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# MALUS

**International  
Ornamental Crabapple Society**

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## MALUS 'OBSCURUS'

A series featuring some of the lesser known crabs.

### Malus florentina

by

John Martens

"No one looking at this plant for the first time would guess that it actually is a member of the apple family," said Arie den Boer when describing Malus florentina in his book Ornamental Crab Apples. Well, perhaps it isn't, as is discussed later. But for now, let us consider it to be a true species in the genus Malus. Characterizing it as "More of a curiosity than anything else," den Boer points out that it may have some use in collection designs. It grows very slowly and it blooms later than other crabs.

This crab has leaves that resemble those of the English hawthorn (Crataegus oxyacantha Syn. C. laevigata). It has white flowers which grow in bunches in the form of a corymb (flat-topped cluster). Similarly, the fruits -- yellow, ripening to a rich red -- grow in clusters. Den Boer says it has a compact, upright or pyramidal form, but in a location to its liking, sometimes becomes a broad bush. Pizzetti, cited below, says it is a large shrub or small tree of rounded habit. The common or English name given in den Boer's book is the Italian Crab.

On the possibility that an Italian author might give a more exuberant account of this crab, I obtained, at the suggestion of Dr. John Sabuco, a copy of the two-volume book, Flowers: A Guide for Your Garden, by Ippolito Pizzetti, this book was copyrighted in Italy in 1968 with the title, Il libro die Fiori. It was translated and revised by Henry Cocker, edited by Michael Sonino, (published by Harry N. Abrams Publishers, New York, 1975). Pizzetti & Cocker give a short description of M. florentina. They describe the autumn foliage as having "magnificent orange-scarlet shades." Although these authors describe dozens of crabapple plants, they chose to illustrate only two with color plates, one of which is M. florentina.

On the other hand, Den Boer says, "In Iowa, this plant has not given evidence of being completely hardy. It is not likely that it has some requirements of which we are as yet not aware." Pizzetti & Cocker state, M. florentina is, "A beautiful hardy plant, thriving at Kew, England from plants introduced from Florence in 1886." Our own experience at the Morton Arboretum tends to resemble den Boer's. In recent years, we have had only one specimen of M. florentina growing afield. While it did not seem to be grossly afflicted with any of the ordinary crabapple diseases, (appears to be susceptible to fire blight...J. Sabuco) it was a scrubby, unattractive tree compared to the glamorous cultivars growing nearby. This tree did not appear to be on the verge of expiring. Perhaps I can best describe its condition by noting that on each occasion that I passed by the tree during the five years that I have been associated with Morton, I would say to myself "Gotta do something about that tree," and then fail to do so because of more pressing tasks. We tended to attribute the poor condition of the tree to salt spray from a nearby tollway, perhaps rightly so. In 1986, to make way for construction, this specimen was trimmed and transplanted by the grounds people to a plot that was expertly prepared for gardening. Here, in good soil, away from heavy traffic, the tree is apparently thriving.

Last summer, Dr. Tom Green and I checked the tree and found it to be heavily loaded with yellow-headed caterpillars. On that occasion Dr. Green showed me a trick for dealing with them, one that works with small trees. Simply grab a limb and shake it vigorously, he said; the caterpillars will let go and fall to the ground where they can be stomped on. With no turf beneath the tree, this was fairly easy. After about 10 minutes of shaking and stomping, the two of us had the tree fairly free of caterpillars. This is called "the Green System of high tech pest control".

Malus florentina deserves to be protected for research. The single specimen mentioned above was planted in its first location in 1956. It is a graft from a tree obtained from the Arnold Arboretum and planted in 1926. Because we were down to one specimen and were subjecting it to the hazards of being transplanted, Morton Arboretum acquired, from Board Member Michael Yanny, four new specimens of M. florentina from the Boerner Botanic Garden near Milwaukee. The new plants were grown from seed and are being cared for by Mr. Kris Bachtell in the plant nursery.

Pizzetti & Cocker note that M. florentina is native to northern Italy. They say, it is very rare both in the wild and in cultivation. Borwicz, (cited below) says this crab ranges from Italy to Turkey. While den Boer's book gives "The Italian Crab" as the English name for M. florentina, our own catalog of plants calls it the "Balkan Crab". Den Boer lists the following Latin names that have been assigned at one time or another to M. florentina.

