Rhododendrons. More money has been wasted probably in this country during the last fifty or sixty years in attempting to cultivate broad-leaved evergreen Rhododendrons, for which with few exceptions the climate is not really suited, than on any other plants. Among hundreds of species which have been discovered chiefly in southeastern Asia only nine are hardy here in New England; these are the eastern American R. maximum, R. catawbiense, R. carolinianum, and R. minus, the Caucasian R. Smirnowii and R. caucasicum, at least in some of its forms. R. hirsutum and R. ferrugineum from the mountains of central Europe sometimes grow here for several years but are usually short-lived in this climate. The Japanese R. brachycarpum has lived in Massachusetts gardens but is no longer in the Arboretum.

The plants which have been chiefly planted in New England gardens are English-made hybrids, hundreds of thousands of which having been imported. They are hybrids of R. catawbiense, most of which are made tender by the blood of Indian species with high-colored flowers. Even the few varieties of these hybrids which have proved hardy in Massachusetts are short-lived and not very satisfactory probably from the fact that they are grafted almost universally on R. ponticum which is not hardy in this climate. Even the two hybrids raised in England between R. catawbiense and R. maximum, called R. delicatissimum and R. wellesleyanum, are not always satisfactory or long-lived owing probably to the stock on which they are grafted in England.

In November, 1908, the Arboretum received from T. J. Seidel, in whose nursery near Dresden was one of the greatest collections of hardy Rhododendrons, a number of his catawbiense hybrids. Seidel
uses as stock for his hybrids one of the hybrids of *R. caucasicum* called Cunningham's White which was raised about 1830 by James Cunningham in his nursery near Edinburgh by crossing *R. caucasicum* with *R. ponticum*. This evidently makes a harder stock than *R. ponticum* and is easily and cheaply cultivated from cuttings. The plants on this stock are dwarfer than those raised in England, and appear to be generallyhardier. In the Seldel Collection in the Arboretum are the following named varieties: Adalbert, Adam, Alarich, Albert, Annedore, Anton, Arno, Attila, August, Bella, Bismarck, Calliope, Daisy, Desiderius, Diana, Donar, Echse, Eli, Eva, Fee and Viola. Of these Daisy with bright red flowers is the showiest and inclined to grow taller than the others. There is certainly no more beautiful Rhododendron in the Arboretum collection. In the future perhaps some American nurseryman will take up the propagation of these hybrids on stock of Cunningham's White or another of the Caucasian hybrids, but until this is done the cultivation of plants established in this country or of new collections of these plants is not promising, especially as the leaves of the evergreen Rhododendrons are seriously and now nearly universally attacked by the so-called lace-wing fly and it is necessary to spray the plants with some mineral oil at least two or three times every year.

*Rhododendron Smirnowii*. The fact that the leaves of this plant are covered below with pale felt, which protects them from the attacks of the lace-wing fly, makes the species particularly valuable, and much can be expected from it in this country. It has been growing in the Arboretum for several years and has not suffered from cold or drought, although when fully exposed to the sun the leaves often droop and their edges infold, and it is better in partial shade than in full sunlight. The flowers are of good size and of pleasant shades of pink or rose color, and are borne in large clusters. Several hybrids of *R. Smirnowii* with hybrids of *R. catawbiense* have been raised in Europe and there are a few of these in the Arboretum collection; they have proved to be good garden plants here, flowering earlier than *R. Smirnowii* and producing large pink flowers. They have never been injured in the Arboretum, but as there is only a trace of the felt left on their leaves they will probably suffer from the lace-wing fly. *R. Smirnowii* is now in full bloom.

*Rhododendron carolanianum* and *R. minus* are southern Appalachian species; the former is a dwarf compact shrub with leaves covered below more or less thickly with rusty brown scales, and compact clusters of small pure pink flowers which open in May; it grows equally well in full exposure to the sun and in the shade of Pines and other trees. There is a white-flowered form with thinner, rusty brown leaves which is still rare in gardens and appears to be less hardy than the pink-flowered type. *R. minus* grows at low elevations, as at the locks on the Savannah River above Augusta, Georgia, up to altitudes of thirty-five hundred feet on the Blue Ridge in North Carolina. It is a shrub sometimes ten or twelve feet tall, with leaves covered below with glandular scales and pink flowers which in Massachusetts open after the middle of June.

