Effects of the winter in the Arboretum. The high temperature of January started the development of the flower-buds of some plants, for example those of the Silver Maple (Acer saccharinum) which was in full flower on the first day of February, or several weeks before the usual time. January was followed by two months of cold weather and frequent snowstorms. The snow protected small plants which without this covering would probably have suffered, and the number of plants that have been killed or seriously injured in the Arboretum is surprisingly small. The flower-buds, however, of many plants have been entirely or partially killed, while other plants which in an ordinary season lose their buds have not suffered and promise to yield unusual crops of flowers. The flower-buds of all Peach trees are killed but those of the Plums and Crabapples appear to be uninjured. The spring is from ten to twelve days later than usual.

Rhododendrons have suffered less than they did in the winter of 1914-15. Occasionally a leaf has been browned or a small branch killed, but apparently a good many flower-buds have suffered and the prospect for flowers is not so good as usual. Rhododendron ponticum, which usually suffers in this climate, appears to be killed outright. This plant which is so hardy in England, where it sometimes becomes a troublesome weed, has seriously interfered with the successful cultivation of Rhododendrons in this part of the world, for it has been used in European nurseries as stock on which is grafted the hybrids and varieties of other species, and the hardiness and vigor of many of these plants has been unfavorably influenced by this tender stock. A little hybrid Rhododendron known as R. praecox, "Little Gem," is per-
feetly hardy here but it blooms so early that in about nine years out of
ten the flowers after they open are spoiled by frost. This year not
a flower-bud has been injured and the plants are now in flower.

**Forsythias.** Many flower-buds of these plants have been killed as
they were two years ago. All the flower-buds in the lower part of
the great Forsythia bed on the slope above the Bussey Hill Road are
entirely killed, while on the plants in the upper part of this bed, al-
though many buds have suffered, there are open flowers enough to
make this part of the bed conspicuous. In the lower ground of the
general Shrub Collection the flower-buds of all the species and varie-
ties of Forsythia have been entirely killed with the exception of those
of the Albanian *F. europaea* which are uninjured. If the flower-buds
of this species are better able to support cold than those of the other
species, which are all natives of eastern continental Asia, the European
plant should be better known and more generally cultivated. One of
the last plants discovered in Europe, it is a vigorous, fast-growing
shrub with more erect stems and branches than are usually found in
the other species of this genus. The flowers are not quite so showy
as those of *F. suspensa* and its hybrids and varieties, but they are
always abundantly produced and of good color. This plant is still rare
in gardens and it is doubtful if it can be found in American nurseries.

**Magnolias.** The Japanese shrubby species, *Magnolia stellata*, is
usually the first of the Magnolias to flower in the Arboretum and the
petals are sometimes browned by a late frost. This year many of the
flower-buds have been killed and only a few flowers much reduced in
size are now open on these beautiful and usually satisfactory plants.
Some flowers are now open on the northern form of the Japanese
*M. kobus* (var. *borealis*). This is a shapely tree, with small drooping
flowers which open before the appearance of the leaves, and good
foliage, but it never flowers here very freely and this year there are
fewer flowers than usual. As a flowering tree for this climate it is
inferior to the white-flowered Chinese species, *M. conspicua*, or as it
now to be called, *M. denudata*, and its hybrids, which also flower before
the appearance of the leaves and are not yet in flower.

**Witch Hazels.** The earliest of the Witch Hazels, *H. vernalis*, a na-
tive of southern Missouri and of Arkansas, opened its first flowers
during the last week of December and these were followed in January
and February by the flowers of the Chinese and Japanese species which
were not affected by a temperature of several degrees below zero. In
the size and color of its flowers and in foliage the Chinese *H. mollis*
is the handsomest of these winter-flowering shrubs. It is hardy, fast-
growing and free-flowering, and might well find a place in every gar-
den where it can be seen from the windows of country or city houses.
Unfortunately this shrub is still difficult to obtain from American
nurseries.

**The Cornelian Cherry (Cornus mas)** is one of the earliest trees or
arborescent shrubs to flower here. 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 numbers that the branches are covered with them. They are followed by bright red, lustrous, oblong fruit the size of a small olive. The flower-buds and the flowers of this little tree are not injured by cold. The habit of this plant is good. The foliage is dark green and abundant and the fruit, although somewhat hidden by the leaves, is handsome. The Cornelian Cherry is a native of most European countries and of western Siberia, and has been an inhabitant of gardens for more than three hundred years. In the United States it was probably more generally 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 can be seen in the Cornel Group near the junction of the Meadow and the Bussey Hill Roads.

