Catalpas are trees of the Bignonia Family and grow naturally only in eastern North America, the West Indies and northern and central China. They all have large simple leaves, and large terminal clusters of two-lipped flowers followed by long slender pods containing many thin seeds furnished at the ends with long tufts of pale hairs. All the Catalpas and one or two of their hybrids are growing in the Arboretum with the exception of the species from the West Indies. The first Catalpa, *C. bignonioides*, which attracted the attention of botanists and gardeners was sent from South Carolina to England early in the eighteenth century. This for a long time was the only American species cultivated in Europe or the United States, but forty or fifty years ago it became known that another species grew in the valley of the Ohio River and along the Mississippi River as far south as western Tennessee and northeastern Arkansas. To this Catalpa the name *speciosa* has been well given as it is now known to be the largest, the fastest growing, the hardiest and the handsomest of all Catalpa-trees. It is the earliest of all the species, too, to bloom, and it is now covered with flowers which are larger than those of the other species. On the rich alluvial bottom lands of the Mississippi River this tree has often grown to the height of one hundred and twenty feet and formed a trunk four and a half feet in diameter. In New England it will never grow to that size, but although it was introduced into the eastern states less than fifty years ago trees in eastern Massachusetts are already fully forty feet high and have been flowering and ripening their seeds for many years. Catalpas produce soft wood which is remarkably durable when placed in contact with the soil, and in some of
the middle western states large plantings of *Catalpa speciosa* were made forty or fifty years ago to furnish fence posts and railway ties. Unfortunately the friends of *Catalpa speciosa* put too high a value on the wood of this tree and less is heard of it now than formerly as a timber tree. Of the remarkable durability of the wood when placed in contact with the soil there can be no question; and no tree with perhaps the exception of the Locust (*Robinia*) which is hardy in the northern states can produce as good fence posts in as short a time, and unlike the Locust it is not attacked by borers which too often ruin that tree, but the wood has proved too soft for railway ties and it is no longer planted to supply them. The other American species, *Catalpa bignonioides*, probably originated somewhere in the southeastern part of the country, but it has been so spread by escapes from planted trees that it is no longer possible to determine the location of its first home. It was for many years one of the common planted trees in the middle and southern states, and specimens are still occasionally seen in southern New England. Now, however, when one wants to plant a Catalpa-tree in this country he finds in nurseries only *C. speciosa*. The more southern species is a smaller tree with shorter-pointed leaves; it grows less rapidly and blooms two or three weeks later than the northern species. The flowers are smaller, in shorter and more compact clusters, and the pods are smaller with thicker walls. There is a dwarf form of *Catalpa bignonioides* (var. *nana*) which grafted on the stem of one of the tree Catalpas has in recent years been largely planted in this country for the supposed decoration of gardens which are more or less formal in character. It is not known where the dwarf plant originated, and if it has ever flowered the fact is not known at the Arboretum. The fact that it is universally sold in American nurseries under the name of *Catalpa Bungei* causes confusion for that name properly belongs to a tree from northern China. This Chinese tree has narrow, long-pointed dark green leaves, small yellowish flowers and small pods. It has been growing in the Arboretum since 1904, and was perfectly hardy until the winter of 1916-17 when one of the trees was killed to the ground and others were more or less injured. They have now recovered, but this Catalpa has not yet flowered in the Arboretum. Compared with the American species it has no value as an ornamental tree. Another Chinese species, *Catalpa ovata*, was sent many years ago to this country from Japan where it has long been cultivated. It is a small tree with comparatively small, dark green leaves, many-flowered clusters of small, yellowish spotted flowers, and slender pods. This tree, which will grow in regions too cold for the American species, has been somewhat planted in the United States, although as an ornamental tree it does not have much to recommend it. In this country it has proved most valuable as one of the parents of the natural hybrid, *Catalpa hybrida*, which appeared several years ago in the Teas Nursery at Baysville, Indiana, and is often called *C. Teasii* and “Teas’ Hybrid Catalpa.” This is a fast-growing and hardy tree with flowers like those of *C. bignonioides*, the American parent, although smaller but in larger clusters, and leaves in shape resembling those of *C. ovata*. The two species introduced by Wilson from central China, *Catalpa Duclouzii* and *C. Fargesii*, are still living but give little promise of ever becoming valuable additions to the number of summer-flowering
trees which can be successfully used for the decoration of New England gardens.

**Late Magnolias.** All the North American species of Magnolias are hardy and can be easily grown in Massachusetts with the exception of *Magnolia pyramidata*, a rare and local shrub or small tree of southern Georgia, western Florida and southeastern Alabama, and the evergreen *M. grandiflora*. The first of the hardy Magnolias, *M. Fraserti*, opened its large pale yellow flowers as the leaves were unfolding. This was followed by *M. acuminata* and *M. cordata* which also flower as the leaves open; the Umbrella Tree, *M. tripetala*, was in flower early in June. The last of these trees to flower are *Magnolia virginiana*, better known as *M. glauca*, and *M. macrophylla*.

