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Checklist of Cultivars of North American Ash (Fraxinus) Species

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Abstract. Cultivars of 7 species of Fraxinus native to North America are described and discussed: F. americana, F. latifolia, F. nigra, F. pennsylvanica, F. quadrangulata, F. uhdei, and F. velutina.

The ashes (Fraxinus spp.) are native only to North America, Europe, and Asia. Of the 65 species (3), relatively few are important landscape trees. Six species native to North America are currently common in the United States nursery trade, and a cultivar of one other American species has recently been grown in The Netherlands.

F. pennsylvanica Marshall (green ash) has the widest natural distribution of any North American ash species, ranging from the East Coast west to Texas and Montana and from near 55° N. Lat. in Canada to about 30° N. Lat. in Florida and Texas. The leaves of F. americana L. (white ash) is only slightly less extensive, especially in its more restricted western U.S. distribution and lack of extension into the prairie provinces of Canada. Black ash (F. nigra Marshall) is another eastern species, ranging from Maine to Minnesota and south to West Virginia and Indiana, with a broad range between 45° and 50° N. Lat. in eastern Canada. The range of blue ash (F. quadrangulata Michaux) is restricted to a few states, notably Ohio, Kentucky, Indiana, Illinois, and Missouri, between about 35° and 43° N. Lat. The other 2 cultivated species are of western origin. The Arizona or velvet ash (F. velutina Torrey) ranges from Texas through Arizona and New Mexico to southern California, and also occurs in Mexico. The Oregon ash (F. latifolia Bentham) ranges from Washington to northern California. The Shamel ash (F. uhdei (Wenzig) Lingelshime) is being grown in California. It is native to Mexico from Sinoloa Province on the west central coast of San Luis Potosi and Oaxaca. Standley (8) noted that it was frequently planted as an evergreen shade tree in the Valley of Mexico, especially around Guadalajara. It is also cultivated in Hawaii and known as the “Hawaiian” ash.

Most of these species have had other botanical epithets in the past, but the names given above are currently the accepted standards. A major problem is the use of varietal names in F. pennsylvanica. The leaves of F. pennsylvanica are supposed to be pubescent beneath, while those of var. lanceolata (Borkhausen) Sargent are glabrous. The common name of the species was “red” ash and that of the variety was “green” ash. Fernald (Rhodora 49: 145-159, 1947) proposed F. pennsylvanica var. subintegerrima (Vahl) Fernald as a replacement, based on priority, for the glabrous type. Since both glabrous- and pubescent-leaved plants can occur in the progeny from an individual female tree, we have followed Little (2) in not recognizing the varieties and using “green” ash as the common name for all trees of the species. Likewise, we followed Little (2) in disregarding F. velutina var. glabra Rehder and other varieties of that species.

Actually, the greatest confusion in nomenclature of ash cultivars in the United States was caused by the mis-applied common name, “blue” ash. Kimberly Nurs., Kimberly, Idaho, sold “blue” ash and “green” ash, presumably seedling stock, beginning about 1936. In their 1944 catalog (p. 4), they singled out the “blue” ash as a new type of their “own propagating.” Their 1945 catalog (p. 4) listed “our new blue ash” which was “budded from selected male trees only.” The tree was illustrated and it was stated that it had been developed over a period of ten years. The name ‘Kimberly Blue’ first appeared in their unpagued 1954 price list, which also included an illustration of the tree. At no time did any of the Kimberly catalogs give the scientific name of their “blue”
ash, but they seldom used the botanical name of any tree species.

