American Crab Apples. Among the small North American trees still imperfectly known to botanists and wood-lovers and scarcely known at all to gardeners are the different species, varieties and hybrids of the Wild Apple. Nine species of these trees are now recognized, with several varieties, and two hybrids and their varieties. They have white or pink fragrant flowers which do not open until the leaves are partly or entirely grown, and green or pale yellow fragrant fruit which hangs on slender stems and, with the exception of that of the species from the northwestern part of the country is depressed-globose, usually from an inch to two and a half inches in diameter and covered with a waxy secretion. All the species spread into thickets and are excellent plants for the decoration of wood-borders and glades. Some of the species have only been distinguished in recent years, and although the species and many of the varieties are now growing in the Arboretum several of these have not yet flowered; only two or three of these Crab Apples can be found in commercial nurseries.

Malus glaucescens, which is named from the pale glaucous color of the under surface of the leaves, is the first of the American species to flower here and has been blooming for more than a week. It is a shrub usually rather than a tree, not more than fifteen feet high, with stems four or five inches in diameter. The flowers are white or rose color, up to an inch and a half across, and the pale yellow fruit is often from an inch to an inch and a half in diameter. It is common in several western New York counties and ranges to western Pennsylvania, southern Ontario and Ohio, and occurs on the southern Appalachian Mountains to northern Alabama.
Malus ioensis begins to open its flowers several days later than *M. glaucescens*. This is the common Crab Apple of the northern middle western states, and in a number of varieties has a wide range southward through Missouri to western Louisiana and Texas. It is a tree sometimes thirty feet high with a trunk often eighteen inches in diameter, a wide open head of spreading branches and usually incised leaves tomentose on the lower surface, flowers often two inches wide with white or rose-colored petals, and fruit hanging on stout hairy stems, and up to an inch and a half in diameter. The common form of this tree in southern Missouri, Arkansas and eastern Oklahoma (var. Palmerti), a small tree with spiny branches and smaller leaves, is flowering in the Arboretum for the first time this year. A form of this tree with double flowers (var. plena), the Bechtel Crab, named for the man who found it several years ago growing in the woods in one of the western states, has opened its pale rose-colored flowers which look like small Roses. When in flower this is one of the popular trees of the Arboretum, judging by the number of persons who want to get close to it. This double-flowered Crab can now be found in many of the large American nurseries, but these nursery trees are often short-lived, probably because the common orchard Apple on which they are usually grafted does not suit them as stock. Persons buying the Bechtel Crab should insist that it be grafted on one of the American Crab Apples, the best for the purpose being the single-flowered type of *M. ioensis*.

*Malus coronaria*, sometimes called the Garland Tree, is the common eastern species, although it does not approach the coast north of Pennsylvania and Delaware and ranges west to Missouri. It is a beautiful tree sometimes twenty-five feet high with a short trunk, pink flowers rather more than an inch in diameter and depressed globose fruit. From *M. glaucescens* it is distinguished by the green under surface of the leaves, and from *M. ioensis* by the absence of pubescence on the leaves, fruit stalks and young shoots. The calyx on one variety (var. dasycalyx) not rare in Ohio and Indiana is thickly covered with white matted hairs. A form with long acuminate leaves (var. elongata) which sometimes forms dense impenetrable thickets grows in western New York to Ohio, and on the southern Appalachian Mountains from West Virginia to North Carolina. Recently a double-flowered form of *M. coronaria* has been found growing in the woods near Waukegan, Illinois (var. Charlottae or the Charlotte Crab). The flowers are larger and whiter than those of the Bechtel Crab, and there is no reason why the Charlotte Crab should not become as great or a greater garden favorite. It is now growing in the Arboretum but the plants are too young to flower.

*Malus platycarpa* has fruit much broader than high, often two and a half inches in diameter with a deep cavity at base and apex. The flowers are about an inch and a half wide with a glabrous pedicel and calyx, but in the var. Hoopesii with a pubescent calyx. There is a large tree of this variety in the old Malus collection opposite the end of the Meadow Road. *M. platycarpa* is a handsome tree well worth a place in collections for its beautiful fruit valuable for cooking and jellies. The so-called Mammoth Crab is probably a hybrid of this species and the orchard Apple-tree.
Malus fusca, the only native Apple-tree of the Pacific States, where it ranges from Alaska to southern California, is in flower. This differs from the other American Crab Apples in its short-oblong, yellow-green flushed with red or nearly entirely red fruit from half an inch to three-quarters of an inch long, without the waxy exudation which is peculiar to the eastern American species, and with thin dry flesh. The calyx of the flower, unlike that of the eastern species, but like that of many Asiatic species, falls from the partly grown fruit.

