Clematis dioscoreifolia. This Clematis, which first flowered in the Arboretum a year ago, can now be seen again in flower on the trellis on the eastern border of the Shrub Collection. In general appearance it resembles the Japanese and Chinese Clematis paniculata which is now one of the most popular climbing plants in the northern states. The leaves, however, are thicker and the flowers are larger with broader sepals, and are therefore even more showy than those of the Japanese plant. They are borne in long loose panicles and are exceedingly fragrant. The fact that this new Clematis does not begin to flower until after the flowers of Clematis paniculata have fallen, and that it remains in flower until after the middle of October, should make it a valuable garden plant. It is a native of the Island of Quelpaert off the southern coast of Corea where it was discovered by the French missionary Tacket in 1908. The Arboretum plant was raised from seeds sent here in 1911 by Monsieur M. L. de Vilmorin. That this Clematis has grown here so rapidly and is so hardy in exposed positions shows that it is a plant with an unusually strong constitution for a Clematis, for very few species or varieties flourish in the Arboretum where the conditions for the successful cultivation of these plants are extremely unfavorable.

Rhus javanica. This is the oldest and correct name of a small Chinese tree usually cultivated as Rhus Osbeckii or as R. semialata. This is not a rare tree in gardens, and attention is now called to it, for the autumn color of the leaves has been exceptionally beautiful this year in its deep tints of red and orange, and has made this little tree one of the beautiful objects in the Arboretum where it can be seen near
the other species of Rhus on the left-hand side of the Meadow Road opposite the Euonymus Collection. *Rhus javanica* blooms at midsummer and the large terminal clusters of white flowers make it attractive at a season when few trees are in bloom. The bright yellow leaves of the Varnish or Lacquer-tree of China and Japan, *Rhus verniciflua*, in this group have also been conspicuous this year. In the nursery near the top of Peter's Hill there are larger and better specimens of this tree which is as poisonous as our native so-called Poison Ivy and should be admired from a distance. The autumn change of color in the leaves of the trees and shrubs of eastern Asia usually occurs three or four weeks later than it does in those of the allied eastern American species. These two species of Rhus are exceptions to this general statement, and other conspicuous exceptions are *Acer ginnala* and *Evonymus alatus*. The former is a small tree or treelike shrub with deeply divided leaves and small compact clusters of flowers which are exceptionally fragrant for Maple flowers. The leaves of no other plant in the Arboretum turn in the autumn more brilliant scarlet and for this reason, if for no other, this Maple deserves a place in northern gardens. It is among the first of all Maples to show the autumn change of color and the leaves have now nearly all fallen. *Acer ginnala* is common in eastern Siberia and was one of the first Asiatic plants introduced into the Arboretum; it has proved perfectly hardy in northern New England and as far northward as Ottawa, Ontario.

*Evonymus alatus*, which is a native of Japan and northern and central China, is a vigorous great shrub which, when sufficient space is allowed it, grows as broad or broader than high with its lower branches resting on the ground. The corky wings on the small branches to which it owes its name are interesting, but the flowers and fruit are not conspicuous; the leaves are smaller than those of many of the species, and the real value of the plant is found in their autumn color which is deep rose and unlike that of any other plant in the Arboretum. The autumn change of color comes early and the leaves are already falling, but while it lasts it is so beautiful that this Burning Bush deserves a place in northern gardens. It appears to best advantage when planted by itself that the branches may have sufficient room in which to spread widely, for when crowded by other shrubs in mixed plantations it loses its beauty of habit. There is a large specimen in the Evonymus Group on the right-hand side of the Meadow Road, and there is another in the grass border on the Bussey Hill Road above the Lilacs.

*Crataegus arkansana*. This Hawthorn is one of the Molles Group of species which all have large flowers which appear with or before the unfolding of the leaves, and large, sometimes edible red or rarely yellow fruit. The fruit of some of the species of this group, like *C. mollis* and *C. Arnoldiana*, ripens early and has already disappeared, but that of *C. arkansana* does not become fully ripe until November, so that in late October this is one of the handsomest species for the leaves are still fresh and green, and add to the brilliancy of the large and abundant fruits. The largest plant in the Arboretum is on the left-hand side of the South Street entrance outside the gate. There is
another specimen in the old Hawthorn Collection on the bank by the parkway boundary, near the Forest Hills entrance to the Arboretum.