Crataegus florentina  
Sorbus florentina  
Pyrus florentina  
Malus crataegifolia

Torminaria florentina  
Cormus florentina  
Pyrus crataegifolia

It is sometimes necessary to use each of these names in matters of botanic history. For example, an article in Curtis' Botanical Magazine from which our cover illustration came, is entitled "Pyrus crataegifolia".

M. florentina may not be in the apple family as alluded to previously. Even the Pyrus versus Malus debate, which apparently goes on unending, is simply a matter of naming the baby. But as late as 1970, K. Browicz, in an article entitled "Malus florentina -- its history, systematic position and geographical distribution", Fragmenta Floristica et Geobotanica 16(1):61-83, apparently considers M. florentina to be a inter-generic hybrid of M. silvestris x Sorbus torminalis, and proposed a new name: x Malosorbus florentina. Browicz says that our plant was mentioned by Tilli under the name Crataegus italica in 1723, and we traced its history from then. He mentions the numerous classifications made in the past and then systematically narrows the choice to two -- Sorbus and Malus. In 1874, he says, Wenzig first proposed that the plant was a cross between Sorbus torminalis and Pyrus malus (Syn. Malus silvestris). Later (1883) Wenzig changed his mind, saying the classification should be Sorbus crataegifolia. A number of subsequent authorities argued for the hybrid classification while others argued it. Browicz states and evaluates all the various positions and summarizes his own work before coming to the tentative conclusion that it is a hybrid. Says he, "In spite of the fact that I am inclined to consider Zuccagni's species as an inter-generic hybrid, I believe that the question has not yet been settled definitively. My conclusions are based entirely on the analysis of dry herbarium materials. Thus there exists a need for accurate studies to be conducted on live material, to collect and sow seeds coming from various stands and to analyze the progeny, as well as to study phytochemically the leaves and bark of Sorbus torminalis. It would also be

valuable to repeat the anatomical studies of wood and to confirm the conclusion of Burgerstein." Zuccagni's species, Crataegus florentina, is the one he found near Florence and described in 1809. Burgerstein's studies of wood were made in 1895 on only a small sample from the herbarium specimen stored in the Naturhistorisches Museum in Vienna. His studies supported the hybrid contention. In C. A. Huckins' A Revision of the Sections of the Genus Malus; Miller, 1972, issued by University Microfilms, Ann Arbor, Michigan in 1985. Huckins comes to the conclusion that M. florentina should remain in Malus; however, largely as a result of Browicz's work, Huckins proposes a revision of organization of the genus. Specifically, he proposes that Section II, Sorbomalus, consist only of Florentinae (Rehder), and that this is a monotypic section. Huckins also qualified his actions regarding M. florentina by saying, "This assignment is not meant to negate an affinity with Sorbus or other pomoid genera nor to exclude the eventual possibility of treating this taxon as a monotypic genus or even as a member of Sorbus." Well, suppose such a possibility materializes. Will our taxon still be a crabapple?

(Chemicals producing scent in the flowers of M. florentina do not approximate Crataegus, Pyrus or Sorbus (aminoid). They are more closely affiliated with Malus (benzoid), but are not a perfect match. It, however, seems very likely that this plant is Malus and this is upheld by the most recent authors such as Krussman. John Sabuco)

## DESCRIPTION:

Malus florentina (Zuccagni) Schneid. Small, round crowned tree, 8 meters by 6 meters in size, a conical shrub when young, twigs shaggy pubescent; leaves broadly ovate, 5-7 cm. long, lobes always incised (Crataegus-like), serrate, dull green above, gray-yellow beneath, tomentose, fall color orange-scarlet; flowers white, 2 cm wide, 2-6" shaggy pubescent corymbs, late flowers abundantly, May-June; fruit red, 1 cm thick, broadly ellipsoid. BM 7423; BFC 118; DRHS 1239 (Syn. M. crataegifolia Koehne). Italy, considered by K. Browicz to be a inter-generic hybrid of M. silvestris x Sorbus torminalis and named x Malosorbus florentina (Zuccagni) Browicz. Appears to suffer at temperatures below -20° F. (From Manual of Cultivated Broad-Leaved Trees and Shrubs by Gerd Krussmann, 1985; Timber Press, Portland, Oregon.)

