Philadelphus. The importance of this genus of shrubs for the decoration of northern gardens during the last weeks of June and the early days of July has been greatly increased by the discoveries of travelers in eastern Asia and by the successful work of plant-breeders. There is a large number of these plants in the Arboretum where they are arranged in the Shrub Collection and in a large group on the right hand side of the Bussey Hill Road and opposite the Lilacs. Known as Syringas or Mock Oranges in popular language, these names are unfortunate and confusing, for Syringa is the botanical name of the Lilac and Mock Orange is the popular name of Prunus caroliniana, a southern Cherry which is much planted in the southern states as an ornamental tree and in making hedges. The species of Philadelphus grow naturally in southeastern Europe and the Caucasus, in the United States on the southern Appalachian Mountains, in Arkansas, western Texas, on the southern Rocky Mountains, and in the northwestern states, in Japan, Korea, northern and western China, and on the Himalayas. The species and hybrids are, with few exceptions, hardy in Massachusetts. They need rich, well-drained soil, and the presence of lime in it has no bad effects on them. Better than most shrubs they can support shade, and their ability to grow and flower under trees makes them valuable as undergrowth in border plantations.

The first of the Syringas to find its way into gardens, the Mock Orange of all old gardens, Syringa coronarius from eastern Europe, was first cultivated in England before the end of the sixteenth century, and was probably one of the first garden shrubs brought to America by the early settlers. It is a medium sized shrub often as broad as
high, with exceedingly fragrant flowers faintly tinged with yellow. This plant has been somewhat neglected in recent years for species and hybrids with larger and showier flowers. This is unfortunate, for no other Syringa equals the old-fashioned Mock Orange in the delicate perfume of its flowers. Varieties with yellow leaves, with double flowers and with narrow willow-like leaves are in the Arborotem collection but none of them have any particular value as garden plants. Among the American species best worth the attention of gardeners are Philadelphus inodorus, P. pubescens, perhaps better known as P. latifolius, and P. microphyllus. The first is a native of the Appalachian Mountain Region and grows to the height of six feet; it has arching branches and large, solitary, pure white cup-shaped, scentless flowers. By some persons it is considered the most beautiful of all the species of Syringa. *P. pubescens* is also a plant of the southern Appalachian Mountain Region. It sometimes grows to the height of twenty feet; the branches are stout and erect, the leaves are broad, and the slightly fragrant flowers are arranged in leafy, erect racemes. This plant is more common in gardens than *P. inodorus*, and although it makes a great show when in bloom it is less beautiful. *Philadelphus microphyllus*, which rarely grows more than three feet tall, has slender stems and leaves and flowers smaller than those of any other Philadelphus in cultivation. What the flowers lack in size, however, they make up in fragrance which is stronger than that of the flowers of any other Syringa, and perfumes the air for a long distance.

The most distinct and perhaps the handsomest of the Asiatic species in the Arborotem is *Philadelphus purpurascens*, one of Wilson's discoveries in western China. It is a large shrub with long, gracefully arching stems from which rise numerous short branchlets spreading at right angles; on these branchlets the flowers are borne on drooping stalks; they are an inch and a half long with a bright purple calyx and white petals which do not spread as they do in most species but form a bell-shaped corolla. This is one of the handsomest of the shrubs brought from western China to the Arborotem. *Philadelphus pekinensis* is another Chinese species well worth a place in the garden. It is a tall broad shrub with arching stems, small dark green leaves and fragrant flowers slightly tinged with yellow. *P. pekinensis* has been growing in the Arborotem for many years and has proved a reliable and free flowering plant. Another old inhabitant of the Arborotem, *P. Falconeri*, which is certainly Asiatic and probably Japanese, has narrow lanceolate leaves and fragrant flowers in from one- to six-flowered racemes, and is distinct in the shape of the leaves and in the long narrow petals of the flower. The origin and history of this plant is not known.

**Hybrid Philadelphus.** More beautiful than the species are some of the hybrid Syringas. The first of these to attract attention was raised in France before 1870 by a Monsieur Billard and is sometimes called "Souvenir de Billard," although the correct name for it is *Philadelphus insignis*. 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 Syringa in our northern gardens, where plants thirty feet high and correspondingly broad are sometimes found, appears to be a hybrid between *P. coronarius* and some unrecognized species. To this plant, whose history is unknown, the name of *Philadelphus maximus* has been given. Another hybrid called *Philadelphus splendens* appeared in the Arboretum several years ago and is supposed to be a hybrid between two American species, *P. inodorus* and *P. pubescens*. It is a large and shapely shrub with pure white, only slightly fragrant flowers an inch and three-quarters in diameter and borne in erect clusters. This hybrid is a free-flowering plant and when the flowers are open it is the showiest plant in the Syringa Group.