Thus, it was left to other nurserymen to assign the proper botanical epithet, and although J.C. McDaniels (Amer. Nurseryman 115(1): 97, 99, 1962) pointed out that 'Kimberly Blue' was actually a form of *F. excelsior* L. (European ash), many nurserymen continued to list it without a botanical name, or assign it to another species. In the listings that follow, we have found references to 'Kimberly Blue' as a cultivar of both *F. pennsylvanica* and *F. quadrangulata*. In our telephone and mail inquiries regarding this cultivar, we have even received opinions that the plant belongs to *F. holotricha* Koehne or *F. nigra*. The most appropriate and proper listing for the cultivar is *F. excelsior* 'Kimberly,' eliminating the confusing "Blue" from the name. Our inquiries also disclosed that this cultivar has not been popular lately, because of a "virus" or "decline." We wonder if this is not simply a case of latent graft incompatibility caused by budding *F. excelsior* on *F. pennsylvanica*.

It is also interesting that 'Kimberly' was propagated from "male trees only," since the flowers of *F. excelsior* are polygamous, with male, female, and perfect flowers on the same tree. We have noted a general lack of fruit production on several European ash cultivars growing in the National Arboretum, usually because most of the flowers are killed by late frost. Of the North American species discussed here, all are dioecious except *F. quadrangulata*, which normally has perfect flowers.

In the checklist that follows, the cultivars are discussed under the respective species which are listed in alphabetical order. It will be noted that the cultivar names 'Alba Marginata' and 'Argentea Marginata' are found under both *F. americana* and *F. pennsylvanica*. In previous checklists (4, 5, 6, 7), names such as 'Columnare,' and 'Globosum' and 'Variegatum' were each used for more than one maple species. The International Code of Nomenclature for Cultivated Plants — 1980 (1) states in Article 50 that "No more than one cultivar may have the same name with the same cultivar class." Cultivar classes may be genera, species, or other groups. We have regarded the species as the cultivar class in all the landscape trees we have dealt with, and do not believe this has caused any confusion, since most of the species are easily identified and do not freely hyridize. Furthermore, it is unlikely that the use of the same cultivar name for different species in the same genus will be a problem in the future, or even since 1958, since the use of "descriptive" Latin terms is now invalid.

The principal value of cultivar checklists is the establishment and maintenance of nomenclatural stability in cultivated plants, according to the Code (1). The U.S. National Arboretum became the International Registration Authority for unassigned genera of woody plants on January 1, 1981. Since that time we have undertaken the compilation of authoritative checklists of the major landscape tree species in the United States.

As in previous lists, VALID CULTIVAR names are given in boldface capitals and INVALID CULIVAR names in lightface capitals.

### Fraxinus americana

**ACUMINATA** - Listed by G. Krussmann, Handbuch der Laubgeholze, Berlin, 1960, p. 451, as a cultivar. J.C. Loudon, Arb. et Frut. Brit. II, 1844, p. 1232, 1246, 1247, considered acuminata as a botanical variety or synonymous with the species (= *F. acuminata* Lamarck). However, *acuminata* has been sold by commercial nurseries (H.A. Hesse, Germany, 1932-1933 and other years). Leaves with entire margins, tip long-acuminate.


**ASCIDIATA** (A.M. (eunissier), Gard. Chron. 76: 335, illus., 1924) - with terminal leaflet bases, and sometimes those of other leaflets, modified into "pitchers." Described from tree sent to France by George H. Shull (U.S.A), who first reported these leaf abnormalities in Science 23: 201-202, 1906.


ELLiptica (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 408) - without description.

HILLCrest (The Siebenthaler Co., Dayton, Ohio, Trade List Fall 1977, p. 17) - without description.

JUGLANDIFOLIA (Pierre Lombarts Nurs., Zundert, The Netherlands, Cat. 1957-58, p. 76) - with small, shiny leaves, pilose underneath, toothed near the apex. Name also used as species epithet synonymous with F. americana.


LONGIFOLIA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 408) - without description.

MACROphylla (L. Dippel, Handbuch der Laubholzkunde, Berlin, 1889, p. 76) - with larger, roundish or wide-oval leaflets.

MANITou (Sheridan Nurs. Ltd., Oakville, Ontario, Canada, Cat. 1976, p. 50) - decidedly columnar, with a well-branched head; grows well in heavy clays.

