Philadelphus. Many new plants in this genus have been found in recent years by travelers in eastern Asia or have been made by plant breeders, and it now constitutes one of the largest 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 Lilac, and Mock Orange, given to them no doubt on account of the fragrance 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 species as many of them are destitute of odor. Species of Philadelphus are native in the United States in the southern Appalachian Mountain region, western Alabama, western Texas, on the southern Rocky Mountains of New Mexico and Colorado, and in the northwestern states. Many species have been found in Japan, Korea, Manchuria and western China, and the genus is represented on the Himalayas, the Caucasus, and in the Balkan peninsula. 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 their attraction which is to be found in their abundant, white, often fragrant flowers. The flowering period of the thirty odd species, with numerous hybrids and varieties in the Arboretum, extends through five or six weeks, and most of the plants flower every year. They require rich, well drained soil, and the presence of lime has no bad effect on them. Better than most plants, they can support shade, and their ability to grow and flower under trees gives
them a special value for the undergrowth of border plantations. The type of the genus and the only species in the gardens of the eighteenth century, *P. coronarius*, is now rarely found except in old-fashioned gardens in New England, but it is a delightful plant and the flowers of no other species are more pleasantly fragrant. In the Arboretum collection there are varieties of this plant with double flowers of which the variety *deutziaeflorus* with narrow petals is the handsomest; a variety with narrow leaves (var. *salicifolia*) is more curious than beautiful, and there is a dwarf compact form which never flowers and one with yellow leaves. Among the American species which should find a place in all collections of hardy shrubs are *P. inodorus* and *P. pubescens*. The first is a medium-sized plant with arching branches which are studded from end to end with large, cup-shaped, scentless flowers, and by some persons considered the most beautiful of the whole genus. *P. pubescens*, sometimes called *P. latifolius* and *P. grandiflorus*, is a native of the southern Appalachian Mountain region, with stout erect stems and branches, broad dark green leaves and slightly fragrant flowers arranged in erect from five- to ten-flowered racemes. *P. pubescens* and some of its hybrids are common garden plants in this country. The most important and distinct of these has been called *P. splendens* which appeared in the Arboretum several years ago, and its other parent is believed to be *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* has the smallest leaves and flowers of any plant in this genus; it is a shrub with slender stems, rarely growing more than three feet tall, with delightfully fragrant flowers.

The earliest *Philadelphus* in the collection to bloom is the Korean variety *Jackii* of the Manchurian *P. Schrenkii* which Mr. Jack discovered a few years ago and which often blooms here during the last week in May. It is a tall, rather narrow pyramidal plant and an excellent addition to the plants of this group. The most distinct and probably the handsomest of the Asiatic species which flowers here is *P. purpureascens*, discovered by Wilson in western China. It is a shrub with long arching stems from which rise numerous branches from four to six inches long which spread at right angles, and on these the fragrant flowers are borne on drooping stalks; they are an inch and a half long with a bright purple calyx and pure white petals which do not spread as they do on most of the species but form a bell-shaped corolla and are very fragrant. This is probably one of the handsomest shrubs brought from western China to the Arboretum. *P. Magdalenae* from central China is another handsome plant well worth general cultivation. It is a tall shrub with arching stems, small, dark green, finely toothed leaves and pure white fragrant flowers an inch and a quarter in diameter and arranged in drooping, leafy, many-flowered panicles from six to ten inches long. *P. pekinensis* from northern China and Mongolia is a compact bush three or four feet high which every year produces flowers tinged with yellow, and is well worth a place in every garden. Another eastern Asiatic plant, *P. Falconeri*, which is probably Japanese, has narrow lanceolate leaves and fragrant flowers in few-flowered
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racemes, and is distinct in the shape of its leaves and long narrow petals. This plant was sent to the Arboretum from the Parsons Nursery at Flushing, Long Island, but nothing more is known of its origin or history.

Few genera of garden shrubs have given better results from natural cross fertilization or to the art of the plant-breeder than Philadelphus. The first of these hybrids to attract attention was raised in France sometime before 1870 by Monsieur Billard and is sometimes called "Souvenir de Billard." This hybrid is one of the handsomest of the tall growing Syringas; it has large, snow-white flowers in long clusters, and its value is increased by the fact that it is the last of the whole group to flower. The largest Philadelphus in northern gardens, where plants thirty feet high and correspondingly broad are sometimes found, appears to be a hybrid between P. coronarius and an unrecognized species. To this plant, whose history is unknown, the name P. maximus has been given.

