Hybrid Rhododendrons at the foot of Hemlock Hill are now rapidly opening their blossoms. A few sorts are past, some are in full bloom, but the majority are just beginning to expand their flower trusses. Given decent weather during the next two weeks this collection will be a feature in the Arboretum. None will deny that where an acid soil prevails these Rhododendrons are the handsomest of broad-leaved evergreens. They have in abundance dark green, more or less oblong leaves larger than those of any other tree or shrub with persistent foliage that can be grown out-of-doors in the climate of Massachusetts. Moreover, they are remarkably free-flowering, every shoot terminating in a large, globose cluster of flowers, white or in varying shades of pink and red to deep purple. No wonder that it is the ambition of most people with gardens to grow these plants and where they are happy their cultivation is relatively simple. To the natural soil of New England additional Oak leafmold is about all that is necessary except a cool position sheltered from the winds and from the east and southeast on account of the hot sun in February and March; indeed, they are best planted under partial shade, that of the White Oak being exceptionally favorable. Where the climate is favorable these simple conditions are all that Rhododendrons really need. Alas! the great drawback in Massachusetts is climate; in a latitude virtually that of Rome and the sun heat of that city from March to September we have the winters almost of Labrador, conditions which few broad-leaved evergreens much less Rhododendrons can tolerate.

The Arboretum collection represents fairly completely the survival of the fittest. Many scores of varieties have been tested and found wanting but a small percentage have come through in a manner more or less satisfactory. In the eighties of last century the late Anthony Waterer, the Father of Hybrid Rhododendrons, used to send what he thought to be his hardest varieties to the Arboretum for testing and this is how it came into possession of the collection it possesses.
American nurserymen have scarcely attempted the breeding of hybrid Rhododendrons, being content to import plants direct from Europe. The advent of Quarantine No. 37 made such importation virtually impossible and the result is a great scarcity and very high prices for such Rhododendrons as are available.

These Bulletins have continuously urged upon American nurserymen the necessity of breeding a race of Rhododendrons suitable to the climate and will continue to do so until the happy event is consummated. The hybrid Rhododendron of today is very largely an English product, having been raised especially for the moist, cloudy climate of the British Isles. For that land the race or races are eminently suitable but New England is climatically not merely another country but almost another world. It calls for plants capable of withstanding extreme heat in summer, great cold in winter, combined with a comparatively low rainfall, conditions inimical to broad-leaved evergreens in general and Rhododendrons in particular. The almost complete absence of this class of vegetation from the native flora clearly indicates that the climate is unsuited to their growth. In the British Isles the hybrid Rhododendrons of today are of exceedingly mixed parentage, many species being employed especially those of the Himalayas and central and western China, the latter unknown to gardens until the dawn of this century. In the Arboretum hybrid Rhododendrons belong to two groups only.

Catawbiense Hybrids, so-called, represent overwhelmingly the largest and best known group. These are the product of intercrossing two American species (Rhododendron catawbiense and R. maximum) with the Eurasian R. ponticum and the red flowered Himalayan R. arboreum and recrossing and selecting from the hybrid progeny. The flowers of the American and the Eurasian species lack color and so the value of the rich red flowered Himalayan species is obvious. Unfortunately, so far as New England is concerned R. ponticum and still more so R. arboreum are tender in this climate and it is only where the blood of the two American species prevails that the types are hardy.

In the Arboretum collection some seventy named varieties of Catawbiense Hybrids are grown and with the exception of a small group of German origin, which came in 1908, nearly all were raised before 1885. In spite of the fact that in recent years European hybridists have turned their attention to intercrossing less hardy but more beautifully colored Chinese species, Catawbiense Hybrids have not been altogether forgotten. This being the case it is reasonable to suppose that at least a few sorts as hardy as some of the earlier varieties have been evolved. The recently formed Rhododendron Association with headquarters in London published in 1930 a “Year Book” in which is given a fairly complete list of the hybrid Rhododendrons in gardens. The hybrids are marked with different letters indicating their comparative hardiness and garden merits. A careful scrutiny of this list shows that nearly all the varieties in the Arboretum col-
lection are recorded but one only is indicated as being worth growing! The one so honored is Album elegans. This is, of course, a British viewpoint but absolutely unbiased and indicates clearly how much below their standard are the hybrid Rhododendrons cultivated here. It is probable that a few of the toughest sorts give better returns here than in the British Isles but when every allowance possible is made the result is disappointing. To argue that no varieties suitable for this climate have been produced since 1885 is foolish; there may not have been many but some there must be and it is greatly to be regretted that they are not represented in gardens here. In Album elegans with pale mauve fading to white blossoms, the very similar Album grandiflorum and the white flowered Catawbiense album we have three excellent varieties of their class. Of the reds passing to crimson Charles Dickens, James Macintosh, Kettledrum, S. B. Parsons, Atrosanguineum and H. W. Sargents are good but it must be confessed that the rest have dull, unattractive colored blossoms. We have really no good pinks among these hybrids and the purples are one and all muddy. Lady Armstrong, Ignatius Sargent, F. L. Ames and Daisy are passing fair but what is needed are varieties with purer and better colors and especially more fiery scarlets of the type of Prometheus, alas! scarcely hardy in the Arboretum.

**Caucasicum Hybrids.** The product of intercrossing *R. caucasicum* with certain Catawbiense Hybrids and other species form a small but extremely useful group. They possess no wide range of color, all having blossoms white or nearly so, but they are very hardy and free flowering. They are said to root from cuttings and, moreover, to be slightly tolerant of limestone. The typical species, whose flowers appear to vary in color from white through pale straw-yellow to pink, is probably not in cultivation in this country. Perhaps the nearest approach to it is Coriaceum, which has flowers pale pink in the opening bud and milky white when fully open. Two of the best of this group are Mont Blanc and Glennyanum, both pinkish in the bud and pure white when the blossoms are fully opened. Another excellent sort is Boule de Neige which has pure white blossoms.

**Fortunei Hybrids.** In recent years a great many varieties of this origin have been originated in the British Isles, where, indeed, they have out-classed in beauty of blossom and popularity the older Catawbiense Hybrids. Of this group only one has so far proved perfectly at home in the Arboretum; this is Duke of York which was received from Mr. G. Paul of Cheshunt, England, in 1915. This has soft pink, 5- to 7-lobed blossoms, each about 3 inches broad, borne ten or twelve together in a loose cluster. It is growing in a well protected spot and so far has not suffered unduly from winter cold. At Sandwich, Massachusetts, Mr. Charles O. Dexter, experimenting with this group and *R. decorum*, another Chinese species, has succeeded in growing and blossoming a number of very lovely forms. Given adequate protection it seems probable that many of these hybrids would prove as amenable as the Catawbiense Hybrids.

E. H. W.