Two Japanese plants. The leafless branches of Euptelea polyandra are now covered with flowers. The conspicuous part of these is the large bright orange-red anthers which hang on short filaments in axillary clusters from one end of the branches to the other. For its peculiar and early flowers this plant is well worth a place in New England gardens, and the large green leaves are handsome and abundant. There are several fine specimens of this large shrub or small tree on the lower side of Azalea Path and this week they are well worth examination. Another species, E. Franchetii, introduced by Wilson from western China, appears to be perfectly hardy in the Arboretum. The plants are still too small, however, to flower. The related Cercidiphyllum japonicum, which is the largest deciduous-leaved tree in Japan and now becoming common in American collections, is also beginning to flower. The flowers are inconspicuous but the red color of the unfolding leaves makes the tree attractive at this season. There is a group of this tree on the two sides of the Meadow Road not far beyond the Administration Building.

Corylopsis. This is a genus of the Witch Hazel Family, distributed, with several species, from the western Himalayas through western and central China to Japan. These plants have leaves which in general appearance resemble those of the Witch Hazel, and drooping spikes of fragrant yellow flowers which appear before the leaves, and terminate on what, later in the season, become short leafy branchlets. Several of these plants are hardy in this climate, but the flower-buds are often killed by intense cold, or, if they are not killed, the flowers open so early that they are destroyed by late frosts. This year the flower-buds have not been much injured, and the flowers of three species are now open. One of the best known of these plants is the Japanese C. spicata. It is a shrub with spreading branches four or five feet high, with yellow flowers, about half an inch long, and produced in from six to twelve-flowered spikes. There are plants of this shrub on Hickory Path near Centre Street. In the collection of Chinese shrubs on the southern slope of Bussey Hill two distinct and beautiful species introduced
by Wilson are now in flower, *C. Veitchiana* and *C. Willmottiae*. If the plants of this genus could be depended upon to flower every year they would deserve a place in all gardens where early spring flowers are desired, but in ordinary seasons they flower too early or the flower-buds are destroyed, and they cannot be recommended for general cultivation here. In the middle Atlantic states, wherever *Jasminum nudiflorum* succeeds they would probably give good results, and in California they may be expected to flourish and to become midwinter and early spring-flowering shrubs of first-rate value. Lovers of rare and little known plants will do well to see them in the Arboretum this spring for it may be many years before they flower so freely again.

**Andromeda floribunda.** There are so few broad-leaved evergreen trees or shrubs which are really hardy in this climate that it may be useful to call attention again to this Andromeda which is a native of the high slopes of the southern Appalachian Mountains and perfectly hardy in New England. It is a low, broad, round-topped bush with small, dark green lustrous leaves and short erect compound clusters of small white heath-like flowers which are now open. The flower-buds, which are fully grown in the autumn, are also white, and are conspicuous through the winter, adding to the value of this plant for the winter and spring garden.

Two eastern American shrubs now in flower show the value of some native plants for American gardens in which they are too seldom found. These flowering shrubs are the Leatherwood (*Dirca palustris*) and the aromatic Spicebush (*Benzoin aestivale*). They are now covered with small yellow flowers, and those of the Spicebush will be followed in the early autumn by lustrous, scarlet fruits. Masses of these two plants can be seen on the right-hand side of the Bussey Hill Road opposite the upper side of the Laurel Collection.

Automobiles are not admitted to the Arboretum, but visitors who desire carriages to meet them at the Forest Hills entrance can obtain them by telephoning to P. J. Brady, Jamaica 670, or to Malone & Keane, Jamaica 344.

The subscription to these Bulletins is $1.00 per year, payable in advance.

An illustrated guide to the Arboretum containing a map showing the position of the different groups of plants has recently been published. It will be found useful to persons unfamiliar with the Arboretum. Copies of this guide can be obtained at the Administration Building in the Arboretum, from the Secretary of the Massachusetts Horticultural Society, 300 Massachusetts Avenue, Boston, from The Houghton, Mifflin Company, 4 Park Street, Boston, and at the office of the Harvard Alumni Bulletin, 50 State Street, Boston. Price, 30 cents.