The poverty of the gardens of the northeastern United States in broad-leaved evergreens, due to our climatic conditions, was shown in a previous bulletin, and we shall now mention a few plants which retain their foliage unchanged in color until late in the season. By the use of such plants it is possible to make a garden which will appear during October and November almost like a garden of broad-leaved evergreens. Most of these plants have come from Europe, although a few Chinese and North American shrubs retain green foliage through November.

One of the best known plants of this class is the European Buckthorn, *Rhamnus catharticus*. This is a large shrub, or in favorable positions a small, round-headed tree. The leaves are now bright green and the branches are covered with small black berries. This is a very hardy, fast-growing shrub, and when gardeners had less material to choose from than they have now it was often planted in this country. Now it is rarely seen except in plantations made many years ago. This is true of another European shrub, *Ligustrum vulgare*, the common Privet. This was once much planted in the eastern United States, especially in forming hedges, and it has always been used in Europe for this purpose. In recent years, however, it has been neglected here in favor of some of the Privets introduced from eastern Asia, although none of these are as useful garden plants. The European Privet is a tall, round-topped shrub; the leaves are still as green as at midsummer and make the best possible background for the large clusters of shining black fruits. There is a form of this plant with yellow-green fruit but this is less desirable than the black-fruited form. The European Privet is one of the hardiest of plants; it grows quickly into a large, round-topped shrub; it is not particular about soil; it bears the shears well, and so can be used in hedges or cut into fantastic shapes. Europe has made comparatively few valuable contributions from its native flora to the gardens of this country and this Privet is one of the best of them.

The handsomest semi-evergreen shrub, perhaps, now in good condition in the Arboretum is an *Evonymus* which is to be seen in the Evonymus Group on the right-hand side of the Meadow Road. It is a broad shrub, ten or twelve feet high, with bright green leaves which will not fall for several weeks. The fruit is small, sparingly produced, and hardly noticeable. This remarkable plant is called *Evonymus Hamiltonianus*, var. *semipersistens*, and nothing is known of its origin although it is not improbable that it is a native of some part of China, and it is possibly a distinct species rather than a variety of another plant.

Some of the Honeysuckles might find a place in an autumn garden for the leaves of several species are still perfectly green. The best known of these are two Chinese species which have been cultivated in this country for at least half a century, *Lonicera fragrantissima* and *Lonicera Standishii*. These are large hardy shrubs and produce their fragrant flowers in early spring before the leaves appear. The leaves of a few other species are still untouched by autumn. The most conspicuous of these are *Lonicera xylosteum* from Europe and northern Asia, *Lonicera*
tibetica from western China and Thibet, a low plant with slender spreading branches, and Lonicera Ledebourii from California.

Nearly all the plants of the Elaeagnus Family retain their leaves until late in the autumn, but the only one in the collection which is still as green as at midsummer is the Sea Buckthorn, Hippophae rhamnoides, a widely distributed shrub or small tree of Europe and central Asia. The male and female flowers are produced by different individuals and the female plant is attractive when the branches are covered with orange-colored persistent fruits. Tall treelike plants of the Sea Buckthorn can be found with the other plants of this Family on the left-hand side of Bussey Hill Road just above the Lilac Collection.

Several European yellow-flowered plants of the Pea Family are now conspicuous from the bright green color of their leaves. Some of the most beautiful autumn plants among them are Genista germanica, Genista pilosa, Genista tinctoria, Genista elata, Cytisus nigricans, and Cytisus capitatus. These are all small low shrubs well suited for small gardens. They can be found in the Shrub Collection. Another yellow-flowered plant of this Family, Coronilla Emurus, of southeastern Europe, grows to a larger size but it is equally green in the first week of November. There are good specimens of this rather tender shrub on the right-hand side of Azalea Path.