These early hybrids were the result of natural cross-fertilization, and the systematic breeding in this genus dates from the time when Lemoine 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 hybrid with a hybrid of P. insignis and produced a race of beautiful plants to which the general name of P. polyanthus is now given. Well known forms of this hybrid are "Gerbe de Neige" and "Farvillon Blanc." To another race of the Lemoine hybrids the name of P. cymosus has been given. This was obtained by crossing P. Lemoinei with P. grandiflorus or some related species. "Conquête" is considered the handsomest of this group and is one of the largest-flowered of all Philadelphus. Other well known plants which are believed to belong here are "Mer de Glace," "Norma," "Nuée Blanche," "Rosace," "Voie Lacte," and "Perle Blanche." To another race of hybrids with double racemose flowers raised by Lemoine and of doubtful origin the name of P. virginalis 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 P. 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 among some of the important contributions to northern gardens during the last thirty years. The Philadelphus Collection is planted in the Shrub Collection and in a larger special group on the right hand side of the Bussey Hill Road opposite the Lilacs.

Zenobia pulverulenta is now in bloom in the Shrub Collection, and during the past week has been the most beautiful shrub probably in the Arboretum. Zenobia is related to the Andromedas and is chiefly distinguished by its open campanulate flowers and four-awned anthers. The leaves are thickly covered with a glaucous bloom, and the ivory white flowers, about half an inch long and broad, are borne on slender stems in axillary clusters forming long terminal racemes on the upper parts of the branches of the previous year. There is a form of this shrub (var. nstida) with leaves green on both surfaces. Zenobia is a southern genus with a single species. The green-leaved variety grows in countless thousands along the borders of the great swamp across
the river from New Berne on the coast of North Carolina; the white-leaved form, which was found by William Bartram on the lower Cape Fear River in North Carolina, appears to be less common and apparently has not been collected in recent years. It is interesting that the two forms of this plant, which grow in a region which could not be expected to produce plants hardy in Massachusetts, are well established and flower every summer in the Arboretum.

**Helianthemum.** A collection of the varieties of *Helianthemum nummularium*, better known perhaps as *H. chamaecistus* or *H. vulgare*, has been established in one of the borders on the southern slope of Bussey Hill and is flowering well this year. These are half evergreen or evergreen, low prostrate shrubs with leaves green on both surfaces, hairy or nearly glabrous, and from half an inch to an inch and a half in length, and flowers normally yellow but varying from rose pink, orange or white, and about an inch in diameter in many-flowered loose racemes. This species is a native of Europe, western Asia and northern Africa, and perhaps not as often cultivated as it should be in this country where low plants are needed to cover the ground among shrubs. The curious fact about it is that the flowers are only open before noon and close entirely in the afternoon.

**Rhododendron (Azalea) calendulaceum**, with its orange yellow or reddish flowers which are not fragrant, has been perhaps the most brilliant plant in the Arboretum during the past two weeks. It is an inhabitant of 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. A large mass of this shrub has been planted on the lower slope of Bussey Hill on Azalea Path, and occasional specimens can be seen in border plantations along the roads.

**Rhododendron (Azalea) ameliense** is a hybrid between *R. calendulaceum* and *R. arborescens* which appeared originally in the Arboretum probably in 1896 and is intermediate between its two parents, and promises to be a good garden plant with large, fragrant, pinkish or white flowers marked with a yellow blotch. It was mentioned without a name by Zabel in 1903 and later has been produced by artificial crossing of its parents at the Hunnewell estate in Wellesley.

**Rhododendron delicatissimum** is a plant probably raised by Anthony Waterer at the Knaphill Nursery in England and has been known in this country since 1870. It is a hybrid undoubtedly with *R. maximum* as one of its parents, and possibly one of Waterer's Catawbiense hybrids as the other parent. It is perfectly hardy, blooms every year, and is now in full flower about two weeks later than Waterer's other Catawbiense Hybrids and earlier than his hybrid *R. Wellesleyanum* between *R. maximum* and *R. catawbiense*. The flowers of *R. delicatissimum* are slightly tinged with pink in the bud but become white or nearly white when fully expanded. This is perhaps one of the most beautiful and hardiest of all hybrid Rhododendrons which can be grown in this climate.