The Arboretum in early summer. The Arboretum is never more interesting and more full of beauty than it is in the early days of June. The leaves of most of the deciduous-leafed trees have attained their full size, and this year, thanks to the abundant rains of the spring, are unusually large and not greatly disfigured by insects. The Arboretum is still full of flowers for this is the time when several American Viburnums begin to bloom, and some of them have been largely used in border and roadside plantations. The Rhododendrons have been little injured during the past winter, and some of the early forms are now in bloom. Early Cornels, Roses and Mock Oranges are already in flower. A large number of American and Old World Hawthorns, especially those on Peter's Hill, are covered with flowers and most of the plants in the Horsechestnut Group are exceptionally fine this year. Many of the American Magnolias are still in full bloom, and in the Shrub Collection can be seen the flowers of many Barberries, Roses, Spiraeas and other shrubs. In the whole Arboretum perhaps there is not a handsomer plant than the double-flowered American Crabapple known in nurseries as the Bechtel Crab.

Viburnums. There are no small trees better suited for the decoration of American parks and roadsides than the three arborescent Viburnums of the eastern United States. The first to flower, *V. prunifolium*, the Black Haw of the middle states, is a common arborescent shrub or small tree on rocky hillsides and in fence-rows, sometimes growing thirty feet high. It may be distinguished from the other arborescent species by its narrower leaves and by the absence from the leaf-stalks of the wing-like margins found on those of the others.
The clusters of pure white flowers are rather smaller than those of the other species and the fruit is dark blue covered with a glaucous bloom and remains on the branches until the beginning of winter. This is the common Viburnum of the middle states, only reaching New England in southwestern Connecticut. It is perfectly hardy in the Arborétum, however, and is the earliest of the arborescent species to flower here. The common northern arborescent species, *V. Lentago*, the Sheepberry or Nannyberry, has broad lustrous leaves and large clusters of creamy white flowers which are followed by sweet and rather juicy, nearly black or dark blue fruits. It is a common northern tree or treelike shrub often twenty or thirty feet tall, and just now is conspicuous in many parts of the Arboretum. The third arborescent species, *V. rufidulum*, is perhaps the most beautiful of all the Viburnums. This is a southern tree which does not grow naturally further north than southern Virginia and southern Illinois, and in the south is a tree often forty feet high with a tall trunk and wide-spreading branches forming a symmetrical, round-topped head. The leaves are thick, dark green and more lustrous than those of other deciduous-leaved Viburnums. The flowers are pure white and are borne in broad, flat-topped clusters, and the fruit is bright blue and covered with a glaucous bloom. It can be distinguished from the other species by the rust brown covering of hairs on the margins of the leaf-stalks, branches of the flower-clusters and winter-buds. Long an inhabitant of the Arboretum, where even in most sheltered positions it is only a shrub, it probably will never become arborescent in habit here. The best specimen can be seen on Hickory Path near Centre Street. Of the shrubby American species now in bloom mention may be made of *V. pubescens*, a plant with small pointed leaves and small, compact clusters of white flowers which are followed by shining black fruits. There is a large compact group of this plant on the right hand side of the Bussey Hill Road opposite the Lilac Group which is now covered with flowers. No other Viburnum blooms more profusely. In the same border are three Viburnums of the popular section of the genus in which the cluster of fertile flowers is surrounded by a ring of white sterile flowers. The handsomest of these plants is probably the European *V. Opulus*, the Guelder Rose. The flower-clusters are perhaps smaller than those of the other species, but the plant grows to a larger size and is more compact in habit, and the fruit is larger and of a deeper color. The Snowball of old-fashioned gardens is a form of this species in which all the flowers are sterile (var. sterile). There is a form with yellow fruit (var. *xanthocarpum*) and a dwarf form (var. *nanum*), which is a small compact bush which rarely flowers. *V. americanum* is a plant of looser habit, with translucent orange-red fruit which hangs on the branches until early spring. The species of northeastern Asia, *V. Sargentii*, has larger sterile flowers than the other species and is decidedly a handsome plant. These Viburnums are all flowering in the Viburnum Collection on the Bussey Hill Road where many of the Asiatic species are also now in bloom.

