Summer Flowering Trees. Several trees with handsome or interesting flowers bloom in the Arboretum in July and August. All these and many summer flowering shrubs should find a place in gardens which are chiefly used during July, August and September, that is in many northern seashore gardens. The most important of summer flowering trees here are the Lindens. Some of the species begin to flower about the middle of June, but in the Arboretum collection are Linden trees which are covered until the end of July with their beautiful fragrant flowers beloved of bees. In the meadow on the right-hand side of the Meadow Road there is a large collection of these trees with many species, hybrids and varieties. Among them are trees of great beauty of habit, and trees which can be successfully used in New England to shade streets and roads and to decorate parks. A careful study of the Linden collection in the Arboretum during June and July will repay lovers and planters of trees.

Koelreuteria paniculata. This Chinese tree will be in bloom when this number of the Bulletin reaches its readers. It can be seen on the right-hand side of the Meadow Road beyond the Evonymus Collection. Koelreuteria is a medium-sized tree with large, dark green compound leaves and large erect clusters of bright yellow flowers which are followed by conspicuous bladder-like fruits. This tree is now often planted in this country, especially in the middle states. In nursery catalogues it often appears as "The Japanese Lacquer-Tree," an absurd name, for it is not a Japanese tree and it does not produce lacquer.
The Aralia Family furnishes the Arboretum with three handsome trees which flower in late summer and early autumn. They are *Acanthopanax ricinifolium*, *Aralia spinosa* and *A. chinensis* and its varieties. The Acanthopanax is a tree which is common in the forests of northern Japan, Korea and China where it is often seventy or eighty feet high with a massive trunk and great wide-spreading branches armed, like the stems of young trees, with many stout prickles. The leaves hang down on long stalks and are nearly circular, five- or seven-lobed and often fifteen or sixteen inches in diameter. The small white flowers are produced in compact, long-stalked clusters which form a flat compound, terminal panicle from twelve to eighteen inches across and are followed late in the autumn by shining black fruits which do not fall until after the beginning of winter. This tree is perfectly hardy in the Arboretum where it has been growing for twenty-four years and where it has flowered and ripened its seeds now for several seasons. It is one of the most interesting trees in the collection and, because it is so unlike other trees of the northern hemisphere, it is often said to resemble a tree of the tropics. *Aralia spinosa*, the so-called Hercules' Club of the southern states where it is a common inhabitant of the borders of woods and the banks of streams, is a tree often thirty feet high with a tall trunk and wide-spreading branches covered with stout orange-colored prickles. The leaves, which are borne at the ends of the branches, are long-stalked, twice pinnate, and from three to four feet long and two and one-half feet wide. The small white flowers are arranged in compound clusters which rise singly or two or three together above the leaves and are three or four feet long. The fruit is black, rather less than a quarter of an inch in diameter, and ripens in early autumn. It is now well established on the slope at the northern base of Hemlock Hill in the rear of the Laurel plantation and is now spreading rapidly there over a considerable area by shoots from underground stems. The Asiatic tree *Aralia* resembles in habit and general appearance the American Hercules' Club, but is distinct from that tree in the absence of stalks to the leaflets. There are a number of geographical forms of this tree; the one which is most commonly cultivated in this country is a native of Manchuria and eastern Siberia (var. *mandshurica*) which is sometimes found in nurseries under the name of *Dimorphanthus mandshuricus*. The Japanese form (var. *glabrescens*) is chiefly distinguished from it by the pale color of the under surface of the leaflets; it is less hardy than the Manchurian form and is not often seen in this country.

*Sophora japonica*, sometimes called the Pagoda-tree, is in spite of its name a Chinese tree which has been cultivated in Japan for more than a thousand years, and as it first reached Europe from that country was long considered a native of Japan. It is a round-headed tree which in Peking, where it has been much planted, has grown to a large size and looks from a distance like an Oak-tree. The leaves and branchlets are dark green, and the small, creamy white, pea-shaped flowers, which open here in August, are produced in great numbers in narrow, erect, terminal clusters. There are also in the collection the form with long pendent branches (var. *pendula*) which rarely flowers, and a young plant of the form with erect branches (var. *pyramidalis*).
Oxydendrum arboreum, the Sour Wood or Sorrel-tree, so-called from the acrid taste of the leaves, is the only American tree in the Arboretum which flowers in August. It is a native of the Appalachian forests from southwestern Pennsylvania and is most common on mountain slopes, but reaches the coast of Virginia and North Carolina. The Sorrel-tree, which is perfectly hardy in New England, is a beautiful tree with bright green shining leaves which turn bright scarlet in the autumn, white Andromeda-like flowers erect on the branches of spreading or slightly drooping terminal clusters, and pale capsular fruits which in the autumn are conspicuous among the brilliant leaves. There is a group of these trees among the Laurels at the base of Hemlock Hill.

