Effects of the winter in the Arboretum. In no previous winter probably has so little damage been done to plants in the Arboretum. The few broad-leaved evergreens which can be successfully grown in this climate, like the species and hybrids of Rhododendrons which often have their foliage browned and flower-buds killed, are in perfect condition, and even the one plant of English Ivy in the Arboretum looks now as fresh and green as it did in November. It is fortunately a late spring or the exceptionally cold weather of mid-April would have destroyed the flower-buds of early flowering plants which this year are generally in good condition. The common American Elm (Ulmus americana), the Red Maple, a few Willows, both arborescent and shrubby, and the Cercidiphyllum, one of the most interesting of the large Japanese trees introduced by the Arboretum into this country, have been in flower during the past week.

Conifers. In the latest study of the conifers by the German botanist Pilger published during the present year forty-six genera with about four hundred species are admitted. Of these representatives of only nineteen genera can be grown in the Arboretum; these are Taxus, Torreya, Cephalotaxus, Abies, Pseudotsuga, Tsuga, Pinus, Picea, Pseudolarix (monotypic), Larix, Cedrus, Sciadopitys (monotypic), Taxodium (monotypic), Cryptomeria (monotypic), Thujopsis (monotypic), Thuja, Libocedrus, Chamaecyparis and Juniperus. The noblest of all conifers, the two Wellingtonias of our western coast region, cannot be grown here, and many of the largest and most interesting species of the genera represented here
have not proved hardy in the Arboretum. Some of the monotypic genera like Cryptomeria and Thujopsis are kept alive with difficulty and will probably never grow to a large size. There is certainly no larger collection of living conifers in northeastern North America, and if students of these trees in a living condition find much to disappoint them here they can see in the herbarium, which is one of the richest in this family in the world, representatives often with many species of all the genera enumerated by Pilger.

Early-flowering native shrubs. Two yellow-flowered native shrubs are in flower and are well worth the attention of the makers of American gardens by whom they have been generally neglected. These are the Leatherwood, *Dirca palustris*, and the aromatic Spice Bush, *Benzoin aestivale*. Their leafless branches are now covered with small yellow flowers, and those of the Spice Bush will be followed in the autumn by scarlet lustrous fruits. Groups of these plants can be seen on the right hand side of the Bussey Hill Road opposite the upper end of the Lilac collection.

The Cornelian Cherry. This Dogwood (*Cornus mas*), is one of the earliest trees or tree-like shrubs with conspicuous flowers to bloom in eastern Massachusetts. The flowers are light yellow and are borne in clusters in the axils of the unfolding leaves and, although individually small, are produced in such profusion that the branches are covered with them. The flowers are followed by bright red, lustrous, oblong fruits the size of small olives. The flower-buds and the flowers of this tree are not injured by cold. The habit of the plant is good; the foliage is dark green and abundant, and the fruit, although somewhat hidden by the leaves, is handsome. The Cornelian Cherry, which is a native of Europe and western Siberia, has been an inhabitant of gardens for more than three hundred years. In the United States it was probably more often planted in the first half of the last century than it is at present, although there are not many early-flowering trees hardy in this climate which are better worth a place in the garden. In the Arboretum it may be seen with the other Dogwoods at the junction of the Meadow and Bussey Hill Roads.

Prunus Davidiana. First raised in the Arboretum from seeds collected by Dr. Bretschneider on the mountains near Peking in the autumn of 1881 and received here in January of the following year, *Prunus Davidiana* is the earliest of the Plum, Cherry, Peach and Apricot groups to flower. It is a small tree with lustrous red-brown bark, slender erect branches which form a narrow head, small flowers, narrow pointed leaves and small fruit of no edible value. The flowers are of the color of those of the common Peach-tree, and there is a form with pure white flowers. The two forms have been covered with flowers during the past week in the Peach and Apricot group on the right hand side of the Meadow Road before its junction with the Forest Hills and Bussey Hill Roads. As a flowering tree in this climate this Peach has little to recommend it for the flower-buds or the flowers are killed almost every year by late frosts, but pomolo-
gists in this country are interested in it as a possible stock on which to work the common Peach-tree, as it is hardy north of the region where the Peach thrives.

