

# The Cornelian Cherries

by RICHARD E. WEAVER, JR.

In late March at the Arnold Arboretum the signs of spring are few and subtle. True, the male Red-wing Blackbirds are calling in the meadow, and the meadow itself is beginning to turn green. And the Snowdrops in front of the Administration building have been blooming for some time, as have the Silver Maples along Meadow Road. But most of the trees and shrubs look about as they had during the drab days of winter. Only their swelling buds hint at their preparation for the season to come.

A few woody plants, however, are in full bloom during the last week of the month, at least if the weather has been seasonable. Silver Maples, *Daphne mezereum*, and *Rhododendron dauricum* provide a bit of color in the brown landscape, but the Cornelian Cherries put on the best show. At the Arnold Arboretum, the finest specimens are just behind the Cork Trees along Meadow Road and near the ponds close to the Forest Hills Gate. These members of the genus *Cornus*, the Dogwoods, are poorly known in comparison with some of their relatives, at least in America, but they are first class ornamentals. Forming large shrubs or small trees, they are literally covered with soft yellow flowers at a time when any color is much appreciated. They are also long-lived, relatively disease-free, and tolerant of poor soils; their fruits are attractive and edible, and the bark of one species is among the most attractive of any hardy woody plant.

The Cornelian Cherries, *Cornus mas* and *C. officinalis*, along with two other, little known species, form a distinctive group (*Cornus* subgenus *Cornus*) within a varied and highly ornamental genus. In these species, the flowers appear before the leaves. They are small and greenish or yellow and are borne on slender stalks in dense, rounded clusters or umbels. The clusters are surrounded at the base by a series of bracts similar to, but not nearly so conspicuous as, those in the Flowering Dogwood (*Cornus florida*) or the Kousa Dogwood (*C. kousa*). The fruits, also borne in clusters, are oblong drupes (fleshy fruits with a single, hard stone, as in Cherries), typically red



*A fine specimen of Cornus officinalis in flower. This plant, growing at the Arnold Arboretum, is about 15 feet tall. Photo: D. Wyman.*

in *C. mas* and *C. officinalis*, but black or blue-black in the other two species.

The best known of the Cornelian Cherries, and the one to which the name is most properly applied, *Cornus mas*, has been valued in Europe as a utilitarian plant since classical Greek and Roman times, and was mentioned in the writings of Homer and Virgil. The Latin name now given the plant is derived from the names applied to it in ancient times, and the common name also has been long established. Both are derived from its utilitarian attributes.

The wood of *Cornus mas* has been valued over the centuries for its hardiness, durability, and flexibility. Although put to more mundane use in recent times, such as for the manufac-

ture of wheel spokes, ladder rungs, and tool handles, it was favored by the Romans to make the shafts of javelins. The modern generic name *Cornus* is the name they used for the plant, its derivation being from the Latin *cornu*, meaning "horn," because of the hardness of the wood.

The specific name *mas*, meaning "male" in Latin, was also applied to this plant by the Romans, presumably because (according to J. C. Loudon in *Arboretum et Fruticetum Britannicum*, vol. 2, page 1014. 1838) young plants bear only male flowers, and therefore do not set fruit. This would have been of some significance to the Romans, since they used the fruit as food. The common name, Cornelian Cherry, or shortened to "Cornel," was given to the plant because its cherry-like fruits are about the color of the gemstone carnelian. Although seldom eaten today, they were formerly used for various purposes in Europe: to make confectionary, marmalades, and liqueurs; mixed with apples and pears to make cider; and pickled green to serve as a substitute for olives.

#### *Key to the Species*

1. Tree with a single trunk, or with a few main trunks close together, the bark on mature individuals exfoliating, exposing the pale inner bark and creating a mottled effect; leaves usually with 6-7 pairs of veins, and with conspicuous tufts of brown hairs in the axils of the veins on the undersurface; flower stalks and the base of the flowers sparsely covered with short, straight, straw-colored hairs (use a magnifying glass) *Cornus officinalis*.
1. Large shrub or bushy tree, usually with numerous stems from the base (or occasionally with only a few), the bark on mature individuals close, scaly, dark-colored; leaves usually with 4-5 pairs of veins, with often inconspicuous tufts of white hairs in the axils of the veins on the undersurface; flower stalks and the base of the flowers densely covered with short, slightly crinkled, white hairs (use a magnifying glass) *Cornus mas*.

The two related species are rare in cultivation, so they are not included in the above key. They are, however, briefly described below.

