



Annual Report 1924-1925

TO THE PRESIDENT OF THE UNIVERSITY:

SIR,

I have the honor to submit the following report on the condition and progress of the Arnold Arboretum during the year ending June 30, 1925.

In the northern part of Kansu, the extreme northwestern province of China, and in northern Tibet are high mountain regions of large area which have never been visited by a botanist and of the flora of which nothing is known. It is fair to suppose that in the forests which cover these regions are trees and other plants unknown to science, and that all the plants of these extremely cold northern regions can be successfully cultivated in New England, Canada, northern Japan and other cold northern countries. The most important and interesting work accomplished by the Arboretum during the year was the arrangement it was able to make with the cooperation of the Harvard Museum of Comparative Zoology to explore these regions.

It was fortunate in being able to secure the services of [Mr. J. F. Rock](#) to take charge of the expedition during a period of at least three years for this purpose. Mr. Rock is a native of Vienna, Austria, and as a boy showed his unusual aptitude for acquiring languages by learning to talk Chinese and Arabic. As a boy he travelled with his father in Egypt, and in 1907 he went to the Hawaiian Islands where he was appointed Professor of Botany and of Chinese in the College of Hawaii; In this position he remained until 1920 devoting himself to a critical study of the Hawaiian flora, making large collections of plants and writing important books and papers, including a volume on the indigenous trees of the islands and another on the exotic trees cultivated on them.

On his return to Washington in 1920 he was employed by the Department of Agriculture to explore some of the countries of southeastern Asia to gather information in regard to the Chaulmoogra Tree from which oil believed to be a remedy for leprosy is obtained. This service completed he devoted a year, under the auspices of the National Geographic Society of the United States, to exploring the natural resources of the southern Chinese province of Yunnan.

Returning to America early in the spring of 1924 he made arrangements with the Arboretum for explorations in the North. He sailed from San Francisco on September 30th and arrived on November 5th at Haiphong in Tonking. By rail he went to Yunnan-fu where the men

who had worked with him in China before were assembled, and where he began the long journey northward with a mule train. Constantly attacked by brigands, with insufficient protection from the Chinese government, the route often made impassable by terrific snow storms, few men have ever made a more dangerous and fatiguing journey, and retained the cheerfulness and confidence of success which Rock's letters disclose.

Early in May he reached the town of Choni in Kansu, close to the Tibetan border, and in a letter written from there on the 29th of June he describes great forests of many species of coniferous trees on the high mountains east of Choni in a region hitherto unexplored. In the last letter received from Rock dated August 9th he was still in good health and able to announce the discovery of many new and important trees.

During the year the Arboretum has continued its explorations in China by aiding the Botanical Department of the National Southeastern University at Nanking in its botanical exploration of the still little known Kiangsu Province, and with the aid of Professor C.T. White, the Government Botanist of Queensland, who had previously assisted the Arboretum in obtaining a nearly complete set of specimens of the trees of New Caledonia, an arrangement has been made to send a collector to New Guinea and later to the Fiji Islands. The collection of living plants permanently planted is generally in a satisfactory condition, 150 trees and 162 shrubs have been added to it during the year. It has been benefited by abundant moisture during the year and a mild winter; and an early spring which fortunately was not followed by unseasonable frosts resulted in an unusual display of early spring flowers, like those of the Chinese Cherry trees which have never before been so covered with flowers, and in the large collection of Japanese Forsythias.

A large collection of the forms of the Japanese Yew (*Taxus cuspidata*) has been arranged in a long bed on the right-hand side of the entrance from Walter Street, and new collections of *Evonymus* and *Rhus* have been made by the road leading to the top of Bussey Hill.

Some preliminary work has been done on the land between South Street and the railroad which is to be devoted to new collections of Poplars and Willows.

The course of the Bussey Brook has been changed here and a small pond has been dug in the lowest ground from which a large amount of valuable soil has been obtained. The eastern and part of the southern boundary of this land has been protected by a substantial link wire fence and planted with large growing Willow trees to shut out the privately owned property on the east and the railroad embankment on the south.

During the year 1924 plants (including grafts and cuttings) and 2,878 packets of seeds have been distributed as follows: to the United States, 1,630 plants and 1,887 packets of seeds; to Great Britain, 238 plants and 400 packets of seeds; to France, 1 plant and 3 packets of seeds; to Italy, 2 plants; to Belgium, 1 plant; to Canada, 13 plants; to South Africa, 3 plants and 114 packets of seeds; to East Africa, 1 plant; to Uganda, 1 plant; to Turkey, 2 plants; to Ceylon, 1 plant; to India, 7 plants and 130 packets of seeds; to the Straits Settlements, 1 plant; to Java, 2

plants; to New Guinea, 1 plant; to China, 1 plant; to Fiji, 1 plant; to Honolulu, 1 plant; to the Canal Zone, 2 plants; to Chili, 1 plant; to Brazil, 1 plant; to British Guinea, 1 plant; to the West Indies, 3 plants; to Australia, 6 plants and 53 packets of seeds; to Cuba, 1 plant; to Argentine, 2 plants; to New Zealand, 56 packets of seeds; to Poland, 54 packets of seeds; to Germany, 78 packets of seeds; to Sweden, 59 packets of seeds; to Czechoslovakia, 21 packets of seeds; to Russia, 23 packets of seeds.

