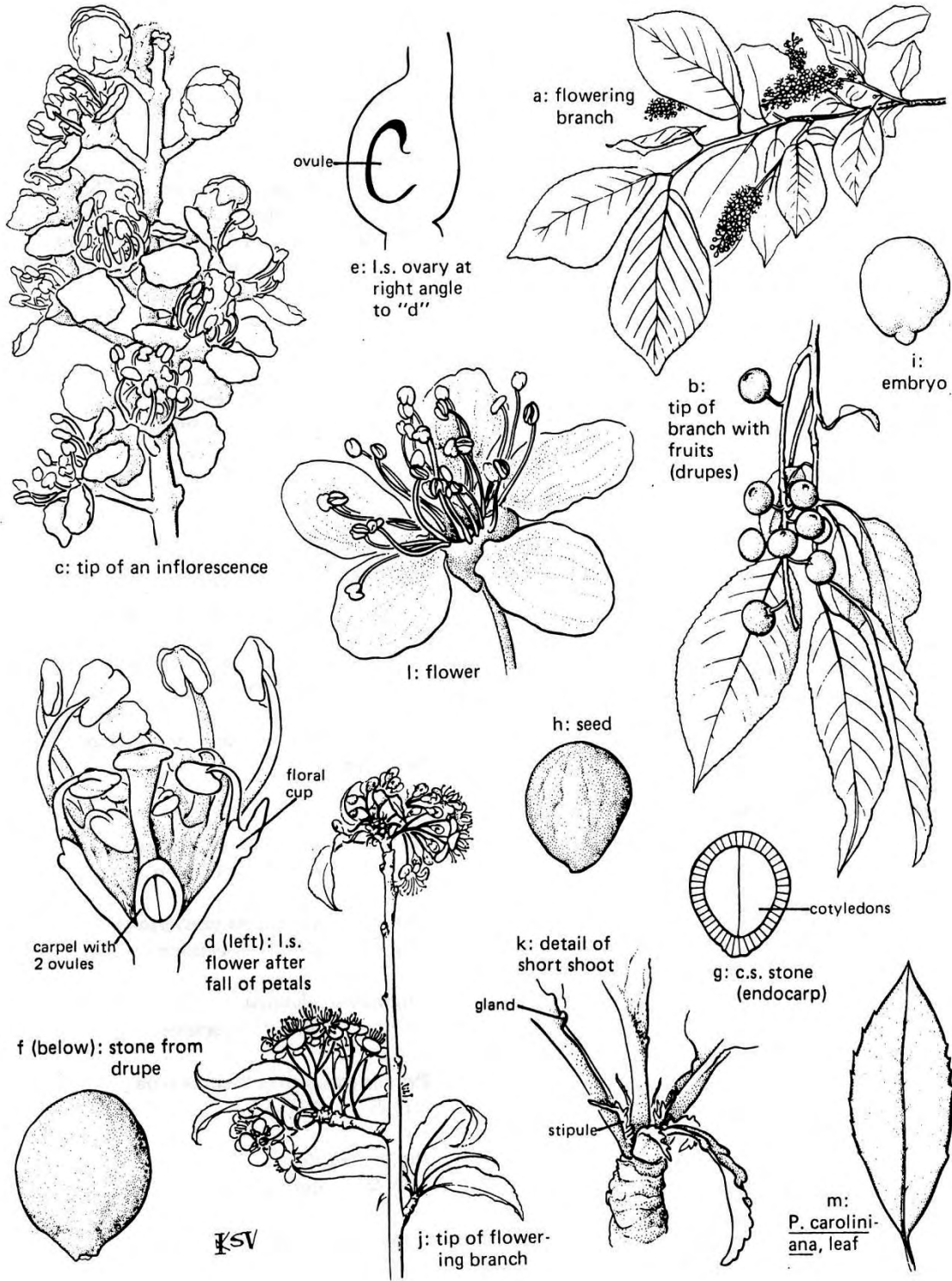
Prunus serrulata var. *lannesiana*
479-90, W, Japan, 1990, 19-SE

Prunus serrulata var. *sibirica*
657-61, G, 1961, 49-NE

Prunus simonii
27-2001, U, 2001, 51-NW

Prunus sogdiana
613-78, W, Kyrgyzstan, 1978, 49-NE

ROSACEAE subfamily AMYGDALOIDEAE: Prunus. a, *P. virginiana*; b-i, *P. serotina*; j-l, *P. pennsylvanica*; m, *P. caroliniana*



Prunus spinosa

195-91, W, Belgium, 1991, 49-NE
356-94, W, France, 1994, 49-NE
645-2007, 2007, W, Ireland, BR-16-SE

Prunus ssiori

1729-77, W, Japan, 1977, 19-NE
256-2002, Z, Japan, 2002, 26-NW

Prunus stepposa

182-95, Z, Ukraine, 1995, 53-NW

Prunus subhirtella

889-37, G, 1937, LARZ

Prunus subhirtella × *yedoensis*

293-88, U, 1988, BR-16-SE, BR-22-NE
393-34, G, 1934, BR-16-SE

Prunus subhirtella 'Pendula'

290-87, U, 1987, BR-22-NE
319-90, G, 1990, BR-22-NE

Prunus subhirtella 'Pendula Plena'

558-53, G, 1953, BR-16-SE

Prunus subhirtella var. *pendula*

'Park Weeping'
412-62, G, 1962, 49-NE

Prunus subhirtella var. *pendula*

'Park Weeping'
412-62, G, 1962, 49-NE

Prunus tomentosa 'Leucocarpa'

21465, U, 1930, BR-16-SE

Prunus virginiana

1162-74, U, 1974, 17-SW
634-93, W, United States, 1993, 22-SW

Prunus virginiana 'Schubert'

324-94, G, 1994, 17-SW

Prunus × *yedoensis*

20321, G, 1927, 54-SW
1140-80, U, 1980, BR-17-SW
267-83, U, 1983, 50-NE, 63-NW

Prunus × *yedoensis* 'Akebono'

212-49, G, 1949, 19-SE
40-2005, G, 2005, 25-NE

Prunus × *yedoensis* 'Shidare Yoshino'

22542, G, 1925, 25-SW
32-96, G, 1996, 16-SW, BR-16-SE,
BR-DAWSON-POND

Pseudolarix amabilis

3656, U, 1891, 39-SE
10764, U, 1921, 39-NE
16779, G, 1896, 40-SW
187-94, W, China, 1994, 40-SW, 58-SE, 62-NE
534-61, G, 1961, 34-NE, 40-SW
59-89, G, 1989, 38-NW, 40-SW, 58-SE, 62-NE

Pseudotsuga menziesii

422-2011, U, 2011, 38-NE

Pseudotsuga menziesii var. *glauca*

10600, U, 1920, 40-SE
16780, W, United States, 1874, 34-SE, 34-SW
16782, U, 1908, 33-NW
23125, G, 1969, 40-NE, 40-SE
1279-64, W, Canada, 1964, 40-SW
1290-60, G, 1960, 40-SE
1368-81, W, United States, 1981, 53-SW
265-47, G, 1947, 22-SE
329-87, U, United States, 1987, 40-NE
623-89, W, Mexico, 1989, 40-SE, 44-SE
697-39, U, 1939, 40-SE
764-87, W, United States, 1987, 41-SE

Pseudotsuga menziesii var. *glauca*

'Glaucapendula'
3820, G, 1890, 34-SE

Pseudotsuga menziesii var. *glauca* f. *caesia*

935-59, U, 1959, 40-SE

Pseudotsuga menziesii var. *menziesii*

447-89, W, United States, 1989, 34-SE

Pseudotsuga menziesii var. *menziesii*

'Fastigiata'
654-51, U, 1951, 40-SE

Pseudotsuga menziesii var. *menziesii* 'Pumila'
10947, U, 1919, 31-SW

Ptelea trifoliata

146-94, W, United States, 1994, 11-NW
490-2010, W, United States, 2010, DGB
872-88, W, Canada, 1988, 11-NW

Ptelea trifoliata ssp. *angustifolia* var. *cognata*
171-59, W, United States, 1958, 2-NE

Ptelea trifoliata ssp. *trifoliata* 'Aurea'

384-44, U, 1944, 18-NE
525-45, U, 1945, 18-NE

Ptelea trifoliata ssp. *trifoliata* var. *trifoliata*

660-60, U, 1960, 19-NW
961-72, U, 1972, 7-NE

Pterocarya sp.

604-97, W, China, 1997, 24-NE, 24-SE

Pterocarya hupehensis

15390, W, China, 1920, 24-NE

Pterocarya paliurus

558-88, W, China, 1988, 18-SE

Pterocarya × *rehderiana*

1191, G, 1879, 24-NE
23119, G, 1959, 24-NE

Pterocarya rhoifolia

1786-77, W, Japan, 1977, 18-SE
1802-77, W, Japan, 1977, 57-NE
32-85, W, Japan, 1985, 55-NW

Pterocarya stenoptera

1652-80, W, China, 1980, 30-NW
473-80, W, China, 1980, 30-NW

Pterostyrax hispida

218-60, U, 1960, 25-SW
241-2008, W, Japan, 2008, 19-SW
843-76, U, 1976, 18-SE, EG-3

Pyracantha coccinea 'Lalandei'

1257-88, U, 1988, BR-1A

567-87, U, 1987, BR-10

Pyracantha coccinea 'Royal'

194-49, G, 1949, 24-NE

Pyracantha coccinea var. *lalandei* ×

Cotoneaster tomentosus
828-59, G, 1959, 24-NE

Pyrus amygdaliformis var. *persica*

723-81, U, 1981, 55-NE

Pyrus balansae

17483, U, 1912, 51-NE
524-94, U, 1994, 51-NW

Pyrus betulifolia

196-95, Z, China, 1995, 51-NE
453-68, U, 1968, 46-SE
963-37, G, 1937, 51-NE

Pyrus bretschneideri

437-64, Z, China, 1964, 51-NE
722-81, Z, China, 1981, 51-SE
785-62, Z, China, 1962, 47-SW

Pyrus calleryana

720-94, W, China, 1994, BR-16-NW

Pyrus calleryana 'Aristocrat'

475-72, G, 1972, 46-SE

Pyrus calleryana 'Bradford'

644-65, G, 1965, 51-NE

Pyrus calleryana 'Chanticleer'

371-70, G, 1970, 51-NE
514-68, G, 1968, 46-SE

Pyrus calleryana var. *dimorphophylla*

10793, W, Japan, 1918, 51-NE
103-72, Z, Japan, 1972, 17-SW
250-80, Z, Japan, 1980, 49-NE
392-85, Z, Japan, 1985, 50-NE
731-81, Z, Japan, 1981, 45-NW

Pyrus calleryana var. *fauriei*
685-52, G, 1952, 51-NE

Pyrus × *canescens*
577-69, U, 1969, 46-SE

Pyrus caucasica
1243-72, U, 1972, 17-SW
1335-80, W, Russian Federation, 1980,
63-NW
1339-80, W, Russian Federation, 1980, 31-SW

Pyrus communis
450-68, U, 1968, 46-SE
17500, U, 1906, 51-NE

Pyrus communis var. *cordata*
1430-52, G, 1952, 47-SW

Pyrus communis var. *pyraster*
1048-64, Z, Hungary, 1964, 46-SE
186-98, Z, Hungary, 1998, 46-SE
388-85, Z, Macedonia, 1985, 50-SE
411-90, W, Hungary, 1990, 47-SW
543-72, W, Macedonia, 1972, 46-SE
632-89, W, Hungary, 1989, 51-NW

Pyrus cossonii
558-85, U, 1985, BR-10
567-51, U, 1950, 51-NE

Pyrus elaeagrifolia
687-55, Z, Romania, 1955, 47-SW
948-34, W, Romania, 1934, 51-NE

Pyrus korshinskyi
557-85, G, 1985, 55-SW, 58-NW

Pyrus × *lecontei*
22248, G, 1932, 51-NE
48-2007, G, 2007, 52-NW

Pyrus nivalis
627-59, U, 1959, 46-SE

Pyrus phaeocarpa
17501, U, 1913, 51-NE

Pyrus phaeocarpa f. *globosa*
1715-3, Z, China, 1915, 51-NE
248-80, Z, China, 1980, 23-NW

Pyrus pyrifolia
7272, W, China, 1908, 51-NE, EG-32-NE
10569, W, China, 1917, 53-NE
23064, G, 1954, 51-NE
387-85, Z, China, 1985, 49-NE
734-81, Z, China, 1981, 17-SW

Pyrus pyrifolia f. *stapfiana*
23189, W, China, 1908, 53-SE
252-80, Z, China, 1980, 23-NW, 49-SW
724-81, Z, China, 1981, 51-NW

Pyrus salicifolia
638-89, W, Armenia, 1989, 51-NE
1243-70, U, 1970, 46-SE

Pyrus serrulata
17502, W, China, 1908, 51-NE
725-81, Z, China, 1981, 59-NE

Pyrus syriaca
489-54, U, 1954, 47-SW

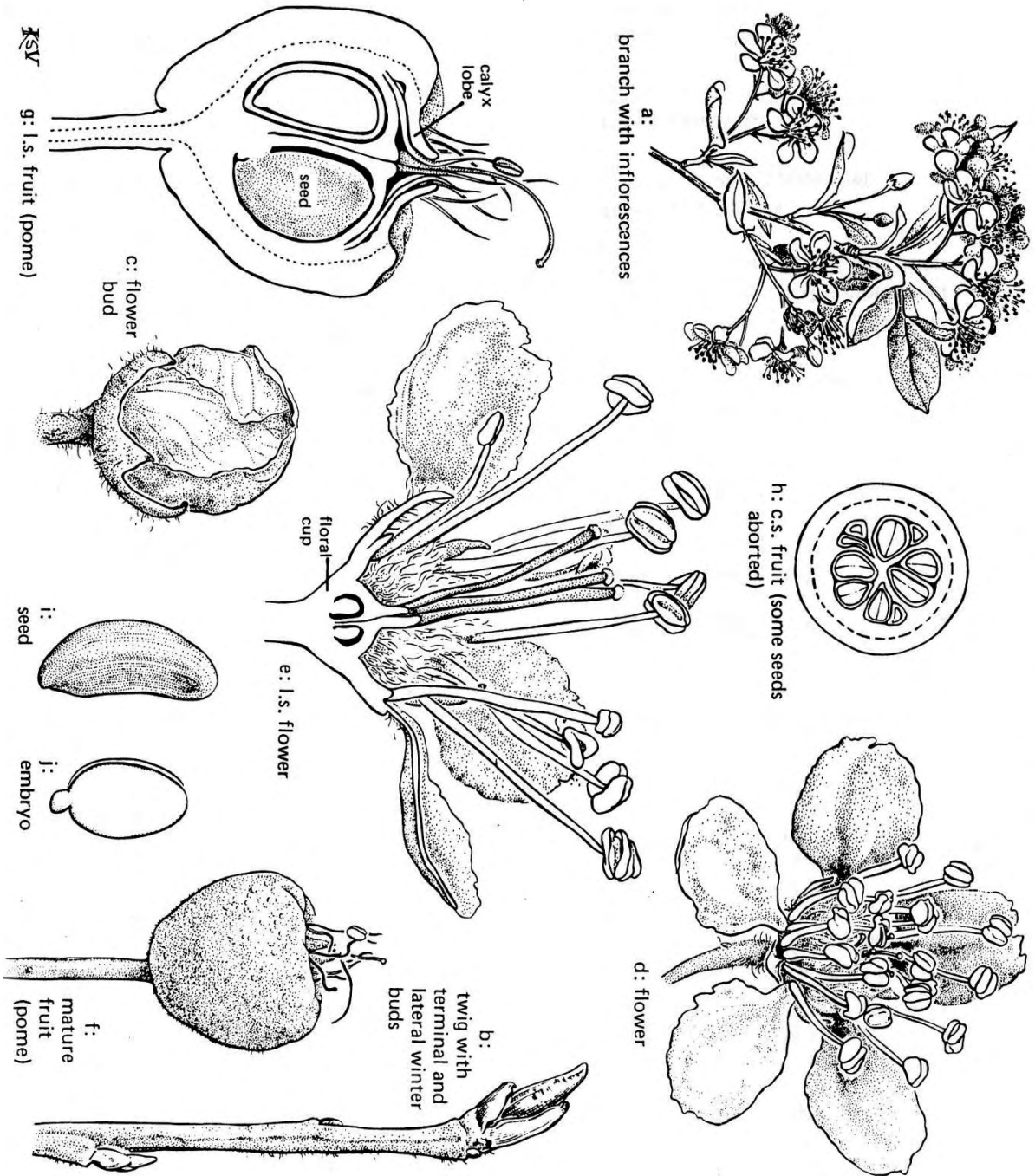
Pyrus ussuriensis
188-98, Z, Japan, 1998, 46-SE
302-2008, G, Russian Federation, 2008,
22-SW
312-2008, G, Russian Federation, 2008,
22-SW
391-85, Z, Japan, 1985, 33-NW
732-81, Z, Japan, 1981, 51-NW
788-84, W, Korea, Republic of, 1984, 33-NW

Pyrus ussuriensis 'Pin-li'
10857, G, Japan, 1919, 51-NE
119-91, G, Japan, 1991, 58-NW
144-72, G, Japan, 1972, 47-SW

Pyrus ussuriensis 'Shinchu'
356-44, G, 1944, 51-NE

Pyrus ussuriensis 'Shu-li'
10861, G, Japan, 1919, 54-SW
418-59, G, Japan, 1959, 51-NE

ROSACEAE subfamily MALOIDEAE: *Pyrus* subgenus *Aronia*. a-j, *P. arbutifolia*



Pyrus ussuriensis var. *hondoensis*

11728, W, country unknown, 1919, 28-SW,
51-NE
17456, W, Japan, 1919, 51-NE
15-97, Z, country unknown, 1997, 34-SW,
51-NW
195-95, Z, country unknown, 1995, 51-NE
33-96, Z, country unknown, 1996, 51-NW
726-81, Z, country unknown, 1981, 59-NE
728-81, Z, Japan, 1981, 59-NE
730-81, Z, Japan, 1981, 49-NE

Quercus sp.

552-95, W, United States, 1995, 59-SW,
62-NE
660-32, U, 1932, 31-NE

Quercus acerifolia

21804, W, United States, 1924, 58-SE
344-89, W, United States, 1989, 32-NW
630-91, W, United States, 1991, 31-NE
631-91, W, United States, 1991, 32-NW

Quercus acutissima

16877, W, Korea, Republic of, 1904, 32-SE
1091-89, W, China, 1989, 51-SE
1130-60, G, 1960, 52-SW
1257-80, W, Japan, 1980, 45-SW
397-86, W, Korea, Republic of, 1986, 63-NW
860-67, G, 1967, 31-NE

Quercus alba

10615, U, 1919, 25-NW
18054, G, 1882, 19-SE, 19-SW, 25-NE, 25-NW
20513, W, United States, 64-NE
21815, U, 1931, 32-NW, 32-SW
21816, U, 1931, 32-SW, 37-NE
22886, U, 1950, 25-NW, 26-SW, 31-NE,
32-SW
1179-85, W, United States, 1985, 25-NE,
25-NW
1186-85, W, Canada, 1985, 25-NE, 25-NW
213-2011, U, 2011, 31-SW
214-2011, U, 2011, 31-SW
216-2011, U, 2011, 31-SW
217-2011, U, 2011, 31-SW
222-2011, U, 2011, 31-SW
225-2011, U, 2011, 31-NE

227-2011, U, 2011, 31-NE
244-2011, U, 2011, 26-NE
246-2011, U, 2011, 31-SE
247-2011, U, 2011, 31-SE
249-2011, U, 2011, 31-SE
254-2011 - 256-2011, 31-SE
286-2011, U, 2011, 37-SW
290-2011, U, 2011, 36-SE
297-97, G, 1997, 10-SE, 58-NE, 58-NW
358-82, W, United States, 1982, 32-NW
434-70, G, 1970, 15-NE
503-2009, U, 2009, 15-NW
505-2009, U, 2009, 11-SW
507-2009, U, 2009, 11-SE
512-2009 - 514-2009, U, 2009, 11-SE
515-2009, U, 2009, 11-NE
611-2010, U, 2010, 57-NE
630-2008, U, 2008, 15-NE
631-2008, U, 2008, 15-NE
633-2008, U, 2008, 15-NE
649-2008, U, 2008, 15-NE
651-2008, U, 2008, 15-NE

Quercus aliena

1117-82, W, Japan, 1982, 31-NE
1728-80, W, China, 1980, 32-NW
88-61, U, 1961, 33-SW

Quercus aliena × *serrata*

1118-82, W, Japan, 1982, 15-NE

Quercus aliena var. *acutiserrata*

16795, W, China, 1908, 33-SW
18409, W, China, 1923, 58-SW
298-2000, W, China, 2000, 25-NE

Quercus aliena var. *calvescens*

16794, W, China, 1908, 33-SW

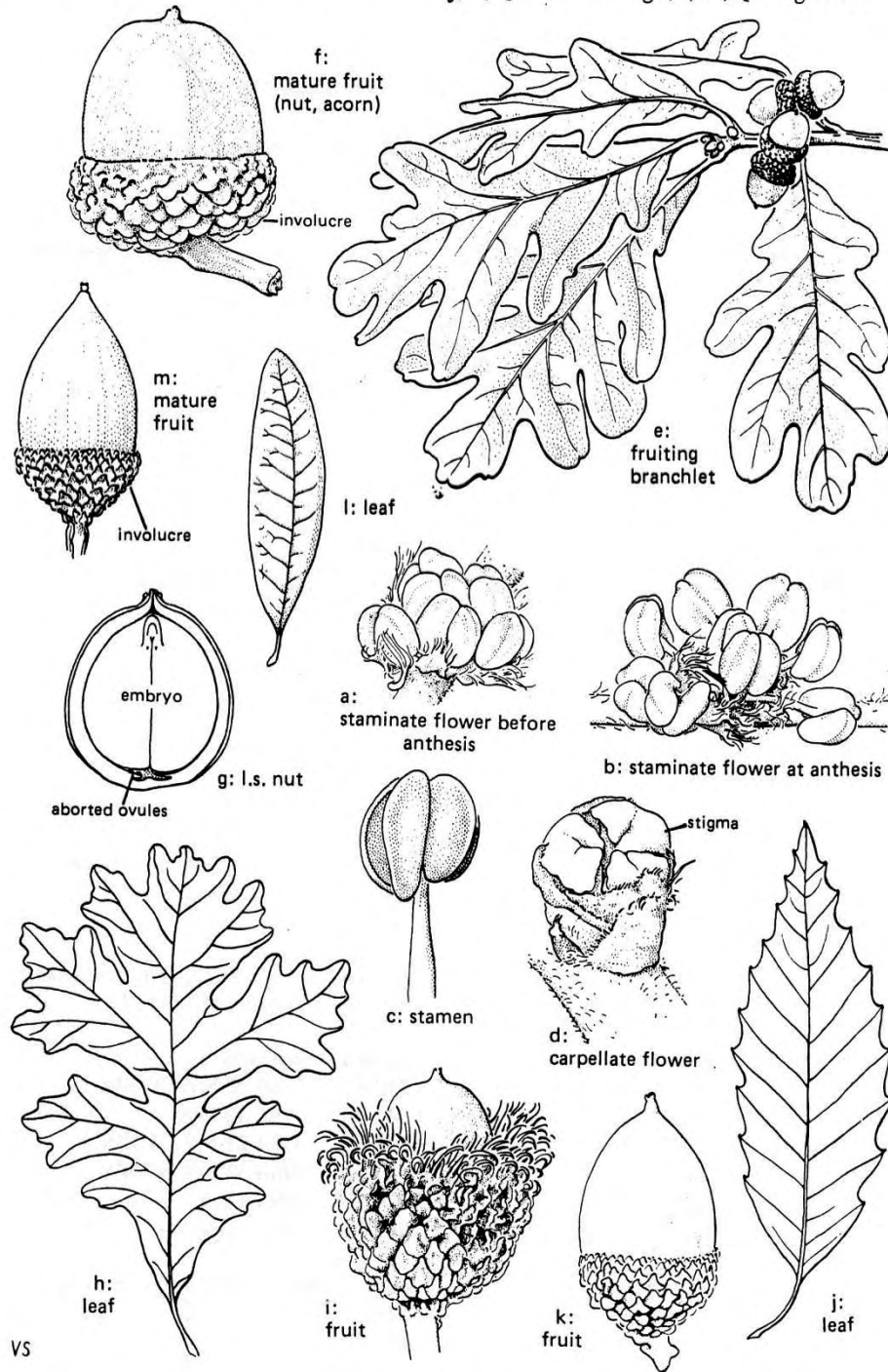
Quercus arkansana

279-86, W, United States, 1986, 31-NE
477-86, W, United States, 1986, 25-SW,
32-NW

Quercus × *bebbiana*

21817, W, United States, 1916, 25-SE
100-2002, Z, United States, 2002, 62-SW

FAGACEAE: *Quercus* subgenus *Quercus*. a-d, *Q. prinus*; e-g, *Q. alba*; h, i, *Q. macrocarpa*; j, k, *Q. muhlenbergii*; l, m, *Q. virginiana*



Quercus × benderi
900-37, G, 1937, 25-NW

Quercus bicolor
18051, G, 1882, 58-SW
19115, G, 1924, 58-SE, 62-NW
19133, G, 1908, 25-SE, 25-SW
22450, G, 1933, 25-SW
22887, G, 1950, 14-NW, 15-SE, 25-NW, 25-SE,
25-SW, 26-NW, 31-NE
107-97, G, 1997, 63-NW
1185-85, W, Canada, 1985, 22-SW, 25-NW
287-97, G, 1997, 62-SE, 64-NE
479-86, W, United States, 1986, 25-NW,
37-SE
517-2002, W, United States, 2002, 25-SW

Quercus bicolor × prinus
19198, U, 1935, 62-SE
19093-1, G, 1929, 25-SE

Quercus × bimundorum
22775, U, 1945, 57-NE

Quercus castaneaefolia
239-38, U, 1938, 25-SE

Quercus cerris
12137, U, 1911, 53-NW
16806, G, 1879, 32-SW
68-99, W, Italy, 1999, 25-NE

Quercus cerris × acutissima
22191, U, 1932, 26-SW

Quercus 'Chimney Fire'
469-2010, G, 2010, DGB

Quercus coccinea
7598, W, United States, 1916, 25-SE, 62-NW,
62-SW
20517, W, United States, 1925, 64-NE
22661, G, 1940, 57-NE
104-98, G, 1998, 37-SW
105-97, G, 1997, 51-SE
189-2006, W, United States, 2006, 31-NE,
47-SE, 52-NW
298-97, G, 1997, 15-NW, 58-NE, 58-NW,
62-NE, 62-SE
349-2001, G, 2001, 54-SW
401-94, W, United States, 1994, 1-SE
693-2010, U, 2010, 62-SW

Quercus coccinea 'Splendens'
519-37, G, 1937, 25-SE
560-61, G, 1961, 31-NE

Quercus × deamii
5962, G, 1908, 58-SW
7786, W, United States, 1916, 25-NE
34-99, Z, United States, 1999, 32-NW

Quercus dentata
16815, W, China, 1907, 33-SW
16816, W, China, 1891, 33-SW
1582-77, G, Korea, Republic of, 1977, 33-SW
1590-52, W, Japan, 1952, 33-SW

Quercus dentata 'Pinnatifida'
1379-67, U, 1967, 13-NE

Quercus ellipsoidalis
1169-85, W, United States, 1985, 32-SW
16808-1, G, 1898, 25-NE
316-89, W, Canada, 1989, 37-SE

Quercus × exacta
3673, U, 1889, 26-SW, 53-NW
815-31, G, 1931, 25-SE

Quercus fabri
636-81, W, China, 1981, 32-SW

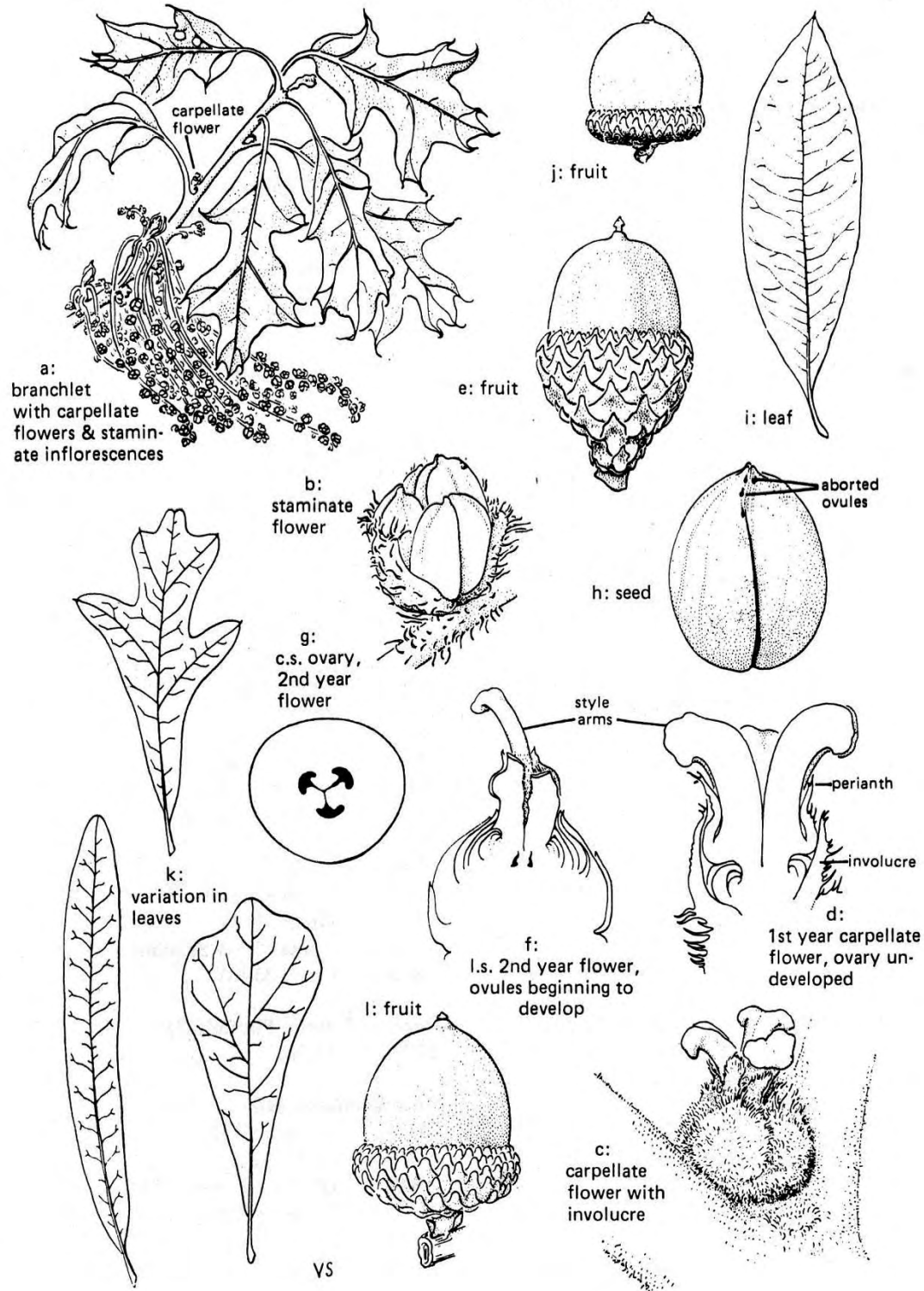
Quercus falcata
3333, U, 1889, 52-SW

Quercus falcata var. *pagodaefolia*
655-88, W, United States, 1988, 31-NE

Quercus falcata var. *pagodaefolia* 'LaRue'
598-93, W, United States, 1993, 7-NE, 7-SW

