Cornus kousa. This is the eastern Asiatic representative of the Flowering Dogwood of the eastern states (Cornus florida) and of the Flowering Dogwood of the northwest (Cornus Nuttallii). Cornus kousa was one of the Japanese plants which reached the United States in the early years of Japanese plant introduction into this country and although it has never become common in American gardens it is occasionally seen in the neighborhood of Boston and New York. The white bracts which surround the head of flowers and are the conspicuous feature of the inflorescence of all the Cornus of this group are narrowed and placed further apart on Cornus kousa than on our eastern Flowering Dogwood, and are long-pointed, and not as in the American plant rounded or emarginate at the apex. On the American plant the end of the bract is often discolored, while in the Asiatic plant the bracts are pure white to the tips. The flower-buds of Cornus florida are often killed here at the north in severe winters, but the extreme cold of the winter of 1917-18 did not injure those of C. kousa. The Japanese plants bloom several weeks later than Cornus florida and when the leaves are nearly fully grown. In Japan Cornus kousa sometimes becomes a small tree with a single trunk, but in this country so far as we have observed it grows always as a shrub with several erect stems. Cornus kousa was found in central China by Wilson and plants raised from his Chinese seeds are established in the Arboretum. They are handsomer than the Japanese form, with longer and broader floral bracts set closer together and often overlapping below the middle. On the largest plant in the Arboretum the head of bracts is four inches and a half across, but in China Wilson measured them
five inches across. On the Japanese plants the heads of bracts are rarely three inches and a half in diameter. The Chinese plant flowered in the Arboretum for the first time two years ago, and the flower-buds have never been injured by cold. It is flowering more freely this year than it has before and is now an object of much beauty. Like the Japanese plant the Chinese *Cornus kousa* has grown here as a shrub, but there seems no reason why it cannot be trained into a tree, as in China it is a small tree with a trunk sometimes a foot in diameter. If it fails to produce seed here the Chinese plant can probably be grafted successfully on *Cornus florida*. Although the Asiatic flowering Dogwoods do not make such a display of flowers as our American trees, their flower-buds are harder judging by the effects of the winter of 1917-18, and if the future confirms this they will flower further north than *Cornus florida*. The fact that they bloom when the leaves are nearly fully grown and when the flowering time of most trees is over makes these Asiatic Cornels valuable, and it now seems probable that in the Chinese form of *Cornus kousa* the northern states have an important ornamental tree. The Japanese and Chinese plants are now in bloom, the former on Hickory Path near Centre Street and the latter with the other Chinese plants on Bussey Hill.

*Aesculus turbinata*, the Japanese Horsechestnut, first came to the Arboretum from France in 1881; this plant was lost, and in 1893 it was raised from seeds collected in Japan by Professor Sargent. These plants were also lost, but another supply was raised in 1900 from seeds produced by the fine specimen in the nursery of Ellwanger & Barry in Rochester, New York, and one of these plants has flowered this year. In Japan this Horsechestnut is a magnificent tree, often growing to a height of eighty or ninety feet and forming a tall trunk occasionally seven feet in diameter. Like the European Horsechestnut the leaves are composed of seven leaflets, but these are thinner and more lustrous, and the leaf-stalks are longer. The Japanese tree in summer therefore appears less dark and massive than the common Horsechestnut. The flower-clusters are narrower and the flowers, which are white with scarlet markings at the base of the petals, are handsomer. *Aesculus turbinata*, which grows to its largest size in central and northern Japan, is perfectly hardy in New England. Time only can show if it is able to live as long and grow to as large a size here as in its native country. If it succeeds here as the Horsechestnut of the mountains of Greece has succeeded during the last hundred years it will prove to be one of the handsomest exotic trees which has been planted in eastern North America. *Aesculus turbinata* is one of the five largest deciduous leaved trees of eastern Asia. The others are *Cercidiphyllum japonicum*, *Populus Maximowiczii*, *Acanthopanax ricinifolium*, and *Zelkowa serrata*. These five trees are now established in the Arboretum.

**Early Flowering Hydrangeas.** The first Hydrangea to flower in the Arboretum is the so-called climbing Hydrangea, *H. petiolaris*, which has been covered with flowers during the past ten days. A few days later the plants in a group of shrubby Chinese species opened their flowers which are arranged in broad flat-topped clusters surrounded by a ring of large, pure white ray flowers. The best known of these plants, *Hydrangea Bretschneideri*, a native of the mountains
near Pekin, was first raised in the Arboretum thirty-seven years ago. It is a large, vigorous, hardy plant, with dark green leaves, and one of the best of the exotic shrubs which flower here the middle of June. Closely related to it are *Hydrangea xanthoneura* and its varieties *Wilsonii* and *setchuensis*, and *H. Rosthornii* raised here from seed collected by Wilson in western China. These plants are hardy and can now be seen covered with flowers in the collection of Chinese shrubs on Bussey Hill and on Hickory Path near Centre Street. As garden plants they do not appear to be in any way superior to *H. Bretschneideri*.