Summer Flowering Shrubs. Many shrubs with conspicuous flowers bloom in the Arboretum during the summer months. The list includes the Heathers (Calluna vulgaris), and several species of Genista and Cytisus. Of this European group the handsomest which can be grown here is the bright yellow-flowered Cytisus nigricans, the yellow-flowered C. capitatus, the white-flowered C. leucanthus and the yellow-flowered Woad Wax and its varieties (Genista tinctoria), too well known in Essex County, Massachusetts, where escaped from cultivation it has ruined many hundred acres of hillside pastures. The Lespedezas with their abundant purple, pea-shaped flowers, and the handsomest of the Chinese Buddleias are still to bloom, as is the very hardy Acanthopanax sessiliflorum, a vigorous shrub of eastern Siberia, most conspicuous in winter when the compact round clusters of the shining black fruits are on the ends of the branches. The Japanese Hydrangea paniculata and its varieties, and the Hydrangeas of North America produce here the showiest July and August flowers. The early-flowered forms of Hydrangea paniculata (var. praecox) which is the handsomest of the group, is already in flower; and all the American species are blooming or just opening their flower-buds. The most popular of these American plants is the form of H. arborescens (var. grandiflora) with snow-ball-like heads of white sterile flowers. There is a similar abnormal form of another of the American species, H. cinerea. More beautiful, and one of the handsomest of the genus, H. quercifolia will flower this month in the Shrub Collection. This is an unusual event for this shrub, which is a native of the southern states, is frequently killed to the ground here. In the middle and southern states it is an important and valued garden ornament. Of the American Hydrangeas which are perfectly hardy in the north the handsomest is H. radiata, a native of mountain slopes in North and South Carolina, once a popular garden plant but now rarely cultivated. It is a broad, round-topped shrub with leaves of ample size, dark green above and silvery white below, and broad flat heads of flowers surrounded by a ring of white neutral flowers.

Amorpha canescens, the Lead Plant, is beginning to open its small, violet-colored flowers arranged in long, narrow clustered spikes, which are conspicuous by the contrast with the color of the leaves and branches and are thickly covered white gray down. This plant is a native of the Mississippi valley where it grows on low prairies from Indiana and Minnesota to Texas.
Aesculus parviflora occupies an important place among summer flowering shrubs. This native of the southeastern states is hardy in the north, and with abundant space and in good soil will spread into great thickets with stems seven or eight feet high. Toward the end of July it will be covered with its tall, narrow, erect spikes of small white flowers which stand up well above the foliage.

Cornus paucinervis suffered somewhat in the cold winter of 1917-18, as was to have been expected, as it grows naturally at low levels in central China where the Orange flourishes and rarely ascends to altitudes of three thousand feet. It has recovered, however, and is now in flower. If it were a little hardier it would be one of the best summer flowering shrubs introduced by Wilson from China. It is a shrub five or six feet tall with erect stems, small, narrow, pointed leaves with only two or three pairs of prominent veins, small clusters of white flowers and black fruits.

July Roses. July is the month when the hybrid Rambler Roses bloom, especially those which have been largely influenced by the Japanese Rosa Wichuraiana, but in the Arboretum collection there are only four species which do not begin to flower until after the first of July. These in the order of the opening of their flowers this year are R. stellata, R. Jackii, R. setigera and R. Wichuraiana. R. stellata, which is a native of the mountains of southern New Mexico, is a comparatively new inhabitant of gardens, and one of the most interesting and distinct of American Roses. It is a shrub with slender, pale yellow stems armed with long slender spines of the same color, small leaves with thick, round, lustrous leaflets, which generally resemble the leaves of some western Gooseberry, and deep rose-colored, slightly cup-shaped flowers from two inches and a half to three inches in diameter. The fruit is dark red, nearly globose, covered with prickles, half an inch in diameter, and surmounted by the much enlarged calyx-lobes. Rosa Jackii, which is a native of Korea, and one of the Multiflorae Group, has long stems which lie nearly flat on the ground, lustrous leaves and pure white clustered flowers rather more than two inches in diameter. The flowers are larger than those of the Japanese R. multiflora, and open two or three weeks later. The Prairie Rose, R. setigera, is well known to the inhabitants of the middle states for it is a common prairie inhabitant from Michigan to Texas. It produces long slender stems which can be trained over an arbor or against a building, but this Rose looks best when allowed to grow naturally when it forms a wide bush of gracefully arching stems. The flowers are produced in wide, many-flowered clusters and are light rose pink. This is usually the last Rose to open its flowers in the Arboretum, but this year Rosa Wichuraiana is several days late. Its long prostrate stems are well suited to clothe banks which when the flowers open look as if they had been covered with snow. Grown in this natural way it is perfectly hardy, but when the stems are trained over an arbor or trellis they often suffer in New England from cold; and its hybrids, among which are found some of the most beautiful Rambler Roses, are less hardy here than those in which Rosa multiflora has been one of the parents.