MICROCARPa (A. Gray, Syn. Fl. North Amer. Il, 1, p. 75, 1878) - as a botanical variety of F. americana, with small samaras. Sold as a cultivar by Boomkwekerij Udenhout, The Netherlands, Cat. 1977, p. 34 as a tree more columnar than normal.


SALIFICOLIA (L. Dippel, Handbuch der Laubholzkunde, Berlin, 1889, p. 76) - described in same terms as MACROphylla, but considered distinct.

SERRATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 408) - as a horticultural variety of F. juglandifolia Lamarck, without description.


SUBSERRATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 408) - as a horticultural variety of F. juglandifolia Lamarck, without description.

TOMENTOSA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 408) - without description.


Fraxinus latifolia


PULVERULENTA (H. Jager and L. Beissner, Die Ziergeholze, Ed. 3, Weimar, 1889, p. 164) - as F. oregona var. pulverulenta, leaves pulverulent (appearing as covered with minute grains of dust.)

Fraxinus nigra

CRISPA (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 511) - as F. sambucifolia crispa, of more shrub-like growth with weak twigs and curled, crowded leaves.

CUCULLATA (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 512) - as Fraxinus sambucifolia cucullata, with puffed-up leaves, which give the tree a somewhat abnormal appearance.


There is also a narrow-crowned selection of F. nigra that has been patented by Ashur L. Cordes of Henning, Minnesota (Plant Patent No. 3754, July 29, 1975). This selection has not been named or distributed.
Fraxinus pennsylvanica

ALBA MARGINATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, 1903, p. 407) - without description. = ALBO-MARGINATA.

ALBO-MARGINATA (K. Koch, Dendrologie, 1872, p. 255) - as F. pubescens albo-marginata, without description.


AUCUBAEFOLIA (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 507) - as F. aucubaefolia Hort., leaves gold-flecked like those of Aucuba japonica.

AUCUBAEFOLIA NOVA (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 508) - as Fraxinus aucubaefolia nova, with larger and more irregular gold flecks on leaves. K. Koch, Dendrologie, 1872, p. 255, stated that this form was grown in the nursery of James Booth and Sons in Flottbeck near Altona, Germany.


CARDAN (Anon., North Dakota Outdoors, May, 1979), p. 15) - released jointly by USDA Soil Conservation Service and Science and Education Administration for farmstead and field windbreak planting in the northern Great Plains; resistance to ash borer has not been adequately proven, but it appears that it is equal to or greater than common green ash. This is a seed propagated cultivar, which is allowable under the Code (1), and 'Cardan' pertains to the third open pollinated generation that originated from a single-tree seed collection made by Ernest George in 1954 in Montana.

CENTER POINT — Name found in the records of the Plant Sciences Data Center of the American Horticultural Society. Tree at the Univ. Minn. Landscape Arboretum, Chaska, Minnesota. Seedling selection made and propagated by Albert Ferguson at Linn County Nurs. Center Point, Iowa. Tree never described or commercially available.


FAN-WEST (L.E. Cooke Co., Visalia, California, Cat. Fall 1976 - Spring 1977, p. 8, Trade-marked) - as Fraxinus lanceolata Fan-West, a seedless cross of Texas green ash and Arizona Ash, light olive green leaves on a good limb-head structure. Found by Eddie Fanick of San Antonio, Texas as a natural seedling on the banks of the Guadalupe River. The tree resembled F. pennsylvanica (Lanceolata) more than F. velutina and thus is included under the former.

FASTIGIATA - Name found in records of the Plant Sciences Data Center of the American Horticultural Society. Plants originally propagated under this name by the Morton Arboretum, Lisle, Illinois, from a tree in Owen Sound, Ontario, Canada. Tree never described or introduced.