**Rosa caudata** is unfolding its pale pink petals which are nearly white toward the base. It is a large, strong-growing, hardy shrub with stout arching stems, dark green leaves, and flowers two inches in diameter, in wide clusters, each containing from twenty to twenty-five flowers. The fruit is orange red, an inch long, contracted above into a narrow neck crowned by the much enlarged calyx-lobes. It flowers at the same time as *Rosa Helenae*, and these two species, and *R. multiflora* var. *cathayensis*, are perhaps the handsomest of the Roses discovered by Wilson in western China.

**Indigofera Potaninii.** This beautiful little shrub from northern China is blooming again in the collection on Bussey Hill. As it grows here it is from three to four feet high, with a single stem and slender erect branches. The flowers are bright rose-color, half an inch long, in long-stalked, erect and spreading racemes from two to three inches in length. The flowers are of the same color, but are larger than those of *Indigofera amblyantha* which Wilson found in western China, and which until *I. Potaninii* bloomed in the Arboretum was considered the handsomest shrubby species which can be grown here.

**Viburnum cassinoides** adds much to the beauty of the Arboretum the middle of June. It is a native of swamps in the northeastern part of the country where it sometimes grows twenty feet high with slender straggling stems. In cultivation it forms a broad, low, round-topped bush, and has proved one of the handsomest of all the Viburnums introduced into the Arboretum. The leaves are thick and lustrous and vary greatly in size and shape. The flowers are slightly tinged with yellow and are borne in wide slightly convex clusters which also vary greatly in size. The fruit is larger than that of the other summer-flowering American Viburnums, and at first yellow-green later becomes pink, and finally blue-black and covered with a pale bloom, fruit of the three colors occurring in early autumn in the same cluster.

**Magnolia glauca**, or *virginiana* as botanists now want to call the Sweet Bay in the Magnolia Collection on the right-hand side of the Jamaica Plain entrance, is again covered with flowers. Often a large tree at the south, at the north this Magnolia is never more than a small tree, or more often a large shrub. The leaves are dark green and very lustrous on the upper surface and silvery-white on the lower surface; the flowers are small, cup-shaped, creamy-white and delightfully fragrant, and continue to open in succession from the middle of June until August. In all North America there is not a more delightful shrub to plant in the garden, or one that will give larger returns in beauty and fragrance; yet it is difficult to find it in any quantity in American nurseries, and it is unknown to most American planters of this gen-
eration. A hybrid, *M. major*, often called *M. Thompsoniana*, between *M. glauca* and *M. tripetala*, another American species, has the general appearance of *M. glauca* but has larger leaves and larger fragrant flowers.

**Halimodendron argenteum** in the Shrub Collection is now covered with its pale rose-colored, pea-shaped, fragrant flowers which are borne in short clusters; their beauty is heightened by the light color of the leaves which are covered with pale silky hairs. This shrub or small tree remains in bloom during several weeks.

**Cornus rugosa.** Attention is called again to the value of this common native shrub for the decoration of parks and gardens where, like many other eastern American trees and shrubs, it is rarely seen. *C. rugosa*, or *C. circinata*, the name by which it is best known, is a shrub sometimes ten feet high which with plenty of space spreads into broad thickets. The young branches are green blotched with purple, becoming purple as they grow older. The leaves are broad, sometimes nearly circular, and dark bluish-green; the flowers are ivory-white, in compact clusters, and are followed in the early autumn by bright blue or nearly white fruits. This Cornel has been much planted in the Arboretum and is greatly improved by good cultivation. It can be seen in the Cornel Group at the junction of the Meadow and the Bussey Hill Roads; and the large individual plants, the great clumps on the right-hand side of the Bussey Hill Road beyond the Lilacs, and the masses among the Hickories in the groups of these trees show the value of this shrub in park planting when broad compact masses of foliage are needed.

**The Tree Lilacs.** As the flowers of the late-flowering group of Lilacs fade the earliest flowers of the so-called Tree Lilacs begin to open. There are three of these Lilacs which all bear large clusters of white or yellowish white flowers which have the disagreeable odor of the flowers of the Privet, and like those of the Privets the leaves fall in the autumn without change of color. The first of these plants to flower, *S. amurensis*, a native of eastern Siberia as its name implies, is a shrub in habit, twelve or fifteen feet high with dark close bark, broad thick leaves dark green above and pale below, and short, broad, unsymmetrical flower-clusters. *S. pekinensis* from northern China flowers next. This is also shrubby in habit, sometimes twenty or thirty feet tall and broad, with stout, spreading stems covered with yellow-brown bark separating readily into thin plates like that of some of the Birch-trees, dark green, narrow, pointed leaves and short and unsymmetrical flower-clusters usually in pairs at the ends of the branches. This species holds its leaves later in the autumn than the others, and produces great quantities of flowers every year, the other species usually flowering abundantly only every other year. The last of the Tree Lilacs to flower, *S. japonica*, is a native of northern Japan, and is really a tree sometimes forty feet high with a tall straight trunk covered with lustrous brown bark like the bark of a Cherry-tree, a round-topped head of upright branches, broad, thick, dark green leaves, and erect, mostly symmetrical flower-clusters from twelve to eighteen inches long. This is one of the handsomest of the small trees which bloom here at the end of June or early in July.