EARLY BLOOMING SHRUBS AT THE ARBORETUM

WITCH-HAZELS. These plants afford a "tie in" with fall and spring. The common witch-hazel (Hamamelis virginiana) is the last plant to bloom in the fall, usually late October or November. The vernal witch-hazel is the first woody plant to bloom in the spring at the Arboretum. This year some of the plants were in bloom by the middle of January. Hamamelis japonica and H. mollis bloom later in February or March. This year they both started about March 15.

The leaves of the Japanese witch-hazel (H. japonica) have a brilliant scarlet to orange autumn color, while the foliage of all the others are colored a good yellow in the fall. Though there are many plants with yellow colored foliage in the fall, these witch-hazels can always be counted on to be outstanding.

Hamamelis virginiana is a more or less scraggly growing plant, which is native all through the northeastern United States. In fact, it is much better used in naturalistic plantings and along the borders of woods than elsewhere because of this loose habit of growth. Hamamelis vernalis, native to southern Missouri and adjacent regions, was first brought to the attention of gardeners by Professor C. S. Sargent about 1908. It grows 5 to 8 feet tall, is dense and suckers very much at the base, making it an excellent species to use in mass plantings. It is the most floriferous of all the witch-hazels, though the individual flowers are the smallest. Therefore it is not as showy as the two Asiatic species, but it is valued for its fragrance, the flowers having a very distinctive and aromatic odor. There is a rather wide variation in the time individual plants bloom and in the color of the flowers. Typically, these have yellowish petals which are reddish towards the base. The flowers are closed when the temperature is low, and then
the petals gradually expand when it gets warmer, a very interesting process.

Hamamelis japonica, the Japanese species, is similar in habit to H. virginiana, but the flowers are larger and more plentiful. The petals are pure yellow while the cupped sepals are more or less purple on the inside. The variety arborea is more tree-like in form with golden yellow petals, calyx deep purple on the inside, and the stamens with purple anthers. The other varieties, H. japonica flavo-purpurascens and H. japonica Zuccariniana, are apparently just as hardy, the former being of more ornamental value because of its larger red and yellow flowers. As a rule it is harder than H. mollis. The Chinese witch-hazel (H. mollis) is the one that has the largest and the most conspicuous flowers of all and has been the most publicized. Unfortunately, it cannot always be depended upon at the Arboretum. The flowers, and even the flower buds themselves, are subject to injury from low temperatures, and none of the plants at the Arboretum have given a good performance during recent years. In warmer sections, or in places where this plant can be given ample winter protection, there is no doubt that it is an addition to the garden, particularly since it is the most outstanding of the small group of plants in bloom at this time of year.

Daphne species. The February daphne (Daphne Mezereum) is the most common of this group, since it has become naturalized at various places in the eastern United States. It is a native of Europe and has been in cultivation for about four hundred years. This is another plant whose early, fragrant, purplish spring flowers (there is a white flowered variety also) are not noticeably affected by freezing. When plants bloom at this early time in the year they are subjected often to violent changes in temperature, and the only flowers of value to us then are those which can stand such conditions. February daphne has red fruits in the summer, and these, combined with the green color of the leaves make a very effective combination at that time.

The lilac daphne (D. genkwa), though it has pretty violet colored blossoms, yellow fruits, and blooms in early May, has not proved very satisfactory here at the Arboretum. It has previously been grown here, but every now and then is either completely killed or is given a severe setback by a cold winter. This plant may do better further south, but cannot be recommended for climatic conditions similar to those at the Arboretum. Daphne Cneorum blooms in mid-May.

There are three other members of this genus, all of them white-flowered, which have been grown at one time or another at the Arbo-
return. They are *D. altaica*, *D. caucasica* and *D. alpina*, none of which are particularly outstanding.

**The Cornelian Cherry** (*Cornus mas*). A native of southern Europe and western Asia, this plant has been used in gardens for over three hundred years, and in this country for over a century. It is of value chiefly for its very early, bright yellow flowers, which apparently are not injured by late freezes. The flower buds themselves can usually be counted on even during the coldest winters in this section of the United States. It blooms at a time when there is little else of importance in flower except the early species of *Hamamelis* and *Daphne Mezereum*. Added to its effectiveness of flower is the beautiful, rich, dark green, shiny foliage, which is attractive all summer long. The fruits are something like elongated cherries, ripening during the summertime, red in color, and in Europe often used for making preserves. The plant itself is vigorous, dense, and is even used for clipped hedges, though it would be better perhaps to use it as an unclipped windbreak. There is a yellow-fruited form growing at the Arboretum.

The amount of fruit it bears apparently depends on weather conditions, for when the weather is particularly cold at blossoms time, there often results a very small amount of fruit later.

The Japanese cornelian cherry (*Cornus officinalis*) is very similar from a horticultural standpoint. It, however, is native of Japan and has only been in this country about sixty years. There is a striking difference in the bark of these two plants, in that the bark of *C. mas* is very close in texture, and a dark grey, while that of *C. officinalis* is loose, splitting and peeling off on the second and third year's growth, into short, papery strands. It is reddish brown in color. From a horticultural standpoint one of these plants is practically the same as the other. They are both valued for dependable early flowers, good foliage and fruit, and a good dense habit of growth.

**Blooming periods.** It is difficult to predict the weather conditions very far in advance, but it may be interesting to some if we list a number of the outstanding groups of plants, together with the approximate time that they normally would be expected to bloom.

- **Middle April**—Forsythias
- **Late April**—Single flowered forms of Japanese cherries
- **Early May**—Shadbushes, Japanese quinces, early spiraeas
- **Middle May**—Crabapples, double flowered Japanese cherries, red bud and flowering dogwood
- **Late May**—Lilacs, wisterias, deutzias, diervillas, hawthorns

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