



## Annual Report 1890-1891

TO THE PRESIDENT OF THE UNIVERSITY:

SIR,

I have the honor to submit the following report of the conditions and progress of the Arnold Arboretum during the year ending July 31, 1891:

Substantial progress has been made by the [Park Commissioners of the City of Boston](#) in carrying out their contract to build roads in the Arboretum; and these are now all practically subgraded and ready for the stone surface. The road slopes are being made by the city as rapidly as possible, and there is reason to believe that a large part, if not the whole of the driveways, will be finished and open to the public before the end of the year 1892. The completion of the roadways will necessitate a large amount of planting during the next two or three years, although the arrangement of several groups of trees in the early part of the sequence must be postponed until a scheme for draining the low, wet meadow near Centre Street can be perfected and carried out. About twenty-five acres on that side of the Arboretum near its principal entrance, and lying along the parkway of the city, cannot be used until a proper outlet into Stony Brook is made for the surface water which now covers it to above the road levels for several weeks at a time every winter and for several days after heavy summer rains, and the whole territory is under-drained. The cooperation of the city of Boston and legislative authority will be necessary to accomplish this.

Some three hundred trees were planted during the year to complete groups which had been only partially planted previously, and to place the following genera in their permanent positions: *Acer*, *Alnus*, *Taxodium*, *Taxus*, *Tsuga*, *Pseudotsuga*, *Sciadopitys* and *Pseudolarix*.

### INTERCHANGE OF PLANTS AND SEEDS

The interchange of plants and seeds with other horticultural and botanical establishments has been continued during the year. There have been 9,498 plants (including grafts and cuttings) and 760 packets of seeds distributed as follows: To all parts of the United States, 9,252 plants and 30 packets of seeds; to Canada, 32 packets of seeds; to Great Britain, 100 plants and 192 packets of seeds; to the continent of Europe, 146 plants and 436 packets of seeds; to Japan, 66 packets of seeds; to India and China, 4 packets of seeds.

There have been received during the year 6,980 plants and 10 packets of seeds. The principal contributors were Parsons & Co. of Flushing, N. Y., Samuel Moon of Morrisville, Penn., B. M. Watson of Plymouth, Mass., Thomas Meehan & Sons of Germantown, Penn. Anthony Waterer, Woking, England (a collection of hardy rhododendrons), and James Veitch & Sons, London (conifers and other trees). There has been added to the herbarium during the year 847 sheets of dried plants, principally North American (including Mexico) and South African.

A considerable part of the Arboretum being arranged, the experiment of furnishing the public with popular instruction about trees and shrubs was made during the year, and Mr. J. G. Jack, an assistant in the Arboretum, was appointed University lecturer on arboriculture for the purpose, and gave, twice a week during the months of May and June, instruction in the open air to a class of twenty-six men and women who paid a small fee for the privilege. His lessons, which treated of the plants in their botanical, economic, and ornamental aspects, were practical and interesting, and the fact that the average attendance at his lectures, which lasted between two and three hours, was nineteen and three-fourteenths out of a total of only twenty-six indicates that they were appreciated by the audience. Instruction of this sort, intended to aid people interested in plants or willing to learn something about them from the practical point of view, seems to be one method by which the collections of the Arboretum can be made useful; and it is proposed to give courses of outdoor instruction in future in the spring and autumn.

I take this opportunity to acknowledge the assistance I have received in the last two years from the committee appointed by the Board of Overseers of the University to visit the Arboretum. Through the efforts of the committee, represented by Mr. Stephen M. Weld acting as chairman, the Arboretum has received during the year the gift of a building from [Mr. H. Hollis Hunnewell](#) who has thus made it possible to place the valuable herbarium and library in secure and commodious quarters, and to increase immensely the importance of the Arboretum as a station for scientific investigation and popular instruction.

Plans have been prepared, a site--close to the principal entrance to the Arboretum from the city parkway--has been selected, and the building will probably be occupied before the end of the next college year. It will be a hundred feet long and thirty-nine feet wide and will consist of a high basement, two stories, and a high attic. The lower and principal story will be divided in the middle by an entrance hall which will open on each side into a museum-room, and in the rear into a small work-room in which is to be the stair shaft. The second floor will be divided into an herbarium-room, a library, and four work-rooms. By this plan the public can be admitted to the museum without interfering with the people working in the herbarium and library, which, by the location of the stairs, can be entirely shutoff from the principal rooms in the lower story. Space will be provided in the two museum-rooms to display a selection of tree products; the herbarium-room will allow the present herbarium of the Arboretum to grow to three times its present size without being crowded; and the library will hold twenty thousand volumes. Abundant storage room will be provided in the basement and in the attic, which will be well lighted by high dormers.

The building will be made of common hard-burnt brick with brownstone window-sills, a moulded brick cornice, and a slated roof with copper ridge-rolls. The first floor over the basement, in which is to be placed all the heating apparatus in the building, will rest on a series of brick arches turned on brick cross-walls; the construction of the upper floors is of wood with joists resting on iron beams and securely built into the brick walls at the ends. Iron stairs enclosed in a brick shaft, and the isolated position of the building, should with this construction make it practically fire-proof. It will be heated by indirect radiation from coils placed in the basement and surrounded by galvanized iron boxes through which air is drawn from the outside and delivered through metal ducts built into the walls. A brick ventilating shaft will be carried up through the building enclosing the smoke flue from the boiler, and from the different rooms ventilating pipes will be taken into this shaft in which the heat from the flue will maintain a constant upward current.

During the year the second volume of *The Silva of North America*, bringing the work down to the end of the *Sapindacece*, has been published; and in the fourth volume of *Garden and Forest* many of the observations made during that year by the staff of the Arboretum have been recorded.

C. S. SARGENT, Director.