Quercus × fernowii
1193-85, W, United States, 1985, 32-SW

FAGACEAE: Quercus subgenus Erythrobalanus. a-e, *Q. ilicifolia*; f-h, *Q. rubra*; i, j, *Q. imbricata*; k, l, *Q. nigra*



Quercus × filialis
1510-25, W, United States, 1925, 25-SE

Quercus frainetto
16810, U, 1908, 32-SW

Quercus gambelii
21820, U, 1911, 32-NW
790-94, W, United States, 1994, 32-SW

Quercus glandulifera
3672, W, Japan, 1892, 33-SW
16823, W, Japan, 1892, 53-SW, 57-NE
16824, W, China, 1908, 33-SW
16826, W, China, 1908, 33-SW
1211-77, W, Japan, 1977, 50-NE
1264-80, W, Japan, 1980, 31-NW, 33-SW
419-82, Z, China, 1982, 32-SW
70-90, W, Korea, Republic of, 1990, 33-SW
763-81, Z, Japan, 1981, 33-SW

Quercus glandulifera var. *brevipetiolata*
1089-89, W, China, 1989, 33-SW
706-94, W, China, 1994, 32-SW

Quercus × hillii
21429, U, 1930, 25-SE

Quercus imbricaria
16833, U, 1887, 26-SW, 32-NW
21800, U, 1931, 58-SW
22890, G, 1950, 26-SW, 32-SE

Quercus × jackiana
7787, U, 1916, 25-NE
19932, W, United States, 1926, 25-NE

Quercus laevis
777-90, W, United States, 1990, 32-SW

Quercus laurifolia
657-88, W, United States, 1988, 62-NE

Quercus × leana
11685, W, United States, 1921, 58-SE
153-89, Z, United States, 1989, 33-SW

Quercus liaotungensis
15-95, W, China, 1995, 25-SW, 31-NE

Quercus libani
22-97, G, 1997, 62-SE

Quercus 'Long'
468-2010, G, 2010, DGB

Quercus lyrata
16840, U, 1882, 31-NE
22526, U, 1919, 58-SW

Quercus macrocarpa
16847, W, United States, 1880, 25-NE, 25-SE
16847-1, G, 1908, 62-SE
18052, U, 1882, 53-SW, 57-NE, 57-SE
22530, G, 1936, 25-NE
22891, G, 1950, 27-SW, 4-NE, 4-SE
279-2000, W, United States, 2000, 63-SW
281-2000, W, United States, 2000, 38-SW,
42-NE
305-90, W, United States, 1990, 25-SW
462-88, W, United States, 1988, 32-SW
482-86, W, United States, 1986, 32-SW
518-2002, W, United States, 2002, 52-NW
658-88, W, United States, 1988, 25-NE,
25-SW, 32-NW
690-2010, U, 2010, 62-NW
802-87, W, United States, 1987, 32-NW
803-87, W, United States, 1987, 25-NE
822-2008, U, 2008, 53-NW

Quercus marilandica
16849, W, United States, 1895, 51-NE

Quercus × megaleia
22768, U, United States, 1923, 58-NE
128-2006, U, 2006, 32-SW

Quercus michauxii
732-86, W, United States, 1986, 52-NW

Quercus mongolica
13256, W, China, 1922, 58-SW
20118, U, 1923, 33-SW
22892, U, 1950, 59-SW
629-95, W, China, 1995, 31-NE

89-96, W, China, 1996, 59-SW

Quercus mongolica var. *grosseserrata*
1207-77, W, Japan, 1977, 38-NE, 38-SE, 44-SE

Quercus muehlenbergii
16857, U, 1897, 31-NE
112-92, W, United States, 1992, 32-NW,
32-SW
1242-85, W, United States, 1985, 15-NE
341-89, W, United States, 1989, 32-NW
389-91, W, United States, 1991, 27-SW,
33-NW
691-86, W, United States, 1986, 38-NW

Quercus muehlenbergii var. *alexanderi*
16856, U, 1893, 31-NE

Quercus × *mutabilis*
22346, W, United States, 1924, 25-SE

Quercus palustris
16860, U, 1894, 57-NE
17162, G, 1882, 25-SE
17162-1, G, 1907, 58-SE
22893, G, 1950, 13-SE, 26-NW, 27-SE
1255-84, W, United States, 1984, 15-NE
650-2008, U, 2008, 15-NE
691-2010, U, 2010, 62-NW
696-2010, U, 2010, 62-SE
697-2010, U, 2010, 62-SE
698-2010, U, 2010, 62-NE
699-2010, U, 2010, 62-NE
804-87, W, United States, 1987, 33-NE
805-87, W, United States, 1987, 62-NE,
62-NW, 62-SE
816-39, G, 1939, 25-SE, 26-SW, 31-NW

Quercus palustris 'Pringreen'
320-2010, G, 2010, DGB

Quercus petraea
69-99, W, Austria, 1999, 31-NE, 32-NW
901-60, W, France, 1960, 32-SW
98-2002, Z, France, 2002, 32-SW

Quercus petraea 'Mespilifolia'
77-2004, G, 2004, 32-NW

Quercus phellos
21805, W, United States, 1923, 58-SE
183-80, W, United States, 1980, 25-SE
229-94, W, United States, 1994, 27-NE, 27-SE,
59-SW
490-86, W, United States, 1986, 32-SW

Quercus × *porteri*
1270, U, United States, 1877, 32-NW

Quercus prinoides
16865, W, United States, 1884, 31-NE, 32-SW

Quercus prinus
16352, G, 1879, 25-SE, 31-NE
16355, U, 1876, 31-NE, 53-NW
22976, G, 1952, 13-NE, 53-NW, 53-SE, 53-SW,
57-NE, 57-SE
190-2006, W, United States, 2006, 31-NE,
47-NW
299-97, G, 1997, 54-SW, 58-NE
971-79, W, United States, 1979, 59-SW

Quercus rehderi
1248, U, 1874, 32-SW
1248-3, G, 1895, 32-SW

Quercus × *robbinsii*
746-36, U, 1936, 25-NW

Quercus robur
22857, G, 1957, 53-NE
22894, G, 1950, 59-SW
269-88, W, Russian Federation, 1988, 27-SW
373-96, W, Turkey, 1996, 25-NE, 25-SE

Quercus robur 'Concordia'
470-2010, G, 2010, DGB

Quercus robur f. *fastigiata*
821-31, G, 1931, 31-NE

Quercus robur f. *heterophylla*
182-2003, G, 2003, 32-SW

Quercus rubra
5859, W, United States, 1908, 26-SW
8197, W, United States, 1916, 25-SE

11253, W, United States, 1917, 25-SE
16798, U, 1882, 25-SE, 26-NW
16799-1, G, 1917, 25-SE, 26-SW, 58-SW, 62-SE
16882, W, United States, 1916, 32-NW
20516, G, 1925, 58-NE, 62-SE
21812, U, year unknown, 32-NW
21818, U, year unknown, 53-NW, 53-SW,
57-NE, 57-SE
22888, U, year unknown, 26-NW, 26-SW
103-97, G, 1997, 38-SE, 38-SW
105-98, G, 1998, 37-SE, 37-SW
140-2011, U, 2011, 34-NE
1167-85, W, United States, 1985, 15-NW,
33-SW
1187-85, W, United States, 1985, 31-NE
1192-85, W, United States, 1985, 25-SE
1241-85, W, United States, 1985, BR-1A
304-90, W, United States, 1990, 15-NE
332-96, U, 1996, 11-SW
335-96, W, United States, 1996, 37-SE, 42-NE,
43-NW
348-2010, U, 2010, 45-NW
349-2010, U, 2010, 45-SE
366-2011, U, 2011, 29-SE
500-2009 - 504-2009, U, 2009, 11-SW
602-2010, U, 2010, 54-SW
692-2010, U, 2010, 62-NW
694-2010, U, 2010, 62-SW
695-2010, U, 2010, 62-SW
810-2008, U, 2008, 53-SW
812-2008, U, 2008, 53-SE
813-2008, U, 2008, 53-SE
817-2008, U, 2008, 53-SE
818-2008, U, 2008, 53-SE
819-2008, U, 2008, 53-SW
821-2008, U, 2008, 53-SE
823-2008, U, 2008, 53-NW
828-2008, U, 2008, 33-NW

Quercus × runcinata

11293, W, United States, 1921, 58-SW
1887-1, G, 1885, 57-SE
745-36, U, United States, 1936, 25-SE
746-36, U, United States, 1936, 25-NW
817-31, G, 1931, 62-NE

Quercus × sargentii

5883, G, 1877, 21-SE, 27-NW, 27-SW

Quercus × saulii
19200, U, 1940, 62-SE

Quercus × schuettei

7782, U, 1916, 25-SE, 58-SW
11028, U, 1921, 58-SW
22701, U, 1941, 26-NW
372-82, U, 1982, 33-SW

Quercus shumardii

18402, W, United States, 1923, 58-SW
1036-80, W, Canada, 1980, 15-NE
491-86, W, United States, 1986, 32-SW
661-88, W, United States, 1988, 25-NE

Quercus shumardii var. *schneckii*

4039, U, 1897, 26-SW
10630, U, 1917, 25-SE
16883, U, United States, 1916, 32-NW

Quercus stellata

18415, U, 1923, 58-SW
165-99, W, United States, 1999, 32-NW
492-86, W, United States, 1986, 31-NE
742-86, W, United States, 1986, 32-NW

Quercus texana

293-86, W, United States, 1986, 25-SE

Quercus trojana

67-98, G, 1998, 32-SW
454-64, U, 1964, 58-NW

Quercus variabilis

3671, W, Japan, 1892, 33-SW
16889, W, China, 1882, 32-SE
17631, W, China, 1908, 33-SW
18053, W, Korea, Republic of, 1905, 57-NE
22977, G, 1952, 58-NW, 63-NW
1581-77, W, Korea, Republic of, 1977, 15-SE
753-94, W, China, 1994, 33-SW
790-69, G, Japan, 1969, 33-SW
945-58, U, 1958, 38-NW

Quercus velutina

1237, U, 1873, 32-NE, 32-NW, 32-SW
1887, U, 1883, 32-NW
16114, G, 1922, 58-SW

16893, U, 1882, 25-SE, 26-SW, 32-NW, 32-SW
21813, G, 1931, 32-NW
21814, G, 1931, 32-NW
22895, G, 1950, 26-NW, 27-SW, 59-SW
23091, G, 1957, 31-SE
23107, G, 1958, 62-NE
23268, U, 1915, 25-SE
191-2006, W, United States, 2006, 25-NE,
32-NW, 47-SW
240-2011, U, 2011, 26-NE
243-2011, U, 2011, 26-NE
253-2011, U, 2011, 31-SE
257-2011, U, 2011, 31-SE
367-2011, U, 2011, 30-NW
494-86, W, United States, 1986, 31-NE
532-2008, U, 2008, 4-NE
534-2008, U, 2008, 4-NE
886-88, W, United States, 1988, 32-NW

Quercus velutina 'Rubrifolia'
516-41, U, 1941, 19-SW

Quercus velutina var. *missouriensis*
5702, W, United States, 1907, 25-SE
308-82, Z, United States, 1982, 15-NE

Quercus × *warei* 'Nadler'
321-2010, G, 2010, DGB

Rhamnus davurica
3025, U, 1893, 5-SW

Rhamnus frangula 'Asplenifolia'
866-82, G, 1982, 31-NW

Rhamnus hupehensis
1706-80, W, China, 1980, 34-NE

Rhododendron sp.
1403-85, W, United States, 1985, 15-NW
302-2010, U, 2010, 4-SE
341-2009, U, 2009, 11-NW
531-2009 - 534-2009, U, 2009, 11-SW
805-86, W, United States, 1986, 8-SE, 8-SW

Rhododendron (undetermined hybrid)
22783, G, 1908, 42-NE
1146-89, G, 1989, 3-NE, 3-SE

Rhododendron variegated hybrid
105-94, G, 1994, 37-SW

Rhododendron 'Adalbert'
6140, G, 1908, 37-SE

Rhododendron 'Albert'
6144, G, 1908, 37-SE

Rhododendron 'Albert Close'
795-72, G, 1972, 37-SE

Rhododendron 'Album Elegans'
6125, G, 1891, 37-SW
22812, G, 1949, 37-SE
23242, G, 1969, 37-SE
299-69, W, Korea, Republic of, 1969, 14-NE
626-72, G, 1972, 43-NE
810-72, G, 1972, 43-NE

Rhododendron 'Album Grandiflorum'
2805, G, 1886, 37-SW
16926, G, 1911, 37-SW
16927, G, 1916, 37-SW
22810, G, 1911, 37-SE
273-54, G, 1954, 42-NE

Rhododendron 'Album Splendidum'
7351, G, 1915, 42-NE
163-70, G, 1970, 43-NE

Rhododendron 'Alexander Dancer'
196-70, G, 1970, 43-NE

Rhododendron 'Anah Kruschke'
797-72, G, 1972, 43-NE

Rhododendron 'Arno'
6149, G, 1908, 42-NE

Rhododendron 'Atrosanguineum'
22617, G, 1896, 37-SW

Rhododendron 'Balta'
178-96, G, 1996, 37-SE
381-94, G, 1994, 37-SE

Rhododendron 'Beaufort'
800-72, G, 1972, 37-SE

Rhododendron 'Bella'
6148, G, 1908, 37-SE
1083-70, G, 1970, 43-NE

Rhododendron 'Ben Moseley'
546-56, G, 1956, 42-NW

Rhododendron 'Bicolor'
23258, G, 1891, 37-SW

Rhododendron 'Blue Ensign'
804-72, G, 1972, 53-NW

Rhododendron 'Blue Peter'
310-74, G, 1974, 26-SW
777-55, G, 1955, 43-NW

Rhododendron 'Boule de Neige'
6159, G, 1908, 42-NE
145-70, G, 1970, 43-NE

Rhododendron 'Bowbells' × *yakusimanum*
526-73, G, 1973, DGB

Rhododendron 'Brazil'
1464-60, G, 1960, 36-SE
628-61, G, 1961, 8-NW

Rhododendron 'Bronze Unique'
19403, G, 1926, 32-SW

Rhododendron 'Brookville'
133-63, G, 1963, 14-NW
353-91, G, 1991, 37-SE
578-62, G, 1962, 42-NW

Rhododendron 'Brown Eyes'
1042-59, G, 1959, 41-SE

Rhododendron 'Cadis'
1105-72, G, 1972, 38-SW

Rhododendron 'Candidissimum'
21-53, G, 1953, 42-NE

Rhododendron 'Caractacus'
23130, G, 1958, 37-SW

Rhododendron 'Caroline'
955-75, G, 1975, 37-SE
985-70, G, 1970, 43-NW

Rhododendron 'Caronella'
430-2008, G, 2008, 38-SW
617-72, G, 1972, DGB

Rhododendron 'Catalode'
1011-70, G, 1970, 38-SW

Rhododendron 'Catawbiense Album'
6003, U, 1910, 37-SW
16933, U, 1911, 37-SE, 37-SW
1049-78, U, 1978, 41-SE
321-94, G, 1994, 37-SE

Rhododendron 'Catawbiense Boursault'
1000-57, G, 1957, 37-SW, 43-NW
1180-56, G, 1956, 43-NW

Rhododendron 'Charles Bagley'
16937, G, 1911, 37-SW

Rhododendron 'Charles Dickens'
308-74, G, 1974, 26-NE

Rhododendron 'Chatham'
921-56, G, 1956, 37-SW

Rhododendron 'Cheer'
808-72, G, 1972, 43-NE

Rhododendron 'Chionoides'
382-94, G, 1994, 37-SE

Rhododendron 'Christmas Cheer'
233-54, G, 1954, 37-SE

Rhododendron 'Conemaugh'
809-72, G, 1972, 37-SW

Rhododendron (*bakeri* × *viscosum*) ×
'Consul Pecher'
837-59, G, 1959, 8-NW

Rhododendron 'Copper Cloud'
916-72, G, 1972, 15-NW

Rhododendron 'Coral Velvet'
690-73, G, 1973, DGB

Rhododendron 'Coriaceum'
22811, G, 1949, 37-SE

Rhododendron 'Corringe'
1017-73, G, 1973, 38-SW

Rhododendron 'Cunningham's White'
1100-70, G, 1970, 43-NE

Rhododendron 'Cynthia'
813-72, G, 1972, 43-NE
879-72, G, 1972, 43-NE

Rhododendron 'Debutante'
918-66, G, 1966, 36-SE

Rhododendron 'Delicatissimum'
6170, G, 1891, 37-SW
16941, G, 1917, 42-NE

Rhododendron 'Dexter's Orchid'
1381-61, G, 1961, 42-NE

Rhododendron 'Dexter's Purple'
570-75, G, 1975, 53-NW

Rhododendron 'Dora Amateis'
75-98, G, 1998, 37-SE

Rhododendron 'Dorothy Russell'
318-91, G, 1991, 37-SE

Rhododendron 'Dr. H. C. Dresselhuys'
23134, G, 1950, 37-SE

Rhododendron 'Dr. V. H. Rutgers'
818-72, G, 1972, 43-NE

Rhododendron 'Duke of York'
22616, G, 1921, 37-SE
22728, G, 1942, 42-NE
179-70, G, 1970, 53-NW

Rhododendron 'Echse'
6175, G, 1908, 37-SE
1090-70, G, 1970, 37-SE

Rhododendron 'Edward S. Rand'
319-91, G, 1991, 37-SE

Rhododendron 'Elie'
820-72, G, 1972, 43-NE

Rhododendron 'Emasculum'
822-72, G, 1972, 37-SE

Rhododendron 'Embley Crimson'
1230-65, G, 1965, 11-NW, 3-NE
545-65, G, 1965, 11-NW

Rhododendron 'English Roseum'
1342-60, G, 1960, 37-SW
575-62, G, 1962, 37-SW
887-60, G, 1960, 43-NW

Rhododendron 'Eva'
6180, G, 1908, 37-SW

Rhododendron 'Everitt #15'
541-56, G, 1956, 41-NW

Rhododendron 'Everitt #17'
542-56, G, 1956, 41-SW

Rhododendron 'Fastuosum Flore Pleno'
823-72, G, 1972, 53-NW

Rhododendron 'Favorite'
1185-53, G, 1953, 5-SW

Rhododendron 'Francesca'
1015-70, G, 1970, 43-NW, 43-SW

Rhododendron 'Fundy'
515-80, U, 1980, 37-SW

Rhododendron 'Gallipoli'
565-65, G, 1965, 15-NW

Rhododendron 'Gog'
1212-65, G, 1965, 3-SE

Rhododendron 'Goldfort'
1048-78, G, 1978, 41-SW

Rhododendron 'Gomer Waterer'
637-53, G, 1953, 42-NE

Rhododendron 'Henry's Red'
431-2008, G, 2008, 42-NE

Rhododendron 'Hino Crimson'
305-74, G, 1974, 26-NW

Rhododendron 'J. J. Jennings'
542-65, G, 1965, 36-SE

Rhododendron 'Janet Blair'
757-73, G, 1973, 14-NW

Rhododendron 'King Tut'
1166-64, G, 1964, 37-SE
829-72, G, 1972, 37-SE

Rhododendron 'Klondyke'
1234-65, G, 1965, 32-NW

Rhododendron 'Lady Armstrong'
170-92, G, 1992, 37-SE

Rhododendron 'Lady Grey Egerton'
549-55, G, 1955, 42-NE
970-56, G, 1956, 3-NE

Rhododendron 'Lady Roseberry'
632-61, G, 1961, 8-NW

Rhododendron 'Landmark'
432-2008, G, 2008, 43-NW

Rhododendron 'Lee's Best Purple'
630-72, G, 1972, 36-NE

Rhododendron 'Lee's Dark Purple'
575-64, G, 1964, 37-SE

Rhododendron 'Llenroc'
302-74, G, 1974, 26-SE

Rhododendron 'Luciferum'
955-56, G, 1956, 37-SE

Rhododendron 'Madame Carvalho'
831-72, G, 1972, 37-SE

Rhododendron 'Mars' seedlings
639-59, G, 1959, 42-NE

Rhododendron 'Meadowbrook'
788-60, G, 1960, 37-SW
553-38, G, 1938, 5-SW

Rhododendron 'Mello-Glo'
128-92, G, 1992, 31-NE
553-38, G, 1938, 5-SW

Rhododendron 'Melton'
923-69, G, 1969, 37-SE

Rhododendron 'Minnie'
795-60, G, 1960, 42-NE

Rhododendron 'Molly Fordham'
428-2008, G, 2008, 37-SW

Rhododendron 'Mrs. A. T. de la Mare'
839-72, G, 1972, 38-SW

Rhododendron 'Mrs. Charles S. Sargent'
16968, G, 1917, 37-SE

Rhododendron 'Mrs. C. S. Sargent' ×
'George Fraser'
896-72, G, 1972, 30-SE

Rhododendron 'Mrs. Harry Ingersoll'
6202, G, 1891, 37-SE
1101-70, G, 1970, 37-SE

Rhododendron 'Mrs. P. D. Williams'
800-60, G, 1960, 37-SE

Rhododendron 'Mrs. P. den Ouden'
1269-50, G, 1950, 43-NW

Rhododendron 'Mrs. Wm. R. Coe'
1385-61, G, 1961, 42-NE

Rhododendron 'Nancy Waterer'
1174-53, G, 1953, 38-NW

Rhododendron 'Nancy Waterer' sport
1521-52, G, 1952, 8-NE

Rhododendron 'Obtusum Arnoldianum'
20627, U, 1928, 38-NW
63-72, U, 1972, 5-SW

Rhododendron 'Old Port'
990-56, G, 1956, 38-SW

Rhododendron 'Olga Mezitt'
179-96, G, 1996, 37-SE

Rhododendron 'Orient'
1926-65, G, 1965, 8-NW

Rhododendron 'Our Best' × 'America'
856-59, G, 1957, 38-SW

Rhododendron 'P.J.M.' Group
278-74, G, 1974, 3-NW

Rhododendron 'P.J.M. Hybrids'
1057-55, G, 1955, 31-NE
405-62, G, 1962, 37-SE
476-58, G, 1958, 31-NE

Rhododendron 'Parsons Gloriosum'
631-72, G, 1972, 43-NW
847-72, G, 1972, 43-NW
913-54, G, 1954, 37-SW, 42-NE

Rhododendron 'Parsons Grandiflorum'
6137, G, 1891, 37-SW
291-49, G, 1949, 37-SE

Rhododendron 'President Lincoln'
1070-70, G, 1970, 37-SE

Rhododendron 'Prize'
849-72, G, 1972, 43-NE

Rhododendron 'Prometheus'
813-55, G, 1955, 43-NW

Rhododendron 'Purpureum Crispum'
796-60, G, 1960, 37-SW

Rhododendron 'Purpureum Elegans'
6135, G, 1891, 37-SE
17119, G, 1911, 37-SE
17120, G, 1917, 37-SW
637-90, G, 1990, 37-SE

Rhododendron 'Purpureum Grandiflorum'
2804, G, 1886, 37-SE, 37-SW
1088-70, G, 1970, 43-NW
1103-70, G, 1970, 43-NW
248-49, G, 1949, 42-NE

Rhododendron 'Ramapo'
851-72, G, 1972, DGB

Rhododendron 'Redhead'
329-91, G, 1991, 38-SW

Rhododendron 'Roseum Superbum'
7516, G, 1915, 37-SW
293-51, G, 1951, 37-SE
866-50, G, 1950, 37-SW

Rhododendron 'Roslyn'
989-56, G, 1956, 41-SW

Rhododendron 'Russell Harmon'
768-72, G, 1972, 37-SE

Rhododendron 'Sagamore Bayside'
1082-56, G, 1956, 42-NE
633-90, G, 1990, 43-NW
993-55, G, 1955, 41-SW

Rhododendron 'Salute'
331-91, G, 1991, 38-SW

Rhododendron 'Scintillation'
125-63, G, 1963, 38-SW
573-62, G, 1962, 42-NW
703-53, G, 1953, 42-NW

Rhododendron 'Sekidera'
10689, G, 1921, 41-NW

Rhododendron 'Shrimp Pink Hybrids'
300-74, G, 1974, 26-SE

Rhododendron 'Skyglow'
1253-38, G, 1938, 41-SW

Rhododendron 'Souvenir of Anthony Waterer'
332-91, G, 1991, 37-SE

Rhododendron 'Spring Glory'
858-72, G, 1972, 43-NE

Rhododendron 'Sultana'
7127, G, 1906, 37-SE

Rhododendron 'Sweet Simplicity'
155-70, G, 1970, 38-SW

Rhododendron 'Tom Everett'
924-56, G, 1956, 41-SW

Rhododendron 'Toucan'
189-72, G, 1971, 8-NW

Rhododendron 'Vallya'
303-74, G, 1974, 26-NE, 26-SE

Rhododendron aff. 'Vallya'
260-2010, U, 2010, 24-SW

Rhododendron 'Viola'
1184-57, G, 1957, 37-SW

Rhododendron 'Waltham'
282-2002, G, 2002, 26-SE, LG-1C, LG-6D

Rhododendron 'Westbury'
706-53, G, 1953, 41-NW

Rhododendron 'Weston'
577-64, G, 1964, 37-SW
765-58, G, 1958, 41-NW
768-73, G, 1973, 14-NW

Rhododendron 'Weston's Crescendo'
427-2008, G, 2008, 38-SW

Rhododendron 'Wheatley'
790-60, G, 1960, 37-SW

Rhododendron 'White Gem'
1369-60, G, 1960, 37-SW
508-60, G, 1960, 42-NE

Rhododendron 'Windbeam'
864-72, G, 1972, 37-SE

Rhododendron 'Wyandanch Pink'
568-75, G, 1975, 53-NW

Rhododendron albrechtii
241-68, U, 1968, DGB
26-98, W, Japan, 1998, 8-NW, 8-SW

Rhododendron × *anneliesae*
10767, G, 1921, 8-NW, 8-SW

Rhododendron arborescens
858, U, 1880, 32-SE
22803, U, 1948, 19-SW, 37-NW, 5-SW
107-2007, W, United States, 2007, 5-SW
464-81, W, United States, 1981, 11-SE,
15-NW, EG-3
469-81, W, United States, 1981, 11-SE,
15-NW
470-81, W, United States, 1981, 15-NW,
39-NE, EG-3
557-2009, U, 2009, BR-DAWSON-POND

Rhododendron arborescens f. *rubens*
641-62, G, 1962, 11-SE
642-62, G, 1962, 11-SE
695-50, U, 1950, 32-NW
907-66, U, 1966, 11-SE, 11-SW
908-66, U, 1966, 11-SW

Rhododendron × *arbutifolium*
123-63, G, 1963, 31-NE
1542-52, G, 1952, 37-SE

Rhododendron atlanticum
108-2007, W, United States, 2007, 5-NW

1141-67, Z, United States, 1967, 5-NW
1168-71, W, United States, 1971, 15-NW

Rhododendron atlanticum Choptank River
Strain
1527-77, W, United States, 1977, 15-NW

Rhododendron atlanticum × *calendulaceum*
410-2002, G, 2002, 5-SW

Rhododendron austrinum
343-96, Z, United States, 1996, 5-SW

Rhododendron austrinum 'Harrison's Red'
512-2010, W, United States, 2010, DGB

Rhododendron × *bakeri*
419-97, W, United States, 1997, 11-NW

Rhododendron brachycarpum
367-91, W, Korea, Republic of, 1991, EG-2,
EG-3
368-91, W, Korea, Republic of, 1991, EG2,
EG-3

Rhododendron calendulaceum
857, U, 1876, 32-NE
857-2, G, 1916, 32-SW
15079, U, 1905, 4-SE
17759, W, United States, 1919, 11-NW
18142, U, 1925, 38-NW
19483, U, 1925, 11-NW
22688, G, 1941, 11-NW
22692, G, 1941, 11-NW
22804, G, year unknown, 11-NW, 8-SW
23123, G, 1876, 11-NW
109-2007, W, United States, 2007, 19-NE,
19-SE
20-2000, W, United States, 2000, 11-NW
202-96, G, 1996, LG-3H
475-81, W, United States, 1981, 34-NE
479-81, W, United States, 1981, 19-NE,
25-NW, EG-3
521-82, U, 1982, 19-NW
656-70, U, 1970, 11-NW

Rhododendron calendulaceum
'Smoky Mountaineer'

22690, G, 1941, 11-NW
557-58, G, 1958, 11-NW
626-56, G, 1956, 11-NW
879-67, G, 1967, 11-NW
955-53, G, 1953, 11-NW, 25-NE

Rhododendron calendulaceum × *molle*
10768, G, 1921, 32-SW

Rhododendron calendulaceum f. *aurantium*
22736, G, 1942, 11-NW
857-4, G, 1922, 11-NW

Rhododendron calendulaceum f. *croceum*
17758-1, G, 1920, 11-NW
17758-3, G, 1922, 11-NW
631-54, G, 1954, 11-SW, 19-SW

Rhododendron canadense
199-2006, G, 2006, LG-2D
871-93, W, Canada, 1993, LG-2H

Rhododendron canescens
1247-80, W, United States, 1980, 26-NW
166-90, W, United States, 1990, EG-3
468-81, W, United States, 1981, 11-SW

Rhododendron canescens 'Clyo Red'
484-2010, W, United States, 2010, DGB

Rhododendron capitatum
244-2003, W, China, 2003, 5-SW

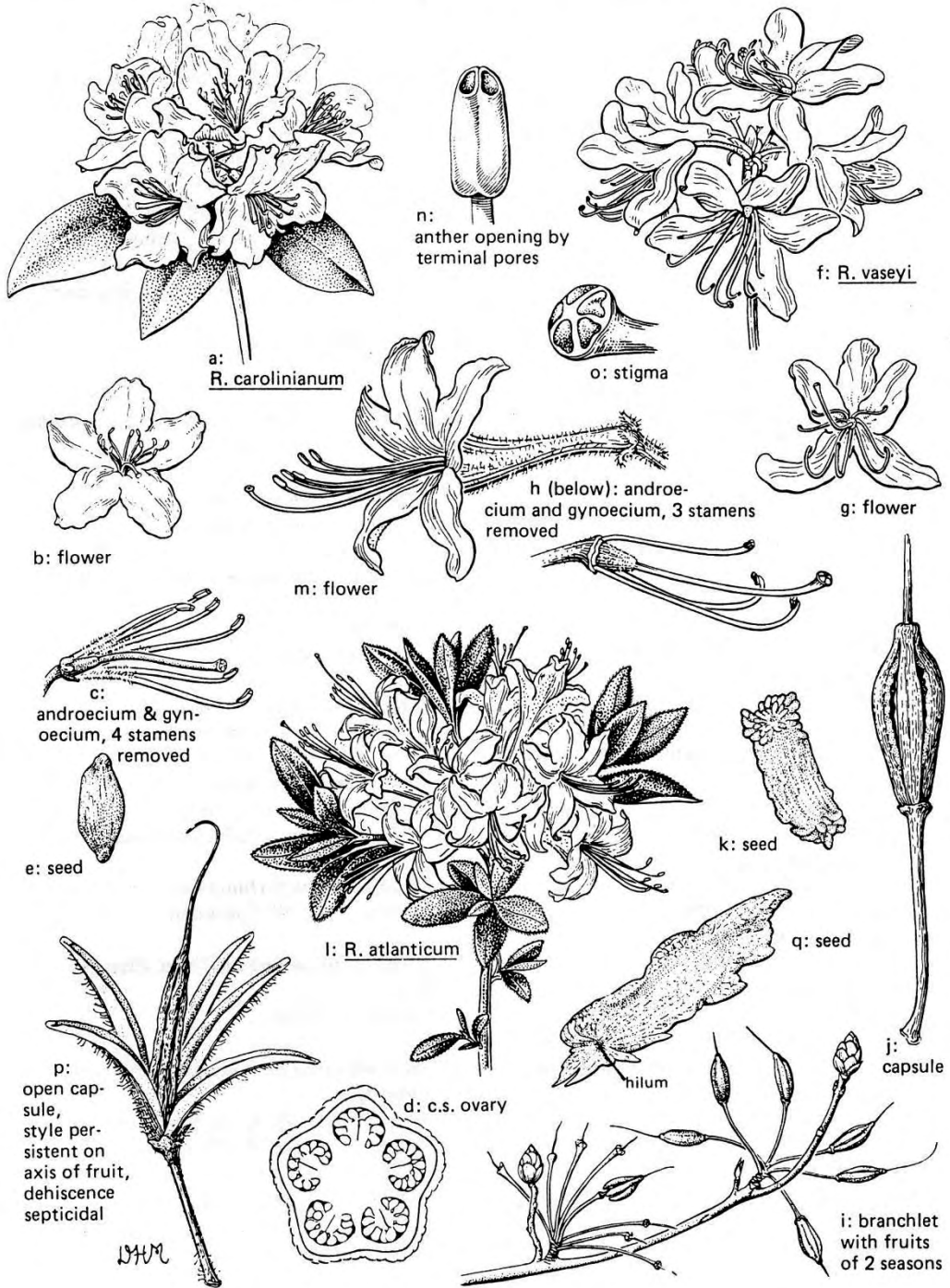
Rhododendron carolinianum × *pubescens*
956-63, G, 1963, 38-SW

