

ARNOLDIA



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CRAB APPLES OF MERIT

THE oriental crab apples are the best of the small ornamental flowering trees for landscape use, because they are outstanding in the spring when they are in bloom and again in the fall when they are in fruit. American nurserymen are growing 140 species and varieties to sell, and 250 different kinds are growing in the collections of the Arnold Arboretum. Each year we make specific notes about these trees, recording those that apparently bloom and fruit well every year, those that are definitely alternate in bearing, and those that are outstanding ornamentally for several specific reasons. The accompanying lists of some 60 species and varieties are those which can be considered among the best, if not the best, for ornamental purposes.

It is impossible to report all the good and bad points about these trees in a few pages. Suffice it to say here, since more detailed information concerning them is available in other publications, that these lists might be scanned carefully for specific purposes. Not everyone wants a pink flowering crab apple, and there are some who want any kind as long as the fruits remain on the trees well into the winter and are suitable for bird food.

Most of the crab apples native to the United States have green fruits, and although they may be beautiful for the few days they are in flower, they have little ornamental value in the fall. Also, the majority of these are susceptible to the disfiguring disease known as cedar apple rust, especially prevalent in areas where junipers and crab apples grow in the near vicinity. Because of this, only one or two of the native crab apples have been recommended.

Then there are those which may be beautiful in both flower and fruit, but which are notoriously alternate bearing. Only a few of these have been recommended, and these merely because their ornamental characteristics have been so outstanding that many want to grow them anyway.

Very few of the varieties with large fruits have been recommended. It has

been suggested that a crab apple has fruits up to two inches in diameter; those producing fruits larger than this are considered apples. However, even fruits one and one-half inches in diameter are almost too large, because these are susceptible to insect injury which mars and distorts the fruit, making it most unsightly. In order to prevent this, the trees must be sprayed, sometimes several times, in order to control the insects. It would seem advisable, then, to plant crab apples with much smaller fruits; those that will not have to be sprayed so often for this purpose, and which have fruits small enough so that they will either be eaten by the birds or will not clutter the ground when they fall. Because of this, very few of the larger-fruited crab apples are recommended here. There are always those plantsmen who wish a beautiful flowering tree and who also wish to make jellies from the large fruits. There are many good varieties for this purpose, and they are available from nurseries. The point to remember, however, is that in order to produce satisfactory and usable fruit, they must be sprayed properly.

The old-fashioned purple crab apple (*Malus purpurea*) has been planted widely in the past, but its flowers fade to a very poor washed-out purple color after being open only a few days. Many new varieties are now available which are much better than this species, having darker flowers and some of them do not fade too much. However, when grown in different locations or on different soils, or under different climatic conditions, the flower colors of some of these newer varieties do change. A conscious effort was made here to segregate those with red to reddish flowers, from the group with reddish-purple flowers, but this is not a hard and fast line of demarcation by any manner of means. There will be considerable purple in the flowers of the latter group and some in the other group as well, the amount more or less depending on growing conditions and weather.

Of those listed with double or semi-double flowers, the only one with outstanding fruit is 'Dorothea.' 'Henry F. du Pont,' and the *M. purpurea* varieties have purplish-red fruits, and the fruits of others are not very ornamental.

Many of the hybrids derived from *M. purpurea* have foliage that is markedly reddish green throughout the growing season. One of the best of these is 'Red Silver,' the under surface of its leaves being slightly grayish and the upper surface reddish. A few species and varieties will sometimes have a marked autumn color to their foliage, although this is not always true every year, in every situation.

The last grouping covers those with different forms or habits. Mostly, the oriental crab apples are small, rounded trees, but a few like *M. baccata*, are standard trees up to fifty feet or more in height. There are some that are definitely upright and even columnar in habit, although the columnar types will not retain this habit at maturity. As these trees grow older, heavier and heavier crops of fruits are borne on the branches so that they are bent downwards, eventually so far that they do not recover completely. Pendulous types, too, are listed; and low forms, of which *M. sargentii* is the lowest.

Among the following varieties will be found some excellent ornamental specimens. Of course, these are not the only ones available from commercial sources, but for those contemplating only a few trees, selections might well be confined to the following:

THE BEST OF THE CRAB APPLES

White Flowers

baccata and vars.	sargentii
'Beauty'	spectabilis albi-plena
robusta	'Tanner'
robusta percisifolia	

Pink Flowers

'Dorothea'	'Prince Georges'
coronaria nieuwlandiana	scheideckeri
'Evelyn'	spectabilis riversii
halliana parkmanii	'Van Eseltine'
ioensis plena	'William Sim'
ioensis 'Nova'	

Pink and White Flowers

arnoldiana	'Katherine'
baccata gracilis	robusta erecta
'Flame'	sargentii rosea
floribunda	

