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 southward 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 it comes in contact with the soil, and in some of the middle western states large plantings of Catalpa speciosa have been made to supply fence-posts, for which the wood is admirably
suited, and for railway ties for which it has proved too soft. 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 eastern 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 Duclozii* 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.

**Some good shrubs.** Although notes are published year after year in these Bulletins about new or little known shrubs as they flower, the Arboretum is constantly asked for lists of the best new shrubs for northern gardens; and in response to this request it now submits another list of comparatively new plants. The plants in this list are hardy in southern New England and the middle states. The two Rhododendrons, however, cannot be grown in soil impregnated with lime. Several of these plants cannot, unfortunately, be found in American nurseries; they
are, however, easily propagated and a demand for them will in time produce a supply. The list contains the names of eighteen of "the best" new shrubs; it might easily be increased to a hundred for there is a large number of new or little known shrubs now growing in the Arboretum which American garden-makers unfortunately neglect. The plants selected today are:— *Hammamelis mollis*, *Prinsepia sinensis*, *Corylopsis Gotoana*, *Amelanchier grandiflora*, *Forsythia intermedia spectabilis*, *Cotoneaster hupehensis*, *C. racemiflora soongorica*, *C. nitens*, *C. multiflora alacarpa*, *Rosa Hugonis*, *Neillia sinensis*, *Rhododendron Schlippenbachii*, *R. japonicum*, *Berberis Vernea*, *Syringa Swegincoli*., *Spiraea Veztchii*, *Philadelphus purpurascens*, and *Eryonymus planipes*.

Like the other Witch Hazels of eastern Asia, *Hammamelis mollis* blooms in the winter and the flowers are not injured by the severe cold to which they are subjected in the Arboretum. This plant has handsome foliage and larger and more brightly colored flowers than the other Witch Hazels, and is invaluable for the decoration of winter gardens. *Prinsepia sinensis* is considered here the best shrub the Arboretum has obtained from Manchuria. It is valuable for its perfect hardness, the fact that its dark green leaves unfold before those of any other shrub in the Arboretum, with the exception of those of a few Willows, and for its innumerable clear yellow flowers which open before the leaves are fully grown. The stems of this shrub are armed with stout spines and it should make a good hedge plant. *Corylopsis*, which is an Asiatic genus related to the Witch Hazels, has handsome yellow, early spring flowers in drooping clusters which appear before the leaves. There are several Japanese and Chinese species in the Arboretum but only the Japanese *C. Gotoana* has been uninjured here by the cold of recent years, and it is the only species which can be depended on to flower every year in a Massachusetts garden. The Forsythia of the list is still the handsomest of the varieties of *F. intermedia* which is the general name of the hybrids between *F. suspensa Fortunei* and *F. viridis*. This variety was raised in a German nursery and is the handsomest of all the Forsythias now known in gardens. *Amelanchier grandiflora* is believed to be a hybrid between the two arborescent species of the eastern United States, *A. canadensis* and *A. laevis*, and is by far the handsomest of the Amelanchiers in the large Arboréturn collection of these plants. It came here from Europe but what is believed to be the same hybrid has been found in several places in the eastern states. The four Cotoneasters in the list are perhaps the handsomest of the twenty odd species introduced by Wilson from western China. They are all large shrubs of graceful habit, and have white flowers and red fruits with the exception of *C. nitens* which has red flowers and black fruit. In recent years the Arboretum has made few more important introductions for American gardens than the Chinese Cotoneasters. Although no longer a "new plant" *Rosa Hugonis* is included in this list because it is not only the handsomest of the Roses discovered in China during the last quarter of a century, but in the judgment of many persons it is the most beautiful of all Roses with single flowers. Fortunately for American garden-makers the value of this Rose is appreciated by a few American nurserymen from whom it can now be obtained. The introduction of *Neillia sinensis* made it possible to add to the Arboretum collection a representative of
a genus of the Rose Family which had not before been cultivated in the Arboretum. There are now other species of Neillia grown here but some of them are not entirely hardy, and others have no particular value as garden plants. *Neillia sinensis*, however, has never been injured by cold, and with its drooping clusters of pink flowers is a handsome plant well worth a place in any garden. *Rhododendron (Azalea) Schlippencbachii* is one of the most important introductions of recent years. A native of northern Korea, it grows further north and in a colder country than any other Azaleas, with the exception of the Rhodora, and there can be little doubt that it can be grown successfully in the open ground much further north in the eastern United States than any of the other Asiatic Azaleas. It may be expected, too, to prove hardy further north than the American species with the exception of Rhodora. The large pale pink flowers of this Azalea, although less showy than those of a few of the other species, are more delicately beautiful than those of any of the Azaleas which have proved hardy in the Arboretum. There are a few plants of this Azalea large enough to flower in the United States, and many seedlings have been raised here and in Europe during the last two years. Until these are large enough to flower it will probably remain extremely rare. *Rhododendron (Azalea) japonicum* cannot be called a new plant for it has been growing in the Arboretum since 1893, but it is such a valuable plant and is still so little known or understood that it can perhaps properly find a place in a list like this. The large, orange or flame-colored flowers make it when in bloom one of the showiest of all the hardy Azaleas. *Berberis Vernae* has been mentioned in a recent number of these Bulletins; and it is only necessary to repeat what has already been said about it, that it is a hardy plant of exceptionally graceful habit among Barberries, with arching and drooping branches from which hang innumerable slender clusters of small yellow flowers followed by small red fruits. *Berberis Vernae* has proved the handsomest of the large number of Barberries with deciduous leaves found by Wilson in western China. Among the numerous species of Lilacs introduced into gardens from China during recent years *Syringa Sweginzowii* is considered the most beautiful by many persons. It is a tall shrub with slender erect stems which produce every year great quantities of pale rose-colored, fragrant flowers in long rather narrow clusters. It has the merit of being almost the last of the Lilacs in the Arboretum collection to bloom. *Spiraea Vettchii* has the merit, too, of being the last of the white-flowered Spiraeas to flower. It is a shrub already 6 or 8 feet tall in the Arboretum, with numerous slender stems and gracefully arching branches which about the first of July are covered from end to end with broad flower-clusters raised on slender erect stems. This Spiraea is one of the best of the hardy shrubs discovered by Wilson in western China, and by many persons it is considered the handsomest of the genus as it is now represented in the Arboretum. *Evonymus planipes* is a native of northern Japan and a large shrub with large dark green leaves and the inconspicuous flowers of the genus; and it is only on account of the beauty of its fruit that this plant is included in this list, for the fruit which hangs gracefully on long slender stems is large, crimson, very lustrous and more showy than that of any of the other Burning Bushes in the Arboretum.