Philadelphus. Many additions have been made in recent years to this genus by travellers in eastern Asia and by the labors of the plant-breeder, and it now constitutes one of the largest and most important groups of garden shrubs hardy in the northern states, and to be ranked with the Lilacs, Bush Honeysuckles, Viburnums, Azaleas and Cornels. The popular names of these plants, Syringa and Mock Orange, are unfortunate for Syringa is the Latin name of the Lilacs and Mock Orange, given to them no doubt on account of the perfume of the flowers of Philadelphus coronarius of southeastern Europe which for many years was the only one of these plants to be found in gardens, does not describe the flowers of all the species for many of them are entirely destitute of odor; and Mock Orange, too, is the common name of Prunus caroliniana, the Evergreen Cherry-tree of the southern states which is much planted there and largely used as a hedge plant. Species of Philadelphus are native in the United States in the southern Appalachian Mountain region, in western Arkansas, western Texas, in the southern Rocky Mountains of New Mexico and Colorado, and in the northwestern states; many species have been found in Japan, Korea and western China; and the genus is represented on the Himalayas, the Caucasus, and in the Balkan Peninsula. The plants of this genus are not particularly interesting in habit; the leaves are dull and fall without change of color, and the fruit, which is a dry capsule, does not add to the attractiveness of these plants, which is to be found only in their abundant white, often fragrant flowers. The flowering period of the thirty odd species, with many hybrids and varieties in the Arboretum collection extends through five or six weeks and most of the plants flower freely every year. They need rich, well-drained soil, and the presence of lime in it has no bad effect on these plants. Better
than most shrubs they can support shade, and their ability to grow and flower under trees gives them a special value for the undergrowth of border plantations.

It is unfortunate that the type of the genus and the only species in the gardens of the eighteenth century, *Philadelphus coronarius*, is now so rarely found in any but the really old-fashioned gardens of New England, for it is a delightful plant and the flowers of no other Philadelphus are more pleasantly fragrant. There are in the Arboretum collection varieties of this plant with double flowers of which the var. *deutziaeflorus*, with narrow petals, is the handsomest; a variety with narrow leaves (var. *salicifolia*) is more curious than beautiful, and a dwarf compact form which never flowers, and one with yellow leaves, are more interesting to those who like monstrosities than to the lovers of beautiful plants. Among American species the handsomest are *Philadelphus inodorus*, *P. pubescens* and *P. microphyllus*. The first of these is by some persons considered the handsomest of the Syringas in the Arboretum collection. It is a species of the southern Appalachian region and a shrub six or seven feet tall, with gracefully arching branches which are studded from end to end with large, cup-shaped, snow white, scentless flowers. Although this shrub was sent to England more than a hundred years ago, it appears to be still rare in American and European gardens. *Philadelphus pubescens*, perhaps better known in gardens as *P. latifolius* and *P. grandiflorus*, grows in the same region as *P. inodorus*; they are larger plants sometimes twenty feet tall with stout erect stems and branches, and broad dark green leaves. *Philadelphus pubescens*, *P. grandiflorus* and some of their hybrids are common garden plants in this country. The most important and distinct of these hybrids is *Philadelphus splendens* which appeared in the Arboretum several years ago, and its parents are believed to be *P. grandiflorus* and *P. Gordonianus*. It is a tall, broad, shapely shrub with pure white, slightly fragrant flowers borne in clusters and an inch and three-quarters in diameter. This plant when in bloom makes a more conspicuous display than any Philadelphus in the collection. The Rocky Mountain *P. microphyllus* is far removed in general aspect from the Appalachian species for it has the smallest leaves and flowers of any plant in this group. It is a shrub with slender stems, and here in the Arboretum has not grown more than three feet tall; perfectly hardy for many years, it has suffered considerably in the two cold winters of recent years. The Arboretum plants are, however, recovering. For a long distance the air is filled with the perfume of the flowers of this little shrub, which is stronger and more aromatic than that of any other Philadelphus.

Perhaps the handsomest and certainly the most distinct of the Asiatic species is *Philadelphus purpurascens*, one of Wilson's discoveries in western China. It is a vigorous shrub, with long arching branches from which spring numerous laterals from four to six inches in length; these branchlets spread at right angles to the stem and on these the fragrant flowers are pendent on drooping stalks. The bright purple calyx of the flowers makes a handsome contrast with the pure white petals which do not spread as in most species but form a bell-shaped corolla. One of the handsomest of the shrubs recently introduced from
China *Philadelphus purpurascens* deserves more general propagation in this country. Another Chinese Syringa, *Philadelphus Magdalenæ*, well deserves a place in American gardens. It is a tall broad shrub with arching stems, small dark green leaves, and pure white fragrant flowers an inch and a quarter in diameter and arranged in drooping, leafy, many-flowered clusters from six to ten inches in length. *Philadelphus pekinensis*, a native of northern China and Mongolia, which has been growing in the Arboretum since 1883, has proved an excellent garden plant. The flowers are not as large as those of many of the other species and are slightly tinged with cream color, but they are produced in immense numbers. This is a compact shrub with slender erect stems three or four feet tall, and usually broader than high.

