The Ailanthus. The Tree of Heaven of the Chinese, which botanists now call *Ailanthus altissima*, although it is still better known as *Ailanthus glandulosa*, is one of the remarkable trees of the northern hemisphere. Raised in Europe in 1751 from seeds sent from Peking, the Ailanthus was one of the first Chinese trees known in western countries. The first Ailanthus was planted in the United States by William Hamilton in 1784 in his famous garden near Philadelphia; and in 1804 it was first planted in New England near Portsmouth, Rhode Island, where it is still abundant. For many years little attention was paid to the Ailanthus in Europe until it was found that one of the silk worms could be successfully fed on its leaves. This discovery led to the establishment of great Ailanthus-plantations in France where they have succeeded beyond the most sanguine expectations, the best results having been obtained in calcareous soil and on the sandy seacoast.

The date of the first planting in Europe of the Ailanthus as a street tree is not known, but when the streets of Paris were generally bordered by trees in the early years of the second Empire it was largely and successfully used for this purpose. As early as 1820 its remarkably rapid growth, the tropical appearance of its long gracefully drooping leaves and its freedom from the attacks of insects attracted general attention to the Ailanthus in the United States. It was found to flourish equally well in the country and in the streets of New York and Philadelphia where it grew more rapidly than any tree which had been planted in those cities; and it was believed that a tree had been found which would take the place of all others for city planting. So great did the popularity of the Ailanthus become in a few years that the
number of the trees planted was only limited by the ability of nursery-
men to supply the demand. The popularity of the Ailanthus in the
United States, however, was short-lived, for when the trees began to
flower it was found that some of the flowers emitted a strong and to
most persons an offensive odor, that the clouds of pollen shed from the
flowers and the flowers themselves dropping on neighboring roofs so
affected the water caught on them that it was unfit for use, and that
the flowers which dropped on the ground made the city sidewalk and
the country yard unbearably disagreeable. This peculiarity of the
flowers discovered, the Ailanthus sank rapidly in popular esteem, and
its general destruction in this country was advocated and put into ex-
ecution.

Unpopular as the Ailanthus has become, it is one of the handsomest
and most valuable trees in the world. Planted in cities it can resist
better than any other tree heat, drought, dirt, and gas escaping from
defective pipes which menace the life of city trees. It grows rapidly
even in the most unpromising situations; it is never seriously injured
by insects; and few trees can be more easily propagated, for small
pieces of the root covered with soil will soon grow into plants large
enough to transplant. The suckers which the Ailanthus produces in
great numbers from the roots are the real drawback to this tree, but
when it is planted in city streets they are unable to force their way
through brick sidewalks and concrete is impervious to them. The male
and female flowers of the Ailanthus are chiefly produced on different
trees; only the male flowers have a disagreeable odor and drop to the
ground. The female flowers are scentless. In the clusters of female
flowers occasional male flowers are found, but there are so few of these
that their odor is not perceptible. It is perfectly easy to propagate only
the female tree which is the one which should be planted, and apart
from the absence of the disagreeable smell of the flowers it is more
ornamental than the male for the winged fruit of the Ailanthus pro-
duced in great terminal clusters is handsome and conspicuous in the late
summer and autumn. The fruit is usually yellow, but in one variety
it is bright red (var. erythrocarpa) and more brilliant and conspicuous
than the fruit of any tree of large size which can be grown in the
northern states. The leaves of the red-fruiting variety are darker on
the upper surface and paler below than those of the yellow-fruiting form;
and the handsomer leaves and more brilliant fruit make this the desir-
able form to cultivate. There is certainly no better tree than the Ail-
anthus to shade the streets of American cities provided they afford
sufficient room for its development, for the Ailanthus even when it is
planted in cities may become a tall, wide-branched tree, demanding
space in which to display all its beauties. Although the attempt
has not been made on a large scale in this country to fix shifting sand
dunes by planting the Ailanthus, it has been successfully used for this
purpose in Europe especially in the neighborhood of Odessa on the Black
Sea where large plantations of Ailanthus have been successful on sterile
soil so shifting that other trees have not been able to secure a foot-
hold on it. The Tree of Heaven produces valuable hard, heavy and
close-grained wood of a pleasant clear yellow color, resembling that of
satinwood; it is easily seasoned, and shows as little tendency to shrink
or warp as the best mahogany. Beautiful furniture has been made
from Ailanthus-wood raised in New England, and if the tree is ever
grown on a large scale on the sandy now unused lands of our seacoast it will supply the cabinet-maker with wood which in quality and beauty equals that of the White Oak, the Black Walnut and the Wild Cherry. It is an interesting fact that although the Ailanthus is now known in all the countries of the world which enjoy a temperate climate its true home in China, that is the region where it is a really wild tree, is still unknown to European and American botanists who have now travelled in nearly all parts of the Celestial Empire. Two other species of Ailanthus, A. Giraldi and A. Vilmoriniana, are known, however, as wild trees in western China. The former which differs in the presence of prickles on the branches has not proved hardy in the Arboretum; the other, which chiefly differs from the common Ailanthus in the downy covering of the young branchlets, is now established here but has not yet produced flowers or fruits.

