Summer Flowering Trees. After the flowers of the Linden trees have mostly passed those of a few other trees add to the interest of the Arboretum in the last weeks of July and in August.

**Koelreuteria paniculata** is the first of these summer-flowering trees to bloom. It is a round-topped tree from 30 to 40 feet high with long compound dark green leaves and great erect clusters of golden yellow flowers which are followed by bladder-like pale fruits. This tree, which is a native of northern China and an old inhabitant of American gardens, is quite hardy in eastern Massachusetts, but has been more often planted in the Middle States than in New England. In American trade catalogues it usually appears as “the Japanese Lacquer tree” although it is not a Japanese tree and does not yield lacquer or anything else but beauty. The trees in the Arboretum are on the right hand side of the Meadow Road. There is a handsome specimen near the northwest corner of the Public Garden in Boston.

**Maackias** are small summer flowering trees of the Pea-family with short erect spikes of small white flowers. The flowers of the best known of these trees, *M. amurensis*, from eastern Siberia have already faded but the variety *Buergeri* from northern Japan differing in the presence of a coat of soft down on the lower surface of the leaves, flowers a week or ten days later than the Siberian tree and is now in bloom. What promises to be a handsomer tree here than either of these is the still little known species from western China, *M. chinensia*, which first flowered in the Arboretum five years ago when it was called *M.*
hupehensis; this year it will be covered with flowers toward the end of the month. A Maackia from Korea, *M. Faurei*, is in the collection but has not flowered here.

**Sophora japonica**, which is growing near the Maackias on the right hand side of the Bussey Hill Road, is covered with flower-buds which will open in the course of the next few weeks. This is a Chinese tree in spite of its name which has been cultivated in Japan for more than a thousand years, but which as it first reached Europe from Japan was supposed to be a native of that country and so received a misleading name. The bark of the young branches and the leaves are dark green and the small white pea-shaped flowers which open here in August are produced in great numbers in narrow, erect terminal clusters. This Sophora has a trunk covered with rough pale bark and the old trees in the streets and squares of Peking where it has been much planted look from a distance like great Oak-trees. There are in the Arboretum collection in addition to the type the form with long pendant branches (var. *pendula*) a favorite, although it rarely if ever flowers, with those who fancy trees of abnormal growth. There are also in the collection young specimens of the tree with erect branches (var. *pyramidalis*) and of the form (var. *rosea*) on which the flowers are slightly tinged with rose color. There is a handsome tree of *Sophora japonica* near the northwest corner of the Boston Public Garden, and a much larger one in Roslyn, Long Island.

The **Aralia Family** furnishes the Arboretum with three summer flowering trees, *Acanthopanax rivicifolium*, *Aralia spinosa*, and *Aralia chinensis*. The Acanthopanax is a tree which is common in the forests of northern Japan and Korea 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 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 thirty 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 spreading rapidly there over a considerable area by shoots from underground stems. The Asiatic tree Aralia resembles in 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 commercial 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.

Oxydendrum arboreum, or as it is often called the Sorrel-tree or the Sour Wood, is with the exception of the Hercules' Club the only North American tree hardy in the Arboretum which does not begin to flower before the middle of July. It is a native of the southern Appalachian mountain forests and the only tree of the Heath Family which can be grown in this climate, with the exception of the Laurel (Kalmia latifolia) and the Rose Bay (Rhododendron maximum) which are shrubs at the north and only exceptionally trees in a few favored valleys of the southern mountains. The Sorrel-tree in its native forests grows fifty or sixty feet high, but at the north as it begins to flower abundantly when only a few feet tall, it is not probable that in this climate it will ever attain a considerable size. It is well worth growing, for its bright green shining leaves which have a pleasant acidulous flavor and in autumn turn bright scarlet, for its white Andromeda-like flowers erect on the branches of spreading or slightly drooping terminal clusters, and for its pale fruits which in the autumn are conspicuous among the brilliant leaves. There is a group of these plants among the Laurels at the northern base of Hemlock Hill which will flower at the end of July or early in August.

