Memorial Trees. The use of trees as memorials for soldiers who lost their lives in the Great War is now popular in this country, judging by the number of letters which come to the Arboretum on the subject. The planting, too, of trees to commemorate the visit of an Association or of a distinguished individual to a spot of historical interest has long been practiced in the United States and has often interfered, with disfiguring results, with well considered planting plans. Even the plans of George Washington, a master planter of trees, have suffered by the zeal of his admirers who have too often in efforts for self-aggrandizement sacrificed the simple beauty of Mount Vernon by insisting on planting among Washington's native trees Japanese Maples, European Oaks, Chinese Mulberries and other trees which fortunately have usually proved short-lived in the valley of the Potomac.

Clearly the essential thing in a memorial tree is its ability to live long. The tree selected therefore should be the native tree which grows to the greatest age in the particular locality and in the kind of soil in which it is proposed to establish the memorial. A native tree should be used for the trees native to any locality have become, through thousands of years of cross-breeding and natural selection, better able to live long and flourish in that locality than any foreign tree or any tree brought from a distant part of this country. All sorts of trees are being used as soldiers' memorials. In a western city a long memorial avenue of Japanese Cherry-trees has been planted. The kind selected is a handsome tree, but its seeds first reached the United States in 1892. Japanese trees are well known to be short-lived in this country, and who can foresee the future of this tree in
North America? In another city an avenue of the Chinese Pagoda-tree (Sophora) is suggested as a memorial. This is a handsome tree interesting in the fact that its abundant pea-like white flowers do not open until midsummer. In some of the open places in Peking are specimens of this tree which from a distance look like great Oak-trees. They may be two or three hundred years old. In this country this tree has probably not been growing for more than seventy or eighty years and its growth here has not been rapid. There seems to be no good reason why the Chinese Sophora should be used as a memorial for an American soldier. But the most unfortunate selection for a soldier's memorial is that made by a patriotic Connecticut community which has planted a group of Colorado Blue Spruces for this purpose. This Spruce by its unusual color probably has taken the popular fancy; it is easily raised; it grows rapidly, and is hardy even in the extreme north. More of these Blue Spruces are sold every year in the northeastern states perhaps than of all other conifers combined. Millions of dollars have been expended on it, and in fifty years from now it is pretty safe to predict that not one per cent. of the trees planted this year will be alive. The Blue Spruce was discovered in 1862, and it was first raised in that year in the Harvard Botanic Garden by Dr. Asa Gray. In Colorado, where it grows near the banks of streams in colonies of scattered plants it loses many of its branches and becomes unsightly by the time it is fifty years old. In cultivation it gradually loses branches long before it has reached that age, and it usually becomes unsightly and only fit for the brush pile.

There are objections to using even the longest lived trees as memorials. Even Elms and White Oaks in New England, Laurel Oaks in Florida and Live Oaks in South Carolina and Louisiana, Black Walnuts in Illinois and Burr Oaks in Wisconsin may suffer from bad treatment. Unexpected calamities are liable to happen to trees; they are often injured by fire or killed by lightning, and neglect is often the fate of trees in this country. Twenty years ago no nobler tree for a Pennsylvania memorial could have been found than the Chestnut and now every Chestnut-tree in the state has been killed by a disease for which no remedy can be found. In the northern part of the eastern states there is not a more appropriate tree than the White Pine to mark the grave of a soldier, but the White Pine is menaced by a deadly disease and no one should now plant it for any purpose with the expectation that it will live through its natural life of one or two centuries.

Trees as memorials appeal to the imagination of many persons. Theoretically they have much to recommend them for this purpose. There are few men who would not be happy in thinking that their memory was to be kept green by one of the great New England Elm-trees, or by such a Live Oak as grows in Audubon Park, New Orleans, but in recent years the best Elm-tree in Massachusetts was first mutilated and then destroyed by storms long before it reached maturity, and the large New Orleans Live Oaks may at any time succumb to one of the West Indian hurricanes which every year destroy buildings and trees on the Gulf Coast.