**Mountain Ashes.** The abundant flowers on these trees and shrubs last spring have been followed by an unusually heavy crop of fruit on most of the species, and Mountain Ashes have probably never been more beautiful in this part of the country than they are this autumn. Their fruit is now the most conspicuous in the Arboretum and deserves the attention of persons interested in plants which produce handsome and conspicuous fruits. There are two principal groups of Mountain Ashes in the Arboretum, one on the bank above the Shrub Collection and near the Forest Hills gate and the other on the left hand side of the Valley Road near and under the group of Swamp White Oaks. None of these plants have more abundant or brilliant fruits in larger clusters than the two Mountain Ashes of northeastern North America, *Sorbus americana* and its variety *decora* with broader leaflets and larger fruits. The value of these two trees is increased by the brilliant colors which their leaves will take on now in a few days. The various forms of the European species, *Sorbus Aucuparia*, in the collection are all fruiting well this autumn, the handsomest perhaps being a tree from northern Austria known as var. *moravica* or *dulcis*. This is a tall, slender, fast-growing tree with smooth bark, leaves with narrower leaflets than those of the common form, and larger and sweeter fruit which in its native country is used as food. The leaflets of the European Mountain Ash vary greatly in width, and in the group near the Forest Hills gate there is a handsome specimen of this tree with exceptionally narrow leaflets. The branches of the large plant of the Japanese *Sorbus commixta* in this group have never before been so weighed down by its clusters of small fruit although it has been growing in the Arboretum for more than thirty years. The bright orange and red autumn colors of the leaves add to the value of this tree. Near it a small plant of *Sorbus amurensis* from eastern Siberia is fruiting well for the first time in the Arboretum. The plants of *Sorbus pekinensis* which are in the Valley Road-Group have been covered with their large, open, drooping clusters of yellow fruit which is now beginning to fall. Both in spring and autumn this slender tree with narrow leaflets is handsome and conspicuous. It well deserves a place in collections of such plants. In this group, too, *Sorbus pohuashanensis*, so named from the mountain range in northern China, the Pohua-shan, where it was discovered, is covered with its erect clusters of large orange-red fruits. It is a handsome plant with leaflets broader than those of the common form of the European
Mountain Ash but no better for gardens in this country than that tree which is gradually becoming naturalized in this country. In the Arboretum, at least, the handsomest trees have sprung from seeds scattered by birds. One of the handsomest and certainly the most interesting Mountain Ash in the Arboretum is growing in the nursery near the top of Peter's Hill. It is a fast-growing tree of perfect shape, with a straight stem covered with smooth pale bark, leaves with unusually narrow leaflets, and wide, convex, compact clusters of pink fruit. No other Mountain Ash which is now known has fruit of this color. This tree which was grown in the Arboretum from seed was first thought to be a form of *S. pekinensis*; it is now believed to be a hybrid of *S. Aucuparia* and *S. pekinensis* to which the name of *S. Arnoldiana* has been given. In the convex, crowded clusters of flowers and fruits it shows the influence of the European plant; in the narrow leaflets and in the size of the small fruit it resembles *S. pekinensis*, while in color the fruit is intermediate between those of its supposed parents.

**Autumn Colors.** There is not yet any great show of brilliant colors in the Arboretum and the leaves of many trees, especially the Oaks, are as green as they were at midsummer, but as in northern New England the leaves of the Sugar Maples, the Birches and other northern trees are reported to be more brilliant than usual a good coloring of many trees may be expected before the end of the month. A few spots of bright color, however, are to be seen here, and these are mostly made by Asiatic trees and shrubs. Already the bright clear yellow leaves of the Siberian Cork-tree (*Phellodendron amurense*) have disappeared from this small tree which is most interesting in the thick, pale, deeply furrowed bark which covers the trunk and larger branches. Last week *Acer mandshuricum*, a Box Elder of northeastern Asia, with clear pure pink fading leaves was from the rarity of this autumn color the most interesting object in the Arboretum. This Maple is one of the largest and handsomest trees in Manchuria, but although other trees of the same region flourish here it has not yet found a place in the Arboretum which suits it, and as yet gives little promise of large size or old age. This is to be regretted for it is as beautiful in the spring as in the autumn, as the unfolding leaves are deep red. The leaves of a Japanese Burning Bush, *Eupomponus alatus*, are just turning to the deep rose color which is unlike that of any other plant in the Arboretum at this season of the year and which makes it one of the most desirable of the perfectly hardy shrubs which can be used for the decoration of New England gardens. Very beautiful this autumn is a Chinese Sumach, *Rhus javanica*, which rivals our native species in the scarlet color of its leaves. This Sumach is a small round-headed tree which produces its large terminal clusters of white flowers at the end of July or in early August. The showy summer flowers and the brilliant October foliage should make this tree better known. In October the leaves of no North American tree are more brilliant than those of *Acer ginnala*, a Maple of eastern Siberia with deeply divided leaves and compact clusters of fragrant flowers. Unfortunately the leaves of this handsome tree fall soon after changing color.