

THE CARLETON ARBORETUM

July 8, 1939

Carleton College
Northfield, Minnesota

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THE CARLETON ARBORETUM -- PROGRESS TO DATE

A detailed survey involving several years of work has been completed. Maps on the scale of 100 feet to the inch and with 5 foot contour lines indicate all important collections of trees and shrubs and all individual trees where these are solitary. The Department of Geology is making a geological map of the same area. In addition soil sampling has been started looking to a complete soils map. With the facts given by these three maps it will be possible to prepare complete planting plans for the future.

Besides the general plantings which have already been made, two nursery plots have been developed which contain somewhat over 8000 specimens comprising over 500 species and varieties. At least a third of this material is ready to be transferred to permanent locations.

A Nature Trail with accompanying wayside directions bulletin has been in use for several years and is proving a great asset in natural history instruction. The bulletin is issued weekly in the spring months. Two small wayside kiosks with some museum material have been built, and it is planned to add others on Forestry, Insect Life, Geology of the Cannon River Valley, Wild Flowers, Aquatic Life of the River, etc.

The entire area is a game sanctuary and efforts are made to retain winter birds by means of some fifteen feeding stations. A shelter belt of Spruce has been planted to add to the protection of the bird sanctuary.

Knowles Ryerson, Chief Horticulturist in charge of Plant Introductions in the Department of Agriculture at Washington, has gone over the site thoroughly and has pronounced it an excellent lay-out for a great arboretum. In so far as is feasible, he has promised the co-operation of his Bureau in supplying more material than is customarily sent to experimenters.

Professor Rosendahl, head of the Department of Botany at the University of Minnesota, members of the Minnesota section of the Society of Plant Physiologists, and others qualified to judge who have gone over the site, have without exception expressed the judgment that it is almost ideal for the purpose of establishing a great arboretum. Some of the assets are: contour of land, presence of the Cannon River, variety of soil (an acid peat bog is included), considerable growths of native trees and shrubs, accessibility by highways, remoteness from city nuisances, freedom from high tax handicap, correlation with a stable institution (Carleton College) insuring permanence.

July 8, 1939.

CONCERNING A CARLETON ARBORETUM

By Harvey E. Stork, Professor of Botany

The teacher of art finds it almost necessary to have a collection of reproductions from the world's famous paintings and of casts of the world's famous sculpture.. Any teacher who can have a modest collection of these counts himself fortunate. In the teaching of botany the teacher has continually round about him a museum, more or less adequate, of the subjects he is teaching. The most important of these from the viewpoint of landscape architectural beauty are the woody plants. For the landscape architect, the tree lends itself especially because of its permanence. The physiology of the tree presents all the problems present in the physiology of the lower plants. Because of the beauty, economic importance, and biological interest, efforts have at various times and various places been made to bring together in one place collections of various species of trees. Such a collection, known as an arboretum, is really a museum of living trees. It is concerning such a collection for Carleton that tentative suggestive plans have here been formulated.

In America the name arboretum immediately suggests the Arnold Arboretum near Boston. This is an extensive tract of land on which have been assembled all the available woody plants that will grow in the vicinity of Boston. Professor Sargent has given his life to the study of American woods in

connection with this arboretum. The results of his research are embodied in the "The North American Silva," a work of some twenty octavo volumes. To indicate the extent of the varieties in the Arboretum it may be said that of one species of tree, the American Hawthorn, four hundred different varieties are distinguished in this Arboretum. Another notable collection of trees in the east is that at Bronx Park in New York City. The collection of trees here is not nearly so extensive as that at Boston. The trees are planted in groups in the park and the various species are labeled with neat placards so placed that they can be read from the driveways leading through the park. In this park no effort has been made to arrange the trees on the basis of relationships. In the Arnold Arboretum, on the other hand, families and genera of trees have been grouped together as far as possible. These two collections of trees are the only ones in America extensive enough to receive the name "Arboreta." At various other places, such as the campuses of universities, efforts have been made to bring together as great a variety of trees as the climate or the region would permit, but in each case the trees are merely planted for ornamentation and not primarily as an object of tree study. Most notable among these in the middle west is the campus of the University of Illinois.

There is now a movement on foot to establish a national arboretum and botanical garden at Washington, D. C. The reception with which the plan is meeting indicates that it will surpass all other such efforts in this country. The movement is only a natural consequence of the nation's carelessness

with its natural timber resources in the past. As the country grows older we may expect to find arboreta and botanical gardens springing up as they have done in the older European countries, where even small cities can boast municipal gardens. (Work of this sort developed at Carleton would be a source of guidance to the cities of Minnesota and other States from which the College draws its students.

During the summer of 1921, spent in a study of plant diseases in the southern and western parts of Minnesota, a study of ornamental planting of the home grounds was incidentally made. The farm homes and villages that display any taste at all in the matter of selection and planting of ornamentals are few and far between. The fact is that in six thousand miles of road covered, less than a dozen farmstead surroundings were photographed because they were beautifully planted. The sad, bleak aspect of the most of the rest is only too familiar to the average person. It seems not unreasonable to maintain that an educational institution like Carleton owes the citizens of the State something in the matter of cultivating an appreciative understanding among the future homemakers as to what use may be made of plant life to make the environment more pleasing.)