## Letters to The Editors

Tom Green  
Ed Hasselkus  
John Sabuco

Dear Dr. Green:

Several days ago, I saw for the first time Crab Gab, Summer, 1985. To me Malus fusca and M. x Dawsoniana are not so obscure. Below are the remarks pertaining to those trees growing in my area (alone).

Malus fusca ranges from southern Alaska to northern California. Small white or faintly-pink flowers are borne from late April through May, succeeded by  $\frac{3}{8}$ " long, oblong, dark yellowish crabapples. When ripe they are tart and edible (mid-August) until frosts soften, acidify and discolor them. 1-3 seeds per fruit are normal because some (of the potential 5) invariably abort. Some native Americans cultivated the trees for the fruit. Autumn coloration varies from a conspicuous red of much beauty, to dull yellow. It is readily distinguished from other kinds of Malus by its often lobed leaves, and relatively tiny, oblong rather than round, yellow fruit. The trunks can be as much as 2' thick, and the tallest a full 50'. It is sometimes a leaning shrub, full of basal suckers -- especially in very boggy ground.

Only one specimen of the hybrid Dawson Crabapple (Malus fusca x M. pumila) tree is known to me. Its height is greater than any other Malus has ever been credited with, to my knowledge; the trunk diameter is 3'10 $\frac{1}{2}$ " c.b.h. and it is 70' tall (1983). The identity and measurements are precise. The fruits are oblong, yellow with a red blush, ripen very late (September to October, even early November), and measure usually 13/16" long by 1" wide, on 1" stalks. Some are up to 1 $\frac{1}{2}$ " long by 1 $\frac{1}{4}$ " wide. The size and flavor remind me of M. 'Dolgo' fruit. As far as I know, this particular specimen is of independent origin; it grows with native trees in an urban park. Cloning it seems very advisable.

Yours truly,  
Lee Jacobson  
Seattle, Washington

Dear Dr. Green:

We have followed with interest, the progress of your Society and have read, in depth, the 'The Winter 1985 Proceedings' issue. In them you asked for questions and comments, so here are a few from a grower's (finished stock) viewpoint.

Disease susceptibility seems to vary considerably, among certain varieties, with regard to region and especially management practices under field growing conditions. Les Nichols (deceased) mentioned the regional factor at Wooster in August 1985 as it pertains to fire blight. But, varieties that are listed as highly susceptible to scab, etc., have been some of the cleanliest we grow (e.g. M. 'Snow-drift' and M. 'Selkirk'). Consequently, we feel cultural practices and possibly linear sources are factors.

At some point, it might be good to address the dwarfing' techniques being used on the west coast to produce smaller growing Malus. These are being budded on Malling Merton understock, which in itself has a lot of merit, and the finished product is being listed as one-half to one-third normal size.

Our experience with dwarf M. 'Snowdrift' has proven this to be correct and I must admit, customer acceptance and enthusiasm in the trade for this produce is excellent and we are increasing our production each year in this area.

Sincerely,  
William N. Scarff, Sr.  
Scarff Nurseries Inc.  
New Carlisle, Ohio

REPLY:

Thank you, Bill, for your thoughtful note.

Dr. Tom Green

I, too, have seen little to no scab on M. 'Snowdrift' or M. 'Selkirk'. As a landscape architect I can see tremendous possibilities for dwarf crabs; especially the more distinctive weeping and columnar forms. I hope to see more of them in the future.

Dr. John Sabuco

We welcome letters from any and all. If you wish a response from Tom, Ed, or John feel free to ask. We will publish as many letters as we can but we reserve the right to edit, or use excerpts. Our readers are the often real experts! Send your letters to the publisher (address inside front cover) or to Tom Green, The Morton Arboretum, Lisle, IL 60532.

## THE IOCS MEMBERSHIP

The following is the most recent membership list of the IOCS. If anyone notices something which is incorrect, please drop us a line with the correction. Please do not use the list for anything other than intra-society business.

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