Red to Reddish Flowers

'Adams'	'Oekonomierat Echtermeyer'
'Almey'	purpurea aldenhamensis
atrosanguinea	purpurea lemoinei
'Baskatong'	'Radiant'
'Crimson Brilliant'	'Red Splendor'
'Henrietta Crosby'	'Sissipuk'
'Hopa'	'Strathmore'

Reddish-Purple Flowers

'Henry F. du Pont'	'Makamik'
'Jay Darling'	'Patricia'
'Liset'	purpurea eleyi

Double or Semi-Double Flowers

Number in parenthesis is the approximate number of petals.

coronaria nieuwlandiana (13-27)	'Katherine' (20)
'Crimson Brilliant' SD	'Prince Georges' (53-61)
'Dorothea' (16)	purpurea aldenhamensis SD
halliana parkmanii (15)	purpurea lemoinei SD
hartwigii SD	scheideckeri (10)
'Henry F. du Pont' SD	spectabilis albi-plena (15)
ioensis plena (about 33)	spectabilis riversii (9-20)
ioensis 'Nova' (18-35)	'Van Eseltine' (15)

Ornamental Fruits

R = red

Y = yellow

O = orange

'Almey'	R	robusta	R & Y
baccata and vars.	R & Y	robusta percisifolia	R
'Beauty'	R & Y	'Rosseau'	R
'Dolgo'	R	sieboldii arborescens	Y-R
'Dorothea'	Y	toringoides	R & Y
'Flame'	R	toringoides macrocarpa	R & Y
'Marshall Oyama'	Y & R	'William Sim'	R
'Radiant'	R	'Winter Gold'	Y
'Red Jade'	R	zumi calocarpa	R-O

Lasting Fruit

baccata jackii	robusta percisifolia
'Bob White'	sargentii
'Makamik'	'Tanner'
'Ormiston Roy'	'Winter Gold'
'Red Jade'	zumi calocarpa

Foliage Color

These crab apples usually have a marked reddish-green foliage color through much of the spring and summer.

'Baskatong'	'Patricia'
'Crimson Brilliant'	purpurea and vars.
'Evelyn'	'Red Silver'
'Hopa'	'Red Splendor'
'Liset'	'Rosseau'
'Makamik'	'Sissipuk'
'Oekonomierat Echtermeyer'	'Strathmore'



PLATE II

Malus 'Katherine' has pink-and-white double flowers.

Foliage of these crab apples may turn red to orange in the autumn.

baccata
dawsoniana
'Evelyn'
ioensis plena

'Prince Georges'
'Rosseau'
'Strathmore'
zumi calocarpa

Unique Forms

'Adams' - upright
baccata columnaris - columnar
baccata gracilis - graceful foliage
'Beauty' - upright
brevipes - low
hartwigii - upright, globe-shaped
hupehensis - fan-shaped
'Marshall Oyama' - upright

'Oekonomierat Echtermeyer' - pendulous
'Red Jade' - pendulous
robusta erecta - columnar
sargentii - low
sargentii rosea - low
'Strathmore' - upright
'Van Eseltine' - upright

Further trials are needed for the following varieties:

- 'Blanche Ames'—An Arnold Arboretum seedling of *M. spectabilis riversii* with semi-double pink and white flowers, $1\frac{3}{8}$ inches diameter; yellow fruits $\frac{1}{4}$ inch diameter, but they fall very soon. Graceful growth habit. Originated in 1939, introduced in 1947.
- 'Burton's Yellow Fruited'—Apparently only offered by one nursery in 1957, we have no information concerning this variety.
- 'Butterball'—Plant received from the University of Washington Arboretum in 1957, and has not yet bloomed.
- 'Chestnut'—Introduced by the Fruit Breeding Farm of the University of Minnesota about 1949. The fruits are about 2 inches in diameter—too large for use as an ornamental.
- 'Ferrill's Crimson'—Offered by Ferrill's Nursery, Salem, Oregon; originated before 1953; somewhat similar to 'Red Silver.'
- 'Gladwyne'—A seedling recently selected by Mrs. Norman J. Henry of Gladwyne, Pa. Our small trees have not yet flowered.
- 'Gwendolyn'—Originated by A. F. den Boer, Des Moines, Iowa, 1936, introduced in 1944; a seedling of *Malus floribunda*; flowers single and pink, bright red fruits nearly one inch in diameter. Our small trees have not yet flowered.
- 'Golden Hornet'—First distributed by John Waterer & Sons, Bagshot, Surrey, England. It is said to be a natural cross between *M. sieboldii calocarpa* and *M. prunifolia coccinea*, originated prior to 1949.

