ARNOLD ARBORETUM
HARVARD UNIVERSITY BULLETIN
OF
POPULAR INFORMATION

JAMAICA PLAIN, MASS.

OCTOBER 18, 1920

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 execution.

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* produced 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-fruited variety are darker on the upper surface and paler below than those of the yellow-fruited form; and the handsomer leaves and more brilliant fruit make this the desirable form to cultivate. There is certainly no better tree than the *Ailanthus* 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 foothold 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. Giraldui* 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

1920. "The Ailanthus." *Bulletin of popular information - Arnold Arboretum, Harvard University* 6(15), 57–59. <https://doi.org/10.5962/p.321071>.

View This Item Online: <https://www.biodiversitylibrary.org/item/216956>

DOI: <https://doi.org/10.5962/p.321071>

Permalink: <https://www.biodiversitylibrary.org/partpdf/321071>

Holding Institution

Harvard University Botany Libraries

Sponsored by

BHL-SIL-FEDLINK

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.