Stewartia pseudo-camellia is another summer flowering tree. It was one of the early plants which come direct to the United States from Japan, and before 1870 was distributed from the Parsons Nursery at Flushing, Long Island. It produces in August its pure white, cup-shaped flowers, which resemble those of a single Camellia; the autumn color of the leaves is dark bronze purple, distinct from that of any other plant in the Arboretum and handsome and interesting; the smooth pale gray bark which separates in large pale plates adds, too, to the interest of this tree. There are two specimens on the upper side of Azalea Path.

Evodias are handsome little trees which also flower here after midsummer. They belong to the Rue family, and are widely distributed in eastern Asia and occur also in Australia and Madagascar. The species have pinnate leaves, white or pinkish unisexual flowers in small clusters terminal on the shoots of the year, and dry, capsular fruit. Like the Phellodendrons, to which Evodia is related, they are protected from the attacks of insects by the pungent aromatic oil with which the leaves abound. Evodia has been growing in the Arboretum since 1905 when Professor Jack brought the seeds of E. Danielli from Korea.
This handsome tree has flowered now for several years in the Arboretum. *E. Henryi*, a common inhabitant of western Hupeh where Wilson found it growing to a larger size than the other Chinese species of this genus, is also established and flowers in the Arboretum.

**Summer Flowering Shrubs.** Many handsome shrubs which can be grown successfully in this climate do not bloom till after midsummer. There are few Americans who have travelled in Scotland in summer who have not been impressed by the beauty of the Heather (*Calluna vulgaris*) or have not felt the desire to introduce it to their homes. The Heather, however, has remained a comparatively rare plant here although it is hardy and easy to grow in nearly all parts of the northern states and eastern Canada where the soil is not impregnated with lime. In one or two places in northern Massachusetts and in Nova Scotia it has become completely naturalized, and on one New England estate where it was planted only a few years ago it is spreading rapidly over large areas. Heather should be planted in well drained sandy soil in situations exposed to the sun, and the plants look better and flower better if the stems are cut down close to the ground in early spring. This prevents a straggling growth and insures a better bloom. There are a number of handsome and interesting varieties of the Heather in the Arboretum collection. Some of the best of these are the variety *alba* with white flowers; the variety *alba minor*, a plant of dwarfer habit than the last; var. *rubra*, a dwarf compact variety with crimson flowers, and one of the earliest to flower and one of the handsomest of the set; var. *tomentosa*, a compact plant with gray-green foliage and red flowers; var. *alba Serlei*, a tall growing form with white flowers; vars. *alba tenella* and *alba rigida* with white flowers; var. *Alportii*, a tall growing form with crimson flowers; and var. *hynoïdes*, a very compact, small-leaved plant producing only sparingly its small purple flowers. These plants can be seen in the Shrub Collection; quantities of Heather have also been planted on the side of the Valley Road.

Among other shrubs still to flower in the Arboretum are *Aesculus parviflora*, from the southeastern United States, and the North American and Japanese Clethras or Spice-bushes. North American and Japanese Hydrangeas, many Spiraeas, Hypericums, Callicarpas, Lespedezas with their abundant purple flowers, and the Chinese Buddleias will later give interest to the Shrub Collection, in which the silver leaved Lead plant (*Amorpha canescens*) of the western plains and prairies has not yet opened its showy blue-purple flowers.

Perhaps the most generally planted shrub in the United States among those which bloom in summer is the form of the Japanese *Hydrangea paniculata* (var. *grandiflora*), in which the whole inflorescence is composed of sterile white ray flowers which surround the inflorescence of the normal form of many other *Hydrangeas*. This abnormal inflorescence is oblong, bluntly-pointed, and often a foot or more in length and so heavy that the slender stems are often not able to support it. The flowers, which are white when they open, turn to a rather dirty red color; and it is not easy to find an uglier garden shrub.

These Bulletins will now be discontinued until the autumn.