Many of the Crabapples promise an exceptionally good bloom this year and several of them will be in full flower next week. There is a large collection of these plants in the Arboretum, including several hybrids, for there are few genera in which natural hybrids among cultivated plants are more often found.

The common Apple-tree of the orchard is usually believed to be a hybrid between the two European species, although the so-called Paradise Apple, which is largely used in this country as stock in the propagation of dwarf Apple-trees, is probably a form of Malus pumila from eastern Europe, central Asia and the Himalayas. Another important hybrid largely grown commercially and known, at least in this country, as the Siberian Crab is believed to have been obtained by a cross between the common Apple-tree and the small-fruited Siberian Crabapple, M. baccata. Plants of this hybrid are fast-growing, very hardy, usually pyramidal small trees. The flowers are handsome but the trees are most ornamental in the autumn when they are covered with their brilliant scarlet or orange, often translucent fruits which are usually from an inch to an inch and a half in diameter. These hybrids are hardy in northern regions too cold for the common Apple-tree, and they are often grown as fruit trees. Their fruit is subacid but valuable when cooked and for preserves. The most curious form, perhaps, of Malus pumila in the collection is M. Niedzwetzkyana from Turkestan. This small tree, which is one of the first Apples in the collection to bloom, has dark purplish red flowers and fruit, even the flesh of the fruit being purple, purple leaves at least early in the season, and dark bark and twigs. That this tree is only an abnormal variety is shown by the fact that the leaves of seedlings raised in the Arboretum are more often green than red.

One of the handsomest of all Crabapples, M. floribunda, is one of the earliest to flower. As it grows in this country it is a broad shrub with a trunk divided at the base into several large stems. The pink flowers, which are deep rose color in the bud, turn white before the petals fall and are produced in the greatest profusion. The dark green foliage is handsome, but the yellow or orange-colored fruits, which are not much larger than peas, make little show. The origin of this plant is uncertain. It was first sent to Europe from Japan, but it is not a native of that country and probably originally came from China, although it is not now known in China in a wild state. By some authors it is considered a hybrid between two of the species of northern China, although it bears but little resemblance to its supposed parents, and seedlings raised from this cultivated plant show comparatively little variation. The largest specimens of this Crabapple will be found in the neighborhood of the Administration Building.

A plant which is evidently a hybrid of M. floribunda with one of the hybrids of M. baccata appeared spontaneously in the Arboretum several years ago and has been named M. Arnoldiana. It has much larger pink flowers and larger fruit than M. floribunda, and in flower it is one of the most beautiful of all Crabapples. Another early-flowering form is known as M. Scheideckeri, a supposed hybrid of M. floribunda, the other parent being probably M. spectabilis or M. prunifolia. This
plant appeared in Germany a few years ago and is one of the most ornamental of Crabapples. The branches are erect and slightly spreading, forming a narrow pyramidal head. The pink and white flowers are produced in profusion, and the comparatively large yellow fruit is from three-quarters to an inch in diameter. Another pyramidal Crabapple much better known is *M. spectabilis*, a native of northern China and an old inhabitant of gardens. The large pink flowers of this tree as it is known in gardens are more or less double; there are several forms, of which the best, perhaps, is Rivers' Crab (*M. spectabilis Riversiana*), so named for the English nurseryman by whom it was raised or distributed nearly a century ago. The Crabapple of eastern Siberia, *M. baccata*, is a tall, narrow tree with white flowers on long, drooping stems, and yellow fruits not much larger than peas. This is a hardy and handsome tree, but it is less beautiful than several hybrids which were raised in the Arboretum many years ago from seeds sent from St. Petersburg. The parentage of these plants is uncertain, although *M. baccata* is no doubt one of the parents. They are wide-branching, vigorous trees with large pure white flowers and fruits two or three times larger than those of *M. baccata*.

By some persons the Parkman Crab (*M. Halliana*) is considered, when it is in flower, the most beautiful of the group. It is a small and not very vigorous tree, with dark bark, leaves tinged with purple when they first unfold, and bright, clear pink, semidouble flowers drooping on long stalks, and minute fruits. This is probably a Chinese plant which has long been cultivated in Japanese gardens but is not now known in a wild state. It reached America sixty years ago and was first cultivated in this country by the historian Francis Parkman in his garden on the shores of Jamaica Pond. Seedlings of this plant show great variation.