Rhododendron carolinianum × 'Cornell Pink'
9-91, G, 1991, 31-NE
131-92, G, 1992, 31-NE
845-59, G, 1959, 31-NE, 38-SW

Rhododendron catawbiense
17605, G, 1924, 37-SW
1032-57, U, 1957, 37-SE
488-81, W, United States, 1981, 11-SW

Rhododendron catawbiense 'Catalgla'
314-91, G, 1991, 37-SW

ERICACEAE: Rhododendron. a-e, *R. carolinianum*; f-k, *R. vaseyi*; l-q, *R. atlanticum*



Rhododendron catawbiense 'Grandiflorum'
22739, U, 1917, 37-SE
529-41, U, 1941, 37-SE
576-62, U, 1962, 37-SW

Rhododendron catawbiense (undetermined
hybrid)
1071-70, G, 1970, 53-NW

Rhododendron catawbiense f. *compactum*
20198, U, 1926, 37-SE, 37-SW

Rhododendron catawbiense f. *insularis*
1244-80, U, 1980, 37-SE

Rhododendron dauricum
130-92, Z, Japan, 1992, 8-NW
1940-77, W, Japan, 1977, 32-SE

Rhododendron decorum
1051-78, U, 1978, 41-SW

Rhododendron degronianum ssp. *heptamerum*
497-73, W, Japan, 1973, EG-9

Rhododendron degronianum ssp. *heptamerum*
(undetermined hybrid)
15363, G, 1923, 37-SE

Rhododendron degronianum ssp. *heptamerum*
var. *hondoense*
714-81, U, 1981, 32-NE
715-81, U, 1981, 37-SE

Rhododendron degronianum ssp.
yakushimanum
1331-78, G, 1978, DGB
858-71, W, Japan, 1971, 34-SE, 39-NE

Rhododendron degronianum ssp.
yakushimanum 'Crete'
606-2003, G, 2003, LG-6A

Rhododendron degronianum ssp.
yakushimanum 'Mist Maiden'
1017-70, G, 1970, DGB

Rhododendron degronianum ssp.
yakushimanum 'Pink Parasol'
217-2003, G, 2003, LG-6D

Rhododendron dilatatum f. *leucanthum*
209-87, W, Japan, 1987, EG-3

Rhododendron discolor
105-85, W, China, 1985, EG-9

Rhododendron fargesii
1806-80, W, China, 1980, EG-9

Rhododendron fortunei
1075-89, G, China, 1989, EG-9
305-96, G, 1996, 42-NE
903-89, W, China, 1989, EG-9

Rhododendron fortunei 'Mrs. Charles Butler'
336-91, G, 1991, 37-SE

Rhododendron fortunei (undetermined hybrid)
20838, G, 1929, 41-NE, 41-SE, 41-SW
22934, G, 1929, 41-SE, 41-SW
8-91, G, 1991, 37-SE
9-91, G, 1991, 42-NE
12-53, G, 1953, 37-SE, 38-SW
1133-57, G, 1957, 41-SE
1347-50, G, 1950, 42-NW
1353-50, G, 1950, 42-NE
1376-60, G, 1960, 42-NW
1379-60, G, 1960, 42-NW
1427-60, G, 1960, 42-NE
250-49, G, 1949, 37-SW
525-56, G, 1956, 41-SW
560-56, G, 1956, 42-NW
561-56, G, 1956, 42-NW
609-53, G, 1953, 42-NW
620-54, G, 1954, 42-NW
692-53, G, 1953, 42-NW
694-53, G, 1953, 42-NW
784-55, G, 1955, 41-SE
912-56, G, 1956, 42-NW
972-57, G, 1957, 3-NE
977-55, G, 1955, 42-NW
993-56, G, 1956, 42-NW

Rhododendron × *fraseri*
269-2000, G, 2000, 5-SW

Rhododendron × *gandavense* 'Ariel'
928-66, G, 1966, 36-SE

Rhododendron × *gandavense*
'Bijou des Amateurs'
17100, G, 1904, 8-NW

Rhododendron × *gandavense* 'Charlemagne'
7091, G, 1914, 38-NW

Rhododendron × *gandavense*
'Coccinea Grandiflora'
53-57, G, 1957, 33-SW

Rhododendron × *gandavense*
'Comte de Flandre'
17102, G, 1914, 8-NW

Rhododendron × *gandavense* 'Cymodocee'
17121, G, 1904, 8-NW, 8-SW

Rhododendron × *gandavense* 'Electa'
1220-66, G, 1966, 36-SE

Rhododendron × *gandavense* 'Gloria Mundi'
10125, G, 1919, 32-SW

Rhododendron × *gandavense*
'Graf Alfred von Niepperg'
17097, G, 1904, 32-SW

Rhododendron × *gandavense* 'Graf von Meran'
7101, G, 1914, 32-SW

Rhododendron × *gandavense*
'Heureuse Surprise'
7105, G, 1914, 8-NW
923-61, G, 1961, 32-SW

Rhododendron × *gandavense* 'Ignacea'
20419, G, 1927, 32-SW

Rhododendron × *gandavense* 'Julius Caesar'
17109, G, 1904, 8-NW

Rhododendron × *gandavense* 'Lelia'
572-58, G, 1958, 25-NW

Rhododendron × *gandavense* 'Madame
Gustave Guillemot'
7104, G, 1914, 32-SW

Rhododendron × *gandavense* 'Narcissiflora'
705-63, G, 1963, 15-NW
903-83, G, 1983, 15-NW, 1-SW

Rhododendron × *gandavense* 'Oscar I'
573-58, G, 1958, 38-NW

Rhododendron × *gandavense* 'Pallas'
7112, G, 1914, 32-SW
565-55, G, 1955, 25-SE

Rhododendron × *gandavense* 'Raphael de Smet'
19064, G, 1925, 32-SW
605-59, G, 1959, 32-SE

Rhododendron × *gandavense* 'Reine des
Rouges'
623-61, G, 1961, 32-SW

Rhododendron × *gandavense* 'Unique'
72-57, G, 1957, 5-SE, 8-NW

Rhododendron × *gandavense* (undetermined
hybrid)

7358, G, 1913, 8-SW
7365, G, 1913, 38-NW
22629, G, 1939, 38-NW
22769, G, 1926, 31-NE
22913, G, 1950, 32-SE, 33-SW, 38-NW
51-57, G, 1957, 8-NW
615-62, G, 1962, 32-SW
631-90, G, 1990, 8-SW
635-90, G, 1990, 5-SE
636-90, G, 1990, 32-SE
639-90, G, 1990, 32-SW
695-54, G, 1954, 25-SW, 33-SW
74-57, G, 1957, 8-SW

Rhododendron × *gladwynensis*
640-56, G, 1956, 8-NW
979-67, G, 1967, 8-NW

Rhododendron hippophaeoides
607-91, U, 1991, EG-9

Rhododendron japonicum ssp. *aureum*
260-2007, G, 2007, 5-SW

Rhododendron kaempferi
3697, W, Japan, 1892, 32-SE
19375, G, 1926, 15-NE
21294, U, 1930, 33-SW
10-89 G, 1989, 11-SE, 15-NE
1104-82, Z, Japan, 1982, 15-NE
127-2001, W, Japan, 2001, 15-NE
1436-63, U, 1963, 15-NE
172-2005, G, 2005, LG-3H
401-63, U, 1963, 15-NE
65-72, U, 1972, 15-NE
660-63, G, 1963, 15-NE
735-66, U, 1966, 15-NE
852-81, U, 1981, 15-NW, 38-NW

Rhododendron kiyosumense
171-2000, Z, Japan, 2000, 3-NW, 5-SW

Rhododendron × *laetevirens*
20951, G, 1929, 41-NW
125-2000, G, 2000, 26-SE, 26-SW
147-38, G, 1938, 37-SE
672-52, G, 1952, 37-SE

Rhododendron luteum (undetermined hybrid)
155-98, G, 1998, 5-SW

Rhododendron makinoi
1145-89, W, Japan, 1989, EG-9
218-92, U, 1992, EG-9

Rhododendron maximum
19446, G, 1926, 42-NE
23020, G, 1953, 38-SW
110-2007, W, United States, 2007, 38-SW,
42-NE
15-96, G, 1996, 37-SE
1803-81, W, United States, 1981, 42-NE
194-82, G, 1982, 41-NE

Rhododendron maximum 'Independence'
306-96, G, 1996, 37-SE

Rhododendron maximum × *discolor*
300-35, G, 1935, 37-SE

Rhododendron maximum × *haematodes*
1350-60, G, 1960, 38-SW
673-60, G, 1960, 38-NW

Rhododendron maximum f. *album*
23021, G, 1953, 38-SW

Rhododendron metternichii var. *pentamerum*
839-77, W, Japan, 1977, EG-9

Rhododendron micranthum
6815, W, China, 1908, EG-15
6815-1, G, 1924, 31-NE

Rhododendron minus
1395-85, W, United States, 1985, 37-SE
1522-82, W, United States, 1982, 39-SE
24-2000, W, United States, 2000, 44-NE,
5-SW, LG-6D

Rhododendron minus var. *chapmanii*
1526-82, W, United States, 1982, DGB

Rhododendron minus var. *minus*
15387, W, United States, 1918, 37-SW
19973, W, United States, 1919, 37-SE
20944, U, 1929, 31-NE
21036, U, 1930, 38-SW
1519-82, W, United States, 1982, 44-SE
1523-82, W, United States, 1982, 47-SW
1525-82, W, United States, 1982, 37-SE
277-74, U, 1974, 26-SW
483-81, W, United States, 1981, 34-NE
899-69, Z, United States, 1969, DGB

Rhododendron × *mixtum* 'Norma'
142-44, G, 1944, 5-SW
791-90, G, 1990, 25-NW

Rhododendron molle ssp. *japonicum*
28-98, W, Japan, 1998, 5-SW

Rhododendron mucronulatum
197-2000, Z, Korea, Republic of, 2000, 5-NW
271-74, U, 1974, 26-NE

32-72, W, Korea, Republic of, 1972, 18-SE
33-72, W, Korea, Republic of, 1972, 11-SW
86-77, W, Korea, Republic of, 1977, DGB
968-85, W, Korea, Republic of, 1985, EG-9

Rhododendron mucronulatum 'Cornell Pink'
354-2003, G, 2003, LG-8I

Rhododendron × *myrtifolium*
8-79, U, 1979, 37-SE
301-74, G, 1974, 26-SW

Rhododendron oblongifolium
18907, W, United States, 1922, 31-NE
1110-86, W, United States, 1986, 15-NW

Rhododendron obtusum var. *kaempferi* ×
yedoense var. *poukhanense*
1221-64, G, 1964, 5-SW

Rhododendron occidentale × *calendulaceum*
21743, G, 1914, 32-SE

Rhododendron periclymenoides
3237, G, 1888, 5-SW, EG-3
111-2007, W, United States, 2007, 5-SW
462-70, U, 1970, BR-DAWSON-POND

Rhododendron praeevernum
1248-63, G, 1963, 42-NE
220-92, U, 1992, EG-9
958-87, G, 1987, EG-9

Rhododendron prinophyllum
860, U, 1879, 5-SW, EG-3
1142-89, G, 1989, BR-DAWSON-POND
508-70, U, 1970, EG-3

Rhododendron prunifolium
116-98, W, United States, 1998, LG-2D
1446-85, W, United States, 1985, 15-NW
1450-85, W, United States, 1985, 15-NW
1452-85, W, United States, 1985, 15-NW
1453-85, W, United States, 1985, 15-NW
505-2010, W, United States, 2010, DGB
656-49, U, 1949, 11-SW
702-50, U, 1950, 32-NW
759-63, U, 1963, 19-SE

790-61, U, 1961, 15-NW, 25-NE
815-90, W, United States, 1990, 15-NW

Rhododendron reticulatum
207-87, W, Japan, 1987, EG-3
716-81, W, Japan, 1981, DGB

Rhododendron russatinii
210-91, U, 1991, 37-SE

Rhododendron sanctum
199-87, W, Japan, 1987, EG-2

Rhododendron schlippenbachii
7258, W, Korea, Republic of, 1905, EG-3
13432, W, Korea, Republic of, 1918, EG-3
1861-80, U, 1980, 37-NW, EG-8
465-70, U, 1970, EG-2
507-77, W, Korea, Republic of, 1977,
BR-DAWSON-POND

Rhododendron sichotense
27-2002, W, Russian Federation, 2002, 3-NW,
8-NW, DGB

Rhododendron smirnowii
23243, U, 1949, 42-NE
1155-51, U, 1951, 37-SE
1263-52, U, 1952, 37-SE
15313-1, G, 1923, 37-SE
309-74, U, 1974, 26-SW

Rhododendron smirnowii (undetermined hybrid)
22730, G, 1917, 37-SE
1519-52, G, 1952, 37-SE
167-70, G, 1970, 38-SW

Rhododendron smirnowii × *degronianum* ssp.
yakushmanum
1179-84, G, 1984, 37-SE

Rhododendron traillianum
864-85, W, country unknown, 1985, EG-9

Rhododendron trichostomum var. *ledoides*
816-60, U, 1960, 38-NW

Rhododendron vaseyi

10704, W, United States, 1921, 15-SE
20953, U, 1929, 11-SW
1355-85, W, United States, 1985, 26-SW,
EG-1, EG-3
1364-85, W, United States, 1985, EG-3
1432-85, W, United States, 1985, 26-SW,
LG-1F, EG-1, EG-3
1433-85, W, United States, 1985,
BR-DAWSON-POND
1434-85, W, United States, 1985, EG-1
EG-3
1435-85, W, United States, 1985, EG-3
1436-85, W, United States, 1985, EG-1,
LG-PER-N
1437-85, W, United States, 1985, EG-3
1438-85, W, United States, 1985, EG-1,
EG-3
272-74, U, 1974, 26-NE
36-87, W, United States, 1987,
BR-DAWSON-POND
460-70, U, 1970, BR-DAWSON-POND
494-81, W, United States, 1981, 11-SW
497-2010, W, United States, 2010, DGB
498-81, W, United States, 1981, 11-SW
599-89, W, United States, 1989,
BR-DAWSON-POND
657-70, U, 1970, 11-SW, 15-SE
811-66, U, 1966, 15-NW

Rhododendron aff. vernicosum

338-91, Z, China, 1991, 38-SW

Rhododendron viscosum

859, W, United States, 1879, 5-SW,
EG-5
21309, U, 1930, 11-SW
1048-85, U, 1985, 3-NE
1097-80, W, United States, 1980, 59-SW
112-2007, W, United States, 2007, 5-SW
284-2007, W, United States, 2007, 5-SW
500-81, W, United States, 1981, 11-SW
585-55, Z, United States, 1955, 11-SW,
15-NW, 3-NE, 3-SE

Rhododendron viscosum (undetermined hybrid)

139-98, G, 1998, 37-NW

Rhododendron viscosum f. rhodanthum

638-62, U, 1962, 5-SW

Rhododendron wadanum

200-87, W, Japan, 1987, EG-9

Rhododendron × watereri

5905, G, 1909, 37-SE
21747, G, 1909, 37-SE
1068-53, G, 1953, 42-NE
1080-70, G, 1970, 37-SE
1089-70, G, 1970, 31-SE
1157-57, G, 1957, 42-NE

Rhododendron weyrichii

565-90, G, 1990, EG-9

Rhododendron yedoense var. poukhanense

20543, U, 1928, 3-SW
1383-82, W, Korea, Republic of, 1982, EG-9
1419-67, G, 1967, DGB
301-2002, W, Korea, Republic of, 2002, 3-SW
385-41, G, 1941, 26-SE
654-70, U, 1970, 3-SW
71-72, U, 1972, EG-9
793-84, W, Korea, Republic of, 1984, EG-3
884-61, U, 1961, 3-SW

Rhodotypos scandens

396-2007, Z, Korea, Republic of, 2007,
17-SW
680-79, U, 1979, 23-NW

Rhus aromatica

271-4, G, 1891, 8-SW
359-84, W, Canada, 1984, 45-SW
441-86, W, United States, 1986, 39-SE
557-2003, W, United States, 2003, LG-7B

Rhus aromatica 'Gro-low'

208-2008, G, 2008, LG-PER-W
422-85, G, 1985, 8-SW

Rhus aromatica var. serotina

20978, U, 1929, 26-SW

Rhus aromatica var. trilobata

1376-65, U, 1965, WH3-SE

Rhus chinensis
111-52, W, Japan, 1952, 26-SW
399-86, W, Korea, Republic of, 1986, 45-SW
475-80, W, China, 1980, 8-SW

Rhus chinensis 'September Beauty'
929-89, U, 1989, 59-NW

Rhus copallina
1287-81, W, United States, 1981, 39-NE
288-97, G, 1997, 54-SW

Rhus coriaria
332-2008, W, Israel, 2008, 11-NW, 54-SW

Rhus glabra
289-97, G, 1997, 54-SW
295-86, W, United States, 1986, 45-SW
62-97, Z, United States, 1997, 54-NW
922-73, U, 1973, 36-SW

Rhus potaninii
11300, U, 1920, 26-SW
734-74, U, 1974, 26-SW

Rhus sylvestris
98-71, U, 1971, 26-SW

Rhus typhina
16990, W, United States, 1884, 26-SW
290-97, G, 1997, 54-SW
606-2008, W, United States, 2008, 8-SW,
54-SW, WH1-SE
84-2008, W, United States, 2008, 8-SW,
62-SW

Ribes alpinum
1258-84, W, Sweden, 1984, 21-SE
1456-80, W, Russian Federation, 1980,
62-NW
603-86, Z, Estonia, 1986, 52-NW
678-80, U, 1980, 15-NE

Ribes alpinum 'Pumilum'
1129-83, U, 1983, 51-SE

Ribes alpinum 'Verno-aureum'
841-70, G, 1970, 15-SW

Ribes aureum
1119-83, Z, United States, 1983, 21-SE
460-81, W, United States, 1981, 31-NE

Ribes echinellum
234-96, Z, United States, 1996, 15-SW

Ribes fasciculatum
183-83, W, China, 1983, 12-SW

Ribes fasciculatum var. *chinense*
1373-73, W, Korea, Republic of, 1973, 15-SW
1879-77, G, Korea, Republic of, 1977, 15-SW
613-88, W, Korea, Republic of, 1988, 21-SE
680-80, Z, Japan, 1980, 51-SE

Ribes giraldii
609-74, U, 1974, 15-SW

Ribes glaciale
614-74, U, 1974, 15-SW

Ribes hirtellum
829-93, W, Canada, 1993, 15-SW

Ribes lacustre
526-94, Z, United States, 1994, 15-SW

Ribes mandshuricum
67-97, W, China, 1997, 15-SW

Ribes maximowiczianum
312-97, W, China, 1997, 15-SW

Ribes odoratum
1192-74, U, 1974, 32-SE

Ribes triste
407-94, W, Korea, Republic of, 1994, 21-SE

Ribes uva-crispa
370-93, W, Italy, 1993, 15-SW
520-94, Z, Russian Federation, 1994, 15-SW

Robinia sp.
171-88, W, United States, 1988, 51-SE

Robinia × holdtii 'Britzensis'
683-72, G, 1972, 23-NW

Robinia pseudoacacia
15561, U, 1921, 15-NW
19615, W, United States, 1925, 15-NW
22838, G, 1950, 15-NW
23173, G, 1963, 15-NW
1377-51, G, 1952, 15-NW
193-56, G, 1956, 15-SW
321-48, G, 1948, 15-NW
365-2011, U, 2011, 29-SE
390-37, U, 1937, 15-SW
668-2010, U, 2010, 57-SE

Robinia pseudoacacia 'Aurea'
618-66, G, 1966, 15-SW

Robinia pseudoacacia 'Bessoniana'
284-50, G, 1950, 15-NW
365-88, G, 1988, 51-SE

Robinia pseudoacacia 'Burgundy'
450-65, G, 1965, 15-SW

Robinia pseudoacacia 'Cylindrica'
371-88, G, 1988, 45-SW
482-52, G, 1952, 15-NW

Robinia pseudoacacia 'Frisia'
361-88, G, 1988, 45-SW

Robinia pseudoacacia 'Monophylla Pendula'
1378-51, G, 1951, 15-NW
372-88, G, 1988, 45-SW

Robinia pseudoacacia 'Rectissima'
196-56, G, 1956, 15-NW

Robinia pseudoacacia 'Semperflorens'
309-56, G, 1956, 15-NW

Robinia × slavinii
116-45, G, 1945, 15-NW

Robinia viscosa var. *hartwigii*
380-88, Z, United States, 1988, 51-SE
402-57, Z, United States, 1957, 15-SW

Rodgersia aesculifolia
392-95, W, China, 1995, 3-NW

Rosa 'AUSblush'
71-2011, G, 2011, BR-6

Rosa 'AUSbord'
70-2011, G, 2011, BR-6

Rosa 'AUSmas'
710-2010, G, 2010, BR-2

Rosa 'Baron Girod de L'Ain'
705-2010, G, 2010, BR-5

Rosa 'Betty Prior'
1086-79, G, 1979, 22-NE
706-2010, G, 2010 BR-2

Rosa 'Bucbi'
407-97, G, 1997, 22-NW, 22-NW
707-2010, G, 2010, 22-NW, BR-4

Rosa 'Carmenetta'
1500-83, G, 1983, BR-4

Rosa 'Cecil Brunner'
708-2010, G, 2010, BR-2

Rosa 'Chrysler Imperial'
75-2011, G, 2011, BR-4

Rosa 'Chuckles'
67-2011, G, 2011, BR-4
920-83, G, 1983, 22-NW

Rosa 'Duchesse de Montebello'
1395-84, G, 1984, BR-2

Rosa 'Greenmantle'
890-83, G, 1983, BR-5

Rosa 'Jane Bullock'
711-2010, G, 2010, BR-2

Rosa 'Madame Isaac Pereire'
74-2011, G, 2011, BR-5

Rosa 'Meipitac'
66-2011, G, 2011, BR-4

Rosa 'Metis'
1061-86, G, 1986, BR-6

Rosa 'New Dawn'
712-2010, G, 2010, BR-4

Rosa 'Pink Parfait'
1232-81, G, 1981, 1-SW

Rosa 'Radcor'
69-2011, G, 2011, BR-2

Rosa 'Radsun'
65-2011, G, 2011, BR-2

Rosa 'Radtko'
709-2010, G, 2010, BR-13

Rosa 'Radtkepink'
198-2010, G, 2010, BR-4

Rosa 'Radyod'
64-2011, G, 2011, BR-2

Rosa 'Seafoam'
713-2010, G, 2010, BR-4

Rosa 'Sombreuil'
73-2011, G, 2011, BR-5

Rosa 'WEKcobeju'
199-2010, G, 2010, BR-3

Rosa 'WEKvossutono'
68-2011, G, 2011, BR-3

Rosa 'Westerland'
714-2010, G, 2010, LG-9C.1

Rosa acicularis
17134, U, 1909, 22-NE
100-77, W, Canada, 1977, BR-17-SW

Rosa acicularis ssp. *sayi*
515-78, W, Canada, 1978, BR-5

Rosa acicularis var. *bourgeauiana*
1049-83, U, 1983, BR-2

Rosa acicularis var. *nipponensis*
707-82, U, 1982, BR-4

Rosa albertii
644-83, W, Russian Federation, 1983,
BR-4

Rosa amblyotis
234-84, U, 1984, BR-5
1521-83, W, country unknown, 1983
BR-4

Rosa arkansana
314-90, W, Canada, 1990, BR-6

Rosa arvensis
579-94, W, France, 1994, BR-4
948-78, W, Belgium, 1978, 22-NW

Rosa bella
455-83, W, China, 1983, BR-4

Rosa blanda
688-82, Z, United States, 1982, BR-4

Rosa californica
1388-83, W, United States, 1983, BR-4

Rosa canina
1085-85, Z, Morocco, 1985, BR-4
294-2008, W, Armenia, 2008, BR-5
387-94, W, Germany, 1994, BR-4

Rosa canina 'Inermis'
1069-81, G, 1981, BR-5

Rosa carolina
41-88, W, United States, 1988, BR-4
59-97, G, 1997, 22-NW, 54-SW
60-97, G, 1997, 22-NW, 54-SW

Rosa centifolia
327-84, U, 1984, BR-5

Rosa cinnamomea
383-79, W, Russian Federation, 1979, BR-5

Rosa coriifolia
716-82, U, 1982, BR-3

Rosa corymbifera
388-94, W, Germany, 1994, BR3, BR-6
620-78, W, Tajikistan, 1978, BR-4
680-82, G, 1982, BR-4

Rosa × damascena 'Trigintipetala'
997-81, G, 1981, BR-5

Rosa davurica
324-97, W, China, 1997, 22-NE

Rosa dumalis var. *dumalis*
840-80, U, 1980, BR-5

Rosa × dupontii
921-82, G, 1982, BR-3

Rosa eglanteria
350-78, W, Denmark, 1978, 22-NE
389-94, W, Germany, 1994, BR-4

Rosa gallica var. *officinalis*
270-94, G, 1994, BR-2

Rosa glauca
347-94, W, Sweden, 1994, BR-4

Rosa gymnocarpa
1005-85, U, 1985, BR-4
297-2005, W, United States, 2005
BR-5

Rosa henryi
117-98, W, China, 1998, BR-4

Rosa hugonis
321-84, G, 1984, BR-4

Rosa × hibernica
1031-85, G, 1985, BR-4

Rosa × highdownensis
610-86, G, 1986, BR-3

Rosa hugonis × omeiensis f. *pteracantha*
230-97, G, 1997, BR-4

Rosa hugonis × spinosissima var. *altaica*
8010, G, 1918, 22-NE

Rosa iberica
728-89, W, Iran, 1989, BR-4

Rosa inodora
330-85, W, Germany, 1985, BR-3
476-78, W, Germany, 1978, 22-NE

Rosa × involuta
1391-73, G, 1973, BR-4

Rosa × kamtchatica
686-82, U, 1982, BR-2

Rosa × kochiana
236-84, G, 1984, BR-3

Rosa luciae
1556-83, W, Japan, 1983, BR-6

Rosa macrocarpa
600-97, W, China, 1997, BR-4

Rosa macrophylla 'Rubricaulis'
965-86, G, 1986, BR-3

Rosa majalis
621-2007, Z, Sweden, 2007, BR-4

Rosa micrantha
1414-83, W, France, 1983, BR-4

Rosa mollis
289-87, W, Norway, 1987, BR-5

Rosa moyesii
460-87, W, China, 1987, BR-3

Rosa multiflora f. *roseiflora*
1060-83, G, 1983, BR-4, BR-16-NW

Rosa nitida
1007-81, U, 1981, 22-NW
370-84, W, Canada, 1984, BR-4
483-97, W, United States, 1997, 54-SW

Rosa nitidula
348-94, W, Spain, 1994, BR-4

Rosa nutkana var. *hispidula*
516-78, W, Canada, 1978, BR-4

Rosa nutkana var. *nutkana*
184-2009, Z, Canada, 2009, BR-4

Rosa omeiensis
63-96, W, China, 1996, BR-5

Rosa oxyodon
295-2008, W, Armenia, 2008, BR-4

Rosa palustris
1179-83, Z, United States, 1983, BR-4
163-85, W, Canada, 1985,
BR-DAWSON-POND
645-83, W, United States, 1983, BR-5
986-79, W, United States, 1979,
BR-DAWSON-POND

Rosa pendulina
993-3, U, 1905, BR-2

Rosa pisocarpa
1760-81, U, 1981, BR-3

Rosa prattii
543-90, W, China, 1990, BR-4
852-80, U, 1980, BR-5

Rosa primula
7446, W, Uzbekistan, 1911, BR-17-SW
276-85, G, 1985, BR-5

Rosa × *pteragonis*
1007-85, G, 1985, BR-5

Rosa pteragonis 'Redwing'
1066-81, G, 1981, 22-NW

Rosa roxburghii
253-83, W, China, 1983, BR-4

Rosa rugosa
277-84, W, Japan, 1984, BR-2
623-85, W, Korea, Democratic People's
Republic of, 1985, BR-2
67-2002, W, Russian Federation, 2002,
BR-4
72-90, W, Korea, Republic of, 1990, BR-2