**Hybrid Philadelphus.** The importance of *Philadelphus splendens* as a garden plant has already been mentioned. Another hybrid of rather uncertain parentage, known now as *Philadelphus speciosus* and formerly as "Monsieur Billard," originated many years ago in France is a handsome plant which, blooming later than other Syringas, prolongs the flowering period of this group until the middle of July. These early hybrids were the result of natural cross fertilization, and the systematic breeding in this genus dates from the time when Lemoine of Nancy in France first crossed the Rocky Mountain *P. microphyllus* with *P. coronarius* and produced the plant to which he gave the name of *P. Lemoinei*. Lemoine then crossed his *P. Lemoinei* with the hybrid *P. insignis* and produced a race of beautiful plants to which the general name *Philadelphus polyanthus* has now been given. Well known forms of this hybrid are "Gerbe de Neige" and "Parvillon Blanc." To another race of the Lemoine hybrids the name of *Philadelphus cymosus* has been given. This was obtained by crossing *P. Lemoinei* with *P. grandiflorus* or some related species. "Conquête" is considered the type of this group; other well known plants which are believed to belong here are "Mer de Glace," "Norma," "Nuée Blanche," "Rosace," "Voie Lactée," and "Perle Blanche." To another race of hybrids with double racemose flowers, raised by Lemoine and of doubtful origin, the name *Philadelphus virginialis* has been given. The type of this group is his "Virginal;" other plants referred to it are "Argentine," "Glacier," and "Bouquet Blanc." The introduction of *Philadelphus microphyllus* into France, where it was sent by the Arboretum in 1877 or 1878, made possible in the hands of Lemoine the production of these races of beautiful plants which are some of the important contributions made to northern gardens in the last thirty years.

**Late-flowering Viburnums.** The Arboretum late in June owes much of its beauty to the late-flowering Viburnums of the northeastern states which have been planted here in considerable numbers. The first of these plants to bloom and the handsomest of them, *Viburnum cassiodens*, although it grows naturally in cold northern swamps, takes kindly to cultivation, and in ordinary garden soil is a handsomer and more shapely plant than it is in its natural home where it often makes slender straggling stems fifteen or twenty feet tall. The beauty of this Viburnum is in its ample, thick and lustrous leaves which vary in shape and size on different plants, in its broad convex clusters of pale cream-colored flowers and in its large showy fruit which when fully
grown is yellow, then pink, and finally blue-black, the three colors often appearing at the same time in the same cluster. The fruit of *Viburnum cassinoides* is larger than the bright blue fruit of the other summer-flowering species, *V. dentatum*, *V. venosum* and *V. Canbyi* which bloom in the order in which they are mentioned here. They are large round-topped bushes with coarsely toothed leaves and large clusters of white flowers; they are all good garden plants and respond to generous treatment with more vigorous growth, a better habit and handsomer foliage. There is a large collection of deciduous-leaved Viburnums in the Arboretum and there is now a good opportunity here to judge the comparative values of the plants from different countries, and this comparison shows that the flora of eastern North America contains more handsome garden plants in this genus than all the rest of the world. In Japan there are species like *Viburnum tomentosum*, *V. Sieboldii* and *V. dilatatum* which are beautiful garden plants, and the European Traveler’s Tree, *V. lantana*, is one of the handsomest and most distinct of the early-flowering Viburnums which can be successfully grown here. In claiming the superiority of the American species for American gardens it must be remembered that none of these species have red fruit, which is produced by several of the eastern Asiatic species. The most successful of the red-fruited species in the Arboretum have been *V. dilatatum* and *V. Wrightii*. These should find a place in American collections, especially the former which is here a hardy, free-flowering plant of compact habit, which has few rivals in the beauty of its brilliant and abundant bright red fruit.

**Cornus kousa.** The flower-buds of the native *Cornus florida* were practically all killed by the cold of the past winter except those on lower branches which had been buried in snow. It is interesting to find, therefore, that the flower-buds of the related species from eastern Asia, *Cornus kousa*, were not injured and that the Arboretum plants have not before been more fully covered with flowers. The form from western China discovered by Wilson, which has before bloomed only sparsely in the Arboretum, is this year white with the bracts of the flower-clusters. The flower-bracts of the Chinese plant are broader and closer together than those of the Japanese plant and it promises to be more valuable here for garden and park decoration. The flower-bracts, however, of both forms of the Asiatic plant are pointed, making a star-like inflorescence, and are much narrower than those of *Cornus florida* which is still the handsomest of the “Flowering Dogwoods” which can be grown in Massachusetts.

**Rhododendron (Azalea) calendulaceum.** The plants of the flame-colored Appalachian Azalea on Azalea Path furnish this week the most brilliant display in the Arboretum. No other Azalea which can grow in the open ground in this climate equals this in beauty with the exception, perhaps, of the pink-flowered *R. Vaseyi* which blooms before its leaves appear. On *R. calendulaceum* and the other late-blooming American species a beauty of the flowers due to their contrast with the well grown leaves is not found on *R. Vaseyi* or on any of the Asiatic Azaleas which can be grown in the northern states.

**Philadelphus splendens** was inadvertently omitted from the list of Arboretum hybrids printed on page 31 of these Bulletins for the current year.