**Viburnums of Western Asia.** It is now possible to judge of the value of most of the deciduous-leaved species of China and Japan as garden plants for the northern states as nearly all of them are well established in the Arboretum. Generally they are less valuable here than the spe-
cies of eastern North America. This statement is of course a general one, for among the Asiatic species are several plants of ornamental value. The species of the Opulus Group, the sterile flowers of which form a ring of inflorescence, are larger on V. Sargenti, the Asiatic representative, than on the American and European species and as a flowering plant is the handsomest of the three. The Korean V. Carl-esii, which has been described in an earlier issue of these Bulletins, is a small shrub with no particular beauty of habit or foliage, but has few rivals in the beauty of its fragrant flowers. The handsomest, however, of all the Asiatic Viburnums is V. tomentosum, a native of both Japan and western China. In Japan it grows to the size of a small tree, but in this country it is a large shrub with wide-spreading horizontal branches on the upper side of which the flat flower-clusters are thickly placed and are surrounded by a ring of pure white ray flowers. The fruit when fully grown is bright scarlet but becomes black at maturity. This is certainly one of the handsomest of the shrubs which has been brought from eastern Asia into this country. There is a Japanese form in the collection with narrower leaves (var. lanceolatum), and two Snowball forms. The more common of these is a large, vigorous and hardy shrub which is covered every year with small compact heads of white sterile flowers. In nursery catalogues it usually appears as V. plicatum but the correct name is V. tomentosum var. dilatatum. The other Japanese Snowball is a dwarf plant and blooms here about two weeks earlier than V. plicatum, and the correct name for it is V. tomentosum var. dilatatum, forma rotundifolium. The Chinese Snowball, V. macrocephalum, forma sterile, has pure white sterile flowers in larger heads than those of the other Snowballs. V. Sieboldii, a native of Japan, is a treelike shrub or small tree which sometimes grows to a height of thirty feet. It has light green, lustrous leaves round and broadest at the apex, with prominent veins, and when pressed a disagreeable odor. The flowers are produced in large clusters and the fruit, like that of V. tomentosum, turns from bright red to black after it is fully grown. V. Sieboldii is a fast-growing and perfectly hardy plant, and is one of the best of the Asiatic Viburnums in this climate. A handsomer plant, however, is V. dilatatatum which is widely distributed in Japan and grows also in Korea and western China. It is a large and shapely shrub with broad flat clusters of perfect flowers which are followed by large clusters of small bright red fruits which make it a desirable plant for the decoration of autumn gardens. This is one of the last of the Asiatic species to flower in the Arboretum and will soon be covered with its handsome flower clusters. V. burejascicum from eastern Siberia and V. erosum, a native of Japan and Korea, are also well established here but have little to recommend them as garden plants; and this is true of the six or seven species from western China discovered by Wilson which are hardy here. The best of them, perhaps, is V. theiferum, a stout and vigorous narrow shrub with erect stems, small flower clusters and red fruits. From an infusion of the leaves the "sweet tea" used by the monks in the monasteries on Mt. Omei, one of the five sacred mountains of China, is prepared. Of the western Chinese species V. Veitchii has perhaps the handsomest foliage which resembles that of the Traveler's Tree, V. Lantana, and retains its bright green color and does not fall until after that of all other Viburnums. V. furcatum from Japan and Korea is
Closely related and resembles the North American Hobblebush or Moosewood, *V. alnifolium*, often called *V. lantanoides*.

*Cornus kousa* is a small tree which enlivens the forests of eastern Asia as *C. florida* enlivens those of eastern North America and *C. Nuttallii* those of western North America. These three species have the large white or creamy white bracts under the flower clusters which make the inflorescence so conspicuous, but the Asiatic tree differs from the American trees by the union of the fruit into a globose fleshy head while the fruits of the American trees are not united. This Asiatic species rarely exceeds twenty feet in height and the floral bracts are narrower, more pointed and not as pure white as those of the American trees. This native of central Japan is valuable, however, because it flowers three or four weeks later than *C. florida*. The best specimen in the Arboretum is flowering on the right hand side of the Centre Street Path and was raised from seeds produced in H. S. Hunnewell’s garden at Wellesley. A handsome tree is the Chinese form discovered by Wilson on the mountains of Hupeh in western China. The bracts under the flower clusters are broader than those of the Japanese form and overlap below the middle so that they form, like those of the American species, a cup on the end of a branch. This form is rare in cultivation, and the specimen among the Chinese plants at the base of Bussey Hill is probably the only large one in this country. It ripens a few seeds so that in time it may become valuable for general cultivation. It is interesting that in Massachusetts the Chinese and Japanese Flowering Dogwoods are hardier than the native species as the western American species cannot be grown here at all and the eastern species, *C. florida*, loses many of its flower-bracts in severe winters, and is often killed or injured here by extreme cold.

*Dipelta floribunda*, a shrub of the Honeysuckle Family, in habit not unlike some of the Diervillas, planted on Bussey Hill has not before flowered so well in the Arboretum. Seeds of this plant were first sent by Wilson to the Veitch Nursery in London in 1905 and a plant was presented to the Arboretum. This plant did not live here and the one now in bloom is one of those raised from the seed sent direct to the Arboretum by Wilson from China in 1910. This was killed to the ground during the winter of 1917; it produced shoots during the following summer and is now flowering profusely. Under favorable conditions plants sometimes grow from ten to sixteen feet high, with long, rather slender, at first puberulous branches with internodes generally shorter than the leaves. The leaves are opposite, without stipules, short-stemmed, thin, deciduous, lanceolate, ovate-lanceolate or oval, from two to four inches in length, acute or acuminate, rounded or cuneate at base, at first puberulous but soon glabrescent and rather paler below than above. The flowers, which are arranged in axillary tufts on short peduncles two-leaved and from three to six-flowered, are borne on slender, short, puberulous pedicels. The corolla, which is two-lipped and about an inch and a quarter in length, is pale rose color, tubular-inflated, the tube narrowed below the middle and cylindrical; the lobes are nearly equal, round-oblong and spreading, the lower lip marked with orange lines.