Rosa rugosa 'Belle Poitevine'
1006-85, G, 1985, BR-2

Rosa rugosa 'Plena'
538-84, U, 1984, BR-2

Rosa scabriuscula
390-94, W, Germany, 1994, BR-2

Rosa schrenkiana
839-90, W, Turkmenistan, 1990, BR-4

Rosa serafinii
700-82, G, 1982, BR-4

Rosa setigera
374-84, W, Canada, 1984, BR-3
547-2009, Z, Canada, 2009, BR-4

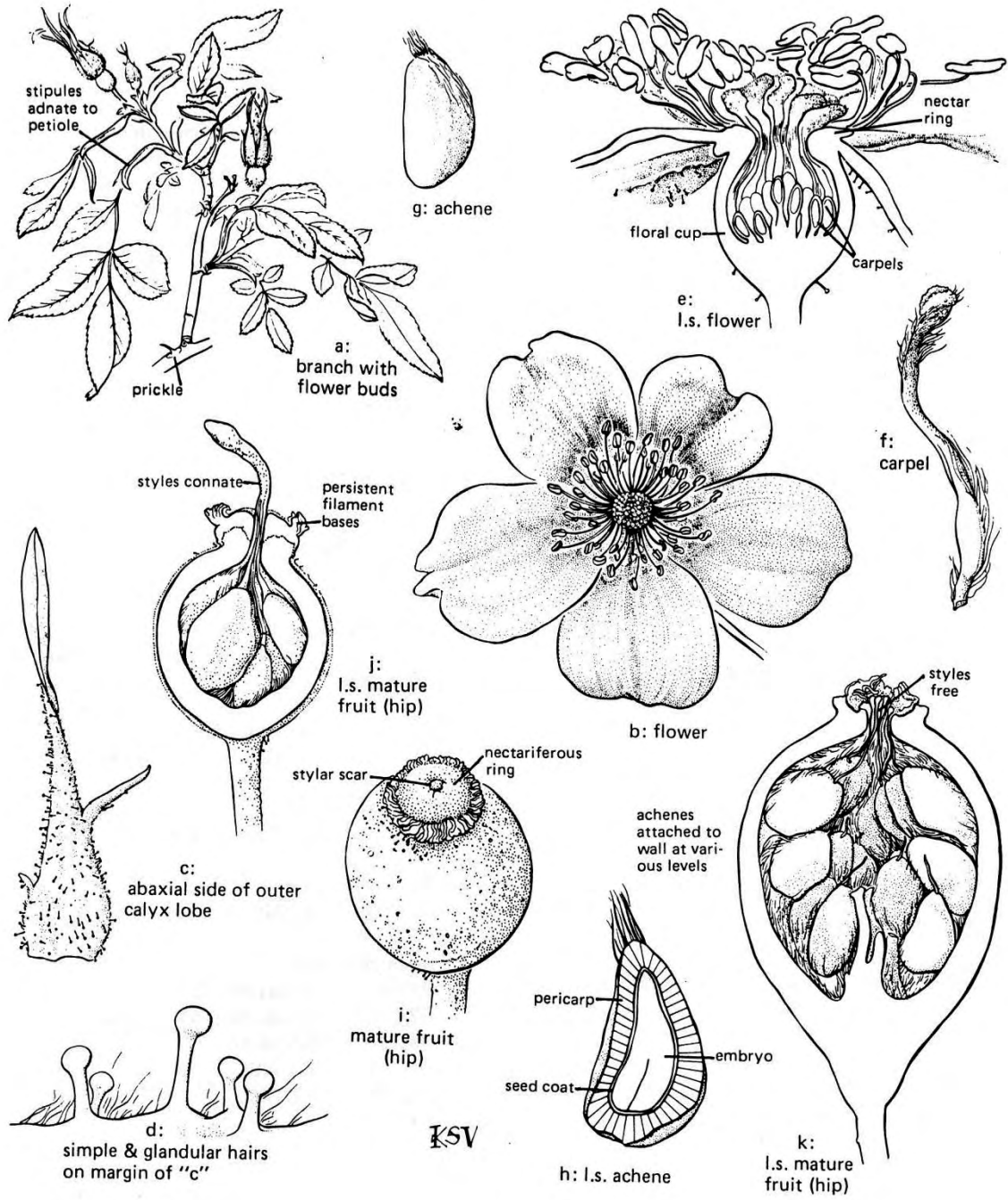
Rosa setigera var. *tomentosa*
416-2007, G, 2007, BR-4

Rosa sherardii
920-80, U, 1980, BR-3

Rosa spinosissima
1041-83, G, 1983, 22-NW
1102-83, U, 1983, BR-3
1462-80, W, Russian Federation, 1980
BR-5
428-85, W, Czechoslovakia, 1985, BR-3

Rosa spinosissima 'Lutea Plena'
795-39, G, 1939, BR-5

ROSACEAE subfamily ROSOIDEAE: *Rosa*. a-h, *R. virginiana*; i, j, *R. setigera*; k, *R. eglanteria*



Rosa spinosissima 'Plato'
1100-83, G, 1983, BR-5, BR-16-NW

Rosa spinosissima var. *altaica*
3136-2, U, 1905, 22-NE

Rosa stylosa
349-94, W, Spain, 1994, BR-3

Rosa sweginzowii
1109-88, G, 1988, BR-3

Rosa transmorrisonensis
258-98, W, Taiwan, 1998, BR-5

Rosa villosa
1305-80, W, Russian Federation, 1980, BR-3

Rosa virginiana
105-2006, United States, 2006,
BR-DAWSON-POND
106-2006, United States, 2006,
BR-DAWSON-POND

Rosa × *waitziana*
606-83, G, 1983, BR-5

Rosa woodsii
109-78, W, Canada, 1978, BR-5
266-90, W, Canada, 1990, BR-3

Rosa woodsii ssp. *ultramontana*
1195-82, W, United States, 1982, BR-3
517-78, W, Canada, 1978, BR-FAXON-POND

Rosa zalana
928-78, W, Hungary, 1978, BR-5

Rubus biflorus var. *biflorus*
627-90, G, 1990, BR-6

Rubus cockburnianus
1245-82, U, 1982, BR-6

Rubus crataegifolius
462-82, U, 1982, BR-6

Rubus idaeus
1070-80, W, France, 1980, BR-4
780-93, W, Canada, 1993, BR-6

Rubus lasiostylus
107-81, W, China, 1980, BR-6
134-81, W, China, 1980, BR-6

Rubus lasiostylus var. *hubeiensis*
126-81, W, China, 1980, BR-6

Rubus palmatus var. *coptophyllus*
461-82, U, 1982, BR-6

Rubus parviflorus
1206-78, G, Canada, 1978, BR-17-SW

Sageretia thea
198-90, U, 1990, LARZ

Salix sp.
1205-85, W, United States, 1985, BR-12
1938-77, G, Japan, 1977, BR-1C, BR-12

Salix aegyptiaca
101-90, G, 1990, 8-SW
492-33, G, 1933, 8-SW

Salix alba
411-66, G, 1966, 5-SW
44-43, G, 1943, 8-NW
81-46, G, 1946, 8-NW

Salix alba var. *caerulea*
1049-79, U, 1979, 8-NE, 8-SE

Salix alba var. *sericea*
1053-79, U, 1979, 8-SE

Salix alba var. *vitellina*
314-47, G, 1947, 5-NE

Salix alba var. *vitellina* 'Pendula'
104-90, G, 1990, 3-SE
63-78, G, 1978, 3-SE
94-90, Z, Russian Federation, 1990, 5-SE

Salix babylonica 'Tortuosa'
131-90, U, 1990, 5-NW
352-2009, U, 2009, 1-SE
545-73, G, 1973, 5-NW

Salix babylonica 'Umbraculifera'
634-60, G, 1960, 8-NW

Salix × *blanda* 'Elegantissima'
16-77, G, 1977, 5-SW
719-71, G, 1971, 8-NW

Salix bebbiana
313-2005, W, United States, 2005, 5-NW
314-2005, W, United States, 2005, 5-NW

Salix × *calodendron*
201-2007, G, 2007, 8-NW

Salix candida
825-93, W, Canada, 1993, LG-8A

Salix chaenomeloides
139-90, G, 1990, 3-SW

Salix × *chrysocoma*
176-85, G, 1985, 59-NE

Salix cinerea
1097-85, U, 1985, 55-SE
375-59, G, 1959, 8-NW
60-95, G, 1995, 3-SE

Salix cinerea ssp. *oleifolia*
2035-65, U, 1965, 8-NW

Salix daphnoides
639-2007, U, 2007, 3-SE
652-71, U, 1971, 8-SW

Salix × *ehrhartiana*
2-99, G, 1999, 8-SE

Salix elaeagnos 'Angustifolia'
513-81, G, 1981, 3-SE

Salix exigua ssp. *exigua*
416-2008, W, United States, 2008, 1-SE

Salix gilgiana
295-80, G, 1980, 8-NW

Salix glauca var. *callicarpaea*
826-93, W, Canada, 1993, LG-8B
855-93, W, Canada, 1993, LG-6A

Salix gracilistyla
690-75, G, 1975, 5-NW
930-74, G, 1974, 5-NW

Salix gracilistyla var. *melanostachys*
404-82, U, 1982, 5-NW
71-98, G, 1998, 5-NW

Salix humilis var. *humilis*
1095-85, U, 1985, 59-NE
209-2005, W, United States, 2005, 5-NW
315-2005, W, United States, 2005, 5-NW

Salix integra
304-2000, G, 2000, 8-SE

Salix integra var. *albo-marginata*
347-96, G, 1996, 5-SW

Salix koriyanagi 'Rubykins'
348-96, G, 1996, 5-SW

Salix lapponum
410-88, G, 1988, DGB

Salix magnifica
481-95, G, 1995, LG-7H

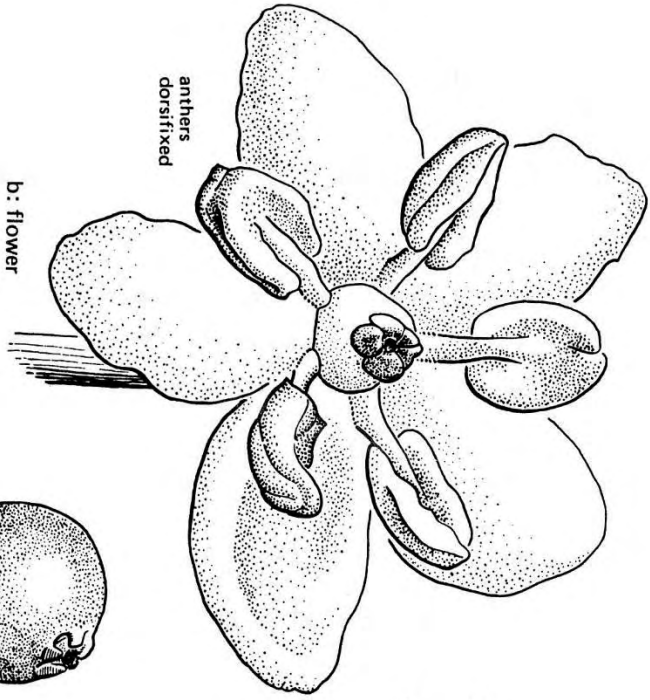
Salix miyabeana
17-93, G, 1993, 59-SW
391-66, G, 1966, 8-NW
432-62, G, 1962, 8-SW

Salix × *multinervis* notho ssp. *charrieri*
1047-79, Z, country unknown, 1979, 5-SE,
8-NE

Salix myrsinifolia
177-65, G, 1965, 8-NW
439-62, G, 1962, 8-NW
832-85, G, 1985, 59-NE

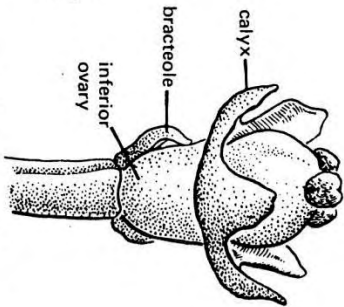
- Salix nigra*
184-2007, Z, United States, 2007, 5-SE
19-92, Z, United States, 1992, 53-NE
- Salix pentandra*
95-90, G, 1990, 8-NW
- Salix petiolaris*
117-99, W, United States, 1999, 8-SW
311-2005, W, United States, 2005, 5-NW
- Salix pierotii*
22939, G, 1937, 3-NE
242-98, G, 1998, 8-NE, 8-SW
375-75, G, 1975, 8-NW
46-43, G, 1943, 8-NW
734-87, U, 1987, 5-NE
- Salix purpurea*
17190, G, 1911, 3-SE
6-82, U, 1982, 5-SE
11-82, Z, Germany, 1982, 5-SE
12-82, G, 1982, 8-NE
3-99, G, 1999, 8-SE, 8-SW
1045-79, G, 1979, 5-NE, 8-NW
294-96, G, 1996, 3-SE
618-2008, U, 2008, 3-SE
- Salix purpurea* 'Gracilis'
653-71, G, 1971, 5-NW
- Salix rorida*
154-98, Z, China, 1998, 8-SE
- Salix × rubens*
1061-79, G, 1979, 8-SE
199-80, G, 1980, 8-NW
272-49, G, 1949, 8-NW
406-66, G, 1966, 5-SW
535-79, G, 1979, 5-SE
538-54, Z, Canada, 1954, 8-NW, 8-SW
633-60, U, 1960, 8-NW
690-83, U, 1983, 51-NE
706-35, W, Canada, 1935, 8-NW
825-2008, U, 2008, 5-SE
- Salix schwerinii*
172-97, G, 1997, 8-SW
- Salix × sepulcralis*
13-82, Z, country unknown, 1982, 5-SE
15-82, G, 1982, 5-NE
178-53, G, 1953, 5-SW
514-81, Z, Germany, 1981, 51-SE
528-33, G, 1933, 8-SW
- Salix × sepulcralis* 'Erythroflexuosa'
177-85, U, 1985, 5-NW
- Salix × sericans*
432-60, G, 1960, 8-NW
- Salix × smithiana*
169-97, U, 1997, 8-SE, 8-SW
235-96, G, 1996, 8-SE
- Salix triandra*
506-81, Z, Czechoslovakia, 1981, 51-NE
- Salix udensis*
153-98, Z, China, 1998, 8-NE
279-97, W, China, 1997, 8-SE
390-66, G, 1966, 5-SW
404-66, G, 1966, 5-SW
- Salix udensis* 'Sekka'
161-64, G, 1964, 8-NW
671-67, G, 1967, 8-SW
- Sambucus canadensis*
323-2007, W, United States, 2007,
BR-DAWSON-POND
814-90, W, United States, 1990, 19-NW
85-2008, W, United States, 2008,
BR-DAWSON-POND
- Sambucus ebulus*
609-94, W, Italy, 1994, 4-SE
- Sambucus racemosa*
262-2008, W, Denmark, 2008,
BR-DAWSON-POND

CAPRIFOLIACEAE: Sambucus. a-f, *S. canadensis*

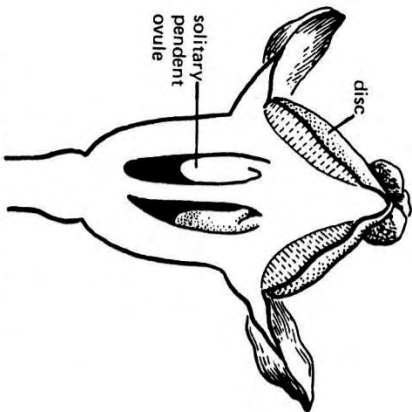


anthers dorsifixed

b: flower



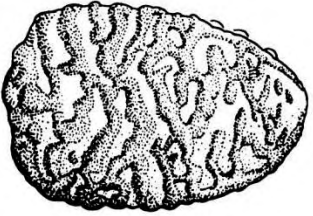
c: flower, corolla and stamens removed



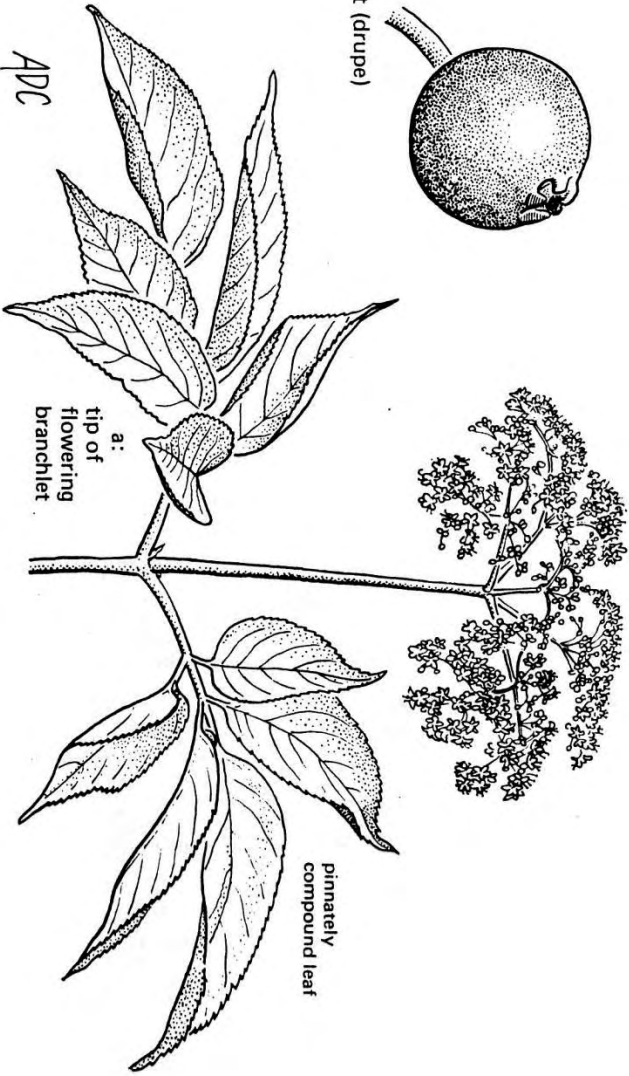
d: l.s. calyx and gynoecium



e: fruit (drupe)



f: stone (endocarp)

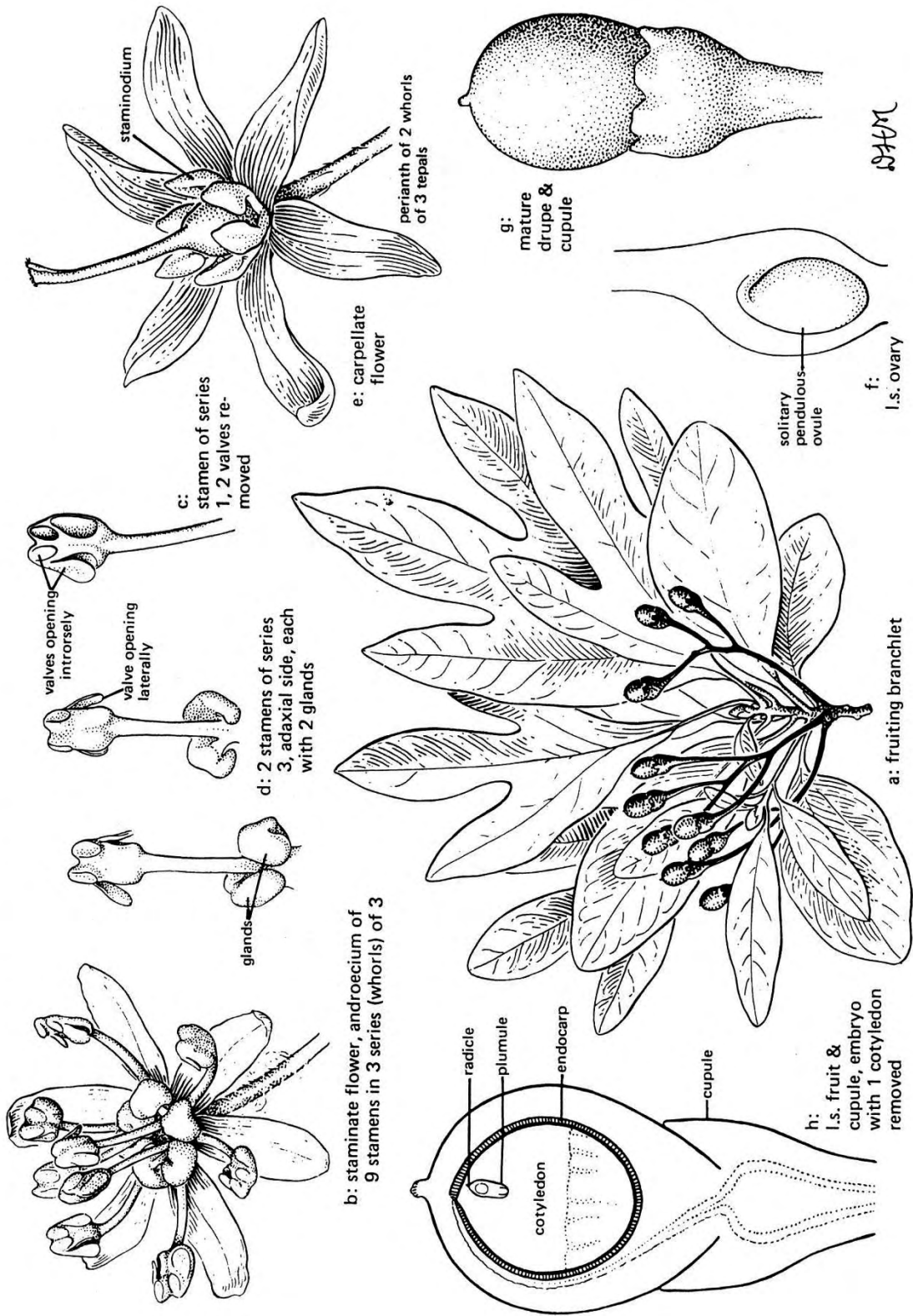


a: tip of flowering branchlet

pinnately compound leaf

ADC

LAURACEAE: Sassafras. a-h, *S. albidum* var. *molle*



Sambucus sieboldiana var. *miquelii*
248-98, W, China, 1998, 4-SE

Sanguinaria canadensis 'Multiplex'
824-72, G, 1972, DGB

Sanguisorba sp.
392-97, W, China, 1997, 1-SW

Sapindus drummondii
680-91, W, United States, 1991, 11-SE, 11-SW

Sarcococca humilis
647-83, G, 1983, DGB
667-2003, G, 2003, LG-7I

Sasa senanensis
17578, W, Japan, 1891, 10-NE

Sasa veitchii
1390-78, G, 1978, 3-NE

Sassafras albidum
300-97, G, 1997, 15-NW, 15-SW

Sassafras albidum var. *albidum*
22915, G, 1950, 14-SE, 51-NW

Sassafras albidum var. *molle*
968, W, United States, 1884, 14-SE
22801, G, 1948, 36-NW

Schisandra chinensis
343-97, W, China, 1997, LG-9C.20
409-89, W, Korea, Republic of, 1989,
LG-9C.21

Schizophragma hydrangeoides
243-2008, W, Japan, 2008, DGB, LG-PER-S,
WH2-SW

Schizophragma hydrangeoides 'Moonlight'
352-2002, G, 2002, LG-5

Schizophragma hydrangeoides 'Roseum'
350-2002, G, 2002, LG-5

Sciadopitys verticillata
18078, U, 1898, 36-NE
1203-73, G, 1973, 33-SW
503-70, G, 1970, 3-NW

Sequoiadendron giganteum
1190-79, W, United States, 1979, 3-NW
1320-72, W, United States, 1972, 35-NE
209-59, G, 1959, DGB
479-95, W, United States, 1995, 26-SW

Sequoiadendron giganteum 'Hazel Smith'
851-87, G, 1987, 35-NE, 35-NW

Shepherdia argentea
102-77, W, Canada, 1977, 14-NW

Shibataea kumasaca
264-85, U, 1985, EG-6

Sinojackia xylocarpa
276-79, U, 1979, 19-NW

Sinowilsonia henryi
156-99, U, 1999, 18-SE
1970-80, W, China, 1980, DGB

Smilax hispida
17247, U, 1898, 12-SW

Smilax sieboldii
145-2000, Z, Korea, Republic of, 2000,
LG-9C.18

Sophora davidii
246-2000, W, China, 2000, 15-SW
246-2003, W, China, 2003, 15-SW
247-2000, W, China, 2000, 15-SW

Sorbaria sp.
613-97, W, China, 1997, 17-SW

Sorbaria kirilowii
431-43, U, 1943, 22-NE
833-71, U, 1971, 22-NE

Sorbaria sorbifolia
108-2000, U, 2000, 31-NW

181-83, W, China, 1983, BR-9
771-56, U, 1956, 22-NE

Sorbaria sorbifolia var. *glandulosa*
537-83, W, Korea Republic of, 1983,
17-SW

Sorbaria sorbifolia var. *stellipila*
538-83, W, Korea, Republic of, 1983, BR-8

Sorbaria tomentosa
284-49, G, 1949, 22-NE
86-94, W, India, 1994, BR-11

(× *Sorbaronia* sp.) × (× *Sorbocotoneaster* sp.)
181-92, G, 1992, 33-NW, BR-11

× *Sorbaronia alpina*
675-55, G, 1955, 55-NW
994-84, G, 1984, BR-12, BR-14

× *Sorbaronia dippelii*
759-78, G, 1978, BR-16-NW

× *Sorbaronia jackii*
1239-85, Z, Canada, 1985, BR-14
882-82, Z, Canada, 1982, BR-10

× *Sorbocotoneaster pozdnjakovii*
89-68, G, 1968, EG-12

× *Sorbopyrus auricularis* 'Bulbiformis'
55-99, G, 1999, 51-NE

Sorbus sp.
470-97, W, China, 1997, 55-SW

Sorbus 'Jackman's Crimson'
305-61, G, 1961, 54-NE

Sorbus alnifolia
3626, U, 1896, 57-NE
13262, W, China, 1920, 33-NE, 33-NW
17261, W, Korea, Republic of, 1904, 25-SW
1300-61, G, 1961, 54-SE
1497-52, G, 1952, LG-PER-W
1719-80, W, China, 1980, 51-NW
1737-80, W, China, 1980, 49-NE

201-52, W, Korea, Republic of, 1952, 55-NW
285-2004, Z, China, 2004, 54-NE
345-27, U, 1927, 19-SW
381-25, U, 1925, 16-NW
403-2003, G, 2003, LG-PER-W
74-90, W, Korea, Republic of, 1990, 55-NW
814-2008, U, 2008, 53-SE

Sorbus alnifolia "Columnar Form"
142-2008, Z, Korea, Republic of, 2008, DGB
400-86, W, Korea, Republic of, 1986, 26-NW

Sorbus alnifolia 'Rigida'
256-63, G, 1963, 54-SE

Sorbus alnifolia var. *lasiocarpa*
413-94, W, Korea, Republic of, 1994, 54-NE

Sorbus americana
1845-66, G, 1966, 54-NE

Sorbus aria
115-2005, Z, France, 2005, 42-NE

Sorbus aria var. *salicifolia*
1110-65, U, 1965, 54-SE
222-27, U, 1927, BR-16-NW
260-70, U, 1970, 39-NE

Sorbus × *arnoldiana*
65-69, G, 1969, 51-SW, 55-SW

Sorbus arnoldiana × *alnifolia*
434-88, U, 1988, 55-SW

Sorbus aucuparia
1257-84, W, Sweden, 1984, 35-NE
180-57, U, 1957, 55-NW
423-88, U, 1988, 34-NE
43-70, U, 1970, 22-NE

Sorbus aucuparia f. *asplenifolia*
493-88, G, 1988, 40-SE
759-81, U, 1981, 34-NE

Sorbus aucuparia var. *rossica*
152-87, G, 1987, 59-SW
272-80, U, 1980, 37-SW

Sorbus aucuparia var. *sibirica*
422-95, U, 1995, 59-NE

Sorbus cashmiriana
416-2002, U, 2002, 55-NW

Sorbus commixta
1190-68, G, Korea, Republic of, 1968, 54-SE
145-2002, W, Japan, 2002, 54-NE
1651-81, U, 1981, 59-NE
1842-77, G, Japan, 1977, 34-SE
255-96, G, 1996, 22-SW, 53-SE
326-86, U, 1986, 35-NE
38-2004, G, 2004, 55-NW
9-98, W, Japan, 1998, BR-16-NW

Sorbus devoniensis
42-96, G, 1996, 55-NW

Sorbus domestica
1043-64, G, 1964, 55-NW
1153-60, G, 1960, 54-SE
385-25, G, 1925, BR-16-NW

Sorbus forrestii
560-83, G, China, 1983, 49-SW
814-77, G, China, 1977, 36-SE

Sorbus hemsleyi
1771-80, W, China, 1980, 40-SE
1981-80, W, China, 1980, 39-NE
1996-80, W, China, 1980, BR-14

Sorbus hupehensis
119-97, W, country unknown, 1997, 54-NE
1675-80, W, China, 1980, 39-NE, 50-SE
1887-80, W, China, 1980, 40-SE
327-86, Z, China, 1986, 50-NE
81-96, W, China, 1996, 59-NE

Sorbus hybrida
301-93, W, Sweden, 1993, 45-NW, 55-NW
430-93, W, Sweden, 1993, 59-NE

Sorbus hybrida 'Gibbsii'
926-53, G, 1953, 55-NW

Sorbus hybrida 'Meinichii'
39-96, G, 1996, 54-SE
681-65, G, 1965, 55-NW

Sorbus hybrida var. *serrata*
1119-65, U, 1965, 54-NE
420-95, U, 1995, 55-SW

Sorbus intermedia
136-56, G, 1956, 55-SW
174-71, U, 1971, 54-NE
476-85, U, 1985, 40-NW

Sorbus intermedia var. *minima*
1538-51, U, 1951, 55-NW
423-95, U, 1995, 51-SW

Sorbus intermedia var. *pinnatifolia*
424-88, U, 1988, 39-NE

Sorbus koehneana
1693-80, W, China, 1980, 34-SE, BR-16-NW

Sorbus lancifolia
1117-65, U, 1965, 54-SE

Sorbus latifolia
334-55, G, 1955, 55-NW

Sorbus latifolia agg.
18462, U, 1922, 25-NW, BR-16-NW

Sorbus mougeotii
1128-78, W, country unknown, 1978, 51-SW
333-86, Z, country unknown, 1986, 40-NW
559-48, U, 1948, 55-NW

Sorbus pohnuashanensis
1175-80, U, 1980, 44-SE
477-80, W, China, 1980, 40-SW
71-2005, Z, China, 2005, 55-NW
757-81, Z, China, 1981, 59-NE

Sorbus prattii var. *prattii*
276-2006, G, China, 54-SW, BR-16-NW

Sorbus × *pseudovertesensis*
1314-70, U, 1970, 55-SW

40-96, G, 1996, 55-NW

Sorbus rehderiana

443-95, U, 1995, 55-NW

Sorbus rufo-ferruginea

364-80, Z, Japan, 1980, 37-SW

47-2004, Z, Japan, 2004, 54-NE

Sorbus sambucifolia var. *pseudogracilis*

1730-77, W, Japan, 1977, DGB

Sorbus scopulina

310-75, W, United States, 1975, 39-NE

315-68, U, 1968, 54-SE

328-86, G, 1986, BR-12, BR-14

330-86, U, 1986, BR-11

Sorbus sibirica

1310-70, U, 1970, 55-NW

433-88, U, 1988, 34-NE

Sorbus simonkaiana

1317-70, U, 1970, 34-NE

Sorbus torminalis

138-2002, G, 2002, 55-NW

246-98, W, France, 1998, 55-NW

Sorbus tsinlingensis

544-88, W, China, 1988, 40-SW

Sorbus umbellata

237-70, U, 1970, 34-SE

46-2004, U, 2004, 54-NE

Sorbus vilmorinii

151-87, G, 1987, 36-NW, 37-SE

Sorbus wilsoniana

179-92, U, 1992, 34-SE

325-86, U, 1986, BR-11

Sorbus yuana

1539-80, W, China, 1980, 22-NW, 27-SE,

51-NW, 51-SW, BR-16-SE, EG-26-SE

1894-80, W, China, 1980, 39-NE, 49-NE,

51-NE, 55-NE, BR-8

Spiraea alba

1285-82, W, United States, 1982, 45-SW

204-89, W, United States, 1989, BR-9

548-2009, Z, Canada, 2009, BR-7

684-84, W, United States, 1984, BR-7

Spiraea × *arguta*

304-84, G, 1984, BR-7

Spiraea × *arguta* 'Compacta'

320-90, G, 1990, BR-7

Spiraea × *billiardii*

656-83, U, 1983, 32-SW

Spiraea × *blanda*

1231-85, G, 1985, BR-6

Spiraea blumei

748-94, W, China, 1994, BR-1A

Spiraea × *bumalda*

678-83, G, 1983, 26-SW

Spiraea × *bumalda* 'Gold Flame'