There are at least, however, two splendid memorials made by trees. The best known of them are rows of Cryptomerias which shade the road which leads to the Temples in Nikko, Japan. These trees
were planted between 1631 and 1651 and extend for a distance of twenty-four miles along the road. A few of the trees have been killed by fire but by the latest reports 18,308 trees are still standing and in good health. The story of their planting is interesting. When the Temple at Nikko, which is the burial place of Ieyasu, the founder of the Tokugawa Dynasty, was built, his successor in the Shogunate called upon the Daimyos of the Empire to send each a stone or a bronze lantern to decorate the ground about the mortuary Temple. All complied with the order but one man, Matsudaira Masatsuma, who, too poor to send a lantern, offered instead to plant trees by the roadside that visitors to the Temple might be shaded from the heat of the sun. He did his work so well that these trees promise to live for centuries longer, and this memorial to Ieyasu is one of the important sights of Japan. The second of the great tree memorials is in California where a block of Redwood-forest on Eel River has recently been dedicated to the memory of Colonel Royal Cawthorn Bolling of the American Aviator Service who was killed in France on March 26, 1918. If trees are selected as a memorial there can be nothing more splendid and more enduring than a part of the Redwood-forest, the most beautiful of all the forests of the world. The Redwood is the tallest of all trees and one of the largest in girth of stem. It grows in a region of humid atmosphere where forest fires rarely occur, and if the trees are cut, or killed by lightning they reproduce themselves by shoots which grow from the stump. The man who has secured this Redwood memorial for his friend has done patriotic service, too, for his country. For the Redwood-forest, which occupies only a narrow strip of territory along the coast of northern California contains the greatest stand of valuable timber per acre in the world, and in the hands of lumber-men must soon disappear if the movement now on foot to preserve at least parts of it is not successful. If memorials are to be erected for soldiers and other men in the form of trees the Redwood-forest offers the best opportunity in beauty and permanency which can be found anywhere in the world.

Fruits. The fruit of many shrubs and of several trees has been unusually abundant this year. That of many Crabapples, Cotoneasters and Hawthorns has been exceptionally fine. In the early autumn that of Cornus obliqua and Evonymus planipes were especially noticeable. This Cornus which has generally been confused with C. Amomum, the Silky Cornel, was first distinguished many years ago by Rafinesque and later was named in Germany Cornus Purpusii. C. obliqua and C. Amomum both grow in Massachusetts, but the latter is an Appalachian species while C. obliqua is most abundant in the Mississippi valley. C. obliqua is a more upright shrub, very distinct in its narrower leaves silvery white on their lower surface and rather larger sometimes paler blue fruit which ripens at least a month earlier than that of C. Amomum. In the Arboretum this year C. obliqua has been the handsomest of the Cornels in late summer and early autumn Evonymus planipes is a native of northern Japan where it grows into a large shrub. It has not been many years in the Arboretum and its fruit becomes more abundant every year. It has the large broad leaves of the European E. latifolia, the inconspicuous flowers of the genus, and
crimson lustrous fruit which hangs gracefully on long slender stalks, and is larger and more beautiful than that of any other Burning Bush in the collection. Still rare and little known in gardens, it is an ornamental shrub of the first class in this climate.

**Cotoneasters.** The fruit of some of the species, like that of *C. rosmos soongarica*, was ripe in August. This is one of the handsomest of the new Chinese species when the long gracefully arching branches are covered with its erect clusters of white flowers, and when these are followed by the abundant showy orange-red fruit. All the forms of *C. horizontalis* are still covered with their small lustrous leaves and small bright red fruit. Of this group the var. *purpusilla* is proving the best garden plant here. Other red-flowered species which are now at their best are *C. odpressa* and *C. apiculata*, low growing species with spreading stems. Handsome, too, now are the large growing *C. davurica*, *C. Delsiana*, and *C. Franchetti*, for they are also covered with green leaves and red fruit. *C. nitens*, a species with red flowers and small black fruit, is also a handsome autumn plant for none of the Chinese Cotoneasters have more lustrous leaves and more gracefully spreading and drooping branches.

**Lonicera Maackii var. podocarpa.** Of the plants in the Arboretum conspicuous at this time for the beauty of their fruit none perhaps is more beautiful than this Honeysuckle which was introduced by Wilson from central China. It is a large, vigorous and hardy shrub with wide-spreading branches and open habit. The flowers are larger than those of most Honeysuckles and are white, and in one form white slightly tinged with rose color. The period of the greatest beauty of this plant, however, is late October, for now it is still covered with bright green leaves and the large scarlet, lustrous fruits are only just ripe. The best specimens of this Honeysuckle in the Arboretum can be seen in the collection of Chinese shrubs on the southern slope of Bussey Hill.

**Some American Plum-trees.** For the beauty of their fruit some of the Plum-trees from the region which extends from southern Illinois to Oklahoma and northern Texas are among the most important additions which in recent years have been made to gardens. The bright scarlet fruit of some of the species ripens in October when the leaves are still fresh, green and lustrous: and in October there is not a Crab-apple or a Hawthorn which equals them in beauty. Many of the Plum-trees are growing in the Arboretum which is responsible for their introduction into northern gardens, but to see them in their beauty it is necessary to visit the parks of Rochester, New York, for in the Arboretum it is now necessary to pick the fruit before it ripens, that the plants may not be broken down by boys who appear to be less lawless in Rochester than they are in Boston. The best of these plants for autumn decoration are *Prunus hortulana*, the handsomest and one of the largest of all Plum-trees (the largest Arboretum specimen was entirely ruined by boys a few years ago); *P. Reverchonii*, which grows on the prairies of northern Texas as a low shrub but in cultivation becomes a small tree, and some of the large Oklahoma forms of *P. angustifolia*. Lovers of plants will be repaid by an autumn journey to Rochester to see the Plum-collections.