HOLLYWOOD - Name found in records of the Plant Sciences Data Center of the American Horticultural Society. Tree at the Univ. Minn. Landscape Arboretum, Chaska, Minnesota. Mal tree growing on Hollywood Ave., Cedar Rapids, Iowa, selected and propagated by Albert Ferguson of Linn County Nurs. Center Point, Iowa. Never described or commercially available.


JEWELL (Jewell Nurs., Inc., Lake City, Minnesota, Wholesale Price List, Fall 1975 - Spring 1976, p. 3) - well branched head, leaves dark green and shiny, few seeds.

KIMBERLY (J. Frank Schmidt & Son Co., Boring, Oregon, Wholesale Price List, Fall 1978 - Spring 1979, p. 8) - as Fraxinus pennsylvanica lanceolata. This cultivar is really Fraxinus excelsior 'Kimberly.'

KIMBERLY BLUE (J. Frank Schmidt & Son Co., Troutdale, Oregon, Wholesale Price List, Fall 1972 - Spring 1973, p. 1) - as Fraxinus penn. lanc. quadrangulata; in Wholesale Price List, Fall 1973 - Spring 1974, p. 1, as Fraxinus penn. lanc. This cultivar is really Fraxinus excelsior 'Kimberly.'

KINDRED (Cross Nurs., Inc., Lakeview, Minnesota, Wholesale Price List, Fall 1979 - Spring 1980, p. 5) - straight, fast growing, good foliage, and seedless. Selected by Ben Gilbertson, Kindred, North Dakota.

MARSHALL SEEDLESS (Cole Nurs. Co., Painesville, Ohio, Fall 1955 Trade List, p. 7) - handsome, shapely tree with extremely dark green glossy foliage, entirely free of seed. Porter-Walton Co., Salt Lake City, Utah, Garden Book No. 46 (1946), p. 56, offered male green ash propagated from “non-seed-bearing trees.” Some of this material was purchased by Marshall Nurs., Arlington, Nebraska, who, in several undated listings offered “Seedless Ash.” Cole Nurs. Co. purchased plants from Marshall and were the first to use the cultivar name. Because of its origin as “trees” in Utah, this cultivar name may actually apply to several genotypes.

MORAIME (Amfac Nurs. Ref. Cat., undated, but pub. in 1981, p. 48) — as Fraxinus pennsylvanica lanceolata 'Moraine.' Actually is F. holotricha 'Moraine.'

NIOBRA (Col Nurs. Co., Painesville, Ohio, Fall 1957 Trade List, p. 6) — pyramidal type with much the same form as pin oak. Female.


SOUTH DAKOTA — Name found in records of the Plant Sciences Data Center of the American Horticultural Society. Tree at Univ. Minn. Landscape Arboretum, Chaska, Minnesota. Cultivar tested under this name by Bergeson Nurs., Fertile, Minnesota, but never commercially available.


STERILE — name used in catalogs of The Siebenthaler Co. (Nurs.) Dayton, Ohio as synonymous with MARSHALL SEEDLESS.

TORNADO (Smith Nursery Co., Charles City, Iowa, Retail Price List, 1974, p. 1) — strong, straight, hardy. Does produce seeds.


VELUTINA — First propagated by the Dutch nurseryman L.Y. Brouwers from a tree in the Belmont Arboretum, Wageningen, The Netherlands, between 1960 and 1965. Listed in Brouwers Boomkwekerijen B.V., Groeneken, as if it were a variety. Propagated by the N.A.K.B. (Nederlandse Algemene Keuringsdienst voor Boomkwekerij), the General Netherlands Service for the Inspection of Trees, as a cultivar. "Velutina" cannot be a valid cultivar name because it was used in the Latin form after 1959.

VINTON (Linn County Nurs., Center Point, Iowa, Cat. Spring 1960, p. 5) — seedless.

ZUNDELT (Pierre Lombarts Nurs., Zundert, The Netherlands, Cat. 1967-58, p. 77) — selected by W.J. Hendriks, Amsterdam, for upright growth habit and columnar form.