Malus angustifolia is the last Crab Apple in the Arboretum to flower. This is a tree sometimes thirty feet tall with a trunk eight or ten inches in diameter, wide-spreading branches, bright pink exceedingly fragrant flowers an inch in diameter, and depressed-globose fruit. From the other species it differs in the only slightly lobed or serrate leaves on the ends of vigorous shoots and in the rounded apex of the leaves on flower-bearing branchlets. Malus angustifolia is a southern species which naturally does not grow north of southeastern Virginia and southern Illinois, ranging to northern Florida and western Louisiana. Plants raised here many years ago from seed gathered in northern Florida are perfectly hardy in the Arboretum where they bloom every year late in May and have proved to be handsome and valuable plants here. The other American species, M. glabrata of the high valleys of the mountains of North Carolina, M. lancifolia, widely distributed from Pennsylvania to Missouri and western North Carolina, and Malus bractata, a common species from Missouri to Florida, with many of the varieties of Malus ioensis are now established in the Arboretum but the plants are still too young to flower.

Malus Soulardii, which is believed to be a natural hybrid between M. ioensis and some form of the orchard Apple (M. pumila) which, not rare and widely distributed in the middle west, is a tree as it grows in the Arboretum, nearly as broad as it is high with spreading, slightly drooping branches. Last year it was thickly covered with its pale pink fragrant flowers, which, for ten days at least, made it one of the most attractive objects in the Crabapple Collection at the eastern base of Peter’s Hill. This year it has bloomed only sparingly. It is a curious fact that M. Soulardii flowers in the Arboretum fully two weeks earlier than either of its supposed parents. Several varieties of Soulard’s Crab are distinguished by western pomologists. Some of them are in the Arboretum collection, but the “Fluke Apple” is the only one which has flowered here yet. This resembles Soulard’s Crab in size and shape, and in the color of its equally abundant flowers, and as an ornamental plant is of equal value.

Malus Dawsonii is a hybrid of the western M. fusca and the common Apple which appeared in the Arboretum many years ago from seed collected in Oregon. It has grown to more than double the size of M. fusca, to which it shows its relationship in the oblong fruit of the shape and color of that of its Oregon parent but of about twice the size. The leaves are less pubescent than those of the common Apple, and the flowers are rather larger. The hybrid blooms at about the same time as M. ioensis and a few days earlier than M. fusca.
Early American Azaleas. Four species, now called Rhododendrons, are in flower, *R. canadense*, the Rhodora, of which there are only a few small plants in the Arboretum, *R. Vaseyi*, *R. nudiflorum* and *R. roseum*. Of these *R. Vaseyi* is the first to open its clear pink or occasionally nearly white flowers. The Arboretum plants in large masses along the Meadow Road are still small but have been covered with flowers during the past week. On the lower side of Azalea Path *R. nudiflorum* and *R. roseum* growing side by side with numerous individuals can be compared. On different plants of *R. nudiflorum* the flowers vary considerably in color, and on a few plants are nearly white. For most persons *R. roseum* with the deep rose-colored flowers is a handsomer plant and perhaps the handsomest of the American Azaleas with the exception of *R. calendulaceum* with its yellow or flame-colored flowers. The fragrance of the flowers of *R. roseum* is only equalled among Azaleas by that of the summer blooming *R. viscosum* of northern swamps.

The first Roses. Three Asiatic species of Rose are the first to flower in the Arboretum, *Rosa Ecae* which opened its first flowers on May 21 one day before those of *R. Hugonis* and *R. omeiensis*. *Rosa Ecae* is still rare in gardens. A native of Afghanistan and Turkestan it is a large fast-growing shrub, with small lustrous leaves, strongly and pleasantly fragrant throughout the season, and pale yellow flowers about an inch in diameter. The flowers are paler in color, slightly smaller, and less crowded on the branches than those of *R. Hugonis* but it is a more vigorous and satisfactory plant and the persistent and unusual fragrance of the foliage greatly adds to its value. *Rosa omeiensis* which is common on the mountains of western China, gets its name from Mt. Omei one of the sacred mountains of the Empire. It is a hardy, fast-growing shrub with erect stems covered with bright red prickles and white fragrant flowers hardly an inch in diameter which are followed by handsome red fruits on elongated yellow fleshy stalks. In its native country this Rose sometimes grows to a height of twenty-five feet. A good hedge for New England gardens might be made with it.

Wisterias. There are no flowers this year on the Chinese and Japanese Wisterias on the trellis on the south side of the Shrub Collection, but an old plant of the white flowering Japanese *W. floribunda* which has been allowed to ramble at will on the trees and shrubs on the left hand side of the Valley Road close to the Centre Street Gate is covered with flowers and is one of the most beautiful objects in the Arboretum during the last days of May.