Forsythias or Goldenbells make the season's first brave display of yellow blossoms and without these handsome shrubs spring gardens would lose much of their beauty. The genus is an Old World one and its distribution is quite interesting. For many years two species only were known, both native of eastern China and cultivated in Japan. In 1897 a species was discovered on the mountains of Albania in southeastern Europe. Since then another species has been discovered in China, one in west Japan and one on the Diamond Mountains of Korea. It is really an Oriental genus with one outlying species in the Balkan Peninsula and geographically far removed. Among shrubs we know of no other identical case but a close parallel is found in the related Lilacs and Privets, which, in addition to Oriental and European species, have representatives on the Himalayas. In very severe winters the flower buds are apt to suffer more or less severely, but on the whole all Forsythias may be classed as hardy so far north as Boston. Formerly the Cornelian Cherry (Cornus mas) the Leatherwood (Dirca palustris) and the Spicebush (Benzoin aestivale) were the season's first favorites among yellow flowering woody plants, but for ornamental purposes Forsythias have now entirely superseded them. The Forsythias are admirable subjects for planting either on banks, against walls or fences, for hedges, or as specimens, but one of the tragedies of spring is the brutal way in which these good-natured shrubs are clipped and sheared at the annual tidying up of the garden. As one travels through the suburbs and countryside decapitated bushes of Forsythias are to be seen on either hand despite the obvious fact that every branch cut from them in early April means a loss of flowers. If people would only wait and enjoy the crop of blossoms and then cut the Forsythia bushes back as severely as circumstances or fancy dictates, no harm would be done. Like other spring flowering shrubs and trees Forsythias produce their blossoms on the past season's growth and the pruning of all these plants should be done immediately after the blossoms have fallen. It is surprisingly difficult to get people to appreciate or at least to practise this simple fact.
In the Arboretum the collection is established on a steep bank on Bussey Hill Road near Forest Hills Gate and immediately before the Lilacs are reached. Individual bushes of the species and varieties are at the lower end and beyond is a tangle some 75 yards long and 25 yards deep, which is one of the most spectacular sights of early spring in the Arboretum. In the Shrub Garden certain of the older species, hybrids and varieties are grown. The curious may be interested to note that in the flowers of the Forsythia the style of the pistil is of two lengths. On some bushes the flowers all have a style longer than the stamens and reaching to the mouth of the corolla-tube. On other plants the style is short reaching about half the length of the corolla-tube and the stamens protrude above it. Some of the varieties of the hybrid _F. intermedia_ are distinguished by having either a long or short style to the pistil. Of the six species known all except _F. Giraldiana_ from Shensi province in China are cultivated in the Arboretum. This species is described as having hairs on the leaves, a condition found in _F. suspensa_ var. _pubescens_, which is growing in the Arboretum. It is rather interesting to note that in the allied genera _Syringa_, _Fraxinus_ and _Chionanthus_ hairiness may occur in any species. It would appear that pubescence in these genera is a family peculiarity and of little or no taxonomic significance.

_Forsythia ovata_, a newcomer from the Diamond Mountains in Korea, whence it was introduced by the Arnold Arboretum through seeds sent by E. H. Wilson in 1917, is first of the Forsythias to open its blossoms. In a wild state this is a straggling, often sprawling shrub of no great size, remarkable chiefly for its relatively large, dark green, very leathery leaves. In cultivation it is a sparsely branching, vigorous shrub with ascending, arching stems forming a broad, rounded shrub some 5 to 7 feet tall. The shoots are pale gray and this with its habit of growth readily distinguish it from other species. The leaves are thick and leathery, broadly ovate, from 2 to 3 inches long and from 1½ to 2 inches wide, coarsely-toothed, and lustrous dark green on the upper surface. The flowers, borne singly or in pairs, are each about 1 inch across and have a purple-brown calyx and a pale, rather greenish, yellow corolla. Though the flowers are smaller than those of other species and the color somewhat pale this new species, on account of its great hardiness, is likely to be of great value to northern gardens. It will probably prove hardy as far north as Ottawa and the hybridist should find it of much service.

_Forsythia suspensa_, native of China but for centuries grown in Japanese gardens and from there introduced into Holland in 1833, was the first Forsythia to be known. The typical form has long, whip-like branchlets, pendent or sprawling on the ground, where they root freely. It will grow from 15 to 30 feet tall and on account of its lax habit this is the best Forsythia for planting against walls or fences or for training over pergolas. The variety _Fortunei_ is an upright growing bush of vigorous habit with erect and arching branches and abundant golden yellow blossoms. Another variety
(atrocaulis) introduced from central China in 1907 is remarkable for its blackish purple shoots and extremely large flowers; unfortunately this does not blossom so freely as the type.

**Forsythia viridissima** was the second species introduced, being sent to England from China by Robert Furtune in 1844. This is a bush with ascending-spreading stems some 5 to 6 feet tall and bright yellow flowers. It is not so hardy as *F. suspensa* and blossoms a little later. More handsome than the type and likely to be of greater hardiness is the variety *koreana*, a common plant in the neighborhood of Seoul, the capital of Korea. This has spreading, arching branches and deeper yellow, more abundant blossoms than the Chinese type. It was introduced by the Arboretum in 1919 through seeds received from the Department of Forestry in Korea. These two Chinese species are much confused in gardens but may be readily distinguished one from the other by splitting a shoot down the middle. In *F. viridissima* the pith will be seen to be arranged in plates one above another, whereas in *F. suspensa* there is no pith and the center of the stem is hollow. Interestingly enough the hybrid between these two species, *F. intermedia*, partakes of both characters. In some shoots or parts of the same shoot lamellate pith will be seen, whereas in others no pith is present.

**Forsythia intermedia**, a hybrid between the two Chinese species, which originated in Europe some time before 1880, is superior to either of its parents. The variety *spectabilis* with rich, pure yellow flowers, each 1½ inches across, is probably the most handsome of all the Goldenbells. It is extremely floriferous and stems 6 to 8 feet long are crowded throughout the whole length with large clusters of blossoms. If only one Forsythia can be grown it should be this. Another variety of this hybrid with deep yellow flowers is *vitellina*. The variety *densiflora* has spreading and pendulous branches, much crowded, pale yellow, rather flat flowers with slightly recurved corolla lobes. The best of the pale yellow Forsythias is *var. primulina*, which originated in the Arboretum about 1910 as a chance seedling.

**Forsythia europaea** was discovered on the mountains of Albania by Dr. A. Baldacci in 1897, and was introduced into cultivation by means of seeds which he sent to Kew in 1899. It is of upright habit with pale gray shoots and yellow blossoms each about 1¼ inches in diameter. Of somewhat ungainly habit, growing 10 feet tall, it has proved more bud-hardy in the Arboretum than the Chinese species.

**Forsythia japonica** in its typical form is not represented in the Arboretum. This species is said to be abundant in the province of Bitchu in western Japan and to be related to *F. suspensa*. In central Korea grows a variety (*saxatilis*), a rather slender stemmed plant and this is now growing in the Arboretum collection.

E. H. W.

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