These early hybrids are the result of natural cross fertilization, and the systematic breeding in the genus dates from the time that Lemoine first crossed the Rocky Mountain *P. microphyllus* with *P. coronarius* and produced a plant to which he gave the name of *P. Lemoinei*. Lemoine then crossed his *P. Lemoinei* with *P. insignis* and produced a race to which the general name of *P. polyanthus* has now been given. Well known forms of this plant are "Gerbe de Neige" and "Pavillon Blanc." To another race of the Lemoine hybrids the name of *Philadelphus cymosus* has been given. This race was obtained by crossing *P. Lemoinei* and *P. pubescens* or some related species. "Conquête" is considered the type of this group. Other well known plants which are said to belong here are "Mer de Glace," "Norma," "Nuée Blanche," "Rosace," "Voie Lactée" and "Ferle Blanche." Another race of hybrids with double racemose flowers raised by Lemoine and of doubtful origin is called *P. virginalis*. The type of this group is Lemoine's "Virginal." Other plants referred to it are "Argentina," "Glacier," and "Bouquet Blanc."

**Late Viburnums.** The Arboretum in late June owes much beauty to several species of Viburnum which have been planted generally in roadside and border plantations. The handsomest of these plants is *Viburnum cassinoides*, an American species which, although it grows naturally in cold northern swamps, is improved by cultivation and in ordinary garden soil is a handsomer and more shapely plant than in its natural form where it often makes straggling stems from fifteen to twenty feet tall. The beauty of this Viburnum is in its ample, thick and lustrous leaves which vary greatly in size and shape on different plants, in its broad convex clusters of pale cream-colored flowers, and in its large and 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. Not often before has this Viburnum been as thickly covered with flowers as it is this year. The fruit is larger than the bright blue fruit of the other summer-flowering American species, *Viburnum dentatum*, *V. venosum* and *V. Canbyi* which bloom in the order in which they are mentioned here; and few plants respond more to generous treatment with vigorous growth, improved habit and handsomer foliage. The largest as well as the latest flowering of these plants, *V. Canbyi*, will not be in bloom for two or three weeks. *Viburnum dentatum*, a Japanese red-fruited plant, also flowers a little later than *Viburnum cassinoides*. It is a large, broad, and perfectly hardy shrub with wide flat clusters of flowers which are followed by
bright red lustrous fruits more brilliantly colored and handsomer than those of any other hardy red-fruited Viburnum with the exception of the European *Viburnum Opulus* and the American *V. americanum*, the so-called Highbush Cranberry, which were in bloom several weeks ago.

**A Dwarf Spruce.** In the May 7th issue of *The Gardeners' Chronicle* of London there is a figure and description of a little conifer which is called *Picea albertiana*, although some doubt is thrown on the accuracy of the name. *Picea albertiana* is a form of the White Spruce found only in the Gaspé Peninsula of eastern Canada and in the valleys of the Black Hills of South Dakota and of the Rocky Mountains of northern Wyoming, Montana and northward, and chiefly distinguished from the common White Spruce of the east by its shorter and broader cones. As this tree grows or grew a few years ago on the borders of streams and lakes or in groves surrounding mountain meadows in northern Montana, it is one of the splendid trees of the continent, rising to the height of one hundred and fifty feet with a trunk from three to four feet in diameter and a narrow pyramidal head of slightly pendulous branches. A plant of a dwarf variety of this Spruce a few inches high was found by Professor Jack near Laggan, in Alberta, in 1904, and from this plant has been raised all the specimens in cultivation. They are all conic in shape and very compact, and the largest of them, in Massachusetts at least, are not much more than two feet high. *Picea glauca* is now the recognized name of the White Spruce and this dwarf, the plant figured in *The Gardeners' Chronicle*, has been named *Picea glauca var. albertina conica*. It is certainly one of the most distinct of dwarf Spruces, and as it can be easily and quickly propagated from cuttings there is no reason why it should not be within the reach of every one interested in rock gardens for which it is well suited.

**A handsome climbing plant.** Mr. H. H. Richardson exhibited on June 4th, before the Massachusetts Horticultural Society, a flower-covered branch of the Southern Cross Vine which has been growing for several years in the open in his garden in Brookline. It is claimed that the Cross Vine has flowered in a Rhode Island garden but its beautiful red and yellow, tubular, two-lipped flowers have not been seen in Massachusetts outside of Mr. Richardson's Brookline garden where several plants are clinging to the trunks of trees and are now fully twenty feet high. This vine climbs by the aid of tendrils by which it attaches itself to the rough bark of trees, but as the tendrils are not furnished with such adhesive disks as occur on some forms of the Virginia Creeper the vine is unable to attach itself to a wall. The adopted name for this plant is now *Anisostichus capreolata*; it has been more often called *Bignonia capreolata*. It grows in rich soil and is common southward from southern Virginia and southern Illinois to Florida and Louisiana, often climbing into the tops of the tallest trees which it enlivens in very early spring with its abundant and showy flowers. The common name of this plant is due to the cross which can be seen in a transverse section of the stem. The Cross Vine, although it may not flower for every one, is one of the interesting additions which have been made recently to the garden flora of Massachusetts.