**Fraxinus quadrangulata**

GLOBOSA (E.H. Scanlon & Assoc., Olmsted Falls, Ohio, Cat. No. 11, Fall 1959-Spring 1960, p. 26) — as globepheaded blue ash, to 25 feet. Later, E.H. Scanlon & Assoc., Wholesale List No. 14, Fall 1962-Spring 1963, p. 35, it was reported that this cultivar was really a European ash, and it was renamed *F. excelsior* 'Rancho.'

KIMBERLY BLUE (J. Frank Schmidt & Son Co., Troutdale, Oregon, Wholesale Price, Fall 1972-Spring 1973, p. 1) — as *Fraxinus penn. lanc. quadrangulata*. This is really *F. excelsior* 'Kimberly.'

URBANA BLUE — Name found in records of Plant Sciences Data Center of the American Horticultural Society. Plant received at Morris Arboretum, Philadelphia, Pennsylvania from J.C. McDaniel, Urbana, Illinois in 1965, grafted on *F. excelsior*. Plant now dead.


**Fraxinus uhdei**

HAGEN — Name found in records of Plant Sciences Data Center of the American Horticultural Society. Plants at Saratoga Horticultural Foundation, Saratoga, California, obtained in 1951 from Hagen Nursery, San Marino, California. Cultivar never widely distributed or offered for sale.


SEXTON — Plants growing in the collections of the Saratoga Horticultural Foundation, Saratoga, California under this name; obtained in 1970 from Paul Gaines Nurs., San Dimas, California. Cultivar may never have been properly described or widely distributed.

TECATE — Registered as AAN Register 363 (without description) as *Fraxinus* Tecate in Proc. Amer. Assoc. Nurserymen 79th Ann. Conv., 1952, p. 9, by John D. Shamel, Costa Mesa, California. Although the species was not indicated, we believe it was *F. uhdei*, because of the use of "Shamel" as a common name for this species in California. Name invalid because of lack of published description.

Fraxinus velutina


MODESTO (Stribling’s Nurs., Merced, California, Cat. Fall 1948-Spring 1949, and perhaps earlier) — as a budded cultivar of F. velutina var. glabra with rapid growth rate and glossy foliage; had been tested for 19 years in 1949. The name ‘Modesto’ has come to be used mistakenly by some authors as a synonym for the variety.

RIO GRANDE (L.E. Cooke Co., Visalia, California, Cat. Fall 1965-Spring 1966, p. 5) — glossy leaves, near white bark, = FAN-TEX.

Literature Cited


Research Geneticist and Biological Technician, respectively
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ABSTRACT


Insect damage to woody ornamentals can vary from the subtle insignificant to widespread destruction that eventually results in death of plants. There are many plants included in the ornamental area with a varied assortment of insects on each species. This results in a relatively large number of insect pests that can be destructive to ornamentals. Fortunately, all of these insect pests do not appear at one time or in one year, as many of them are cyclic. Life cycles and general biology of the insects are important in determining sensible control strategies. Often times, early control materials can be used in reducing the pest and are safer to the applicator and environment. Treatment at the appropriate stage of development can result in good suppression with a safer material of relatively low toxicity. In some cases, reasonable control can only be obtained at a certain stage in the life cycle of the insect and this becomes critical if one is to obtain satisfactory results. Materials to use on a specific pest need to be determined based on research results, climatic conditions, size and age of the pest, plant reactions, equipment capabilities, area where the material is to be used, and effects on other forms of life. It should be understood that 100 percent control of a pest is not practical or possible. Shifting a delicate balance where and when it is needed is the prime aim of pest control. Therefore, many other factors need to be considered in maintaining strong healthy plants that are capable of withstanding a degree of insect injury but can recover in a short period of time with minimum visual symptoms and little impact on total plant vigor.