483-89, G, 1989, BR-9

Spiraea cana × *thunbergii*

323-84, G, 1984, BR-8

Spiraea canescens

1229-85, U, 1985, BR-6

Spiraea cantoniensis

1930-77, G, Japan, 1977, BR-15-SE

Spiraea chamaedryfolia

1029-82, W, Russian Federation, 1982, BR-7

391-79, W, Russian Federation, 1979, 22-NE

625-83, W, Russian Federation, 1983, BR-8

Spiraea chamaedryfolia var. *piliosa*

633-74, U, 1974, 31-NE

Spiraea chamaedryfolia var. *ulmifolia*

301-84, U, 1984, BR-7

- Spiraea chinensis*
183-73, U, 1973, BR-DAWSON-POND
223-83, W, China, 1983, BR-8
629-84, W, China, 1984, BR-9
- Spiraea* × *cinerea* 'Grefsheim'
1234-85, G, 1985, BR-6
1285-78, G, 1978, 22-NW
- Spiraea crenata*
1398-80, W, Russian Federation, 1980,
23-NW
- Spiraea douglasii*
319-85, W, United States, 1985, 22-NE
455-73, U, 1973, 31-NW
- Spiraea douglasii* var. *menziesii*
191-93, W, United States, 1993, BR-9
- Spiraea fastigiata*
732-74, U, 1974, BR-17-SW
- Spiraea fritschiana*
540-83, W, Korea, Republic of, 1983, BR-7
- Spiraea henryi*
1121-86, U, 1986, BR-7
302-84, Z, China, 1984, BR-7
- Spiraea hypericifolia*
165-95, W, Kazakhstan, 1995, BR-1C
- Spiraea japonica*
1254-80, W, Japan, 1980, 23-NW
244-2008, W, Japan, 2008, 3-NE, BR-7,
WH2-SW
413-2007, W, Japan, 2007, 3-NE, BR-7,
WH2-SW
680-83, U, 1983, 22-NW
- Spiraea japonica* 'Atrosanguinea'
1033-66, G, 1966, 26-NE
- Spiraea japonica* var. *acuminata*
523-89, W, China, 1989, BR-7
- Spiraea latifolia*
316-84, Z, United States, 1984, BR-7,
BR-9, BR-DAWSON-POND
- Spiraea longigemmis*
352-92, U, 1992, BR-8
- Spiraea miyabei* var. *glabrata*
694-76, U, 1976, 22-NE
- Spiraea mollifolia*
248-85, Z, China, 1985, BR-7, BR-12
- Spiraea nipponica* var. *rotundifolia*
1899-77, G, Japan, 1977, BR-15-SE, 22-NW
1937-77, W, Japan, 1977, BR-1C
- Spiraea nipponica* var. *tosaensis*
1023-86, G, Japan, 1986, BR-6
- Spiraea prunifolia*
382-1, G, 1904, 17-SW
- Spiraea prunifolia* f. *simpliciflora*
3138, U, 1887, BR-1A, BR-1C
18283, W, Korea, Republic of, 1905, 25-NW
119-99, Z, Korea, Republic of, 1999, LG-7H
286-2002, Z, Korea, Republic of, 2002, 1-SE
516-2003, Z, Korea, Republic of, 2003, 44-NE
- Spiraea pubescens*
260-75, U, 1975, BR-1C
541-83, W, Korea, Republic of, 1983, BR-8
75-99, Z, Korea, Republic of, 1999, LG-3G
- Spiraea salicifolia*
595-83, U, 1983, 22-NW, BR-8
627-85, W, Korea, Democratic People's
People's Republic of, 1985, BR-7
- Spiraea sargentiana*
1233-85, U, 1985, BR-6
- Spiraea* × *schinabeckii*
640-74, G, 1974, 31-NE, BR-16-SE
- Spiraea tomentosa*
129-2005, W, United States, 2005,

BR-DAWSON-POND
164-2001, W, United States, 2001,
BR-DAWSON-POND
493-2010, W, United States, 2010, DGB

Spiraea trichocarpa
528-77, W, Korea, Republic of, 1977, BR-1C

Spiraea × *vanhouttei* 'Meyeri Nana'
311-84, G, 1984, BR-7

Spiraea veitchii
1034-85, U, 1984, BR-8
1767-80, W, China, 1980, 22-SW

Spiraea virgata
848-76, U, 1976, 22-NE

Spiraea virginiana
1089-88, W, United States, 1988, 62-SW
1152-89, W, United States, 1989, 62-SW
1153-89, W, United States, 1989, 62-SW
1154-89, W, United States, 1989, 62-SW
1155-89, W, United States, 1989, 62-SW
1156-89, W, United States, 1989, 62-SW
1157-89, W, United States, 1989, 62-SW
1158-89, W, United States, 1989, 27-SE
1159-89, W, United States, 1989, 27-NE
1160-89, W, United States, 1989, 27-NE
1161-89, W, United States, 1989, 27-SE
1162-89, W, United States, 1989, 27-NE
1163-89, W, United States, 1989, 62-SW
1165-89, W, United States, 1989, 62-SW
1166-89, W, United States, 1989, 62-SW
1167-89, W, United States, 1989, 62-SW
20-91, W, United States, 1991, 62-SW
21-91, W, United States, 1990, BR-9
22-91, W, United States, 1991, 62-SW
23-91, W, United States, 1991, 27-SE
282-2004, Z, United States, 2004, 32-NE
459-2003, Z, United States, 2003, 32-NE
460-2003, Z, United States, 2003, 32-NE
463-2003, Z, United States, 2003, 32-NE
465-2003, Z, United States, 2003, LG-3C
469-2003, Z, United States, 2003, LG-3C
470-2003, Z, United States, 2003, LG-3C
471-2003, Z, United States, 2003, LG-3C
473-2003, Z, United States, 2003, LG-3C

774-88, Z, United States, 1988, 27-NE
81-88, W, United States, 1988, 62-SW
82-88, W, United States, 1988, 62-SW
83-88, W, United States, 1988, 62-SW
945-88, W, United States, 1988, 62-SW
947-88, W, United States, 1988, 27-SE
958-88, W, United States, 1988, 62-SW
973-88, W, United States, 1988, 27-NE
974-88, W, United States, 1988, 27-SE
975-88, W, United States, 1988, 27-NE
976-88, W, United States, 1988, 62-SW
977-88, W, United States, 1988, 27-NE
978-88, W, United States, 1988, 27-NE
979-88, W, United States, 1988, 27-NE

Spiraea virginiana f. *serrulata*
322-84, Z, United States, 1984, BR-7

Spiraea wilsonii
20493, W, China, 1926, 25-NW
1284-78, U, 1978, BR-16-SE
545-93, Z, China, 1993, BR-9
679-89, Z, China, 1989, BR-10
953-85, Z, China, 1985, BR-8

Stachyurus praecox
1428-83, W, Japan, 1983, 3-NW
1828-77, W, Japan, 1977, 1-SW, EG-9
75-90, W, Japan, 1990, EG-9

Staphylea sp.
640-97, W, China, 1997, 11-SE

Staphylea bumalda
1865-77, W, Korea, Republic of, 1977, 24-SE

Staphylea colchica
139-2001, W, Germany, 2001, 8-SE
789-73, G, 1973, 11-SE

Staphylea colchica var. *coulombieri*
1185-72, U, 1972, 11-SE

Staphylea holocarpa
457-2002, G, China, 2002, 11-SE

Staphylea holocarpa var. *rosea*
1060-86, G, 1986, 50-NE

59-81, W, China, 1980, 8-SE

Staphylea × elegans 'Hessei'

568-76, G, 1976, 53-NW

Staphylea pinnata

21632, U, 1925, 25-SW

1186-72, U, 1972, 11-SE

588-85, W, Hungary, 1985, 11-SW

59-76, G, 1976, 11-SE, 11-SW

Staphylea trifolia

1063-72, U, 1972, 11-SE

1078-79, W, United States, 1979, 24-SE

1194-85, W, United States, 1985, 11-SW

1423-83, W, United States, 1983, 49-SW

1736-81, W, Canada, 1981, 12-SW

1795-81, W, United States, 1981, 8-SE

247-95, W, United States, 1995, 11-SW

62-76, G, 1976, 11-SW

7-2008, W, United States, 2008, 8-SE, 53-NW

Stephanandra chinensis

388-90, W, China, 1990, BR-9

Stephanandra incisa

1029-86, W, Japan, 1986, BR-8

Stephanandra incisa 'Crispa'

1228-89, G, 1989, BR-1B

278-85, G, 1985, 1-SW, BR-8

762-59, G, 1959, 26-NE

Stephanandra tanakae

801-86, W, Japan, 1986, BR-8

Stewartia 'Scarlet Sentinel'

154-2001, G, 2001, EG-2, LG-2K

Stewartia malacodendron

504-2010, W, United States, 2010,

DGB

Stewartia monadelphpha

1084-79, U, 1979, 5-NW

441-72, U, 1972, 32-SE

653-74, U, 1974, 32-SE

Stewartia ovata

18847, U, 1922, EG-8

643-2003, W, United States, 2003, 4-NE

Stewartia ovata × pseudocamellia

1048-68, G, 1968, 19-NW

Stewartia ovata var. *grandiflora*

18244, W, United States, 1925, EG-7, EG-8

Stewartia pseudocamellia

11440, W, Korea, Republic of, 1918, EG-8

8-43, G, 1943, 13-SW, 19-SW

1141-71, Z, Korea, Republic of, 1971, 32-SE

1269-83, W, Korea, Republic of, 1983, EG-7

1666-65, G, 1965, 3-SW

405-42, U, 1942, 18-SE

661-70, U, 1970, 19-SW, 3-NE

764-69, G, 1969, 53-SE

Stewartia rostrata

248-2005, W, China, 2005, 53-SW

249-2005, W, China, 2005, 53-SW

322-2004, W, China, 2004, 4-NE

327-2004, W, China, 2004, 4-NE

358-2004, G, 2004, 53-NW

373-76, U, 1976, EG-6

472-75, G, 1975, 53-SE

769-36, U, 1936, EG-8

Stewartia rostrata (undetermined hybrid)

761-69, G, 1969, EG-6

Stewartia sinensis

114-99, Z, China, 1999, 13-SW, LG-2J

383-2001, G, China, 2001, 19-NW

531-34, U, 1934, EG-6, EG-8

691-94, W, China, 1994, EG-7

Stranvaesia davidiana

1993-80, W, China, 1980, 33-NW

Stranvaesia davidiana var. *undulata*

840-84, U, 1984, 45-NW

× *Sycoparrotia semidecidua*

149-99, G, 1999, 19-SW

- Styphnolobium japonicum*
12221, W, Korea, Republic of, 1920, 15-SW
17250, G, 1891, 15-SW
22779, G, 1946, 15-SW
1239-83, W, Korea, Republic of, 1983,
50-NW, EG-32-NE
216-35, G, 1935, 15-SW
80-98, G, 1998, 53-SE
- Styphnolobium japonicum* 'Columnaris'
415-78, G, 1978, 39-SE
- Styphnolobium japonicum* f. *oligophylla*
781-90, U, 1990, EG-26-SE
- Styphnolobium japonicum* 'Pendula'
493-67, G, 1967, 15-SW
- Styphnolobium japonicum* 'Violacea'
414-78, G, 1978, 26-SW
619-66, G, 1966, 15-SW
- Styrax americana*
11647, U, 1926, 18-SE
- Styrax confusus*
1082-89, W, China, 1989, 18-SE, 25-NW
312-2004, W, China, 2004, 18-SE, 21-NE
- Styrax dasycantha*
164-2008, G, Korea, Republic of, 2008, DGB
- Styrax japonica* 'Angyo Dwarf'
549-85, G, 1985, 52-NE
- Styrax japonica* 'Carillon'
503-82, G, 1982, LG-PER-S
- Styrax japonicus*
17334, W, Japan, 1892, 18-SE
1652-81, U, 1981, 62-SE
1849-77, W, Korea, Republic of, 1977, 19-SW
284-75, G, 1975, 21-NE
290-91, W, Korea, Republic of, 1991, 18-SE
428-69, G, 1969, 4-NE
939-85, W, Korea, Republic of, 1985, 18-SE,
38-NW
- Styrax obassia*
1082-80, W, Korea, Republic of, 1980, 24-NE
1270-83, W, Korea, Republic of, 1983, 50-NE
1500-77, G, Japan, 1977, 25-SW
348-2010, G, 2010, DGB
380-78, G, 1978, 19-SW
401-86, W, Korea, Republic of, 1986, 58-SW
914-77, W, Korea, Republic of, 1977, 25-NW
978-85, W, Korea, Republic of, 1985, 18-SE
- Symphoricarpos albus*
1032-81, Z, United States, 1981, 31-NW
1080-81, Z, United States, 1981, 26-SW
1082-81, U, 1981, 31-NE
1091-81, U, 1981, 31-NE
198-67, U, 1967, 26-SW
348-84, W, United States, 1984, 39-NE
785-76, U, 1976, 14-NW
- Symphoricarpos* × *doorenbosii*
1020-67, G, 1967, 15-SW
- Symphoricarpos* × *doorenbosii* 'Kordes'
185-2006, G, 2006, LG-2H
- Symphoricarpos hesperius*
786-83, U, 1983, 32-SW
- Symphoricarpos occidentalis*
17341, W, United States, 1900, 14-NW
1024-81, Z, United States, 1981, 26-SE
103-78, W, Canada, 1978, LG-7I
- Symphoricarpos orbiculatus*
937, U, 1874, 14-NW
27-73, U, 1973, 31-NE
- Symplocos chinensis* f. *pilosa*
545-83, W, Korea, Republic of, 1983, 49-SW
719-85, W, 1985, 14-SW
- Symplocos chinensis* var. *pubescens*
796-84, W, Korea, Republic of, 1984, 14-SW
- Symplocos paniculata*
112-68, G, 1968, 13-NE
1199-68, W, Korea, Republic of, 1968,
EG-26-SE

1378-73, U, 1973, 21-NE, 32-SE
17587-1, G, 1897, 14-NW, 14-SW
1948-80, W, China, 1980, 14-SW
433-77, G, Japan, 1977, 14-SW
709-75, G, 1975, 21-NE

Syneilesis aconitifolia
90-96, W, China, 1996, 1-SW

Syringa sp.
235-74, G, 1974, 14-SE

Syringa (undetermined hybrid)
224-79, G, 1979, DGB
276-2008, G, 2008, 14-SE

Syringa 'Bailbelle'
93-2000, G, 2000, 21-NE

Syringa 'Baildust'
184-2004, G, 2004, 15-SW

Syringa 'Bailsugar'
185-2004, G, 2004, 15-SW

Syringa 'Foxy Lady'
277-2008, G, 2008, DGB

Syringa 'Laurentian' × 'Pyramidalis Alba'
96-83, G, 1983, DGB

Syringa 'MORjos 060F'
200-2000, G, 2000, 21-NE

Syringa 'Purple Haze'
36-2002, G, 2002, 14-SE

Syringa 'Pyramidalis Alba' × 'Excel'
1213-81, G, 1981, 14-SE, 20-NE
1603-81, G, 1981, 51-NW

Syringa (Villosae Group) 'Ferna Alexander'
554-75, G, 1975, 21-NW
764-90, G, 1990, 14-SE

Syringa (Villosae Group) 'Hedin'
690-41, G, 1941, 27-SE

Syringa (Villosae Group) 'Mary C. Bingham'
131-98, G, 1998, 14-SE, 14-SW
730-90, G, 1990, 21-SE

Syringa (Villosae Group) 'Miss Canada'
474-92, G, 1992, 21-NW

Syringa (Villosae Group) 'Prairial'
247-40, G, 1940, 27-NE, 27-SE

Syringa × *chinensis*
129-79, G, 1979, 33-NW
539-79, G, 1979, 33-NW

Syringa × *chinensis* 'Lilac Sunday'
127-96, G, 1996, 14-SE
164-96, G, 1996, 21-SE

Syringa × *chinensis* 'Red Rothomagensis'
178-2004, G, 2004, 14-SE, 21-NW
339-67, G, 1967, 14-SE

Syringa × *chinensis* f. *metensis*
10607, G, 1920, 21-NE
20491, G, 1925, 21-SE, 21-SW

Syringa × *chinensis* f. *saugeana*
11718, G, 1921, 27-NE
12081, G, 1900, 21-NW
15662, G, 1924, 21-NW
445-38, G, 1938, 21-NW

Syringa × *chinensis* nothof. *bicolor*
22727, G, 1942, 21-SE
223-74, G, 1974, 21-SE

Syringa × *chinensis* var. *alba*
362-50, G, 1950, 21-NW
4339-1, G, 1900, 21-NW

Syringa × *diversifolia*
308-91, G, 1991, 14-SE, 15-SW

Syringa × *diversifolia* 'William H. Judd'
583-84, G, 1984, 55-NE
695-84, G, 1984, 15-SW

Syringa emodi
6628, G, 1881, 21-SE
133-2000, Z, India, 2000, 21-SE
87-94, W, India, 1994, 14-SW

Syringa × henryi
483-94, G, 1994, 20-NE, 21-NE

Syringa × hyacinthiflora 'Asessippi'
1075-88, G, 1988, 15-SW
166-74, G, 1974, 15-SW
257-74, G, 1974, 15-SW
802-67, G, 1967, 14-SE

Syringa × hyacinthiflora 'Berryer'
11743, G, 1922, 14-SE

Syringa × hyacinthiflora 'Blanche Sweet'
302-95, G, 1995, 21-NE
475-92, G, 1992, 21-NE

Syringa × hyacinthiflora 'Catinat'
21892, G, 1932, 21-NW

Syringa × hyacinthiflora 'Esther Staley'
1374-52, G, 1952, 21-NW
144-2005, G, 2005, 14-SW

Syringa × hyacinthiflora 'Evangeline'
717-36, G, 1936, 14-SW
808-67, G, 1967, 14-SW

Syringa × hyacinthiflora 'Excel'
160-87, G, 1987, 15-SW
718-36, G, 1936, 21-NW
895-73, G, 1973, 14-SE

Syringa × hyacinthiflora 'Gertrude Leslie'
145-2005, G, 2005, 21-NW
189-96, G, 1996, 21-NE

Syringa × hyacinthiflora 'Hyacinthiflora Plena'
15659, G, 1907, 21-NW

Syringa × hyacinthiflora 'Lamartine'
23075, G, 1955, 27-NE

Syringa × hyacinthiflora 'Laurentian'
955-50, G, 1950, 21-NW

Syringa × hyacinthiflora 'Louvois'
261-80, G, 1980, 62-SE
605-80, G, 1980, 21-SE

Syringa × hyacinthiflora 'Maureen'
858-77, G, 1977, 14-SE

Syringa × hyacinthiflora 'Necker'
21903, G, 1932, 14-SW

Syringa × hyacinthiflora 'Nokomis'
724-36, G, 1936, 14-SW
901-73, G, 1973, 14-SE

Syringa × hyacinthiflora 'Norah'
1037-77, G, 1977, 14-SE

Syringa × hyacinthiflora 'Pocahontas'
692-41, G, 1941, 21-SW
725-36, G, 1936, 14-SW
92-98, G, 1998, 14-SE

Syringa × hyacinthiflora 'Royal Purple'
285-79, G, 1979, 15-SW
903-73, G, 1973, 15-SW

Syringa × hyacinthiflora 'Scotia'
329-35, G, 1935, 21-NW

Syringa × hyacinthiflora 'Sister Justina'
904-73, G, 1973, 15-SW

Syringa × hyacinthiflora 'Summer Skies'
289-79, G, 1979, 21-NW

Syringa × hyacinthiflora 'Swarthmore'
190-96, G, 1996, 14-SE

Syringa × hyacinthiflora 'Turgot'
16432, G, 1928, 21-NW
21013, G, 1929, 21-NW
606-82, G, 1982, 52-NE

Syringa × hyacinthiflora 'Vauban'
214-74, G, 1974, 21-NW

Syringa × *josiflexa* (Villosae Group)
'Anna Amhoff'
315-96, G, 1996, 21-NW

Syringa × *josiflexa* (Villosae Group)
'James MacFarlane'
93-98, G, 1998, 14-SE

Syringa × *josiflexa* (Villosae Group) 'Sulte'
131-75, G, 1975, 21-SW

Syringa josikaea
592-2003, G, Latvia, 2003, 21-NW

Syringa juliana
1063-86, Z, country unknown, 1986, 45-SW
657-80, Z, country unknown, 1980, 33-NE

Syringa komarowii
272-2002, U, 2002, 21-SE
665-97, W, China, 1997, 14-SE

Syringa komarowii ssp. *reflexa*
109-81, W, China, 1980, 14-SE, 21-SE
299-2000, W, China, 2000, 14-SE, 21-SW

Syringa meyeri
188-87, G, 1987, 21-NW

Syringa meyeri (white form)
266-88, U, 1988, 21-NW
306-2006, U, 2006, 15-SW

Syringa meyeri 'Palibin'
1037-89, G, 1989, 21-SE

Syringa oblata
20621, G, 1928, 21-SE
234-2005, W, China, 2005, 14-SE
381-2001, W, Korea, Democratic People's
Republic of, 2001, 15-SW

Syringa oblata ssp. *dilatata*
185-87, W, Korea, Republic of, 1987, 14-SW
307-78, U, 1978, 14-SE, 14-SW
605-86, Z, Korea, Republic of, 1986, 14-SE,
21-NW
789-67, Z, Korea, Republic of, 1967, 21-NW

Syringa oblata ssp. *dilatata* 'Cheyenne'
278-79, G, 1979, 14-SW
316-96, G, 1996, 14-SE, 21-SE

Syringa oblata var. *affinis*
475-2003, G, 2003, 14-SE

Syringa patula
1223-82, W, Korea, Republic of, 1982, 14-SE
314-97, W, China, 1997, 14-SE, 14-SW,
21-NW
371-97, W, China, 1997, 14-SE, 14-SW, 20-NE
656-90, W, Turkey, 1990, 21-SW
915-77, W, Korea, Republic of, 1977, 14-SE

Syringa patula 'Miss Kim'
1036-89, G, United States, 1989, 14-SW

Syringa pekinensis
145-2007, W, China, 2007, 14-SE
18335, W, China, 1924, 21-SW
18342, G, 1924, 21-NW
19136, W, China, 1923, 21-SE
21634, W, China, 1926, 20-NE
21635, W, China, 1926, 21-NW
20-95, W, China, 1995, 14-SE, 53-SE, 57-NE
487-93, W, China, 1993, 21-NW

Syringa pekinensis 'Morton'
352-96, G, 1996, 14-SE

Syringa pekinensis 'Pendula'
255-63, G, 1963, 21-SW

Syringa × *persica* 'Alba'
319-95, G, 1995, 21-NW

Syringa pinatifolia
745-93, W, China, 1993, 14-SE

Syringa × *prestoniae* (Villosae Group)
'Alexander's Perfection'
588-75, G, 1975, 14-SE

Syringa × *prestoniae* (Villosae Group)
'Alexander's Pink'
296-89, G, 1989, 14-SW

Syringa × prestoniae (Villosae Group)
'Donald Wyman'
300-91, G, 1991, 14-SW
688-41, G, 1941, 27-NE

Syringa × prestoniae (Villosae Group)
'Handel'
719-36, G, 1936, 14-SW

Syringa × prestoniae (Villosae Group) 'Hecla'
720-36, G, 1936, 14-SW

Syringa × prestoniae (Villosae Group)
'Hiawatha'
764-41, G, 1941, 14-SW

Syringa × prestoniae (Villosae Group) 'Romeo'
1333-38, G, 1938, 21-SW

Syringa × prestoniae (Villosae Group) 'Silvia'
146-75, G, 1975, 14-SE

Syringa × prestoniae (Villosae Group)
'W.T. Macoun'
476-2003, G, 2003, 14-SE
701-36, G, 1936, 14-SW

Syringa protolaciniata
134-45, G, 1945, 21-NW

Syringa protolaciniata × vulgaris
'Henri Robert'
247-2004, G, 2004, 14-SW
271-96, G, 1996, 21-NW

Syringa protolaciniata 'Kabul'
113-91, Z, Afghanistan, 1991, 14-SE
577-81, W, Afghanistan, 1981, 14-SE

Syringa pubescens
1594, W, China, 1882, 21-NW
18336, W, China, 1922, 21-NW
19-95, W, China, 1999, 14-SE

Syringa pubescens ssp. *julianae* 'Hers'
291-79, G, 1979, 21-NW

Syringa pubescens ssp. *microphylla*
124-2003, W, China, 2003, 20-NE
19-99, W, China, 1999, 14-SW, 20-NE, 21-NW
72-99, G, 1999, 14-SE

Syringa pubescens ssp. *microphylla × meyeri*
262-2006, G, 2006, 14-SE
521-38, G, 1938, 27-SE

Syringa reticulata
1111, W, Japan, 1876, 21-SE
11188, G, 1922, 21-NW
17353, G, 1889, 21-SE
286-82, W, Japan, 1982, 27-SE
423-49, G, 1949, 21-SE
629-71, G, 1971, 21-NW
749-90, Z, Japan, 1990, 21-NW

Syringa reticulata 'Ivory Silk'
303-95, G, 1995, EG-3

Syringa reticulata var. *mandshurica*
11706, W, Korea, Republic of, 1918, 21-SE
11708, W, China, year unknown, 21-NW
22349, U, 1926, 21-NW, 24-NE
23061, G, 1954, 21-SE
1033-1, G, 1922, 21-NW
374-97, W, China, 1997, 14-SE, 20-NE,
21-NW

Syringa sweginzowii
1254-52, U, 1952, 21-SW
221-77, W, China, 1977, 21-NW, 55-NE

Syringa × swegiflexa
317-49, G, 1949, 21-NE
701-36, G, 1936, 14-SW

Syringa × swegiflexa (Villosae Group)
'Carlton'
1335-38, G, 1938, 21-SW

Syringa tomentella
6626, W, China, 1909, 21-SE
18340, G, 1923, 21-NW
222-77, W, China, 1977, 14-SE
295-2002, Z, China, 2002, 21-NW
446-28, U, 1928, 21-NW

758-90, Z, China, 1990, 14-SE
81-99, Z, China, 1999, 14-SW

Syringa tomentella var. *sweginzowii*
386-2004, W, China, 2004, 21-NE

Syringa villosa
17362, G, 1907, 21-NE, 21-NW
750-90, Z, China, 1990, 21-NW

Syringa villosa 'Charles Hepburn'
235-2004, G, 2004, 20-NE

Syringa villosa × *henryi*
1873-80, G, 1980, 21-SE

Syringa vulgaris
17363, W, Bulgaria, 1905, 21-NW
143-97, G, Romania, 1997, 14-SE, 21-NW
17363-1, Z, Bulgaria, 1928, 14-SE
603-80, G, 1980, 21-NW
949-34, W, Romania, 1934, 27-NE, 27-SE

Syringa vulgaris (undetermined hybrid)
514-92, G, 1992, 21-NW

Syringa vulgaris 'Adelaide Dunbar'
212-74, G, 1974, 14-SE

Syringa vulgaris 'Albert F. Holden'
124-98, G, 1998, 21-NE

Syringa vulgaris 'Ami Schott'
339-2004, G, 2004, 15-SW, 21-NE

Syringa vulgaris 'Andenken an Ludwig Spaeth'
147-2005, G, 2005, 14-SE

Syringa vulgaris 'Arch McKean'
340-2004, G, 2004, 15-SW
477-92, G, 1992, 14-SE

Syringa vulgaris 'Atheline Wilbur'
297-96, G, 1996, 21-NW
341-2004, G, 2004, 15-SW

Syringa vulgaris 'Aucubaefolia'
276-96, G, 1996, 20-NE

Syringa vulgaris 'Belle de Nancy'
308-96, G, 1996, 14-SE

Syringa vulgaris 'Bleuatre'
640-79, G, 1979, 27-SE

Syringa vulgaris 'Boussingault'
821-34, G, 1934, 14-SW

Syringa vulgaris 'Carmine'
20667, G, 1929, 21-NW

Syringa vulgaris 'Charles Joly'
4361-2, G, 1904, 21-NW
94-98, G, 1998, 14-SE

Syringa vulgaris 'Charm'
146-2005, G, 2005, 14-SE
516-92, G, 1992, 21-NE

Syringa vulgaris 'Colbert'
176-74, G, 1974, 14-SE

Syringa vulgaris 'Comtesse Horace de Choiseul'
7922, G, 1918, 27-NE

Syringa vulgaris 'De Jussieu'
17701, G, 1924, 20-NE

Syringa vulgaris 'Diplomate'
825-67, G, 1967, 21-NW

Syringa vulgaris 'Dr. Masters'
164-74, G, 1974, 14-SE

Syringa vulgaris 'Dr. Troyanowsky'
609-80, G, 1980, 62-SE

Syringa vulgaris 'Dwight D. Eisenhower'
6-2003, G, 2003, 14-SE, 21-NW, 21-SE

Syringa vulgaris 'Edith Cavell'
300-95, G, 1995, 21-NW

Syringa vulgaris 'Edmond Boissier'
188-96, G, 1996, 21-NW

Syringa vulgaris 'Fiala Remembrance'

175-96, G, 1996, 14-SE

Syringa vulgaris 'Frederick Law Olmsted'
186-96, G, 1996, 14-SE, 21-NW

Syringa vulgaris 'Fuerst Liechtenstein'
3000-1, G, 1894, 15-SW

Syringa vulgaris 'General John Pershing'
190-74, G, 1974, 14-SE

Syringa vulgaris 'General Sheridan'
172-74, G, 1974, 14-SE

Syringa vulgaris 'General Sherman'
11420, G, 1922, 14-SE

Syringa vulgaris 'Gloire de Moulins'
2978-1, G, 1895, 21-NW

Syringa vulgaris 'Grand-Duc Constantin'
17373, G, 1913, 14-SE
1107-77, G, 1977, 15-SW

Syringa vulgaris 'Henri Martin'
194-74, G, 1974, 14-SE

Syringa vulgaris 'Hulda'
752-93, G, 1993, 21-NE

Syringa vulgaris 'Humphrey'
281-79, G, 1979, 14-SW

Syringa vulgaris 'Jean Bart'
3456-1, G, 1895, 21-NE

Syringa vulgaris 'Jean Mace'
7919, G, 1918, 14-SE
799-85, G, 1985, 14-SE

Syringa vulgaris 'K. A. Timiryazev'
441-75, G, 1975, 21-NW

Syringa vulgaris 'Kapriz'
433-75, G, 1975, 21-NW

Syringa vulgaris 'Krasavitsa Moskvyy'
342-2004, G, 2004, 14-SE, 21-NE

Syringa vulgaris 'Macrostachya'
3813-1, G, 1897, 21-NW

Syringa vulgaris 'Marc Micheli'
307-41, G, 1941, 27-NE

Syringa vulgaris 'Martha Stewart'
477-2003, G, 2003, 15-SW

Syringa vulgaris 'Maurice de Vilmorin'
5197, G, 1906, 21-NW

Syringa vulgaris 'Michael Buchner'
3468-1, G, 1895, 21-NW

Syringa vulgaris 'Miss Ellen Willmott'
176-96, G, 1996, 21-NW
298-95, G, 1995, 14-SE
578-86, G, 1986, 21-NE
615-56, G, 1956, 21-NE

Syringa vulgaris 'Mlle. Melide Laurent'
5199, G, 1906, 21-NW

Syringa vulgaris 'Mme. Antoine Buchner'
338-76, G, 1976, 14-SE

Syringa vulgaris 'Mme. Felix'
602-80, G, 1980, 51-SE

Syringa vulgaris 'Mme. Lemoine'
220-74, G, 1974, 21-NW
739-89, G, 1989, 14-SE

Syringa vulgaris 'Mme. Leon Simon'
17378, G, 1906, 21-NW

Syringa vulgaris 'Monge'
148-2005, G, 2005, 15-SW

Syringa vulgaris 'Mrs. W. E. Marshall'
149-2005, G, 2005, 15-SW

Syringa vulgaris 'Night'
748-89, G, 1989, 14-SE

Syringa vulgaris 'Patrick Henry'
1061-88, G, 1988, 14-SE

Syringa vulgaris 'Paul Thirion'
472-92, G, 1992, 21-SE

Syringa vulgaris 'Prairie Petite'
39-97, G, 1997, LG-3B

Syringa vulgaris 'President Carnot'
3804, G, 1895, 21-SW

Syringa vulgaris 'President Lincoln'
299-95, G, 1995, 21-NW
654-80, G, 1980, 14-SE