'Goldfinch'—Probably an *M. baccata* seedling originated in Philadelphia about 1920, but not introduced until about 1953. We have no records of this except that the flowers are single and white, fruits small and yellow.

ioensis 'Plena Nana'—Discovered, probably as a sport, in nurseries of A. McGill & Son, Fairview, Oregon, prior to 1955. Leaves and flowers are identical with those of *M. ioensis plena*, but habit is more of a bush. Six-year plant is about 6 feet high and 4 feet across.

'Klehm'—Somewhat mixed up in the trade, the plants I have seen are forms of *M. coronaria*, said to have double flowers. Sometimes listed as *M. ioensis* 'Klehm.' Fruits are greenish. More growth information is needed.

'Lady Ilgen'—New variety with medium to large yellow fruits, introduced to America from Europe by the Montreal Botanic Garden, 1951.

'Mary Potter'—An Arnold Arboretum cross between *M. sargentii rosea* and *M. atrosanguinea* made in 1939, introduced in 1947; tends to breed true from open-pollinated seed.

'Mount Arbor Special'—Introduced about 1938 by the Mt. Arbor Nurseries of Shenandoah, Iowa; a cross between 'Hopa' and 'Red Silver' with reddish-purple foliage said to be a brighter color than that of other varieties.

'Northland'—Originated as a cross (McIntosh apple \times 'Dolgo') at the Fruit Breeding Farm of the University of Minnesota in 1926 (selected in 1938 as their No. 1423), named in 1957; hardy in northern Minnesota, fruits red, $1\frac{3}{4}$ inches long, resembling those of 'Dolgo' in shape, ripening in mid-August; good for jellies. The fruit is pretty large for a strictly ornamental crab apple, although excellent for a "general purpose" crab.

'Pillar of Fire'—Not new; this is the variety 'Strathmore,' renamed by Stern's Nurseries, Geneva, N.Y.

'Pink Beauty'—Originated before 1947 at the Government Experiment Station, Morden, Manitoba, Canada, as its No. 451. Seems to have few faults, but fruits drop by September 1. Flowers are single, pink; fruits are bright red, maturing in mid-August. Robert C. Simpson, Simpson Orchard Co., Vincennes, Indiana, named it before 1958.

'Pixie'—Originated by A. F. den Boer, Des Moines, Iowa, introduced 1948; single pink flowers, red fruits, semi-pendulous branching. The plant we have at the Arnold Arboretum is small and has not yet flowered.

'Prairie Rose'—Originated at the University of Illinois, Urbana, Illinois, as an open-pollinated seedling of *M. ioensis*; has double flowers and is thought to be more scab-resistant than Bechtel's crab apple.

- 'Pretty Marjorie'—A new variety from Holland received in the Arnold Arboretum in 1958; has not yet bloomed.
- 'Professor Sprenger'—Originated prior to 1950 as a clone of *M. zumi* selected by S. G. A. Doorenbos, The Hague, Holland; the fruit is said to be orange and remains on the tree until January. We do not yet have this in our collection.
- purpurea 'Eleyi Compacta'—Introduced by S. G. A. Doorenbos, The Hague, Holland, 1952; flowers similar to *M. purpurea eleyi* but slightly deeper and a very dense, compact habit. Fruits are purplish-red.
- 'Rainbow'—Offered by Big Rock Nursery, Big Rock, Illinois, actually not a new variety but five standard varieties budded on 'Hopa' understock.
- 'Seafoam'—A seedling selection of *M. 'Oekonomierat Echtermeyer'*, made in 1939, named in 1952 by A. F. den Boer, Des Moines, Iowa, with apparently a pendulous habit.
- 'Shakespeare'—A selection of *M. atrosanguinea*, made before 1957 by E. H. Scanlon of Olmsted Falls, Ohio; said not to fade in flower as badly as the species.
- 'Sunburst'—Not new; this is 'Hopa' renamed by Stern's Nurseries, Geneva, N.Y.
- 'Upton Pyne'—Recently introduced from England, this is actually an apple, with large fruit streaked pink.
- 'Valley City'—Several seedlings originating at Northwest Nursery Co., Valley City, N.D.; selected as substitutes for the purple-leaved plum. Some question as to sufficiently outstanding merit for propagation in the East.
- 'Van Houttei'—Offered by R. C. Notcutt, Ltd., Woodbridge, Suffolk, England, with white flowers and yellow fruits. Introduced into America in 1958.

DONALD WYMAN

Still time to register for the following Spring Classes:

- Field Class:** Jamaica Plain — Dr. Donald Wyman
April 24–May 29, Friday mornings 10–12 noon \$2.00
- Natural History of Non-Flowering Plants:** Case Estates, Weston —
Mr. G. S. Torrey
April 29–May 27, Wednesday afternoons 2–4 p.m. \$10.00
- Field Botany:** Case Estates, Weston — Dr. R. A. Howard
May 5–June 2, Tuesday afternoons 2–4 p.m. \$2.00



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