**Crataegus succulenta.** This is one of the large and handsome Thorns of the thick-leaved section of the Tomentosae Group of these plants, distinguished from all the other groups by the longitudinal cavities in the inner face of the nutlets of the fruit. *C. succulenta* is a tree sometimes twenty feet high with a short trunk, stout, wide-spreading branches, and thick, dark green and very lustrous leaves. The flowers are only about two-thirds of an inch in diameter but they are arranged in broad, many-flowered, lax clusters and are produced on long slender stalks. The fruit is also comparatively small and not more than three-quarters of an inch in diameter, but it is borne in large clusters on elongated gracefully drooping stems; it is bright scarlet and very lustrous, and the fruit of no other Thorn is more brilliant. A specimen of this plant in the old Hawthorn Collection is now covered with fruit. The leaves, which are still green, will later turn orange and scarlet.

**Crataegus nitida.** This is a tree which under favorable conditions sometimes grows thirty feet high and forms a tall straight trunk eighteen inches in diameter, stout, wide-spreading lower branches and ascending upper branches forming a rather open flat-topped head. The leaves are narrow, pointed, two or three inches long and half as wide, dark green and shining above, paler below, and late in the autumn turn rich orange color through shades of bronze and orange-red. The flowers are rather less than an inch in diameter, and are arranged in broad many-flowered clusters thickly placed along the upper side of the branches. They are followed by oblong fruits about half an inch long and are borne on slender, much elongated stems. The fruit is red, covered with a glaucous bloom, and is now fully grown and colored, although it will not become ripe for two or three weeks. This Thorn is a native of the bottom-lands of the Mississippi River near East St. Louis, Illinois, and was first raised in the Arboretum thirty-six years ago. It is one of the handsomest of the whole genus, and if a selection of six species as ornamental plants was to be made it would in the opinion of many persons be one of the six. There are several large specimens in the old Thorn Collection.

**Crataegus pruinosa.** The tree of this species in the old collection is fruiting well again this year and is a good representative of one of the northern group called Prunosae which contains some beautiful species. *Crataegus pruinosa* is a tree sometimes from fifteen to twenty feet tall with a small trunk and spreading branches forming a broad rather open head, or it often grows as a tall shrub with numerous intricately branched stems. The leaves are broad, thick, dark blue-green, and often covered with a pale bloom, and are now beginning to turn a dark orange color more or less passing into red. The flowers, which open here toward the end of May, are exceptionally handsome for they are about an inch wide and are conspicuous from the large, deep rose-colored anthers of the twenty stamens. The large globose fruit is apple-green, thickly covered with a glaucous bloom until after it is fully grown, becoming about the first of November when it ripens dark pur-
ple-red and very lustrous. This is one of the widely distributed species as it is found from southwestern Vermont to Illinois and Missouri, and southward in the Appalachian region to the foothills of the southern mountains. Like many of the American Thorns, it delights in soil strongly impregnated with lime.

**Crataegus aprica.** The specimen of this species in the old collection is also covered with ripening fruit. It is a small tree with small yellow-green leaves, large flowers in compact from three to six-flowered clusters, and dull orange-red sub-globose fruit about half an inch in diameter, borne on stout, nearly erect stems. As a garden plant this tree is chiefly interesting as being one of the hardiest of a group of species entirely confined to the southeastern states known as Flavae. *C. aprica* is a native of dry valleys in the foothills of the southern Appalachian Mountains where it is widely distributed from southwestern Virginia southward at elevations between fifteen hundred and thirty-five hundred feet above the sea level.

**Dwarf species of Crataegus.** Several of the little Hawthorns belonging to the Intricatae group are now covered with handsome fruit. These shrubs which are natives of the northern states, have been almost entirely neglected by gardeners. They all have large and showy flowers which on most of the species do not open until the leaves are fully grown, and many of them have large and bright colored fruits. Many of these shrubs are only two or three feet high when fully grown, and several of them are well suited for small gardens or for planting in front of groups of the larger species. The plants of this group are arranged on the lower side of the drive at the eastern base of Peter’s Hill.

**Evonymns Bungeana,** which has been an inhabitant of the Arboretum for thirty years, deserves more general cultivation than it has yet received in this country. It is a tree or treelike shrub with slender rather pendulous branches and narrow, pointed, yellow-green leaves which are now turning yellow or yellow and red. The great beauty of this plant is in the rose-colored fruit which is produced in large clusters near the ends of the branches on which it remains for several weeks after the leaves have fallen. This is one of the handsomest of the Asiatic species in the late autumn and a plant which should be better known.

**Magnolia glauca.** This, the Sweet Bay of the Atlantic and Gulf Coast regions from Massachusetts to Texas, is still covered with its bright green shining leaves which are silvery white on the lower surface and which will not become discolored or fall before December. Attention has often been called in these Bulletins to the value of this tree as an ornament to New England gardens. Few deciduous-leaved trees are more beautiful or have more persistent foliage. The cup-shaped, creamy white flowers continue to open during many weeks in early summer and fill the air with their fragrance; and the fruit, like that of all the Magnolias, is interesting and handsome when the scarlet seeds hang from the branches on long slender threads.