Magnolias. The earliest of the Magnolias, *Magnolia stellata*, has been in flower for several days in front of the Administration Building. This is a perfectly hardy, vigorous, wide-spreading shrub and an inhabitant of the mountain slopes of southern Japan, and, like the other early flowering Magnolias, belongs to that section of the genus in which flowers appear before the leaves. There is a variety of this plant with pale pink flowers which is also in bloom. This Magnolia is badly planted in the Arboretum, for its position on the southern side of the Administration Building induces it to flower earlier than it might in a more protected situation like the northern side of a group of conifers. In its present position the flowers are usually injured by late frosts. This year they began to open on the 24th of April and have only been slightly injured by frost. This would be a beautiful plant to grow in city yards for which its size and habit are well suited, but in the city the flowers will open even earlier and will certainly be destroyed by frost every year. Another early flowering Japanese species, *M. salicifolia*, a native of the mountain slopes of northern Hondo, is a small slender tree with narrow pointed leaves and smaller flowers than those of *M. stellata*. This little known plant is perfectly hardy in the Arboretum and is now in flower on the Centre Street Path behind the Hickories; it was introduced into American and European gardens by Professor Sargent who brought seeds from Japan in 1892.

Pieris or Andromeda floribunda. The beauty and value of this plant cannot be too often referred to in these Bulletins, for judging by an experience of over fifty years it is the only broad-leafed evergreen to which nothing ever happens in this climate. It is not attacked by borers, the leaves never become discolored, and the flower-buds formed in autumn are almost as conspicuous during the winter as the flowers, and are not injured by the lowest temperature which has been recorded in southern New England. It is a round-topped shrub of compact habit sometimes eight or ten feet across and five or six feet high, with small, pointed, dark green leaves and short terminal clusters of pure white flowers. A native of high altitudes on the southern Appalachian Mountains, this shrub is rare and local in its distribution as a wild plant, but for more than a century has been valued in England and largely propagated by English nurserymen.

*Erica carnea*. This is the only true Erica which is hardy here, and with its white-flowered variety has never flowered more profusely in the Arboretum. It is a common European plant which grows not more than five or six inches high but spreads into broad mats. It is an excellent plant for the edging of beds and for the spring rock garden, and should be better known and much more generally planted than it has been in this country. It has now been in bloom in the Shrub Collection for at least two weeks and is still in excellent condition.
Forsythia ovata. This native of the slopes of the Diamond Mountains of Korea was raised at the Arboretum from seeds collected by Wilson in Korea in 1918, and in its range is the most northern of the species of Forsythia, has been in bloom for more than a week. It is a large shrub distinct in its light yellow branches with broad, long-pointed, coarsely toothed leaves from four to five inches long and from three to four inches wide, and clear primrose-colored flowers rather smaller than those of F. Fortunei or any of the forms of F. intermedia. They open, too, about a week earlier than those of the other Forsythias, and this year were fully open on the 23rd of April. This Korean species promises to be a useful addition to early spring-flowering shrubs and to be hardy in parts of this country where the other Forsythias cannot be successfully cultivated. It should also prove exceedingly valuable to cross with the other species and hybrids in order to produce hardier hybrids of this useful genus.

April-flowering Rhododendrons. The earliest of these, the Siberian R. dahuricum, which can be seen on Azalea Path is now well covered with its small rose purple flowers. The flowers of the north China R. mucronulatum, which open usually two or three days later than those of the Siberian plant, are less delicate and are rarely injured by frost. On the lower side of Azalea Path there is a mass of this beautiful plant which is well worth a place in the spring garden. The plants of the hybrid Rhododendron (R. ciliatum x dahuricum) known in gardens as R. praecox “Early Gem” in the general Rhododendron collection are covered with expanding flower-buds. This is an interesting and handsome plant, but the flowers are very delicate and five years out of six are ruined by frost.

Docent service. Beginning on May 9th a docent will meet visitors who may desire his services at the Forest Hills gate at 3 P. M. on Tuesdays, Saturdays and Sundays; and garden clubs and groups of not less than twelve persons at any other hour if the Director is notified not less than two days in advance.

Mr. J. G. Jack of the Arboretum staff will conduct a field class on Saturdays during the spring and early summer, to assist those who wish to gain a more intimate knowledge of the native and foreign trees and shrubs which grow in New England. Instruction will be given in informal outdoor talks and in the examination of the plants. Different botanical groups will be visited at each meeting, although any trees or shrubs found may form subjects for study. No technical knowledge or special preparation is required in order to join the class as the instruction is intended to be simple in character, affording opportunities for questions and answers relating to the specimens under observation. Unless otherwise notified the class will meet promptly at ten o'clock in the morning, on Saturdays, in the Arboretum at the Forest Hills entrance, beginning May 8th. The class will close on the 25th of June. The fee for the course is $5.00, payable in advance.