American Azaleas. No other plants add more to the beauty of mountain slopes and forest glades in eastern North America than Azaleas, which are more abundant and more varied in the color of their flowers in the Appalachian region than in any other part of the world. Of the ten species found in the eastern United States seven are established in the Arboretum, and the others from the extreme south, although in the Arboretum nurseries, are too young to show their ability to withstand the rigors of the New England climate. All Azaleas are now called Rhododendrons. The first species to bloom, R. Vaseyi, begins to flower the beginning of May, and the flowers of the last, R. viscosum, can be found as late as the middle of July. The Azalea season is therefore a long one. R. Vaseyi is a tall shrub with slender stems and of open irregular habit; in its home in a few isolated mountain valleys in South Carolina it sometimes grows to the height of fifteen feet. The flowers are produced before the leaves appear, in small compact clusters, and are pure pink in color, plants with white flowers occasionally appearing. With R. Vaseyi the Rhodora (R. canadense) blooms. This is a well known dwarf shrub often covering in the north large areas of swampy land with a sheet of bloom. The small flowers, however, are of a rather unattractive rose-purple color. Naturally the Rhodora grows from Newfoundland to Pennsylvania and New Jersey. The next to bloom are R. canescens and R. nudiflorum, and although the two sometimes grow together the former is a northern and the latter a more southern plant, and is especially common in the Gulf States from eastern Florida to eastern Texas. The rosy pink flowers of these plants open before or with the unfolding of the leaves, and in early spring fill the woods with their beauty and fragrance.
These plants can now be seen in flower on Azalea Path and there is a mass of *R. canescens* on the Meadow Road in front of the Linden Group. *R. calendulaceum* is the next species to flower, and a few plants have already opened their orange, yellow or reddish flowers which are not fragrant. This shrub is an inhabitant of the mountain regions from southern New York to Georgia, and is extremely abundant on the lower slopes of the high mountains of North Carolina and Tennessee. In flower it is the most showy of the American Azaleas established in the Arboretum, and one of the most beautiful of all flowering shrubs. A large mass of this Azalea has been planted on the slope below Azalea Path, and occasionally large specimens can be seen on the border plantations along some of the roads. The next species to flower, *R. arborescens*, is also a native of the mountain region from Pennsylvania to Georgia where in sheltered valleys it sometimes grows from fifteen to eighteen feet tall. The flowers, which appear after the leaves are nearly fully grown, are white or faintly tinged with rose color, and are made conspicuous by the long bright red filaments of the stamens; they are very fragrant, and the young leaves have the odor of new mown grass. Less showy in the color of the flowers, perhaps, than the yellow-flowered Azalea, it is one of the most beautiful of all hardy Azaleas. The last species to flower, the Clammy Azalea or Swamp Honeysuckle, *R. viscosum*, is a common inhabitant of the swamps of the eastern states, especially of those in the neighborhood of the coast. The small flowers are pure white and covered with clammy hairs, and the leaves are often of a pale bluish color, especially on the lower surface. This plant is valuable for the lateness of its flowers which do not open before the flowers of most hardy shrubs have passed, and for their fragrance. These shrubs are all good garden plants although, like other Rhododendrons, they cannot be made to live in soil impregnated with lime. They are not often cultivated, however, because it is not easy to find them in nurseries, for few nurserymen in the United States care to take the time and trouble to raise such plants from seeds, the only successful way in which they can be propagated.