There have been received 4,734 plants (including grafts and cuttings) and 929 packets of seeds as follows: From the United States, 4,091 plants and 174 packets of seeds; from Nova Scotia, 448 plants; from Canada, 109 plants; from Great Britain, 75 plants and 529 packets of seeds; from France, 27 packets of seeds; from Germany, 7 plants and 7 packets of seeds; from Holland, 4 plants and 15 packets of seeds; from Sweden, 31 packets of seeds; from Czechoslovakia, 1 packet of seeds; from China, 9 packets of seeds; from Japan, 27 packets of seeds; from India, 97 packets of seeds; from Russia, 13 packets of seeds.

The herbarium now contains 225,270 sheets, 20,248 sheets having been added to it during the year. Among these are about 2,500 North American plants, 400 plants from Central and South America, 3,900 Chinese plants, 2,400 plants from Europe, the Mediterranean region and western Asia, 550 African plants, 780 plants from the Himalayan Mountains and other parts of India and Malaysia, and 720 plants from Australia and New Zealand.

One of the most valuable of the special collection is that of about 1,200 Hawaiian plants collected by Mr. J.F. Rock which formed part of his private herbarium.

There have been distributed from the herbarium about 6,900 specimens among twelve institutions in the United States and Europe. The woody flora of the world is still imperfectly and irregularly represented in this herbarium. That of North America and of the Japanese Empire from Saghalin and Korea to Formosa is fairly well represented, and the importance of making it more complete in an institution like that of the Arboretum is my excuse for repeating what I said on this subject in my report of last year.

"Beyond the deserts and regions of excessive cold the vegetation of the wooded surface of the world is changing rapidly. Great areas of forest land are cleared for lumber every year, and in the tropics the increasing demand for rubber and the products of other tropical plants will in a few years eliminate many species of trees which have already disappeared from a large part of the area once occupied by them. The knowledge of such trees must sooner or later be found only in herbaria, by the descriptions contained in books, and by photographs. Books on such subjects are every year becoming absorbed in permanent libraries, and in a few years it will be practically impossible to form what has never yet been formed - a complete collection of dried plants which will make it possible to study in one place in a satisfactory manner the trees of the world and their original variations and distribution. Such a collection is needed and there is no better place for it than the Arnold Arboretum, for at the Arnold Arboretum there is one of the largest collections of living trees and shrubs which can be grown in such a severe climate

and an unsurpassed library devoted to the subject. To make such a collection of dried plants will prove along, difficult and expensive undertaking and should be begun at once if it is ever to be completed."

In the library are now found nearly everything which has been published in all editions and languages about trees and their cultivation, including all important floras which treat in part only of woody plants and the books of travel in which appear any mention of trees. It now contains 36,066 volumes and 8,170 pamphlets, 641 volumes and 222 pamphlets having been added during the year. There are now received at the library 300 current periodicals. The library is supplemented by a collection of 11,883 mounted and catalogued photographs of trees and the portraits of botanists, 810 having been added to it during the year.

During the year four numbers of the [Journal](#) and twenty numbers of the *Bulletin of Popular Information* have been published. The spring field meetings were unavoidably omitted during the year, but two Chinese students registered at the [Bussey Institution](#) for advanced degrees have practically passed their entire time at the Arboretum during the last two years. Here they have received the help and assistance of the Arboretum staff, the free use of the herbarium, library and living collections from which they have made large collections of dried plants.

During the year the northern boundary of the Arboretum has been extended by the purchase of 125,060 feet of land from the Adams Nervine Asylum, including a heavily wooded ridge with an approach to it from Centre Street. There has always been danger that the trees on this ridge, which form a beautiful border to an important part of the Arboretum, might be cut down and the ridge levelled and covered with buildings. This would have been a great injury to the beauty of the Arboretum, and although the area purchased is not as large as some of the recent additions of land acquired by the Arboretum this is the most important it could make anywhere for the beauty of the Arboretum as a garden.

During the year, with the assistance of the Committee appointed by the Overseers to visit the Arboretum under the efficient chairmanship of Mr. Roger Wolcott, the Arboretum has received \$54,716.76 to increase its income. This money has been contributed by persons living in thirty-eight states of the Union, the Provinces of Quebec and Manitoba in Canada, and in New South Wales.

From the sale of publications, photographs, etc., the Arboretum has received \$3,048.99 during the year. If the Arboretum is to maintain its reputation and extend its usefulness during the nine hundred and fifty-seven years it must remain in its present situation, two things are essential--a much larger endowment and more land on which to display its fast increasing collections of living plants.

C. S. SARGENT, Director.