Syringa vulgaris 'President Poincare'
312-96, G, 1996, 14-SE

Syringa vulgaris 'Prince Notger'
3001-1, G, 1895, 21-NW

Syringa vulgaris 'Prince of Wales'
381-43, G, 1943, 27-NE

Syringa vulgaris 'Princesse Clementine'
151-2005, G, 2005, 14-SW

Syringa vulgaris 'Princesse Marie'
2930-1, G, 1895, 21-NW

Syringa vulgaris 'Rochester'
753-93, G, 1993, 15-SW

Syringa vulgaris 'Ruhm von Horstenstein'
258-74, G, 1974, 15-SW

Syringa vulgaris 'Sarah Sands'
343-2004, G, 2004, 15-SW, 21-NE

Syringa vulgaris 'Sensation'
344-2004, G, 2004, 14-SE, 21-NW

Syringa vulgaris 'Souvenir de Gaspard Callot'
860-77, G, 1977, 14-SE

Syringa vulgaris 'Sovetskaya Arktika'
284-68, G, 1968, 21-NW

Syringa vulgaris 'St Margaret'
896-73, G, 1973, 21-SE

Syringa vulgaris 'Thunberg'
733-67, G, 1967, 21-SE

Syringa vulgaris 'Tournefort'
249-74, G, 1974, 14-SE

Syringa vulgaris 'Triomphe de Moulins'
17734, G, 1924, 14-SE

Syringa vulgaris 'Triomphe d'Orleans'
2932-1, G, 1895, 21-NW

Syringa vulgaris 'Valetteana'
17384, G, 1916, 21-NW

Syringa vulgaris 'Wedgwood Blue'
152-2005, G, 2005, 21-NW

Syringa vulgaris 'William C. Barry'
189-74, G, 1974, 14-SE

Syringa vulgaris 'Wonderblue'
153-2005, G, 2005, 14-SE

Syringa wolfii
322-97, W, China, 1997, 14-SE, 14-SW,
21-NW
629-85, W, Korea, Democratic People's
Republic of, 1985, 21-NE, 21-NW

Syringa wolfii var. *hirsuta*
537-77, W, Korea, Republic of, 1977, 21-SE

Syringa yunnanensis
115-30, G, 1930, 21-SW
1211-76, U, 1976, 21-NW
289-2002, Z, China, 2002, 14-SW, 21-NW
746-93, W, China, 1993, 20-NE
867-78, Z, China, 1978, 21-NW

Taxodium distichum
274-93, W, United States, 1993, 59-NW,

59-SW
365-2003, G, 2003, 59-NW
452-92, W, United States, 1992, 3-NE,
59-NW, 59-SW
471-2010, G, 2010, DGB
695-91, W, United States, 1991, LARZ

Taxodium distichum 'Cascade Falls'
249-2010, G, 2010, DGB

Taxodium distichum 'Fastigiata'
422-2010, G, 2010, DGB

Taxodium distichum 'Hurley Park'
465-2010, G, 2010, DGB

Taxodium distichum 'Pendens'
806-52, G, 1952, 22-NW

Taxodium distichum var. *distichum*
21775, U, 1912, 36-SE
110-33, W, United States, 1933, 3-SE
1326-85, W, United States, 1985,
BR-DAWSON-POND
19-49, W, United States, 1949, 37-SW
345-89, W, United States, 1989, 59-NW,
59-SW, BR-DAWSON-POND
624-91, W, United States, 1991, 59-NW,
59-SW
674-88, W, United States, 1988, 3-NE, 59-NW

Taxodium distichum var. *imbricarium*
17397, U, 1905, 36-SW
403-2010, G, 2010, DGB

Taxodium distichum var. *imbricarium* 'Morris'
421-2010, G, 2010, DGB

Taxodium distichum var. *imbricarium* 'Nutans'
1007-38, U, 1938, 5-SE

Taxodium distichum var. *imbricarium*
'Prairie Sentinel'
404-2010, G, 2010, DGB

Taxus 'Holland Seedling'
1304-50, G, 1950, 40-SE

Taxus 'Old Westbury'
630-68, G, 1968, 4-NE

Taxus baccata
1329, G, 1879, 41-NE
1227-88, Z, Bulgaria, 1988, 41-NE
141-88, G, 1988, EG-7
146-2007, W, Georgia, 2007, 41-NE
1496-84, Z, Bulgaria, 1984, 40-SE
1497-84, Z, Bulgaria, 1984, 40-SE
26-39, U, 1939, 17-SW, 40-SE
370-35, W, Bulgaria, 1935, 17-SW
371-35, W, Bulgaria, 1935, 17-SW
372-35, W, Bulgaria, 1935, 40-SE
543-32, U, 1932, 17-SW
546-89, W, Germany, 1989, 36-SW
582-92, Z, Bulgaria, 1992, 40-SW
935-34, W, Bosnia and Herzegovina, 1934,
40-SE

Taxus baccata 'Adpressa'
18725, G, 1923, 40-SW
77-95, G, 1995, 36-SE

Taxus baccata 'Cheshuntensis'
801-37, G, 1937, 36-NE

Taxus baccata 'Elegantissima'
1332, G, 1880, 36-SE

Taxus baccata 'Ericoides'
35-89, G, 1989, 40-SE

Taxus baccata 'Linearis'
1197-28, W, country unknown, 1928, 36-NE

Taxus baccata 'Lutea'
1030-38, G, 1938, 36-SE

Taxus baccata 'Nigra'
16400, G, 1928, 36-NE

Taxus baccata 'Omberg'
819-58, G, 1958, 40-SE

Taxus baccata 'Repandens'
3560, G, 1890, 36-SW
5219, G, 1906, 36-NE

1277-88, G, 1988, 36-SW

Taxus baccata 'Standishii'

1012-71, G, 1971, 36-SE

Taxus baccata 'Variegata'

1742-77, G, 1977, 57-SE

Taxus canadensis

1539-82, Z, United States, 1982, LG-PER-E

17402-1, Z, United States, 1891, 36-SE

601-58, W, Canada, 1958, 31-SW

Taxus chinensis

1395-60, G, 1960, 40-SE

48-82, G, 1939, 62-NW

654-39, G, 1939, 40-SE

Taxus cuspidata

2672, G, 1884, 41-NE

13470, W, Japan, 1914, 36-NE

17404, W, Japan, 1892, 36-NE, 36-SE, 36-SW,
41-NE, 41-NW

17652, G, 1924, 39-SE

20374, G, 1927, 36-NE

22087, G, 1932, 40-SW

23202, G, 1966, 39-SE

169-99, Z, Japan, 1999, 36-SW, 40-SW

283-97, W, China, 1997, 36-SW

448-90, W, Japan, 1990, 36-SW

497-52, G, 1952, DGB

Taxus cuspidata 'Aurescens'

10334, G, 1919, 36-NE

1531-71, G, 1971, 31-SW

Taxus cuspidata 'Densa'

5218, G, 1917, 36-NE

5714, G, 1907, 36-SW

Taxus cuspidata 'Expansa'

727-41, G, 1941, 40-SW

Taxus cuspidata 'Gold Dwarf'

2011-77, G, 1977, 31-NE

Taxus cuspidata 'Green Mountain'

709-60, G, 1960, 40-SE

Taxus cuspidata 'Nana'

5217, G, 1900, 36-NE

7968, G, 1917, 36-NE

21260, G, 1924, 40-SW

602-92, G, 1992, 40-SW

Taxus floridana

1171-89, W, United States, 1989, EG-9

1176-89, W, United States, 1989, EG-8

1178-89, W, United States, 1989, EG-8

Taxus × *hunnwelliana*

10760, G, 1921, 36-SE

17643, G, 1924, 40-SW

17644, G, 1924, 40-SW

19110, G, 1921, 40-SW

580-92, G, 1992, 40-SW

604-92, G, 1992, 36-NE

Taxus × *media*

10761, G, 1921, 45-NE

11267, G, 1922, 36-NE

17645, G, 1924, 40-SW

17646, G, 1924, 40-SE

Taxus × *media* 'Anthony Wayne'

1071-62, G, 1962, BR-17-SW

Taxus × *media* 'Beanpole'

609-72, G, 1972, DGB

Taxus × *media* 'Berryhill'

414-58, G, 1958, 40-SE

Taxus × *media* 'Brevicata'

31-52, G, 1952, 40-SE

Taxus × *media* 'Brownii'

303-38, G, 1938, 40-SW

Taxus × *media* 'Cedar Hill'

991-49, G, 1949, 40-SE

Taxus × *media* 'Chadwick'

1279-60, G, 1960, 40-SE

1538-82, G, 1982, 52-SW

Taxus × *media* 'Densiformis'

437-58, G, 1958, 40-SE

Taxus × media 'Dutweilleri'

735-36, G, 1936, 40-SW

Taxus × media 'Flushing'

1101-62, G, 1962, 36-NE, 40-SE

Taxus × media 'Gem'

606-63, G, 1963, 40-SE

Taxus × media 'Halloriana'

511-56, G, 1956, 40-NE

Taxus × media 'Hatfieldii'

17648, G, 1924, 39-SE, 40-SW

17649, G, 1924, 39-SE

Taxus × media 'Hicksii'

8036, G, 1919, 36-SE

10711, G, 1921, 36-NE

606-92, G, 1992, 36-NE, 36-NW, 36-SE

Taxus × media 'Hillii'

22-60, G, 1960, 40-SE

Taxus × media 'Hummeri'

1161-62, G, 1962, 36-NE

Taxus × media 'Kelsey Upright'

467-48, G, 1948, 40-SE

Taxus × media 'Moon'

36-52, G, 1962, DGB

Taxus × media 'Taunton'

990-49, G, 1949, 40-SE

Taxus × media 'Thayerae'

17653, G, 1924, 39-SE, 40-SE, 40-SW, 41-NE,
45-NE, 45-NW

302-38, G, 1938, 40-SW

Taxus × media 'Totem'

10-64, G, 1964, 4-SE

Taxus × media 'Vermeulen'

1167-62, G, 1962, BR-17-SW

Taxus × media 'Ward'

692-42, G, 1942, 40-SE

Taxus × media 'Wellesleyana'

1078-59, G, 1959, 40-SE

Ternstroemia sp.

436-97, W, China, 1997, 19-NW

Tetradium daniellii

126-67, G, 1967, 25-NE

20417-1, U, 1928, 33-NW

415-71, G, 1971, 18-SE, 24-NE

477-63, G, 1963, 33-NW

580-90, W, Korea, Republic of, 1990, 8-SW

701-2008, U, 2008, 33-NW

702-2008, U, 2008, 33-NW

Thuja koraiensis

412-94, W, Korea, Republic of, 1994,

LG-PER-E

477-97, W, Korea, Republic of, 1997, 31-SE

478-97, W, Korea, Republic of, 1997, 31-SE

Thuja koraiensis var. *austrina*

90-97, Z, Korea, Republic of, 1997, 36-NW

91-97, Z, Korea, Republic of, 1997, 31-SW

Thuja occidentalis

139-87, W, United States, 1987, 52-SW

312-89, W, Canada, 1989, 53-SE

313-89, W, Canada, 1989, 39-NE, 39-NW,
53-SE

41-92, W, United States, 1992, 2-NE, 2-SE

441-92, W, United States, 1992, 53-SE

494-92, W, Canada, 1992, 2-NE, 2-SE

609-93, W, United States, 1993, 53-SE

623-38, G, 1938, 36-NW

66-88, W, United States, 1988, 53-SE

746-41, G, 1941, 36-NW

820-67, G, 1967, 31-NW, 45-NE

Thuja occidentalis 'Argentea'

169-92, U, 1992, 36-NE, 9-NE

Thuja occidentalis 'Buchananii'

1357-78, G, 1978, 39-SE

Thuja occidentalis 'Caucasica'
63-66, G, 1966, 30-NE, 36-NW

Thuja occidentalis 'Columbia'
220-69, G, 1969, 31-NW
611-92, G, 1992, 2-NE, 36-NE

Thuja occidentalis 'Douglasii Aurea'
1050-62, G, 1962, 36-NW

Thuja occidentalis 'Douglasii Pyramidalis'
110-97, G, 1997, 53-SE

Thuja occidentalis 'Ellwangeriana Aurea'
1229-88, G, 1988, LG-PER-S

Thuja occidentalis 'Filiformis'
169-69, G, 1969, 31-SW

Thuja occidentalis 'Hancei'
5088, G, 1904, 36-NW
564-92, G, 1992, LG-PER-S

Thuja occidentalis 'Hetz Wintergreen'
71-60, G, 1960, 36-NW

Thuja occidentalis 'Holmstrup'
584-59, G, 1959, DGB

Thuja occidentalis 'Indomitable'
1865-65, G, 1965, 31-NW

Thuja occidentalis 'Little Champion'
779-73, G, 1973, 31-SW

Thuja occidentalis 'Lutea'
4984, G, 1903, 36-NW
1207-83, U, 1983, 57-SE
603-92, G, 1992, 31-SE, 9-NE
614-92, G, 1992, 36-NW, 9-NE

Thuja occidentalis 'Milleri'
1309-60, G, 1960, 31-NW

Thuja occidentalis 'Nigra'
519-82, G, 1982, 3-NE

Thuja occidentalis 'Pumila'
601-92, G, 1992, LG-71

Thuja occidentalis 'Riversii'
1824-66, G, 1966, 31-NW

Thuja occidentalis 'Robusta Recurva'
1799-65, G, 1965, 36-NW

Thuja occidentalis 'Spiralis'
23207, G, 1966, 36-NW
79-59, G, 1959, 36-NE

Thuja occidentalis 'Umbraculifera'
132-92, G, 1992, 31-NW

Thuja occidentalis 'Wintergreen Pyramidal'
308-59, G, 1959, 36-NW

Thuja occidentalis 'Woodwardii'
609-92, G, 1992, 31-SW

Thuja plicata
17515, W, United States, 1880, 36-NW
17516, W, United States, 1898, 41-SE, 42-SW
23065, U, year unknown, 31-SW
10-2003, W, United States, 2003, 27-NE,
36-NE
109-49, G, 1949, 36-NW
1225-78, W, Canada, 1978, 31-SE
1474-81, W, United States, 1981, 26-NW,
39-SE
1519-67, G, 1967, 45-NE
1549-81, W, United States, 1981, 33-NW
307-57, G, 1957, 31-SW, 36-NW
313-81, W, United States, 1981, 2-SE
321-59, G, 1959, 36-NW
520-82, G, 1982, 3-NE
584-92, Z, United States, 1992, 2-NE
613-92, Z, United States, 1992, 2-NE, 36-NW

Thuja plicata 'Hillieri'
424-61, G, 1961, 36-NW

Thuja plicata 'Semperaurescens'
813-65, G, 1965, 36-NW

Thuja plicata 'Stoneham Gold'
342-63, G, 1963, 30-NE

Thuja plicata 'Zebrina Extra Gold'
1365-83, G, 1983, 62-SE, 62-SW

Thuja standishii
17517, W, Japan, 1890, 36-NW
1208-83, U, 1983, 52-NE
892-72, U, Japan, 1972, 37-NW

Thuja sutchuenensis
161-97, Z, China, 1997, 36-NE

Thujopsis dolabrata
1190-83, G, 1983, 33-NW
1713-77, W, Japan, 1977, DGB
635-59, G, 1959, 36-NW

Thujopsis dolabrata var. *hondae*
1163-76, G, 1976, LG-PER-S
1189-83, U, 1983, 31-NW

Tilia americana
7141, G, 1912, 7-SE
15399, U, 1923, 10-NW
17527, G, 1897, 7-NE
17538, W, Canada, 1906, 53-SE
18066, U, United States, 1897, 7-SW
19804, W, United States, 1916, 7-SE
1323-82, W, United States, 1982, 51-NW
22-80, W, United States, 1980, 4-SE
217-66, G, 1966, 7-SW
535-2003, Z, United States, 2003, 7-NE

Tilia americana 'Redmond'
358-55, G, 1955, 7-SW
450-56, G, 1956, 7-SE

Tilia amurensis
6783, U, 1909, 10-NE
145-86, U, 1986, 53-SE
2037-77, W, Korea, Republic of, 1977, 7-NW
315-97, W, China, 1997, 57-NE
370-97, W, China, 1997, 43-NE
674-29, G, 1929, 4-SE

Tilia begonifolia
655-52, G, 1952, 7-NE

Tilia cordata
4332, G, 1900, 7-NE
6635, G, 1903, 7-NE
17522, U, 1894, 7-SE
23159, G, 1962, 27-NE
1091-38, G, 1938, 10-NE
1317-71, U, 1971, 4-SE
163-55, G, 1955, 7-SE
2158-65, G, 1965, 4-SE
2161-65, G, 1965, 10-NE
272-38, G, 1938, 10-NE
300-2005, W, Spain, 2005, 4-NE, 62-NW
442-85, W, Norway, 1985, 4-NE, 7-SE
711-52, G, 1952, 10-NW, 7-SE

Tilia cordata (variant)
11755, G, 1913, 7-SE

Tilia cordata 'Greenspire'
372-64, G, 1964, 7-SE

Tilia cordata 'Swedish Upright'
12112, G, Sweden, 1906, 53-SE
179-91, G, Sweden, 1991, 7-SE
595-61, G, Sweden, 1961, 7-SE

Tilia dasystyla
6634, U, 1894, 7-NE, 7-SE
17530, G, 1912, 4-SE
17561, G, 1908, 7-SE
17562, U, 1895, 7-SE
18067, G, United States, 1910, 4-SE
18393, G, 1924, 4-SE
86-73, U, 1973, 4-SE
947-54, G, 1954, 10-NW

Tilia dasystyla ssp. *caucasica*
1336-80, W, Russian Federation, 1980, 4-SE
85-73, G, 1973, 7-NE

Tilia × *euchlora*
17525, U, 1898, 7-SE
19771, G, 1926, 7-SE
23158, G, 1962, 10-NE
1324-82, W, United States, 1982, 4-SE

191-87, Z, United States, 1987, 38-SW

Tilia × europaea

192-66, G, 1966, 10-NE

89-38, G, 1938, 7-SE

90-38, G, United States, 1938, 10-NE

Tilia × europaea 'Longevirens'

214-66, G, 1966, 4-SE

Tilia × europaea var. *pallida*

1987-65, G, 1965, 7-NE

Tilia × europaea 'Wratislaviensis'

485-65, G, 1965, 4-SE, 7-SE

Tilia floridana

563-58, Z, United States, 1958, 7-SW

689-59, Z, United States, 1959, 7-SE

75-2001, Z, United States, 2001, 7-SW

Tilia henryana

221-87, U, 1987, 7-SW

857-74, U, 1974, 4-SE

Tilia heterophylla

146-86, Z, United States, 1986, 7-SE

563-2003, W, United States, 2003, 7-NW

Tilia × hillieri

2159-65, G, 1965, 7-NE, 7-SW

Tilia insularis

10859, W, Japan, 1919, 4-SE

138-94, Z, Japan, 1994, 7-NE

152-86, Z, Japan, 1986, 54-SW

170-91, Z, Japan, 1991, 62-NW

Tilia japonica

3699, W, Japan, 1892, 7-SE

147-86, Z, Japan, 1986, 4-NE, 4-SE

445-82, U, 1982, 49-NE

772-53, W, Japan, 1953, 4-SE

902-76, U, 1976, 7-SE

945-63, Z, Japan, 1963, 7-SW

Tilia kiusiana

1019-86, G, Japan, 1986, 4-NE

Tilia koreana

586-90, W, Korea, Republic of, 1990, 57-NE,
7-SE

Tilia mandshurica

17532, U, 1911, 7-SE

381-97, W, China, 1997, 7-SW

564-79, U, 1979, 7-SE

Tilia maximowicziana

365-93, Z, Japan, 1993, 7-SE

606-93, Z, Japan, 1993, 57-SE

Tilia mexicana

1053-90, W, Mexico, 1990, 7-SW

Tilia miqueliana

12211, W, China, 1920, 10-NW

Tilia × moltkei

4959, G, 1902, 7-SE

5861, G, 1909, 4-SE

Tilia mongolica

135-96, W, China, 1996, 50-NE

314-56, G, 1956, 7-SW

Tilia monticola

174-91, U, United States, 1991, 10-NW

Tilia neglecta

17538, W, Canada, 1906, 53-SE

155-86, Z, Canada, 1986, 7-NE

323-79, W, United States, 1979, 4-SE

Tilia paucicostata

10589, G, 1920, 10-NE

Tilia platyphyllos

17547, G, 1902, 7-NE

17549, G, 1909, 7-NE

1276-51, G, 1951, 7-NE

340-2001, W, Germany, 2001, 7-NE

584-66, G, 1966, 7-NE

709-52, G, 1952, 7-SE, 7-SW

Tilia platyphyllos 'Aurea'

690-65, G, 1965, 7-NE

Tilia platyphyllos 'Fastigiata'
583-59, U, 1959, 7-NE

Tilia platyphyllos 'Fastigiata Laciniata'
152-61, G, 1961, 7-NE

Tilia platyphyllos 'Laciniata'
4966, U, 1902, 4-SE

Tilia platyphyllos 'Rubra'
436-56, G, 1956, 7-NE

Tilia platyphyllos 'Tortuosa'
208-2005, U, 2005, 7-NE

Tilia platyphyllos 'Vitifolia'
1227-89, U, 1989, 7-SW
754-64, U, 1964, 7-NE

Tilia platyphyllos ssp. *cordifolia*
161-71, U, 1971, 4-SE
310-64, G, 1964, 10-NE
502-71, U, 1971, 4-SE

Tilia platyphyllos ssp. *pseudorubra*
1616-65, U, 1965, 4-SE

Tilia tomentosa
5862, G, 1907, 10-NE
589-85, W, Hungary, 1985, 4-SE

Tilia tomentosa 'Pendula'
13453, U, 1923, 7-NE
21421, G, 1930, 7-SW

Tilia tomentosa var. *erecta*
493-59, G, 1959, 10-NE, 10-NW

Tilia venulosa
168-91, U, 1991, 4-SE

Torreya grandis
1088-89, W, China, 1989, 33-NW, 33-SW,
36-NW
479-80, W, China, 1980, 36-NW, 65-NW

Torreya grandis var. *merrillii*
1087-89, G, 1989, EG-2

Torreya nucifera
15810, U, 1921, 36-SE
490-97, W, Japan, 1997, EG-2,
EG-3
533-40, U, 1940, 41-NW
794-34, G, 1934, 36-SE

Torreya nucifera var. *igaensis*
453-90, W, Japan, 1990, 36-NW

Torreya nucifera var. *sphaerica*
454-90, G, 1990, 36-NW

Torreya taxifolia
1050-89, W, United States, 1989, 33-SW
1051-89, W, United States, 1989, 33-SW,
36-NW
1052-89, W, United States, 1989, 1-SW
1054-89, W, United States, 1989, 1-SW,
36-NW
1055-89, W, United States, 1989, 33-SW
1056-89, W, United States, 1989, 1-SW
1058-89, W, United States, 1989, 1-SW
1062-89, W, United States, 1989, 1-SW,
36-NW
1067-89, W, United States, 1989, 33-SW
1441-85, W, United States, 1985, 1-SW
1443-85, W, United States, 1985, 33-SW
818-87, G, 1987, 36-NW
857-87, W, United States, 1987, 36-NW

Trachelospermum asiaticum
362-2002, Z, China, 2002, LG-8B
480-80, W, China, 1980, 32-NE

Tricyrtis macropoda
670-94, W, China, 1994, 3-NE

Tripterygium wilfordii
1031-90, W, Japan, 1990, 22-NW
1905-77, W, Korea, Republic of, 1977, 11-NW
382-95, Z, Korea, Republic of, 1995, 19-SE,
LG-1D
439-94, Z, Korea, Republic of, 1994, 19-NE

Trochodendron aralioides
332-2001, G, 2001, EG-3, EG-18

Tsuga sp. (Ulleung-do Type)
1251-83, W, Korea, Republic of, 1983, 26-SW,
32-NW

Tsuga canadensis
7632, G, 1917, 40-NE
23066, U, 1954, 32-SE, 34-NE, 34-SE, 49-NE
23084, U, 1956, 31-SW
1000-79, W, United States, 1979, 30-NW
131-72, G, 1972, LG-PER-S
1509-1, W, United States, 1882, 41-NW
165-88, W, United States, 1988, 26-SW
179-41, G, 1941, 40-NE
218-63, G, 1963, 10-SW, 34-NE
227-61, G, 1961, LG-PER-S
227-85, W, United States, 1985, 2-SE
263-47, G, 1947, 1-SW, 30-SW
267-67, G, 1967, 10-NW
316-63, W, United States, 1963, 10-NW
358-69, U, 1969, 10-SW
537-2008, U, 2008, 2-SE
622-2008, U, 2008, 2-SE
67-46, G, 1946, 40-NE
886-69, G, 1969, DGB
921-65, W, United States, 1965, 10-SW

Tsuga canadensis 'Abbott's #42'
1127-79, Z, United States, 1979, 49-SW

Tsuga canadensis 'Abbott's #50'
913-65, W, United States, 1965, 10-SW

Tsuga canadensis 'Albospica'
547-37, G, 1937, 40-NE

Tsuga canadensis 'Ashfield Weeper'
377-67, W, United States, 1967, 10-SW

Tsuga canadensis 'Atrovirens'
1505, G, 1880, 41-NW

Tsuga canadensis 'Bradshaw'
634-48, G, 1948, 40-NE

Tsuga canadensis 'Cesarini's Broom'
1403-67, U, United States, 1967, 10-NW

Tsuga canadensis 'Cinnamomea'
21-2001, G, 2001, LG-PER-S

Tsuga canadensis 'Cloud Prune'
1290-72, W, United States, 1972, LG-PER-E

Tsuga canadensis 'Cole's Prostrate'
12-80, U, 1980, DGB

Tsuga canadensis 'Compacta'
1680, G, 1881, 41-NW
8097, G, 1918, 31-SW
21278, G, 1930, 40-NE

Tsuga canadensis 'Coplen'
528-62, G, 1962, 10-SW

Tsuga canadensis 'Curtis'
286-65, G, 1965, 10-NW

Tsuga canadensis 'Dwarf White-Tip'
1648-67, G, 1967, 10-SW

Tsuga canadensis 'Erhle Large-Leaf'
788-58, G, 1958, 10-SW

Tsuga canadensis 'Fremdii'
6809, G, 1913, 40-NE

Tsuga canadensis 'Gable Twiggy'
275-65, G, 1965, 10-NW
527-62, G, 1962, DGB

Tsuga canadensis 'Gable's Littleleaf'
1279-78, G, 1978, 2-SE

Tsuga canadensis 'Gracilis'
999-68, U, 1968, DGB

Tsuga canadensis 'Green Cascade'
598-72, G, 1972, 10-SW

Tsuga canadensis 'Harmon'
525-62, G, 1962, DGB

Tsuga canadensis 'Hiti'
196-45, G, 1945, 40-NE
72-38, G, 1938, 40-NE, 41-NW

Tsuga canadensis 'Horsford Contorted'
1636-67, W, United States, 1967, DGB

Tsuga canadensis 'Hussii'
1064-71, G, 1971, 33-NW

Tsuga canadensis 'Innisfree'
1026-50, G, 1950, 10-SW
842-56, G, 1956, 31-NW

Tsuga canadensis 'Jervis'
1761-65, G, 1965, DGB

Tsuga canadensis 'Kingsville'
475-59, G, 1959, 40-SE

Tsuga canadensis 'Livingston'
821-86, W, United States, 1986, 40-NE

Tsuga canadensis 'Loudon Dwarf'
280-65, G, 1965, 10-NW

Tsuga canadensis 'Microphylla'
1042-38, G, 1938, 40-NE

Tsuga canadensis 'Minima'
1762-65, G, 1965, 10-NW

Tsuga canadensis 'Minuta'
955-70, U, 1970, DGB

Tsuga canadensis 'Nana'
1393-64, G, 1964, 10-NW
274-65, G, 1965, 10-SW
279-65, G, 1965, 10-SW

Tsuga canadensis 'Rockland'
615-63, G, 1963, 10-SW

Tsuga canadensis 'Saint George'
1707-81, U, 1981, DGB

Tsuga canadensis 'Starker'
228-61, G, 1961, 14-NW

Tsuga canadensis 'Stewarts'
135-72, U, 1972, DGB

Tsuga canadensis 'Stockman's Dwarf'
357-69, G, 1969, 10-NW

Tsuga canadensis 'Stranger'
1069-71, G, 1971, 10-NW

Tsuga canadensis 'Taxifolia'
2244-65, G, 1965, 10-SW

Tsuga canadensis 'Upper Bank'
128-72, G, 1972, LG-PER-E

Tsuga canadensis 'Watnong Star'
667-69, W, United States, 1969, DGB

Tsuga canadensis 'Westonigra'
433-48, G, 1948, 40-SE

Tsuga canadensis 'Wyckoff'
508-62, G, 1962, 40-SE

Tsuga canadensis 'Youngcone'
963-70, G, 1970, 10-SW

Tsuga canadensis f. *pendula*
10712, G, 1921, 31-SW
15820, G, 1923, 40-NE
1514-2, G, 1881, 40-NE
1671-65, G, 1965, DGB
1724-66, G, 1966, DGB
759-31, G, 1931, 40-NE
864-38, G, 1938, DGB

Tsuga canadensis f. *pendula* 'Brookline'
655-66, W, United States, 1966, LARZ-B
896-80, W, United States, 1980, 37-SE

Tsuga caroliniana
15803, W, United States, 1886, 34-SE, 39-NE,
44-SE
19447, G, 1926, 39-NE, 3-NW, 49-SW
266-2011, U, 2011, 37-NW
342-51, G, 1951, 31-NW, 31-SW
500-82, G, United States, 1982, 57-NW
566-2010, U, 2010, 49-NE
616-2008, U, 2008, 53-SW
705-93, W, United States, 1993, 39-NE, 40-NE

Tsuga caroliniana 'Compacta'

22511, G, 1936, 41-NW
1276-68, G, 1968, DGB

Tsuga caroliniana 'Green Mound'

1260-85, G, 1985, 37-SE

Tsuga caroliniana 'LaBar Weeping'

607-71, W, United States, 1971, LG-PER-S

Tsuga chinensis

17569, W, China, 1911, 38-NW
10-97, Z, China, 1997, 30-NW
100-94, U, China, 1994, 10-SW, 14-NW,
32-NW, 32-SE, 41-NE, 41-NW, 41-SE,
41-SW, 42-SW, 46-NE, 62-SE, 62-SW
20-99, W, China, 1999, 14-NW, 32-SE, 37-SE
21-99, W, China, 1999, 14-NW, 32-SE, 32-SW
225-2003, W, China, 2003, 32-NW, 41-SE,
42-SW
226-2003, W, China, 2003, 32-SW, 41-SW,
42-NW, 42-SE, 42-SW
227-2003, W, China, 2003, 32-NW, 32-SE,
42-NW
228-2003, W, China, 2003, 26-SW, 32-NW,
32-SW, 41-SE, 42-NW
229-2003, W, China, 2003, 10-SW, 32-NE,
41-NW
230-2003, W, China, 2003, 10-SW, 14-NW,
26-SW, 41-SW
231-2003, W, China, 2003, 26-SW, 32-NW,
41-SW
232-2003, W, China, 2003, 30-SW, 41-SW
233-2003, W, China, 2003, 32-NW, 32-SW,
41-SE, 42-SW
234-2003, G, 2003, 41-SW, 42-NW, 42-SE,
42-SW
235-2003, W, China, 2003, 26-SW, 41-SE,
41-SW, 42-SW
242-2000, W, China, 2000, 32-NW, 35-NW,
41-SW, 42-NW
243-2000, W, China, 2000, 41-SE, 41-SW,
42-NW, 42-SE, 42-SW
307-2000, W, China, 2000, 37-SE
440-2003, W, China, 2003, 41-SE
944-52, Z, China, 1952, 40-NE

Tsuga chinensis var. *oblongisquamata*

132-2009, W, China, 2009, 41-SW
133-2009, W, China, 2009, 41-NW
134-2009, W, China, 2009, 41-NW
135-2009, W, China, 2009, 34-NE

Tsuga diversifolia

17571, U, 1973, 35-NW
1146-86, W, Japan, 1986, 38-NW
1837-77, W, Japan, 1977, 26-NW, 26-SW
39-82, U, 1982, 26-SW

Tsuga heterophylla

1492-81, W, United States, 1981, 57-NW
22-94, W, Canada, 1994, 26-SW
45-82, Z, United States, 1982, 2-SE
47-62, W, United States, 1962, 34-SE

Tsuga mertensiana

693-77, G, 1977, 26-NW

Tsuga mertensiana 'Quartz Mountain'

1384-67, U, 1967, DGB

Tsuga sieboldii

17577, U, 1908, 44-SE
1007-80, W, Japan, 1980, 38-NW, 57-NW
353-54, U, 1954, 40-SE

Ulex europaeus

169-94, W, France, 1994, 27-SW

Ulmus sp.