The new Chinese Cotoneasters. Of the shrubs introduced from western China by Wilson the most successful perhaps as garden plants belong to the Old World genus Cotoneaster. At least eighteen of these species are hardy in the Arboretum, and several of the plants have now grown large enough to show their habit, the beauty of their flowers and fruits, the brilliancy of their foliage and their ability to adapt themselves to the peculiarities of the New England climate. The most showy species now in flower are *C. multiflora* and its variety *calocarpa*, and *C. hupehensis*. *C. multiflora* is a tall shrub with slender, widely spreading, gracefully arching, bright chestnut brown stems and branches, dull pale gray leaves, white flowers half an inch in diameter borne along the whole length of the branches in compact clusters on short lateral twigs, and black fruits. *C. multiflora* is a widely distributed and common plant in southern Siberia and northern and western China, and has been in cultivation for several years. The variety, which has larger fruits, was discovered by Wilson near Sung-pan Ting
in the Minn valley. *C. hupehensis* is perhaps even more beautiful as a flowering plant than *C. multiflora*, for although the white flowers are smaller they are less covered by the smaller leaves. It is a large, wide-spreading shrub with very slender arching stems and branches which are now so covered with flowers that from a distance it is hard to realize that it is a Cotoneaster and not a Spiraea. The fruit is bright red and very beautiful. *C. foveolata* is a large vigorous plant with stout arching stems from six to ten feet high, large thin leaves dark green and lustrous above and pale below with prominent veins deeply impressed on the upper surface. The flowers are small, globose and red, in compact clusters, on stalks much shorter than the leaves by which they are a good deal hidden. The fruit is black and lustrous. The greatest beauty, perhaps, of this plant is in the autumn color of the leaves, for after the leaves of most American shrubs have fallen those of this Chinese Cotoneaster change to brilliant shades of orange and red. There are few more beautiful autumn plants in the Arboretum. Something like *C. foveolata* in the size and color of the flowers and in the shape of the smaller leaves is a variety of the north China *C. acutifolia* from the borders of Tibet (var. villosula) which is also in flower. This is a dwarfer and more compact shrub than *C. foveolata*, with black fruits and bright autumn colors. Another set of these plants is distinguished by small dark green leaves, small red flowers and red fruit. The best known of these, *C. horizontalis*, has been in cultivation now for several years and is not rare in European gardens. It is a low shrub with wide-spreading branchlets which when trained against a wall grow several feet tall, but untrained form a dense mat two or three feet high and sometimes six or eight feet in diameter. In this climate the leaves remain on the branches without change of color until early winter, but in milder climates do not fall until the spring. The best specimen of this handsome plant in the Arboretum is on Hickory Path near Centre Street. *C. dwaricata*, which is also in flower, is a larger plant with wide-spreading stems forming a rather open head, and bright red fruit. From this the related *C. nitens*, which is a smaller shrub, differs chiefly in its more compact habit and reddish black fruit. Distinct with prominent stems forming mats only a few inches high are *C. adpressa* and *C. microphylla*. These are useful little plants for the rock garden and for the edging of garden walks. Several of the Chinese Cotoneasters are in the general Shrub Collection and on Hickory Path, but the best specimens are in the Chinese Shrub Collection on the southern slope of Bussey Hill where these plants have been growing for four years in an exceedingly exposed position and without protection.

**Flowering Ashes.** This is the common name for a group of Ash trees (*Fraxinus*) with elongated white petals which make the flowers conspicuous. They are natives of southern and southeastern Europe, the Himalayas and western and northern China. A shrubby species, *F. dipetala*, is common in California, and two Mexican species extend into the territory of the United States, one in southern Texas and the other in Arizona where it ranges as far north as the rim of the Grand Cañon of the Colorado River. The type of the group, *Fraxinus*
Ornus, is a common tree in southern Europe, and is now in flower at the upper end of the Ash Group near the top of the eastern slope of Bussey Hill. Manna is the hardened sap of this and a related species. Another species of Flowering Ash, F. Bungeana, is also in flower near F. Ornus. This is an old inhabitant of the Arboretum and is an irregularly growing shrub ten or twelve feet high from the mountains near Peking. It flowers here regularly every year and produces large crops of seeds. The plant of a third species, Fraxinus Paxiana, will soon be in flower. This is one of Wilson's discoveries in western China and is flowering this year for the first time in America. It is a small tree remarkable for the large size of the nearly globose terminal winter-buds.

A new Diervilla. Among the plants brought from Korea a few years ago into the Arboretum by Mr. Jack is a form of Diervilla florida which has been named var. venusta. This is one of the handsomest of all Diervillas and one of the earliest to flower. It is very vigorous and every year completely covers itself before the leaves are half grown with large rosy pink flowers. Few of the shrubs introduced by the Arboretum in recent years give greater promise of usefulness and popularity in northern gardens. It is in the Shrub Collection, but the best plant in the Arboretum now in full bloom is on Hickory Path near the Pecan tree.

Bush Honeysuckles. For northern gardens there are no more beautiful shrubs than some of the Bush Honeysuckles, with their myriads of yellow, white, rose color or red flowers which in summer or autumn are followed by lustrous, usually scarlet fruits. Many of these shrubs are able to show their greatest beauty in this climate, but this can be obtained only by planting them in rich soil and with sufficient space for free growth in all directions. In poor soil and when crowded by other plants they are usually miserable objects. The large growing kinds like the different forms of L. tatarica, L. bella and its varieties with white and with rose-colored flowers and L. notha should be planted as isolated specimens at least twenty feet from any other plant. L. Morrowi, a plant of the Amoor region in eastern Siberia requires even more space, for its lower branches which cling close to the ground naturally spread over a great area. This shrub has gray-green foliage, comparatively large white flowers and bright red fruits. It is one of the most useful of the early introductions of the Arboretum into the United States and has been largely planted in the Boston parks. Like many other Bush Honeysuckles L. Morrowi hybridizes easily with other species, and most of the plants raised from seeds, now sold by American nurserymen as L. Morrowi are hybrids of that species with L. tatarica and are erect growing plants of little value for those who want plants with the peculiar habit of L. Morrowi. Among less vigorous growing plants attention is called to two hybrids of L. Korolkowi in the collection, L. amoena and L. Arnoldiana. These have small gray-green foliage and small, bright pink and very attractive flowers, and are hardly surpassed in grace and beauty by any honeysuckles in the collection.

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