Japanese species which deserve the attention of lovers of hardy plants are *M. zumi* from Japan, with pink and white flowers, and *M. Sargentii*, a native of the borders of salt marshes in the northern island, and the only shrub Apple which is now known. In the Arboretum it has proved a valuable late-flowering plant; and it appears particularly well suited for northern gardens for on the coast of Maine it grows even better than it does here. The last of the eastern Asiatic species to flower is *M. toringo*, from northern China and Japan. This is a small tree with spreading branches, numerous, very small flowers, and minute, red or yellow fruits. A low, shrubby seedling form of this species has appeared in the Arboretum.

The American Crabapples bloom later than the Asiatic and European species. There is one species (*M. fusca*) on the northwest coast and several in the Atlantic states from New York, Michigan and Iowa southward. In the group on the Forest Hills Road and nearly opposite the end of the Meadow Road *M. fusca* is well established. With it there is an interesting hybrid of this and the common Apple-tree named *M. Dawsoniana*. This is a vigorous tree with the peculiar oblong yellow fruit of its American parent. The fruits, however, are much larger and the leaves resemble those of the common Apple. *M. corona-ria* from the eastern states and *M. ioensis* from the central west are in this group, and there are plants of *M. angustifolia* from the extreme southeastern states now well established on Hickory Path near Centre Street. Of *M. ioensis* there are two plants opposite the end of the
Meadow Road, of the form known as the Bechtel Crab. This tree has double pale pink flowers which look like small clustered Roses. This is the last Crabapple in the collection to bloom, and one of the most popular plants in the Arboretum, judging by the fact that when the trees are in flower the ground about them is trodden hard by visitors who want to examine them at close range.

There are two groups of Apple-trees in the Arboretum. The first is on the left-hand side of the Forest Hills Road entering from the Forest Hills Gate and opposite the end of the Meadow Road. This collection contains the largest plants in the Arboretum. The second and supplementary collection is arranged at the eastern base of Peter's Hill. The plants are smaller, but this collection contains a larger number of species and hybrids than the other. For the lovers of spring flowers the blooming of the Crabapples is one of the three or four most interesting periods in the Arboretum year.

The earliest of the Viburnums to flower this year is V. Carlesii, from Korea, whence it was sent to Europe a few years ago. It is very hardy and blooms freely when not more than a foot high. It is particularly interesting from the fact that the flower-buds are bright orange-red. The inner surface of the corolla, however, is white and as the flowers open the color of the outer surface gradually fades to pink and then to white. As the buds do not always expand at the same time there are therefore in the cluster pink buds among the white flowers. This plant is still comparatively little known, but it seems destined to become a valuable and popular garden plant.

The Mahonia from the northwest coast, Berberis or Mahonia Aquifolium, with its shining Holly-like leaves, yellow flowers and blue fruits, is well known to garden lovers except perhaps in the extreme northern states where this plant is not very hardy and in severe winters is often badly injured. The much dwarfer and perfectly hardy Mahonia from the southern Rocky Mountains (B. repens) is, however, much less known as a garden plant. This plant grows only a few inches high and the leaves lack the lustre of those of the Oregon plant; it spreads rapidly, however, in good soil and soon forms a broad mat. This promises to be one of the best broad-leaved evergreens for ground cover in this climate. It is now in flower in the Shrub Collection.

The earliest true Barberry to flower in the Arboretum is Berberis dictyophylla which, although it comes from the southern part of China, is perfectly hardy here. The flowers are solitary or occasionally in pairs in the axils of the leaves, about half an inch in diameter, and pale primrose yellow. The great beauty of the plant, however, is in the leaves which, although not large, are silvery white on the lower surface and in the autumn turn brilliant scarlet on the upper surface while the lower surface retains its spring and summer color. This shrub can be seen with the other Barberries in the Shrub Collection and in the supplementary collection of Barberries on Hickory Path near Centre Street.

Several Honeysuckles (Lonicera) and some of the early-flowering Currants and Gooseberries (Ribes) are now in flower in the Shrub Collection and deserve the attention of visitors.

The Arboretum will be grateful for any publicity given these Bulletins.