COMPLIMENTARY

NEW SERIES VOL. VIII NO. 5

# ARNOLD ARBORETUM

## HARVARD UNIVERSITY

# BULLETIN

OF

# POPULAR INFORMATION

JAMAICA PLAIN, MASS. MAY 12, 1922

**American Hawthorns.** Some of these plants are now in bloom and the flowers of others will be conspicuous in this Arboretum during the next six weeks, and from the middle of August until midwinter Hawthorns will be brilliant here with fruit. No other group of plants is represented in the Arboretum by so many species; and no other group of small trees and shrubs with deciduous leaves can add so much beauty during such long periods of the year to our parks and gardens. The discovery, determination and cultivation of the large majority of these plants has been accomplished during the last twenty-three years. For until the end of the last century no one had formed any conception of the number, variety and distribution of these plants in North America. To the botanists of forty years ago fifteen or sixteen species with two or three varieties were known, and American gardeners were able to plant only two or three of these. There are now some five hundred species or forms established in the Arboretum, and an increasing number of these trees are flowering and producing their fruits here every year. Hawthorns are distributed in North America from Newfoundland and northern Quebec to northern Florida and northern Mexico, and from the Atlantic to the Pacific. They are much more abundant in species east of the eastern borders of the great plains than in the Rocky Mountain and Pacific regions, where they range northward into British Columbia and southward only into northern California. So far as is now known they are most abundant in species in the valleys of the streams which flow from north and south into Lake Erie, and in the region which extends from southern Missouri to the valley of the Red River in Arkansas. New York and Pennsylvania are rich in

species, and southward along the Appalachian Mountains and in the southeastern states species of Crataegus are not rare. The species have now been arranged in twenty-three groups distinguished by the shape and character of the leaves, the size of the flowers and the size and shape of the fruit, and it is interesting that while species of some of these groups are widely and generally distributed those of others are chiefly confined to particular sections of the country, as the Flavae to the southeastern states, the Douglasianae to the northwest, and the Tenuifoliae to the northeastern and middle states. The Macracanthae, which is one of the common northern groups, with many large trees, is extremely rare in the southern states and in Arkansas and eastern Texas is represented by only a few small shrubs. The Intricatae, composed mostly of small shrubs, has its greatest number of species in Pennsylvania and adjacent states, but is extremely rare in the Mississippi valley and unknown westward. The Molles Group, which contains the largest number of species which become trees of considerable size, is common in the northeast, almost unknown in the southeastern part of the country, and most abundant in Missouri, Arkansas and Texas to the valley of the San Antonio River and the Edwards Plateau. Descriptions and figures of twenty-five species of this Group are included in the new edition of Sargent's *Manual of the Trees of North America*, and there are already indications that the number can be enlarged. Trees of this Group are the earliest of the American Hawthorns to bloom in the Arboretum, and three of them are now covered with open flowers. These three species are *Crataegus arnoldiana*, *C. arkansana* and *C. mollis*. They are all large and handsome trees, and have some historical interest for students of American Hawthorns, for it was these plants which first attracted attention at the Arboretum to differences in their flowers in the number of stamens and in the color of anthers, which first led to the critical study of Crataegus which has been going on here ever since and which among other things has led to the sowing of 4269 different lots of Crataegus seeds.

**Crataegus arnoldiana** was found growing as a large rather misshapen shrub in the dense shade of large trees on the bank opposite the southern end of the Meadow Road. It has only been found outside of the Arboretum in the valley of the Mystic River at West Medford, Massachusetts, where a number of years ago there were several trees, and near Lyme, Connecticut. *C. arnoldiana* has taken kindly to cultivation and there are now a number of large and shapely specimens growing in the Arboretum. The largest of them are the two trees on the left hand side of the Valley Road close to the Centre Street entrance, and there are other good specimens on the left hand side of the Valley Road in front of the White Oak Collection and in the old Crataegus Collection between the Shrub Collection and the Arborway boundary. The flowers of *C. arnoldiana* are about three-quarters of an inch in diameter, and are arranged in broad, many-flowered clusters. Like those of most of the eastern species of this group, they have ten stamens and yellow anthers. The fruit is bright crimson, subglobose, slightly hairy at the ends and about three-quarters of an inch in length. It begins to ripen the middle of August and falls early in September. The early ripening fruit of no other Hawthorn is so conspicuous.