535-2008, U, 2008, 4-NE

Ulmus 'Coolshade'

561-48, G, 1948, 14-SW

Ulmus 'Hamburg'

520-53, G, 1953, 20-SE
666-50, G, 1950, 20-SE

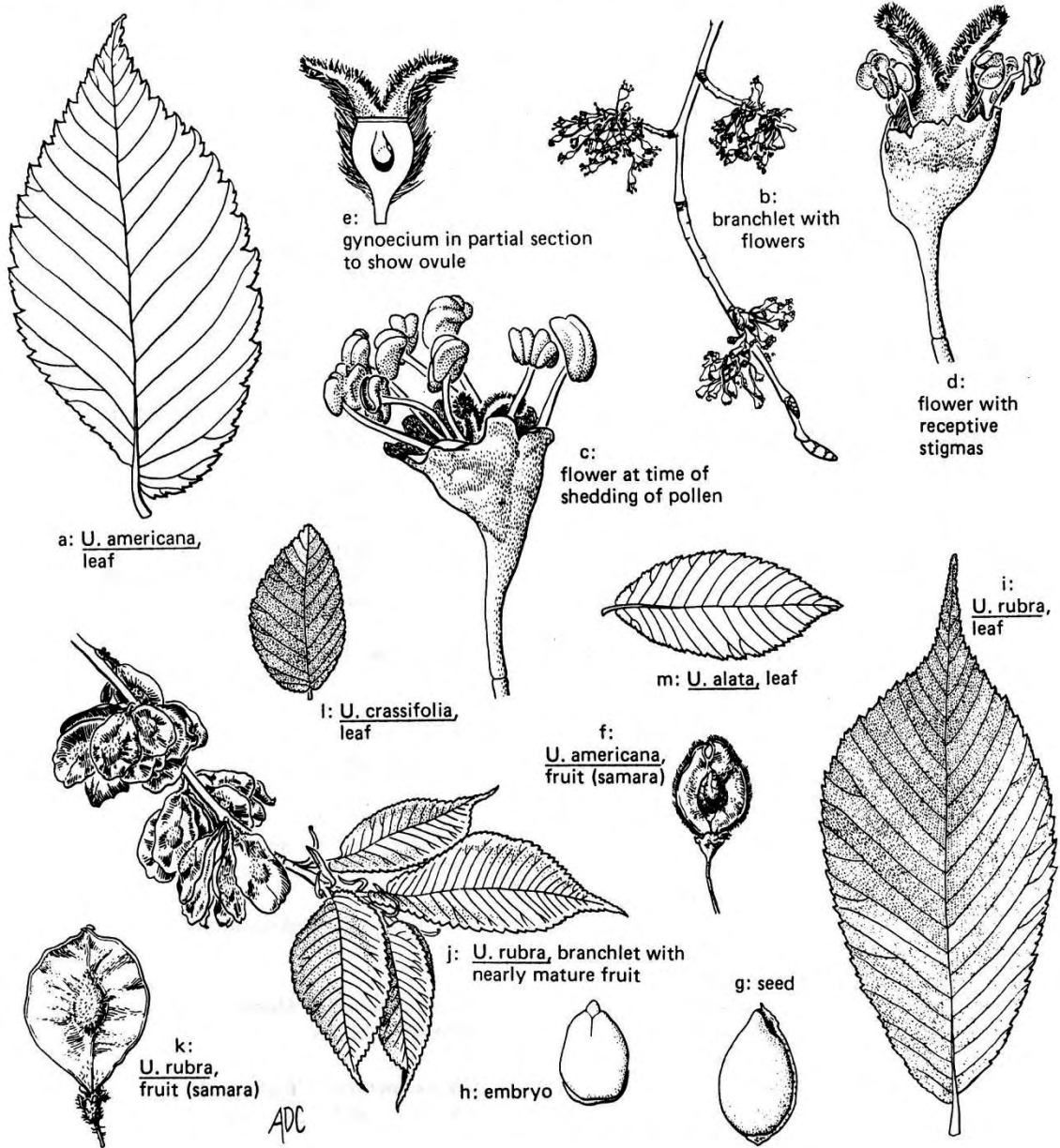
Ulmus 'Kansas Hybrid'

362-63, G, 1963, 14-SE, 20-NE

Ulmus 'Morton'

130-2002, G, 2002, 51-SE, LG-PER-W

ULMACEAE: Ulmus. a-h, *U. americana*; i-k, *U. rubra*; l, *U. crassifolia*; m, *U. alata*



Ulmus 'Morton Glossy'
132-2002, G, 2002, 20-NE

Ulmus 'Morton Stalwart'
131-2002, G, 2002, 20-NE

Ulmus 'Viminalis'
499-53, G, 1953, 20-SE

Ulmus alata
404-95, W, United States, 1995, 20-SW

Ulmus americana
250-53, G, 1953, 20-SE
371-2008, Z, United States, 2008, 20-NE,
LG-PER-W, WH2-SW
412-86, W, United States, 1986, 22-SW

Ulmus americana 'Ascendens'
297-2006, G, 2006, 20-NW, 62-SW

Ulmus americana 'Fiorei'
1238-61, G, 1961, 21-SW

Ulmus americana 'Princeton'
352-91, G, 1991, 20-NW, 43-NE, 51-SE,
51-SW
561-89, G, 1989, 20-SE, 20-SW, 43-SE

Ulmus americana 'Valley Forge'
180-2003, G, 2003, 20-NW, 20-SW,
LG-PER-W

Ulmus carpinifolia
326-81, G, 1981, 55-NE

Ulmus carpinifolia 'Purpurea'
321-81, G, 1981, 19-SE

Ulmus carpinifolia 'Webbiana'
761-80, G, 1980, 55-SE

Ulmus carpinifolia var. *cornubiensis*
17676, G, 1915, 20-SW
323-81, G, 1981, 20-SW, 26-NW

Ulmus changii
445-2002, W, China, 2002, 20-SE

Ulmus crassifolia
511-2002, W, United States, 2002, 26-NW
758-86, W, United States, 1986, LARZ

Ulmus davidiana
5957, W, China, 1908, 20-SE
785-80, Z, China, 1980, 20-SW

Ulmus davidiana var. *japonica*
4119, G, 1895, 20-SE, 20-SW
917-78, W, Korea, Republic of, 1978, 20-SE

Ulmus glabra
391-2001, W, Georgia, 2001, 20-NE

Ulmus glabra 'Camperdownii'
352-51, G, 1951, 14-SW

Ulmus glabra 'Nana'
448-88, G, 1988, 20-SE

Ulmus × *hollandica*
7614, G, 1917, 20-SW
325-81, G, 1981, 27-SE
92-38, G, United States, 1938, 20-NE

Ulmus × *hollandica* 'Bea Schwarz'
151-61, G, 1961, 20-SW
270-62, G, 1962, 20-NE

Ulmus × *hollandica* 'Belgica'
322-81, G, 1981, 20-SE

Ulmus × *hollandica* 'Christine Buisman'
135-54, G, 1954, 20-NW
273-46, G, 1946, 20-NE

Ulmus × *hollandica* 'Dampieri'
17876, G, 1908, 20-NW

Ulmus × *hollandica* 'Major'
241-98, G, 1998, 20-SW

Ulmus × *hollandica* 'Modiolina'
225-36, G, 1936, 20-SW

Ulmus × *hollandica* 'Pendula'
857-78, G, 1978, 33-NE

Ulmus laciniata
17909, W, country unknown, 1913, 26-NE
250-2001, W, Korea, Republic of, 2001, 20-SE

Ulmus laciniata var. *nikkoensis*
17908, W, Japan, 1905, 20-SE
17908-1, Z, Japan, 1908, 26-NE

Ulmus laevis
6951, G, 1910, 20-SW
17910, G, 1888, 20-NW
637-79, G, 1979, 13-SE
753-80, G, 1980, 62-NE

Ulmus macrocarpa
17911, U, 1911, 26-NE
387-40, U, China, 1940, 26-NW

Ulmus minor 'Gracilis'
32-97, G, 1997, 14-SE

Ulmus parvifolia
17917, G, 1914, 20-SW
1353-73, W, Korea, Republic of, 1973, 14-SE
195-90, U, 1990, LARZ
197-90, U, 1990, LARZ

Ulmus parvifolia f. *lanceolata*
1799-77, G, Korea, Republic of, 1977, 33-SW

Ulmus parvifolia 'Hibari'
674-67, G, 1967, 14-NE

Ulmus parvifolia 'King's Choice'
287-95, G, 1995, 20-SW, EG-26-SE

Ulmus parvifolia 'Pathfinder'
135-98, U, 1998, 14-NE, 21-NW

Ulmus parvifolia 'Pendens'
70-45, G, 1945, 20-SE

Ulmus parvifolia var. *coreana*
402-86, W, Korea, Republic of, 1986, 20-NE

Ulmus pumila
17923, W, country unknown, 1913, 26-NE
638-79, G, China, 1979, 20-SE

673-87, Z, China, 1987, 14-SW

Ulmus pumila (variant)
451-75, G, United States, 1975, 21-SW

Ulmus pumila 'Ansaloni'
636-61, G, 1961, 20-SW

Ulmus pumila × *rubra* 'Rosehill'
748-60, G, 1960, 20-NE

Ulmus pumila var. *arborea*
698-87, U, 1987, 45-SW
925-83, U, 1983, 20-NE

Ulmus rubra
737-88, U, 1988, 20-SW
738-88, U, 1988, 20-SE

Ulmus thomasii
444-88, G, 1988, 27-SE

Ulmus wilsoniana
5457, W, China, 1911, 26-NE
527-82, Z, China, 1982, 31-NE

Ulmus wilsoniana × *dauriana* var. *japonica*
170-97, G, 1997, 20-NE
344-82, G, 1982, 45-NW
704-41, G, 1941, 20-SE
706-41, G, 1941, 20-SE
804-80, G, 1980, 20-SE

Ulmus wilsoniana 'Patriot'
136-98, U, 1998, 21-NW, 25-NE

Ulmus wilsoniana 'Prospector'
134-2002, G, 2002, 20-NW, LG-PER-W

Uvularia 'Sunbonnet'
493-95, G, 1995, 1-SE

Vaccinium 'Northblue'
401-2002, G, 2002, LG-6E, LG-7A

Vaccinium angustifolium
196-2006, G, 2006, LG-6C, LG-7G
279-2003, G, 2003, LG-6E

487-42, G, 1942, 31-SE
616-2003, G, 2003, LG-6E, LG-7A

Vaccinium angustifolium 'Brunswick'
267-96, G, 1996, 5-SW
615-2003, G, 2003, LG-2F

Vaccinium angustifolium 'Chignecto'
268-96, G, 1996, DGB

Vaccinium arboreum
248-89, W, United States, 1989, 31-NE

Vaccinium boreale
839-93, W, Canada, 1993, DGB

Vaccinium corymbosum
1951, W, United States, 1883, EG-2
20773, G, 1926, 31-NE
22898, U, 1950, 11-SW, 19-SW, 25-SW, 40-NE
250-34, G, 1934, 11-NW
285-2007, W, United States, 2007, 8-NW
303-97, G, 1997, 3-NE
386-71, W, Canada, 1971, 5-SW
3867-1, G, 1923, 5-SW
529-2009, U, 2009, 11-SW
530-2009, U, 2009, 11-SW
652-2008, U, 2008, 15-SE
653-2008, U, 2008, 15-SE
657-2008, U, 2008, 15-SE

Vaccinium corymbosum 'Dunfee'
8163, U, 1922, 11-NW

Vaccinium corymbosum 'Earliblue'
197-2006, G, 2006, LG-6E

Vaccinium corymbosum 'Grover'
20745, Z, United States, 1929, 11-NW

Vaccinium corymbosum 'Harding'
20746, U, 1929, 11-NW

Vaccinium corymbosum 'Katherine'
20747, U, 1929, 11-NW

Vaccinium corymbosum 'Pioneer'
20748, U, 1929, 11-NW

Vaccinium corymbosum 'Rubel'
20750, U, 1929, 11-NW

Vaccinium corymbosum 'Sam'
20751, U, 1929, 11-NW

Vaccinium corymbosum 'Sunshine Blue'
203-2006, G, 2006, LG-6C, LG-6E

Vaccinium hirtum
1907-77, W, Japan, 1977, DGB

Vaccinium myrtilloides
137-78, W, United States, 1978, 37-SE

Vaccinium oldhamii
1014-62, G, 1962, 5-SW
268-78, U, 1978, DGB

Vaccinium ovatum
1202-78, U, 1978, DGB

Vaccinium pallidum
207-76, W, United States, 1976, DGB

Vaccinium stamineum
19478, W, United States, 1925, 31-NE
19479, W, United States, 1925, 31-NE
20946, G, 1929, 37-NW

Vaccinium uliginosum
388-97, W, China, 1997, 5-NW, DGB

Vaccinium vitis-idaea
794-93, W, Canada, 1993, DGB

Viburnum sp.
1834-77, W, Japan, 1977, 13-SE

Viburnum acerifolium
364-84, W, Canada, 1984, 44-SE

Viburnum betulifolium
1736-80, W, China, 1980, 62-NW
255-2001, G, China, 2001, 13-SE

Viburnum bitchiuense
1797-77, W, Korea, Republic of, 1977, 13-SE

2047-77, W, Korea, Republic of, 1977, 13-SE

Viburnum × *bodnantense* 'Dawn'

1121-67, G, 1967, 13-SE

Viburnum bracteatum

6119, W, United States, 1904, 13-SW

1067-87, W, United States, 1987, 13-NE

1068-87, W, United States, 1987, 19-SW

229-98, Z, United States, 1998, 13-SE

365-2005, Z, United States, 2005, LG-3D

Viburnum buddleifolium

7533, G, 1914, 32-NE

Viburnum burejaeticum

316-2007, Z, Chaina, 2007, LG-3M

375-97, W, China, 1997, 32-NE, EG-16

Viburnum × *burkwoodii*

815-41, G, 1941, 13-SW

Viburnum × *burkwoodii* 'Chenault'

1208-62, G, 1962, 13-SW

Viburnum carlesii

17981-2, G, 1925, 13-SE

892-61, G, 1961, 19-SE

Viburnum carlesii 'Aurora'

2163-65, G, 1965, 13-SW

Viburnum carlesii 'Compactum'

346-2002, G, 2002, LG-8K

Viburnum cassinoides

109-79, W, Canada, 1979, 59-NE

1104-81, W, United States, 1982, 50-NE

18-79, W, United States, 1979, 59-NE

874-85, W, United States, 1985, 62-NE

Viburnum cf. *corylifolium*

103-99, U, 1999, 13-SE

708-37, U, 1937, 13-SE

Viburnum dentatum

10-2012, U, 2012, BR-FAXON-POND

352-95, U, 1995, 3-NE

5070-1, G, 1902, 13-SE

8-2012, U, 2012, 3-NE

9-2012, U, 2012, BR-FAXON-POND

Viburnum dentatum var. *dentatum*

217-2002, G, 2002, 19-NE

1253-83, G, 1983, 19-NW

Viburnum dentatum var. *indianense*

101-38, G, 1938, 13-SE

293-85, W, United States, 1985, 19-NW

Viburnum dentatum var. *lucidum*

17985, W, United States, 1888, 13-SE

Viburnum dentatum var. *pubescens*

20732, G, 1925, 13-SW

1046-81, Z, United States, 1981, 39-NE

269-32, G, 1932, 13-SE

Viburnum dentatum var. *venosum*

18008, W, United States, 1888, 13-SE

268-85, G, 1985, 13-NE, 13-SE

Viburnum dilatatum

20449, G, 1927, 13-SW

138-52, W, Japan, 1952, 13-SE

1452-83, W, Japan, 1983, 13-SE

1804-77, W, Korea, Republic of, 1977, 15-SW

1872-77, W, Japan, 1977, 15-SW

821-85, Z, Japan, 1985, 13-NE

Viburnum dilatatum 'Catskill'

167-73, Z, Japan, 1973, 19-SW

Viburnum dilatatum f. *hispidum*

1120-86, Z, Japan, 1986, 39-NE, 39-SE

Viburnum dilatatum f. *pilosulum*

36-72, W, Korea, Republic of, 1972, 10-SW

77-90, W, Korea, Republic of, 1990, 13-NE

Viburnum erosum

512-83, W, Korea, Republic of, 1983, 19-NE

78-90, W, Korea, Republic of, 1990, 19-NW

963-85, W, Korea, Republic of, 1985, 19-NW

Viburnum erubescens var. *gracilipes*
798-65, G, 1965, 19-NW

Viburnum farreri 'Nanum'
293-2003, G, 2003, LG-2E

Viburnum flavescens
1964-80, W, China, 1980, 13-SE

Viburnum furcatum
17988, W, Japan, 1915, 11-SW
11-98, W, Japan, 1998, LG-8E

Viburnum hanceanum
360-95, U, 1995, 19-NE, 19-SE

Viburnum hupehense
1903-80, W, China, 1980, EG-7

Viburnum hupehense ssp. *hupehense*
1748-80, W, China, 1980, 51-NW
1985-80, W, China, 1980, 62-NW
80-81, W, China, 1980, 19-NW

Viburnum hupehense ssp. *septentrionale*
362-95, Z, China, 1995, 13-SW

Viburnum ichangense
51-60, G, 1960, 13-SW, 19-SE

Viburnum ichangense var. *atratocarpum*
125-81, W, China, 1980, 13-SE
259-2001, Z, China, 2001, 13-SE

Viburnum × *juddii*
1107-27, G, 1927, 13-SE

Viburnum koreanum
619-88, Z, China, 1988, 13-SE

Viburnum lantana
1057-72, G, 1972, 10-SW
206-96, Z, Moldova, Republic of, 1996,
19-NW

Viburnum lantana var. *discolor*
1294-83, W, 1983, 19-NW

Viburnum lentago
18021, G, 1882, 13-SE
22951, G, 1951, 25-NE, 37-NW
11-2012, U, 2012, 13-SE
12-2012, U, 2012, 13-NE
1715-81, W, Canada, 1981, 13-SE
301-86, W, United States, 1986, 13-NE
306-90, W, United States, 1990, 13-SW
395-2008, U, 2008, 26-SE
795-64, W, country unknown, 1964, 25-NW

Viburnum lobophyllum
1166-83, Z, China, 1983, 13-SE
1875-80, W, China, 1980, 13-SE
206-2004, Z, China, 2004, 13-NE
722-68, Z, China, 1968, 19-NW

Viburnum melanocarpum
386-81, G, China, 1981, 13-SW

Viburnum molle
18294, W, United States, 1924, 13-SW

Viburnum molle f. *leiophyllum*
167-2000, U, 2000, 13-SE
4643-1, U, 1905, 19-SW

Viburnum mongolicum
254-2001, Z, China, 2001, 13-SE

Viburnum nudum
565-2003, W, United States, 2003, LG-3G

Viburnum nudum 'Winterthur'
431-2002, G, 2002, LG-3E

Viburnum opulus
352-78, W, Denmark, 1978, 13-NE
48-2006, Z, Denmark, 2006, LG-3E
873-85, W, United States, 1985, 55-NE

Viburnum opulus var. *calvescens*
287-2002, Z, Japan, 2002, 13-SE
719-88, W, Japan, 1988, 14-NW

Viburnum plicatum
18016-1, G, 1903, 13-SE
933-4, G, 1903, 13-NE

Viburnum plicatum 'Mariesii'
23141, G, 1962, 14-NW

Viburnum plicatum 'Mary Milton'
237-98, G, 1998, LG-8J

Viburnum plicatum 'Roseum'
912-79, G, 1979, 13-SE

Viburnum plicatum f. *tomentosum*
503-84, U, 1984, 19-NE

Viburnum × *pragense*
1085-76, G, 1976, 13-NE
1311-64, G, 1964, 13-SW, 19-NW

Viburnum prunifolium
22586, U, year unknown, 13-SW
1189-85, W, United States, 1985, 13-SW
1910-81, W, United States, 1981, 13-SE

Viburnum rafinesquianum
17974, G, 1880, 15-SW
227-2006, Z, Canada, 2006, 13-NE, LG-2I
365-84, W, Canada, 1984, 13-NE
480-97, W, United States, 1997, 19-SW

Viburnum rafinesquianum var. *affine*
18295, W, United States, 1924, 25-NE
4622-2, U, 1924, 19-NW

Viburnum recognitum
21064, G, 1925, 13-SE, 13-SW
1471-83, W, Canada, 1983, 19-NW, 51-SW
19-60, W, United States, 1960, 19-SE
39-68, W, Canada, 1968, 19-SE
411-64, U, 1964, 19-SE
51-2006, Z, Canada, 2006, LG-PER-N
633-93, W, United States, 1993, 19-SW

Viburnum rhytidophyllum
7253, U, 1907, 18-NE
1386-82, W, China, 1982, 13-SE
1387-82, W, China, 1982, 13-SW
45-81, W, China, 1980, 13-NE
57-81, W, China, 1980, 13-NE

Viburnum rhytidophyllum 'Roseum'
133-67, G, 1967, 19-NW

Viburnum × *rhytidophylloides*
756-79, G, 1979, 14-NW
874-57, G, 1957, 19-SE

Viburnum × *rhytidophylloides* 'Alleghany'
256-2000, G, 2000, LG-8F

Viburnum rufidulum
21418, G, 1930, 13-SW
3943-1, U, 1899, 13-SE

Viburnum sargentii
1897-80, W, China, 1980, 13-SE
1922-80, W, China, 1980, 13-NE
301-2007, Z, China, 2007, DGB
379-97, W, China, 1997, 19-NW
398-68, G, 1968, 19-NW
79-90, W, Korea, Republic of, 1990, EG-16

Viburnum sargentii 'Onondaga'
158-2004, G, 2004, LG-8C

Viburnum scabrellum
911-79, Z, United States, 1979, 14-NW

Viburnum schensianum
744-88, Z, country unknown, 1988, EG-15
832-63, Z, country unknown, 1963, 19-SW

Viburnum setigerum
1635-80, W, China, 1980, EG-15
305-2002, Z, China, 2002, 13-SE

Viburnum setigerum 'Aurantiacum'
19085, W, China, 1908, 13-SE
20189, W, China, 1907, 13-NE
577-87, Z, China, 1987, EG-15, EG-16

Viburnum sieboldii
398-62, G, 1962, DGB
616-6, G, 1913, 13-SE, 15-SW

Viburnum sieboldii 'Seneca'
619-71, G, 1971, 19-SW

Viburnum trilobum
22900, U, year unknown,
BR-FAXON-POND
1097-60, G, 1960, 19-SE
361-2006, W, United States, 2006, LG-2I

Viburnum utile
638-94, W, China, 1994, LG-8E

Viburnum veitchii
101-81, W, China, 1980, 62-NW
457-94, Z, China, 1994, 19-SW

Viburnum wrightii
1825-77, W, Japan, 1977, 62-NW
19-87, Z, Japan, 1987, 33-NE

Viburnum wrightii var. *eglandulosum*
825-63, G, 1963, 13-NW

Vinca minor 'Bowles' Variety'
1463-61, G, 1961, 9-NE

Vitex negundo var. *heterophylla*
264-75, G, 1975, 15-SW

Vitex rotundifolia
132-2001, W, Japan, 2001, LG-7I

Vitis sp.
933-79, W, United States, 1979, 44-NE

Vitis aestivalis var. *argentifolia*
1213-76, W, United States, 1976, 11-NE
150-87, W, United States, 1987, LG-9B.14

Vitis × *andersonii*
709-54, G, 1954, 52-SW

Vitis betulifolia
112-81, W, China, 1980, LG-10A.3

Vitis champinii
712-54, U, 1954, 52-NE

Vitis coignetiae
63-92, W, Japan, 1992, LG-10B.16, LG-PER-S
95-92, W, Japan, 1992, LG-9C.23

Vitis davidii
1096-78, G, 1978, 8-SE

Vitis flexuosa
1106-78, W, Korea, Republic of, 1978, 47-SE
710-54, Z, Japan, 1954, 52-NE
813-54, W, Japan, 1953, 52-SW

Vitis flexuosa var. *tsukubana*
1034-74, G, 1974, 8-NE

Vitis pentagona
999-76, G, 1976, 44-NE

Vitis piasezkii var. *pagnuccii*
1994-80, W, China, 1980, LG-9C.25

Vitis riparia
1739-81, W, Canada, 1981, LG-10A.7
302-89, W, United States, 1989, LG-10B.14

Vitis vinifera 'Purpurea'
353-2006, G, 2006, LG-9C.27

Vitis vinifera × *amurensis* 'Beichun'
331-84, G, 1984, LG-10B.4

Vitis vinifera × *amurensis* 'Beihong'
332-84, G, 1984, LG-10B.5, LG-PER-S

Weigela 'Bristol Ruby'
384-83, G, 1983, 13-SE

Weigela coraeensis
222-2002, G, 2002, 14-NW

Weigela decora
1928-77, W, Japan, 1977, 59-SW
81-90, W, Korea, Republic of, 1990, 14-NW

Weigela floribunda
1019-90, W, Japan, 1990, 14-NW

Weigela florida
125-2003, W, China, 2003, LG-7C
132-96, W, China, 1996, 14-NW
215-2001, U, 2001, 14-SE
402-92, Z, Korea, Republic of, 1992, 14-SE

404-86, W, Korea, Republic of, 1986, 45-SW
411-94, W, Korea, Republic of, 1994, 14-NW
844-84, U, 1984, 14-NW
854-84, U, 1984, 14-NW

Weigela florida 'Bramwell'
186-2006, G, 2006, LG-2H

Weigela florida 'Foliis Purpureis'
388-83, G, 1983, 13-SE

Weigela florida 'Rubidor'
625-90, G, 1990, 33-NE, 33-NW

Weigela florida var. *venusta*
817-84, Z, Korea, Republic of, 1984, 14-NE

Weigela hortensis
130-2001, W, Japan, 2001, 14-NW
279-84, W, Japan, 1984, 14-NW
414-2007, W, Japan, 2007, 14-NW

Weigela japonica
1104-89, W, China, 1989, 33-NE, 33-NW

Weigela japonica var. *sinica*
1051-83, U, 1983, 13-SE
1317-84, Z, China, 1984, 13-SE

Weigela maximowiczii
167-97, G, 1997, 14-SE
199-73, G, 1973, 32-SW

Weigela praecox
966-85, W, Korea, Republic of, 1985, 51-NW,
52-SW

Weigela praecox 'Bouquet Rose'
843-84, G, 1984, 13-NE

Weigela praecox 'Gracieux'
164-2000, G, 2000, 14-NW

Weigela sachalinensis
422-93, W, Korea, Republic of, 1993, 14-SE

Weigela subsessilis
175-2000, Z, Korea, Republic of, 2000, 32-SE

176-2000, Z, Korea, Republic of, 2000, LG-2K
1901-77, W, Korea, Republic of, 1977, 32-SW
1906-77, W, Korea, Republic of, 1977, 14-NW
218-2001, Z, Korea, Republic of, 2001, 32-SE
219-2001, Z, Korea, Republic of, 2001, 32-SE
317-2001, W, Korea, Republic of, 2001,
14-NW, 32-SE
362-91, G, 1991, 27-NW
409-92, Z, Korea, Republic of, 1992, EG-8
587-83, Z, Korea, Democratic People's
Republic of, 1983, 33-SW

Wikstroemia trichotoma
288-2001, G, Korea, Republic of, 2001, LG-1D

Wisteria floribunda
1008-89, W, Japan, 1989, LG-4
1894-77, W, Japan, 1977, 19-SW

Wisteria floribunda 'Issai Perfect'
354-2006, G, 2006, LG-9A.3

Wisteria floribunda 'Shiro Noda'
1128-81, G, 1981, 44-NE

Wisteria frutescens
1414-85, W, United States, 1985, LG-PER-S
532-92, W, United States, 1992, LG-10A.2
623-91, W, United States, 1991, LG-4

Wisteria frutescens 'Aunt Dee'
223-2002, G, 2002, LG-5
260-2000, G, 2000, LG-5
409-2003, G, 2003, LG-5

Wisteria frutescens 'Blue Moon'
359-2003, G, 2003, LG-10A.5, LG-PER-S

Wisteria frutescens 'Longwood Purple'
192-2001, G, 2001, LG-4

Wisteria frutescens 'Nivea'
225-2002, G, 2002, LG-4

Wisteria sinensis
1132-81, G, 1981, 44-NE
1225-89, W, China, 1989, LG-4
296-2008, W, China, 2008, LG-9A.1

Wisteria sinensis 'Caroline'
355-2006, G, 2006, LG-9A.4

Wisteria venusta 'White Silk'
200-2007, G, 2007, LG-9A.5

Xanthoceras sorbifolia
1293-79, W, China, 1979, 32-NE
488-80, W, China, 1980, 11-NW, EG-26-SE

Xanthorrhiza simplicissima
17610, W, United States, 1886, 11-SW, 15-SE
113-2007, W, United States, 2007, LG-PER-W
447-93, U, 1993, 3-NW
79-98, G, 1998, 15-SE

Yucca glauca
432-81, W, Canada, 1981, 25-SW, 31-NW

Zabelia biflora
109-98, W, China, 1998, 21-NW
504-93, Z, China, 1993, 21-NW
94-23, W, China, 1923 18-SE

Zamia furfuracea
943-76, U, 1976, WH-INTERIOR

Zamia integrifolia
270-2011, W, United States, 2011,
WH-INTERIOR
283-2011, W, United States, 2011,
WH-INTERIOR

Zanthoxylum alatum var. *subtrifoliatum*
811-80, G, 1980, 11-NW

Zanthoxylum americanum
118-79, W, Canada, 1979, 11-NW

685-84, W, United States, 1984, 62-SW

Zanthoxylum simulans
1210-70, G, 1971, 19-NW
1803-77, G, Korea, Republic of, 1977, 8-SW

Zelkova schneideriana
1294-79, W, China, 1979, 20-SW
489-80, W, China, 1980, 14-NW, 20-NE
773-94, W, China, 1994, 14-NW

Zelkova serrata
10792, G, 1920, 54-SW
11115, G, 1919, 14-NE
19192, G, 1925, 14-NE, 14-NW
1813-77, W, Korea, Republic of, 1977, 20-NW
497-79, G, 1979, 14-NW

Zelkova serrata 'Green Veil'
512-82, G, 1982, LG-PER-S

Zelkova serrata 'Schmidtlow'
135-2002, G, 2002, 14-SW, 53-SE

Zelkova serrata 'Village Green'
659-66, G, 1966, 14-NW

Zelkova sinica
11578, G, 1920, 14-NE
12215, W, China, 1920, 14-NE
288-80, Z, China, 1980, 20-SW
766-84, W, China, 1984, 14-SE, 55-NE