The leaves of few American plants retain their summer color until November. An exception, however, is Leucothoe racemosa from the southern Appalachian Mountains which can be seen in the Shrub Collection. A very different plant but one still as green is the Chinese Matrimony Vine, Lycium chinense. This has long, wand-like, arching or prostrate stems which with a little support can be made vine-like and used to cover trellises. It is a useful plant for draping walls and when planted as a shrub in masses it soon makes an impenetrable barrier. The scarlet shining fruits which are abundantly strung along the branches add greatly to the autumn beauty of this hardy plant. It has been freely used to cover the boundary walls of the Arboretum and it can also be seen in the Shrub Collection.

In the group of Barberries on Hickory Path and in the Shrub Collection is a plant which is still but little known in American gardens. This is Berberis Neuberti, a hybrid between the common Barberry, Berberis vulgaris, and the evergreen Berberis or Mahonia Aquifolium. It is a moderate-sized, broad-topped shrub with large dark green leaves which remain on the branches with little change of color through November. This plant does not bloom freely and rarely produces fruit, but it is one of the hardiest and handsomest of the shrubs with semi-persistent foliage which have been introduced into the Arboretum.

The leaves of a few vines are still almost as green as in summer and promise to remain green for sometime longer. The best known of these, perhaps, is a Japanese Honeysuckle, a form of Lonicera japonica, which is usually known in gardens as Hall’s Honeysuckle. In the middle and southern states this vigorous plant has become perfectly naturalized, often crowding out the native plants, and retains its foliage during the winter. Here the leaves are killed by severe cold. As a flowering plant, too, this is one of the handsomest of the Vine Honeysuckles which are hardy in this climate.
The leaves of the two Akebias, *Akebia quinquefolia* and *Akebia lobata*, are still fresh and green, and these slender and graceful vines deserve a place in every autumn garden. The small purple flowers do not make much show, and the edible fruit, which is largely consumed in Japan, is rarely produced in this climate. Large plants can be seen on the trellis at the eastern end of the Shrub Collection.

*Clematis paniculata*, one of the handsomest of the late summer-flowering species and now one of the most popular hardy plants in the United States, is still covered with leaves as green as they were in July. Another vine growing on the trellis near the Akebias is now conspicuous with bright green leaves. This is a Japanese Moonseed, *Cocculus Thunbergii*.

A few shrubs are still brilliant in their autumn dress and the leaves of others are only beginning to turn. The most important of these last is *Viburnum Canbyi*, a native of eastern Pennsylvania and of Delaware. This is the last of the Viburnums to flower; and its bright blue fruits do not ripen until October. Plants of this handsome shrub in the Arboretum are now fully ten feet high and from ten to twelve feet in diameter. The large leaves are only just beginning to turn from dark green to the color of old leather and will be in good condition for two or three weeks longer. There are several large plants of this Viburnum on the right-hand side of the entrance to the Administration Building, and there are others on the right-hand side of both the Meadow and the Bussey Hill Roads.

The leaves of two Currants in the Shrub Collection are just turning scarlet. These are *Ribes curvatum* and the Chinese form of *Ribes fasciculatum*. *Ribes curvatum* is a little known plant found a few years ago in the neighborhood of Stone Mountain in central Georgia. It has white flowers gracefully drooping on long stems, and in cultivation has proved to be one of the most attractive in the large collection of these plants in the Arboretum. The beauty of the Chinese Currant at this season is increased by the bright red fruits which are still on the branches. This handsome Currant is the only one of its genus in the collection with fruit which ripens in the autumn.

A few other shrubs are still worthy of notice for their autumn coloring. The most conspicuous among these now perhaps is *Cornus sanguinea*, with leaves the color of old Spanish leather. This is a large shrub from Europe which has been able to adapt itself perfectly to our climate where it flowers freely and produces large quantities of dark-colored fruit which, however, has now disappeared. A broad massive specimen will be found on the right-hand side of the Bussey Hill Road just beyond its junction with the Meadow Road and on the upper margin of the Cornell Group.

Other shrubs with still highly colored foliage are the Japanese *Viburnum tomentosum* with leaves of dark reddish brown, and *Lyonia or Andromeda ligustrina*, with bright scarlet leaves. This handsome native plant has been generally planted among the shrubs along some of the drives in the Arboretum and it can be found in the Shrub Collection.

The Arboretum will be grateful for any publicity given these Bulletins.