*Magnolia virginiana*. In all North America there is not a more satisfactory shrub or small tree to plant in a garden or one that will give a larger return in beauty and fragrance. The leaves are dark green and very lustrous on the upper surface and silvery white on the lower surface. The flowers, which are smaller than those of the other American Magnolias, and continue to open here from the middle of June until August, are cup-shaped, creamy white and emit a pungent fragrance which in the evening fills the air for a long distance from the plant. At the north *M. virginiana*, which has bright green glabrous branchlets, rarely grows thirty feet in height but in the Gulf States the variety *australis* is a large tree occasionally nearly a hundred feet high with branchlets thickly covered with matted white hairs and leaves which remain bright and green during the winter and fall in spring. In spite of its beauty and value as a garden plant *Magnolia virginiana* appears to be little known or appreciated by American gardeners of the present generation due perhaps to the fact that it is difficult to find it at least in any quantity in American nurseries. A hybrid of this tree and the Umbrella Tree (*M. tripetala*), known as *M. major* or *Thompsoniana*, has the general appearance of *M. virginiana* but the leaves are larger and the flowers are larger and whiter but equally fragrant.

*Magnolia macrophylla* is the last of the Magnolias to flower in the Arboretum. A native of the southern States it is perfectly hardy in Massachusetts, where it has sometimes grown to a height of from twenty to thirty feet and formed a wide round-topped head of branches spreading at nearly right angles to the trunk. This Magnolia is distinguished by the fact that it has the largest leaves and the largest flowers of any tree growing in any part of the world beyond the tropics. The leaves are silvery white on the lower surface and are from twenty to thirty inches in length and eight or nine inches in width. The expanded flowers are often a foot in diameter. Although perfectly hardy here *Magnolia macrophylla* is best planted in a position sheltered from the wind which often badly tears the large and delicate leaves.

Robinia Hartwigii, one of the shrubby Locusts from the high Appalachian Mountains of North Carolina is now in flower in the collection of these plants on the right hand side of the Meadow Road. It is a tall vigorous shrub with leaves composed usually of nineteen short-
stalked, oblong-ovate, acute, slightly hairy leaflets, gradually narrowed and rounded at base, bright green above and pale below. The branchlets of this shrub, the leaf stalks, the stem of the flower-clusters and the calyx of the flowers are thickly covered with gland bearing hairs. The flowers are arranged in erect axillary racemes shorter than the leaves, and are interesting from the contrast between the pure white petals and the dull red calyx. This tall shrub differs chiefly from the arborescent *R. viscosa* in habit and in the less viscid secretions from the glands which are common to the two plants; and it is not improbable that when better known, they may prove to be varieties of one species. Whatever its specific rank, *R. Hartwigii* is an attractive and useful addition to the hardy shrubs which flower here at the end of June.

**Cornus Amomum**, the Silky Cornel, is just beginning to open its flower-buds. In cultivation it is not a satisfactory plant unless it can be given sufficient room for its wide-spreading branches to extend freely and spread over the ground. When crowded by other plants the branches become erect and it loses its real beauty and value. To be seen at its best this Cornel should have a clear space with a diameter of not less than twenty feet in which to spread. It is well suited for the front of groups of trees and shrubs, and there is no better shrub to plant by the margins of ponds and streams where its long branches can hang gracefully over the water. Its purple stems are attractive in winter, and the bright blue fruits which ripen in the autumn add to the value of this native shrub. In the Cornel Group, at the junction of the Meadow and Bussey Hill Roads, there is a good specimen of this plant, and its value for planting near water can be seen on the borders of the small pond in the rear of the Cornel Group.

**Cornus alternifolia** is also in flower. It is a tree growing sometimes to the height of thirty feet with long branches spreading at right angles from the stem, from which rise lateral branchlets bearing the terminal flower clusters. The distinctive character of this Cornus is found in the alternate leaves, the leaves of the other American species being opposite. The handsome blue or rarely yellow fruit ripens in October. *Cornus alternifolia* has always proved difficult to transplant and for a long time was not well represented in the Arboretum, but there are now several healthy plants growing on the slope at the right hand side of the Roslindale entrance. There is also a plant which has grown spontaneously at the eastern base of the hill on which the Juniper collection is established. The Cornus from eastern Asia, *Cornus controversa*, is another species with alternate leaves and with spreading branches. It is a larger and handsomer tree than its American relative with larger flower-clusters. In western China it sometimes grows to the height of sixty feet and now promises to grow to a large size here and to become one of the important trees introduced by the Arboretum into the United States. This Cornel flowers here at the end of May or early in June.