*Top left: The flowers of Cornus mas, appearing before the leaves in early spring. Photo: R. Weaver.*

*right: The trunk of Cornus officinalis with its characteristic exfoliating bark. Photo: R. Weaver.*

*Bottom left: Trunks of Cornus mas showing the dark, scaly bark. Photo: P. Chvany.*

*right: Fruits and foliage of Cornus mas 'Flava', about 1/2 life-size. This cultivar is distinguished from the species by its yellow rather than red fruits. Photo: H. Howard.*



*Cornus mas* L. Cornelian Cherry. Native from central and southern Europe into western Asia, and reliably bud-hardy into Zone 4, this is the most frequently cultivated of the species. In this country it generally forms a large, multi-stemmed shrub to 15 feet tall. The largest specimen at the Arnold Arboretum has grown about 12 feet tall and twice as broad in its 93 years. A specimen this size would hardly be suitable for the average sized American yard, but with careful pruning of sucker shoots, the plant can be trained into an attractive, several-stemmed small tree.

As mentioned earlier, the fruits are edible. But, although they may reach the size of a small olive, the stone is large and the flesh relatively scant. Also, fruit set is seldom heavy in this country.

A number of cultivars have been selected, most of them differing from the species in having variegated leaves or white or yellow fruit. A few are described briefly below, a condensation of a more complete list which appeared in *Arnoldia*, Vol. 21, pages 9-18, in 1961 (Registration Lists in Cultivar Names of *Cornus* by R. A. Howard).

*Cornus mas* 'Alba' — fruits white.

'Argenteo-marginata' — leaves with a broad, white edge.

'Aureo-elegantissima' — early leaves golden-edged, but becoming flushed with carmine at maturity.

'Flava' — fruits yellow.

The species is available from a number of nurseries in this country, but I have been unable to find sources for any of the cultivars.

*Cornus officinalis* Sieb. & Zucc. Korean Cornelian Cherry. This is certainly the finest of the hardy species. A native of central and southern Korea and perhaps the Chinese province of Chekiang where it grows into a tree 30 feet tall, it was introduced into cultivation in Europe about 1870. It is not quite as hardy as *C. mas*, being reliable only in Zone 5. The fruits, similar to those of *C. mas*, were thought to possess medicinal properties by Oriental peoples, and the plant has been widely cultivated by them for centuries. At least young individuals of this species are easily confused with *C. mas*, and if only flowers are



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A large specimen of *Cornus mas* at the Arnold Arboretum showing the shrubby habit typical of the species. Plant was 86 years old when photographed; now 93, it has a height of 12 feet. Photo: H. Howard.

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available, distinguishing between the two species is always difficult. The diagnostic characters separating the two are outlined in the key above. The most obvious differences, and the ones which make *C. officinalis* far superior horticulturally to *C. mas*, are in the bark and the habit of the plants. *Cornus officinalis* is almost always a vase-shaped small tree with a single trunk, or with a few main trunks close together. The finest specimen at the Arnold Arboretum is 62 years old and about 15 feet tall. The bark on mature specimens exfoliates in a pattern suggesting that of a Sycamore or a *Stewartia* (but not as attractive, I must admit, as the latter). More subtle differences, but also horticulturally significant, are that the flowers of *C. officinalis* are a slightly better yellow, they are borne in larger clusters, and they appear a few days earlier than those of *C. mas*.

A more complete account of this species is to be found in: Wilson, E. H. Rare and Noteworthy Plants. *The Garden* 88: 333. 1924. Although the Korean Cornelian Cherry is certainly a desirable plant, it is rarely offered for sale by nurserymen. It is, however, listed by LaFayette Home Nursery in Lafayette, Ill., and by Greenbrier Farms in Chesapeake, Va.

*Cornus sessilis* Torr. Miner's Dogwood. This species, a native of the mountains of California, is a shrub or small tree to 15 feet tall. The flowers are in few-flowered clusters and the fruits are blue-black. The plant is not showy in flower or fruit, and it apparently is seldom cultivated. It is tender in all but the warmest parts of the northeastern United States.

*Cornus chinensis* Wanger. This is a tree to 40 feet tall in the wild, with flowers in larger clusters than those of *C. mas* and *C. officinalis*. The leaves are also large with conspicuous veins, and have been compared with those of a *Hosta*. It is native to northern India, northern Burma, and western and central China, and is very rare in cultivation. The plants cultivated in England were grown from material collected by Kingdom Ward in northern Assam, and they are tender even in most parts of the British Isles. However, considering the natural range of the species, hardy clones might well be found if botanical exploration would be possible once more in China.

Neither *Cornus mas* nor *C. officinalis* seems to be fussy about soil conditions, nor are they bothered by any serious insect pests or diseases. According to Mr. Alfred Fordham, Propagator at the Arnold Arboretum, the seeds have a double dormancy. His experiments have shown that this may be overcome by a warm treatment for five months followed by cold stratification for three months at 40 degrees F. He also suggests that the seeds may be sown when mature in the fall, with germination to be expected in the spring of the second year hence. The intervening summer and subsequent winter supply the conditions necessary for germination. Both species are also easily propagated from softwood cuttings.