Some of the Rhododendrons which have proved hardy in the Arboretum appear to be hybrids of the pale yellow-flowered *R. caucasicum*, a shrub which grows at high altitudes on the mountains of the Caucasus
in Asia Minor. These hybrids, which have been grown successfully in
the Arboretum, have compact clusters of flowers which open some-
times two or three weeks earlier than the catawbiense hybrids. There
is much confusion in regard to the history of these plants and their
breeding. The most satisfactory of them here is Boule de Neige.
Judging by the name it was raised in France or Belgium. Only the
name appears in the most elaborate work on Rhododendrons which has
been published, and nothing now appears to be known about its breed-
ing. It has white flowers faintly tinged with pink when they first
open, and is one of the best Rhododendrons which can be planted in
New England. Other good plants here of the Caucasian race are Mont
Blanc, with deep rose-colored flower-buds and expanding flowers which
soon become pure white; it is a taller and wider spreading plant than
Boule de Neige; Sultana and Cassiope are dwarf, white-flowered plants
of less vigorous growth and dwarfer habit than Mont Blanc. A plant
of *R. coriaceum*, not rare in English nurseries, has been in the Arbor-
etum for many years, and although it flowers a week or two earlier
than the plants already mentioned it appears to be of Caucasian blood.
Three dwarf hardy Rhododendrons were obtained many years ago in
England by crossing the European species with a dwarf species of the
southern Appalachian Mountains. The handsomest of them is perhaps
*R. myrtifolium*, a hybrid between *R. minus* and *R. hirsutum*, which is
covered every year in June with small clusters of pale rose-colored flow-
ers. A hybrid between *R. ferrugineum* and *R. minus* has recently been
distinguished as *R. laetevirens*, the name *Wilsonii* under which it has
been growing in English nurseries properly belonging to another plant.
The third of these hybrids, *R. arbutifolium*, is believed to be the re-
sult of crossing *R. carolinanum* with *R. ferrugineum*. The American
parents are handsomer plants and better worth a place in the garden
than these hybrids which have suffered from the influence of the Euro-
pean species.

In the Arboretum are several plants of the hybrid between *R. Met-
ternichii* and a hybrid catawbiense raised by Anthony Waterer at Knap
Hill. These plants have large, dark green leaves which are larger
than those of *R. catawbiense* and of many of its hybrids, and flowers
which vary on different individuals from pink to rose color. They are
hardy and vigorous but the flowers are not superior to those of some
of the hardy forms of the catawbiense hybrids.

The Japanese *R. brachycaurum* is a handsome shrub with leaves
which resemble those of *R. catawbiense*, and compact clusters of large
pale pink or pale straw-colored flowers. This species did not reach
England, it is said, until 1888, although it was sent to the United States
in 1882 by Dr. R. H. Hall, and flowered in Mr. Francis Parkman's gar-
den a few years later. The original plant was presented by Mr. Park-
man to the Arboretum where it bloomed for several years; it was finally
lost in transplanting. This hardy Rhododendron, it is believed, will soon
become common in gardens as Wilson sent large supplies of seeds from
Japan.

**Cornus controversa.** This is a widely distributed tree in Japan, Korea
and western China, and one of Wilson's photographs made in China
shows a specimen sixty feet high with a trunk seven feet in girth.
This tree is now blooming in the Arboretum and the largest specimen is in the Peters' Hill Nursery. This plant came here in 1913 from the Park Department of the City of Rochester, New York, and is now about twenty-five feet high with a short trunk and a head twenty-six feet in diameter. The branches are long, crowded and spread at right angles with the stem, drooping slightly at the ends, the lowest sweeping the ground. The upper sides of the branchlets are thickly covered with flat flower clusters six or seven inches in diameter, and raised on erect stems. The flowers, which are white or white faintly tinged with yellow, are followed by black shining fruits which are eaten by the birds as fast as they ripen. As it grows on Peters' Hill it is a magnificent plant and the handsomest of the genus in the Arboretum with the exception of the species with white floral bracts. To the student of botanical geography *C. controversa* is interesting as another living witness of the relationship between the floras of eastern Asia and eastern North America, for in the genus *Cornus* with many species there are but two with alternate leaves, *C. controversa* in eastern Asia and *C. alternifolia* in eastern North America. Although this Asiatic species was growing in the Veitch Nursery near London as early as 1880, it has remained little known or understood in gardens owing to the confusion of this species with *C. macrophylla*, an eastern Asiatic tree with opposite leaves.

**Kolkwitzia amabilis**, the only representative of a genus of western China related to Diervilla and Abelia, is blooming well on the southern slope of Bussey Hill. The flowers are in pairs on long stems at the ends of short lateral branchlets, and rose color in the bud become paler after opening and are blotched with yellow at the base of the inner surface of the divisions of the lower lobe of the corolla. *Kolkwitzia* has not yet produced seeds in the Arboretum, but it can be propagated by cuttings and is now becoming more common in Long Island gardens than it is in the neighborhood of Boston. It is interesting that, judging from a photograph just received from Dr. Ridgway, it is growing and flowering better in his garden at Olney, Illinois, than it has in the east.

**Hydrangea petiolaris.** The specimen of this vine, the Japanese climbing Hydrangea, on the southeastern corner of the Administration Building is one of the great sights of the Arboretum at this season of the year when it is covered with flower clusters from the ground to the eaves of the building. The leaves of few plants unfold here as early in the spring, and there is only one other climbing plant with conspicuous flowers hardy here, *Schizophragma hydrangeoides*, able to attach itself to a brick or stone wall, and this blooms later. The flower clusters of the Climbing Hydrangea are surrounded by a circle of white sterile flowers from eight to ten inches in diameter; they are terminal on short lateral branches which stand out from the main stem of the plant and give it an irregular surface which adds to its beauty and interest. This plant was first raised at the Arboretum in 1878 and is now occasionally cultivated in this country. It might be better known and more generally used for there is no other plant so well suited to cover brick or stone walls of buildings in the northern United States.