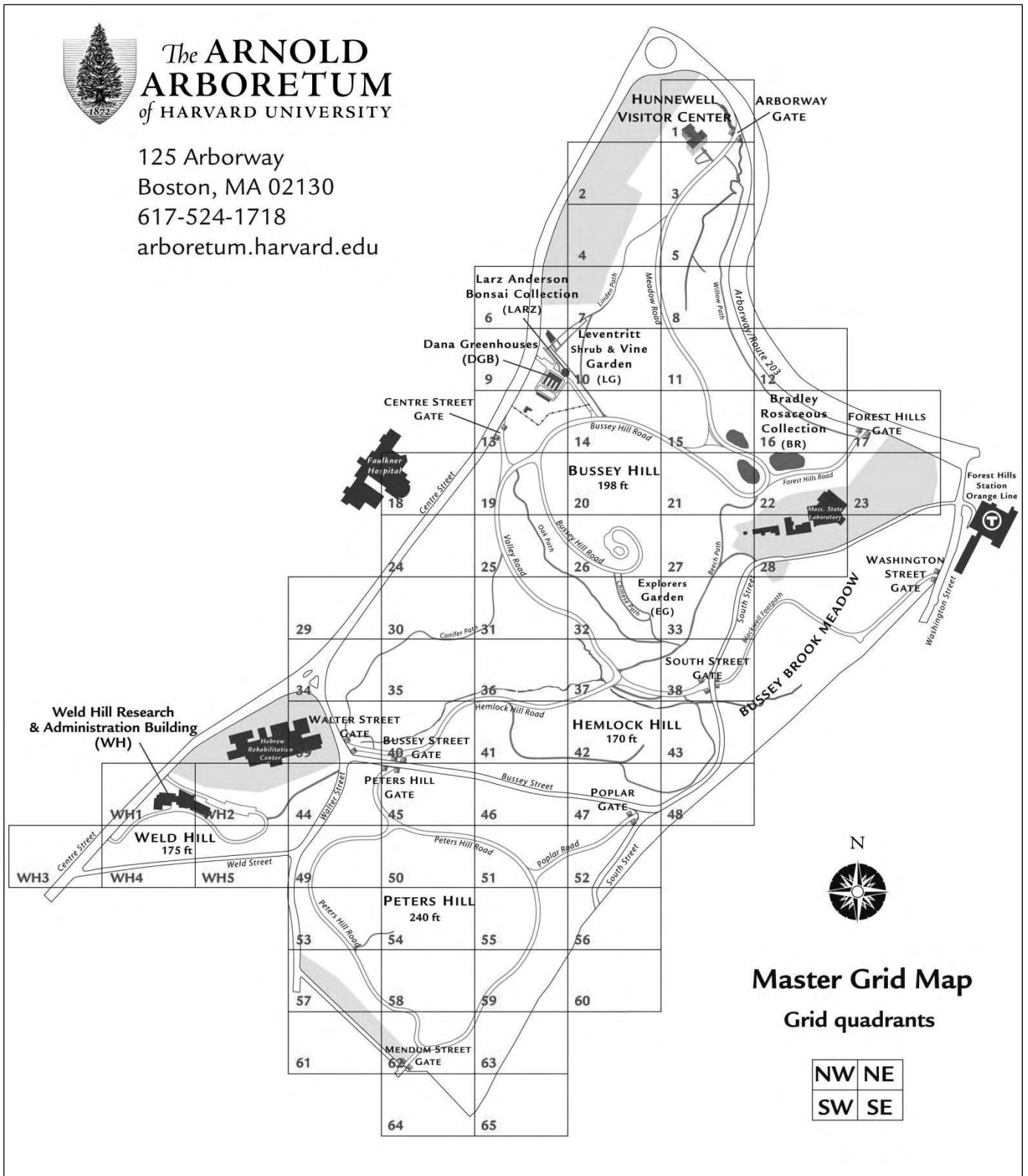
Zenobia pulverulenta
21087, G, 1930, 37-NW
114-2007, W, United States, 2007, 5-NW,
8-NW

APPENDIX I: MAPS



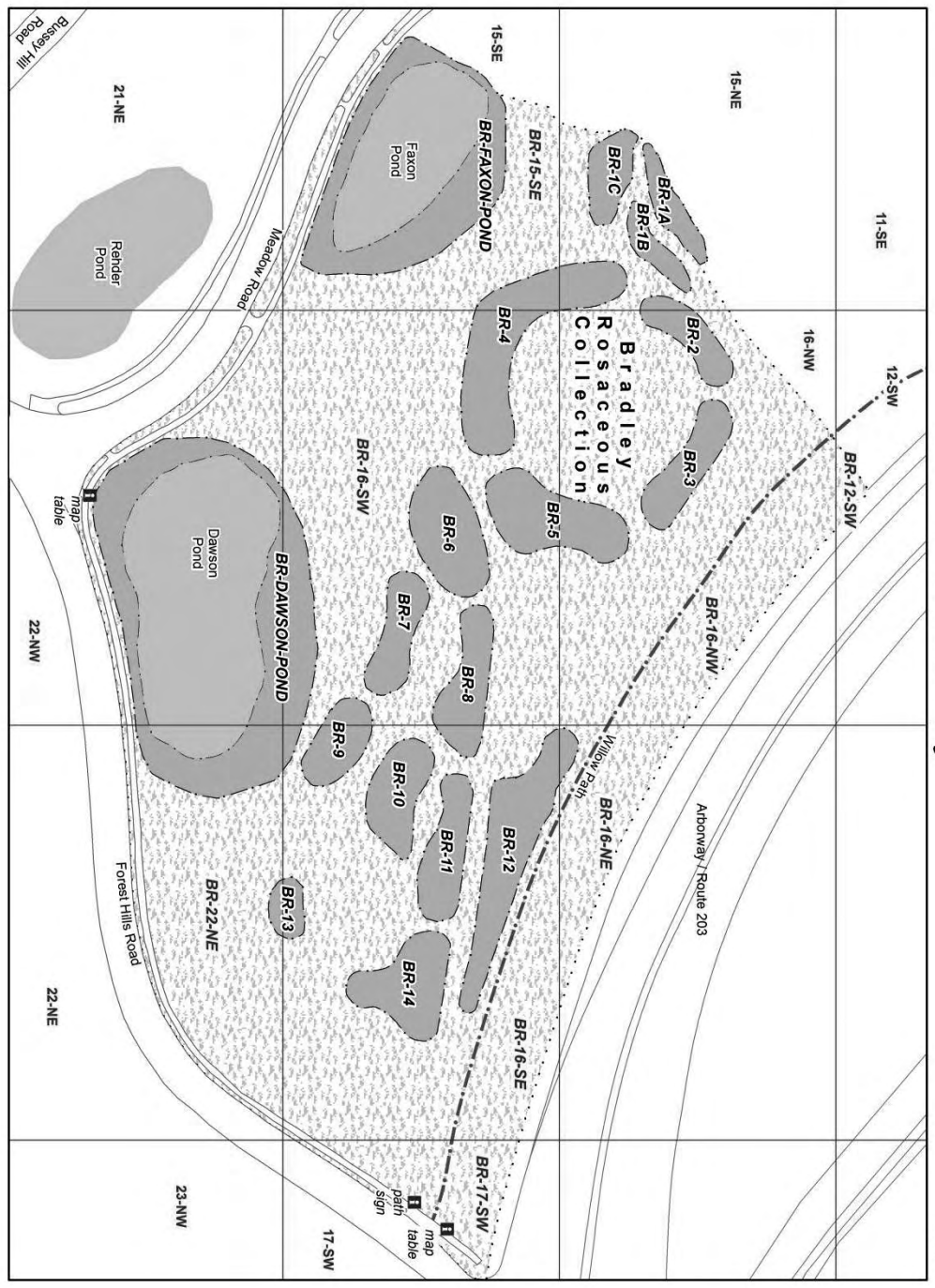
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Bradley Rosaceous Collection (BR) Location Key

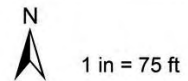
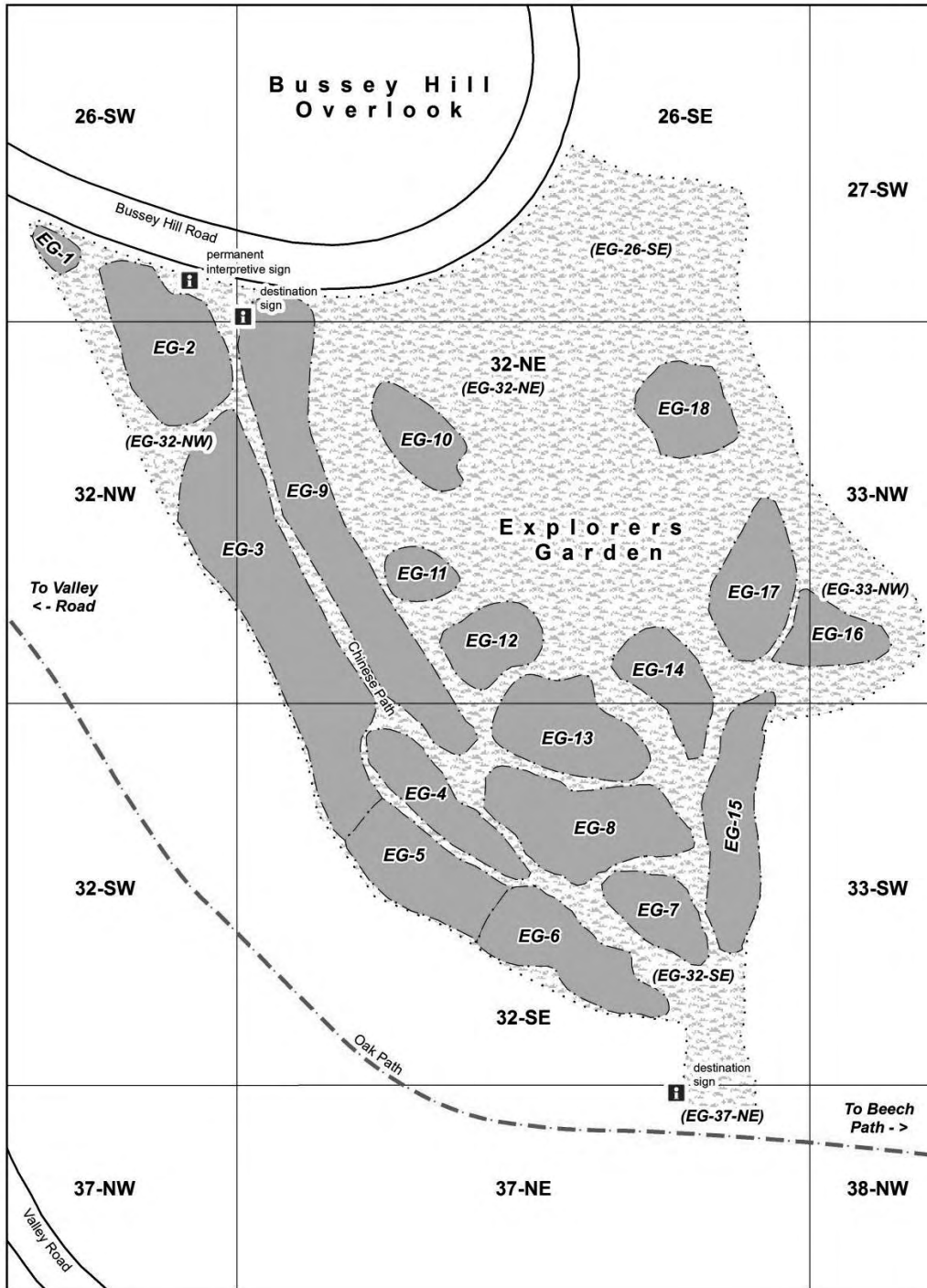
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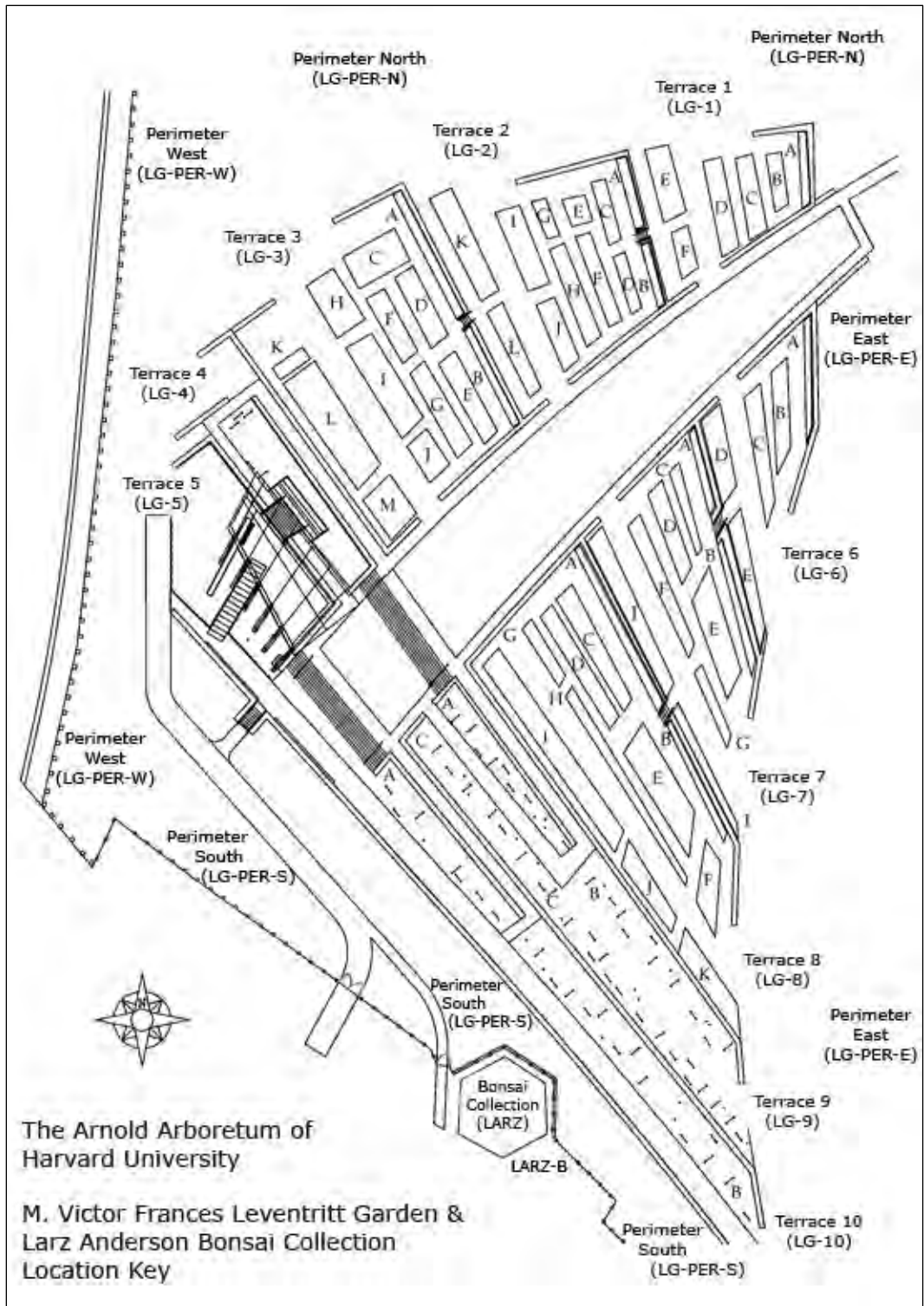


N
1 in = 102 ft

Explorers Garden (EG) Location Key

2/8/2012





**APPENDIX II: INDEX OF GENERA WITH THEIR
FAMILY AFFILIATION**

<i>Abelia</i>	Caprifoliaceae	<i>Camellia</i>	Theaceae
<i>Abeliophyllum</i>	Oleaceae	<i>Campsis</i>	Bignoniaceae
<i>Abies</i>	Pinaceae	<i>Caragana</i>	Fabaceae
<i>Acer</i>	Sapindaceae	<i>Carpinus</i>	Betulaceae
<i>Aconitum</i>	Ranunculaceae	<i>Carya</i>	Juglandaceae
<i>Actinidia</i>	Actinidiaceae	<i>Caryopteris</i>	Verbenaceae
<i>Aesculus</i>	Sapindaceae	<i>Castanea</i>	Fagaceae
<i>Ailanthus</i>	Simaroubaceae	<i>Catalpa</i>	Bignoniaceae
<i>Akebia</i>	Lardizabalaceae	<i>Cathaya</i>	Pinaceae
<i>Albizia</i>	Fabaceae	<i>Ceanothus</i>	Rhamnaceae
<i>Alnus</i>	Betulaceae	<i>Cedrela</i>	Meliaceae
<i>Amelanchier</i>	Rosaceae	<i>Cedrus</i>	Pinaceae
× <i>Amelasorbus</i>	Rosaceae	<i>Celastrus</i>	Celastraceae
<i>Amorpha</i>	Fabaceae	<i>Celtis</i>	Cannabaceae
<i>Ampelopsis</i>	Vitaceae	<i>Cephalanthus</i>	Rubiaceae
<i>Andrachne</i>	Euhorbiaceae	<i>Cephalotaxus</i>	Cephalotaxaceae
<i>Andromeda</i>	Ericaceae	<i>Cercidiphyllum</i>	Cercidiphyllaceae
<i>Angelica</i>	Apiaceae	<i>Cercis</i>	Fabaceae
<i>Aralia</i>	Araliaceae	<i>Chaenomeles</i>	Rosaceae
<i>Arctostaphylos</i>	Ericaceae	<i>Chamaecyparis</i>	Cupressaceae
<i>Arisaema</i>	Araceae	<i>Chamaedaphne</i>	Ericaceae
<i>Aristolochia</i>	Aristolochiaceae	<i>Chimonanthus</i>	Calycanthaceae
<i>Aronia</i>	Rosaceae	<i>Chionanthus</i>	Oleaceae
<i>Aruncus</i>	Rosaceae	<i>Chosenia</i>	Salicaceae
<i>Arundinaria</i>	Poaceae	<i>Chrysanthemum</i>	Asteraceae
<i>Asarum</i>	Aristolochiaceae	<i>Cimicifuga</i>	Ranunculaceae
<i>Asimina</i>	Annonaceae	<i>Cissus</i>	Vitaceae
<i>Astilbe</i>	Saxifragaceae	<i>Cladrastis</i>	Fabaceae
<i>Astilboides</i>	Saxifragaceae	<i>Clematis</i>	Ranunculaceae
<i>Aucuba</i>	Cornaceae	<i>Clerodendrum</i>	Verbenaceae
<i>Berberis</i>	Berberidaceae	<i>Clethra</i>	Clethraceae
<i>Berchemia</i>	Rhamnaceae	<i>Cocculus</i>	Menispermaceae
<i>Betula</i>	Betulaceae	<i>Colutea</i>	Fabaceae
<i>Bignonia</i>	Bignoniaceae	<i>Comptonia</i>	Myricaceae
<i>Boehmeria</i>	Urticaceae	<i>Corema</i>	Empetraceae
<i>Broussonetia</i>	Moraceae	<i>Coriaria</i>	Coriariaceae
<i>Buckleya</i>	Santalaceae	<i>Cornus</i>	Cornaceae
<i>Buddleia</i>	Loganiaceae	<i>Corylopsis</i>	Hamamelidaceae
<i>Bumelia</i>	Sapotaceae	<i>Corylus</i>	Betulaceae
<i>Buxus</i>	Buxaceae	<i>Cotinus</i>	Anacardiaceae
<i>Callicarpa</i>	Verbenaceae	<i>Cotoneaster</i>	Rosaceae
<i>Calluna</i>	Ericaceae	<i>Crataegus</i>	Rosaceae
<i>Calocedrus</i>	Cupressaceae	+ <i>Crataemespilus</i>	Rosaceae
<i>Calycanthus</i>	Calycanthaceae	<i>Cryptomeria</i>	Taxodiaceae

<i>Cudrania</i>	Moraceae	<i>Grewia</i>	Tiliaceae
× <i>Cupressocyparis</i>	Cupressaceae	<i>Gymnocladus</i>	Fabaceae
<i>Cupressus</i>	Cupressaceae	<i>Hakonechloa</i>	Poaceae
<i>Cycas</i>	Cycadaceae	<i>Halesia</i>	Styracaceae
<i>Cydonia</i>	Rosaceae	<i>Hamamelis</i>	Hamamelidaceae
<i>Cyrilla</i>	Cyrillaceae	<i>Hedera</i>	Araliaceae
<i>Cytisus</i>	Fabaceae	<i>Helwingia</i>	Cornaceae
<i>Daphne</i>	Thymelaeaceae	<i>Hemerocallis</i>	Liliaceae
<i>Davidia</i>	Nyssaceae	<i>Hemiptelea</i>	Ulmaceae
<i>Decodon</i>	Lythraceae	<i>Heptacodium</i>	Caprifoliaceae
<i>Decumaria</i>	Saxifragaceae	<i>Hibiscus</i>	Malvaceae
<i>Deutzia</i>	Saxifragaceae	<i>Hosta</i>	Liliaceae
<i>Diervilla</i>	Caprifoliaceae	<i>Hovenia</i>	Rhamnaceae
<i>Diospyros</i>	Ebenaceae	<i>Humulus</i>	Cannabaceae
<i>Dipelta</i>	Caprifoliaceae	<i>Hydrangea</i>	Saxifragaceae
<i>Dirca</i>	Thymelaeaceae	<i>Hypericum</i>	Clusiaceae
<i>Disporum</i>	Liliaceae	<i>Ilex</i>	Aquifoliaceae
<i>Dracunculus</i>	Araceae	<i>Indigofera</i>	Fabaceae
<i>Ehretia</i>	Boraginaceae	<i>Indocalamus</i>	Poaceae
<i>Elaeagnus</i>	Elaeagnaceae	<i>Itea</i>	Saxifragaceae
<i>Eleutherococcus</i>	Araliaceae	<i>Jasminum</i>	Oleaceae
<i>Elliottia</i>	Ericaceae	<i>Jeffersonia</i>	Berberidaceae
<i>Elsholtzia</i>	Lamiaceae	<i>Juglans</i>	Juglandaceae
<i>Empetrum</i>	Empetraceae	<i>Juniperus</i>	Cupressaceae
<i>Enkianthus</i>	Ericaceae	<i>Kalmia</i>	Ericaceae
<i>Ephedra</i>	Ephedraceae	<i>Kalopanax</i>	Araliaceae
<i>Epimedium</i>	Berberidaceae	<i>Kerria</i>	Rosaceae
<i>Erica</i>	Ericaceae	<i>Koelreuteria</i>	Sapindaceae
<i>Eucommia</i>	Eucommiaceae	<i>Kolkwitzia</i>	Caprifoliaceae
<i>Euonymus</i>	Celastraceae	+ <i>Laburnocytisus</i>	Fabaceae
<i>Euptelea</i>	Eupteleaceae	<i>Laburnum</i>	Fabaceae
<i>Exochorda</i>	Rosaceae	<i>Larix</i>	Pinaceae
<i>Fagus</i>	Fagaceae	<i>Lavandula</i>	Labiatae
<i>Fallopia</i>	Polygonaceae	<i>Ledum</i>	Ericaceae
<i>Fargesia</i>	Gramineae	<i>Leitneria</i>	Leitneriaceae
<i>Flueggea</i>	Euphorbiaceae	<i>Leptodermis</i>	Rubiaceae
<i>Fontanesia</i>	Oleaceae	<i>Lespedeza</i>	Fabaceae
<i>Forestiera</i>	Oleaceae	<i>Leucosceptrum</i>	Lamiaceae
<i>Forsythia</i>	Oleaceae	<i>Leucothoe</i>	Ericaceae
<i>Fortunearia</i>	Hamamelidaceae	<i>Ligustrum</i>	Oleaceae
<i>Fothergilla</i>	Hamamelidaceae	<i>Lindera</i>	Lauraceae
<i>Franklinia</i>	Theaceae	<i>Liquidambar</i>	Hamamelidaceae
<i>Fraxinus</i>	Oleaceae	<i>Liriodendron</i>	Magnoliaceae
<i>Gaylussacia</i>	Ericaceae	<i>Liriope</i>	Liliaceae
<i>Genista</i>	Fabaceae	<i>Lithocarpus</i>	Fagaceae
<i>Geranium</i>	Geraniaceae	<i>Lonicera</i>	Caprifoliaceae
<i>Ginkgo</i>	Ginkgoaceae	<i>Loropetalum</i>	Hamamelidaceae
<i>Gleditsia</i>	Fabaceae	<i>Lycium</i>	Solanaceae

<i>Lyonia</i>	Ericaceae	<i>Platanus</i>	Platanaceae
<i>Maackia</i>	Fabaceae	<i>Platycarya</i>	Juglandaceae
<i>Maclura</i>	Moraceae	<i>Platyclusus</i>	Cupressaceae
<i>Maddenia</i>	Rosaceae	<i>Pleioblastus</i>	Poaceae
<i>Magnolia</i>	Magnoliaceae	<i>Poliathyrsis</i>	Flacourtiaceae
× <i>Mahoberberis</i>	Berberidaceae	<i>Polygonatum</i>	Liliaceae
<i>Mahonia</i>	Berberidaceae	<i>Poncirus</i>	Rutaceae
<i>Malus</i>	Rosaceae	<i>Populus</i>	Salicaceae
<i>Meliosma</i>	Sabiaceae	<i>Potentilla</i>	Rosaceae
<i>Menispermum</i>	Menispermaceae	<i>Prinsepia</i>	Rosaceae
<i>Menziesia</i>	Ericaceae	<i>Prunus</i>	Rosaceae
<i>Mespilus</i>	Rosaceae	<i>Pseudolarix</i>	Pinaceae
<i>Metasequoia</i>	Taxodiaceae	<i>Pseudotsuga</i>	Pinaceae
<i>Microbiota</i>	Cupressaceae	<i>Ptelea</i>	Rutaceae
<i>Miscanthus</i>	Poaceae	<i>Pterocarya</i>	Juglandaceae
<i>Mitchella</i>	Rubiaceae	<i>Pterostyrax</i>	Styracaceae
<i>Morus</i>	Moraceae	<i>Pyracantha</i>	Rosaceae
<i>Mukdenia</i>	Saxifragaceae	<i>Pyrus</i>	Rosaceae
<i>Myrica</i>	Myricaceae	<i>Quercus</i>	Fagaceae
<i>Neillia</i>	Rosaceae	<i>Rhamnus</i>	Rhamnaceae
<i>Neviusia</i>	Rosaceae	<i>Rhododendron</i>	Ericaceae
<i>Nyssa</i>	Nyssaceae	<i>Rhodotypos</i>	Rosaceae
<i>Oemleria</i>	Rosaceae	<i>Rhus</i>	Anacardiaceae
<i>Ophiopogon</i>	Liliaceae	<i>Ribes</i>	Saxifragaceae
<i>Orixa</i>	Rutaceae	<i>Robinia</i>	Fabaceae
<i>Osmanthus</i>	Oleaceae	<i>Rodgersia</i>	Saxifragaceae
<i>Ostrya</i>	Betulaceae	<i>Rosa</i>	Rosaceae
<i>Oxydendrum</i>	Ericaceae	<i>Rubus</i>	Rosaceae
<i>Pachysandra</i>	Buxaceae	<i>Sageretia</i>	Rhamnaceae
<i>Paeonia</i>	Ranunculaceae	<i>Salix</i>	Salicaceae
<i>Parrotia</i>	Hamamelidaceae	<i>Sambucus</i>	Adoxaceae
<i>Parrotiopsis</i>	Hamamelidaceae	<i>Sanguinaria</i>	Papaveraceae
<i>Parthenocissus</i>	Vitaceae	<i>Sanguisorba</i>	Rosaceae
<i>Paulownia</i>	Scrophulariaceae	<i>Sapindus</i>	Sapindaceae
<i>Persea</i>	Lauraceae	<i>Sarcococca</i>	Buxaceae
<i>Petasites</i>	Asteraceae	<i>Sasa</i>	Poaceae
<i>Petteria</i>	Fabaceae	<i>Sassafras</i>	Lauraceae
<i>Phellodendron</i>	Rutaceae	<i>Schisandra</i>	Magnoliaceae
<i>Philadelphus</i>	Saxifragaceae	<i>Schizophragma</i>	Saxifragaceae
<i>Photinia</i>	Rosaceae	<i>Sciadopitys</i>	Taxodiaceae
× <i>Phylliopsis</i>	Ericaceae	<i>Sequoiadendron</i>	Taxodiaceae
<i>Phyllostachys</i>	Poaceae	<i>Shepherdia</i>	Elaeagnaceae
<i>Physocarpus</i>	Rosaceae	<i>Shibataea</i>	Poaceae
<i>Picea</i>	Pinaceae	<i>Sinojackia</i>	Styracaceae
<i>Picrasma</i>	Simaroubaceae	<i>Sinowilsonia</i>	Hamamelidaceae
<i>Pieris</i>	Ericaceae	<i>Smilax</i>	Smilacaceae
<i>Pinus</i>	Pinaceae	<i>Sophora</i>	Fabaceae
<i>Pistacia</i>	Anacardiaceae	<i>Sorbaria</i>	Rosaceae

<i>Sorbaronia</i>	Rosaceae	<i>Trachelospermum</i>	Apocynaceae
<i>Sorbocotoneaster</i>	Rosaceae	<i>Tricyrtis</i>	Liliaceae
<i>Sorbopyrus</i>	Rosaceae	<i>Tripterygium</i>	Celastraceae
<i>Sorbus</i>	Rosaceae	<i>Trochodendron</i>	Trochodendraceae
<i>Spiraea</i>	Rosaceae	<i>Tsuga</i>	Pinaceae
<i>Stachyurus</i>	Stachyuraceae	<i>Ulex</i>	Fabaceae
<i>Staphylea</i>	Staphyleaceae	<i>Ulmus</i>	Ulmaceae
<i>Stephanandra</i>	Rosaceae	<i>Uvularia</i>	Liliaceae
<i>Stewartia</i>	Theaceae	<i>Vaccinium</i>	Ericaceae
<i>Stranvaesia</i>	Rosaceae	<i>Viburnum</i>	Adoxaceae
<i>Styphnolobium</i>	Fabaceae	<i>Vinca</i>	Apocynaceae
<i>Styrax</i>	Styracaceae	<i>Vitex</i>	Verbenaceae
<i>Sycoparrotia</i>	Hamamelidaceae	<i>Vitis</i>	Vitaceae
<i>Symphoricarpos</i>	Caprifoliaceae	<i>Weigela</i>	Caprifoliaceae
<i>Symplocos</i>	Symplocaceae	<i>Wikstroemia</i>	Thymelaeaceae
<i>Syneilesis</i>	Asteraceae	<i>Wisteria</i>	Fabaceae
<i>Syringa</i>	Oleaceae	<i>Xanthoceras</i>	Sapindaceae
<i>Taxodium</i>	Taxodiaceae	<i>Xanthorrhiza</i>	Ranunculaceae
<i>Taxus</i>	Taxaceae	<i>Yucca</i>	Liliaceae
<i>Ternstroemia</i>	Theaceae	<i>Zabelia</i>	Caprifoliaceae
<i>Tetradium</i>	Rutaceae	<i>Zamia</i>	Zamiaceae
<i>Thuja</i>	Cupressaceae	<i>Zanthoxylum</i>	Rutaceae
<i>Thujopsis</i>	Cupressaceae	<i>Zelkova</i>	Ulmaceae
<i>Tilia</i>	Tiliaceae	<i>Zenobia</i>	Ericaceae
<i>Torreya</i>	Taxaceae		