The phenomenal drought which Massachusetts in common with other states has endured will long be remembered for it caused grave anxiety among all who garden. In late June the Arboretum enjoyed one good rainfall but not another worth mentioning until October 2nd. For fully two months supplying water to suffering trees and shrubs was the principal work engaged upon. Fortunately, there was no great heat but at the height of the drought it looked as if a great many plants must die. Thanks to the water stored from the heavy rains of spring the trees suffered but little and as autumn arrived a general freshening among all woody plants was noticeable. Today it is difficult to realize that extreme drought has been experienced. The power of resuscitation enjoyed by plants is, indeed, marvelous.

The pageant of autumn coloring in New England is almost commonplace, yet nowhere in the world is it more brilliant or more abundant. On every side the gaiety of coloring is redundant as if Nature happy in a season’s work well done was celebrating in joyous mood. Trees, being the dominant feature of the landscape, stand forth most conspicuously and with a little study it is easy to recognize the majority of native forest trees by the color of their autumn robes. As with the color of fruits, so with autumn tints in general, they are fixed in character, the same individual producing each successive season the same colors. The Poplars, Birches, Elms (with one Oriental exception), Hickories and Tulip-tree change unfailingly to yellow tones, varying from rich yellow to orange-yellow. Beech and some other trees pass from yellow-orange to golden bronze and russet. In the Oaks, the Swamp White, the English, and the Chestnut Oak, the foliage changes more or less leather-brown tints; the White Oak in a majority of trees gives a splendid splash of scarlet, passing to crimson. In the Red and Black Oaks red to crimson tones prevail. As the autumn colors persist long on Oaks they are the most glorious feature of New England’s countryside. In Maples every conceivable color
obtains. In the Striped-bark Maple the autumn foliage is pale to clear yellow; the Scarlet Maple may be yellow, orange, deep red, or crimson-purple, but the greatest variation is seen in the Sugar Maple where every color from pale yellow through orange to pink and crimson may be seen on half a dozen individuals often growing side by side. Of exotic species no Maple has more beautiful autumn foliage than Acer ginnala, a small tree of more or less shapeless habit with abundant coarsely toothed leaves which change from salmon to the richest tones of red. The White Ash of all trees gives the greatest show of vinous purple. No other large native tree presents this color and it can be picked out in the autumn so far off as one can distinguish color. Occasionally one notes a White Ash tree that is all yellow, a color that is invariable in its close relatives, the Red and Green Ash. Glorious are the colors of the Sassafras, varying from yellow and orange to salmon-red. The Pepperidge or Tupelo (Nyssa sylvatica) of all native trees gives the greatest show of pure crimson in the fall. The true Larches change to yellow but are far outshone in autumn beauty by the Chinese Golden Larch (Pseudolarix amabilis), which early assumes tones of old gold to golden-bronze almost unique among trees. Its remote relative, the Ginkgo, changes to the richest yellow and where these trees are associated with Pine, Hemlock, Spruce and Fir the effect is heightened since the latter stand out as black-green and gray-green foils. Of the lesser trees none is more lovely in autumn garb than the Flowering Dogwood for every color is present in its foliage among which nestle clustered scarlet fruits. Of all native flowering trees none has greater ornamental value than the Flowering Dogwood. In the Arboretum, where all the hardy native trees are assembled and where, too, may be found a large percentage of the trees of boreal regions that can be grown in the climate of Massachusetts, the autumn coloring is unusually rich and varied and no more delightful stroll can be taken than through its grounds in October.

Autumn coloring is by no means confined to trees; indeed, it is general among the native shrubs of eastern North America. Comparatively few native trees bear ornamental fruits, whereas, such are common among shrubs. Viburnums as a tribe are rich in all the qualities that make an ornamental shrub for they are of good habit, free-flowering and fruiting, and deserve far greater attention than is now accorded them. Among autumn foliage that of Viburnum prunifolium with its rich vinous purple shades is not exceeded by any shrub. On its heels comes the Nannyberry (V. lentago) but, perhaps, less brilliant in color. Similar, too, is the autumn foliage of V. cassinoides. In this species and also in V. prunifolium the fruit as it ripens passes from white through shades of pink to blue-purple. The Arrowwood (V. acerifolium) so common in woodlands has pale pinkish to claret-colored foliage distinctly translucent in autumn days. In sheer autumn brilliancy the Sumacs perhaps exceed other groups of native shrubs and in none is a brighter ruddy crimson seen than in Rhus copallina. Evonymus and Honeysuckles give an abundance of fruit but little autumn color; the Barberry tribe, however,
A splendid native shrub, *Viburnum prunifolium*
excel in both qualities. In a group so large it is hard to single out the most desirable but in the Arboretum at the moment none are more beautiful than *Berberis diaphana* on Centre Street Path and *B. circumserrata* on Bussey Hill. These two Chinese species are both low and compact in habit, forming rounded masses much broader than tall with moderately large coarsely toothed leaves of various shades of orange to purplish crimson among which hang ovoid scarlet fruits. The fruit on the different Blueberries and Huckleberries has long since disappeared but their autumn tints and especially those of the High-bush Blueberry are richly developed. Azaleas are free-flowering and beautiful giving in variety a ten weeks' succession of blossom in spring and early summer, and most of them have warm tinted autumn foliage. Handsomest of all are the blackish purple tints of *Rhododendron roseum* and the crimson to purple hues of *R. Vaseyi*. In the Flame Azalea (*R. calendulaceum*) the autumn colors are almost as varied as those of the flowers in spring while the leaves of the Swamp Honeysuckle (*R. viscosum*) vary from luminous orange to lustrous bronze. The Korean *R. poukhanense* effects bronzv purple tones, whereas orange, salmon-red to crimson prevail on Kaempfer's Azalea. The Enkianthus boast no beauty in their fruits but in their autumn foliage they rank among the loveliest of all shrubs. In *E. campanulatus* all shades from orange through salmon-red to purplish crimson may be seen and that favorite of the Japanese, *E. perulatus*, better known as *E. japenicus*, with its glowing orange through red to crimson tones may be acclaimed superbrilliant. On Bussey Hill the Azaleas and Enkianthus may be seen in their autumn dress and nearby Cotoneasters in rich variety are strung with brightly colored fruits. Especially ornamental are *C. Dielsiana, C. divaricata, C. horizontalis* and *C. apiculata*. The Callicarpas possess little beauty of flower and no particular merit in foliage but their lustrous, pale lavender fruits clustered in the leaf axils are as lovely as they are unique in color. Spiraeas, Deutzias, Philadelphus and their ilk are in a measure like herbs inasmuch that while they give an abundance of blossom they possess no ornamental qualities in fruit or autumn foliage. In the ordinary garden there is little place for trees but always a place for good shrubs and in selecting these attention should be paid not only to their flowering qualities but to their habit of growth, to the character of their fruits, and their autumn tints. Were this more commonly practised the shrubs about homes would be of a more varied and much more highly ornamental character.

The Hawthorns on the easterly and southerly slopes of Peters Hill are laden with fruit and wellworth coming a long distance to see. Hawthorns possess a strong family likeness but they are, nevertheless, strongly characteristic. The habit of growth, the long horizontal zig-zag branches far outthrust and laden with pendent masses of fruits of varying shades of red to purplish crimson are most impressive. The season of ripening and period of retaining their fruits varies enormously. *Cotoneagus arnoldiana*, the first of its tribe to ripen fruit is in full glory in late August and the fruits are shed by the end of September; others ripen in succession and some carry their fruits far into the winter.

E. H. W.