The University of Minnesota has long maintained a forestry department. During several different periods in its career it was known as the Minnesota School of Forestry. For years Professor Cheyney has been at the head of this department. He knows the problems of the State's forests better than anyone else. His department maintains forestry stations

on Lake Itasca and at Cloquet. At the latter efforts have been made to introduce trees of greatest economic importance, such as certain western pines and spruces from the Rocky Mountain regions. In some cases they have failed. When Professor Cheyney was approached and asked for a list of the species of American trees that could be expected to grow successfully in southeastern Minnesota, he replied that little experimentation had been carried on and that all too little was known about this question. No agency in the State has ever set for itself the problem of determining to what extent southern woody species will be found hardy here. Professor Cheyney stated it as his opinion that it would be a valuable contribution to botanical research if some agency would undertake just this problem. The Cloquet station, to be sure, has introduced several species, but its interest has concerned only trees of value to the lumbermen. The beech tree of the southern area of our country, because of its smooth white bark, represents one of the more beautiful ornamental trees. It has never interested the forestry department of the State because it was not of sufficient interest to lumbermen. No one can say whether a beech is hardy here or not. The tree is found in northern New York and even in southern Ontario, and so far as temperature conditions are concerned there is reason for believing that it could form an important element in our tree planting in Minnesota. How hardy it is here has never been determined.

An ideal location for an arboretum is a region that presents a great variety of geological conditions. For trees

of the willow type the banks of a stream should be available; for trees of the larch type there should be marshes; the black spruce demands a lowland region, whereas the bur oak must have uplands; for the locust and others of its type washed hillsides are favorable. To accommodate the different varieties of trees all conditions of swamp, lowland, slope and upland should be included in the location.

Since one of the objects of the arboretum is to afford a variety of woody plants, it is obviously impossible to secure all the stock for planting from nurseries. In the case of many trees the stock is not carried by nurseries. Many of them must be secured directly from the wild forests. For example, the American beech as we know it in the natural forests is not carried by nurseries. The nurseries have only a rusty-leaved variety known as Fagus ferruginea. It would add to the interest of the course in Forest Botany to maintain a local nursery in which seedlings and transplants could be grown from seeds. Here seeds of the State's exotics could be planted and the resistance of the seedlings to this climate could be determined. Student effort could be depended on to keep this department of trial introduction going, and the nursery would be a very practical laboratory for the teaching of principles of plant life.

With respect to the establishment of an arboretum there is reason why it should be planned quickly and started early. A tree does not grow to maturity in a year or two. A building can be erected in that time, but for a collection of trees one must plan years ahead. It were better to start and

make some mistakes than to regret some years later that planting had been delayed. The land devoted thereto would have the same status as the campus and be tax-free.

The above statement was written in 1921.

COPY

NORTHERN PACIFIC RAILWAY COMPANY

St. Paul, Minn.

C. W. BUNN
Vice President and Special Counsel.

November 2, 1931

Dear Mr. Cowling:

After going over with you thoroughly the property you have acquired for an Arboretum at Carleton I am glad to say to you that I am delighted.

You have ample room, a wide variety of soil from moist bottom land to clay loam upland, a wide variety of side hills and slopes. One may select almost any kind of soil and almost any kind of exposure. The outlook of the whole is also full of beauty. I do not believe there is a better place in the whole country to plant an Arboretum; with the exception of course that one can grow nothing that will not grow in our Minnesota climate. But I believe that your ground furnishes as good a place as there is in the State to grow everything which can be here successfully grown.

Sincerely yours,

(Signed) C. W. Bunn

Mr. Donald J. Cowling
President Carleton College
Northfield, Minnesota

COPY

AMERICAN ASSOCIATION OF NURSERYMEN

E. C. Hilborn, President
Valley City, North Dakota

February 18, 1932

Professor H. E. Stork
Carleton College
Northfield, Minnesota

Dear Mr. Stork:

... I am very much interested in the possibility of building up a fine Arboretum here in the Northwest area, and I could think of no place more finely situated than yours for such a purpose.

... With the fine large tract of land so beautifully situated you have an opportunity to build a wonderful Arboretum and serve the Northwest in a rather unique way. Undoubtedly there are outstanding men of the Northwest who will see the possibility of doing some great service thru your Arboretum.

I note that you have introduced a course in the material of landscape gardening. It is true that an interest is being developed in better gardening throughout the country. One can see the magazines are full of it. Even in this depressed time our people show renewed interest. Possibly in time Carleton may find it worth while to offer a good course in the interesting subject of landscape gardening.

...

Cordially yours,

(signed) E. C. Hilborn

ECH:LK

CARLETON ARBORETUM

A Statement by Mr. E. C. Hilborn, General Manager
of the Northwest Nursery Company,
Valley City, North Dakota

You have such a marvelous lay-out in the way of grounds and a potential wonderful Arboretum that the problem is indeed a large one. I can see also that if this were handled in a manner commensurate with its possibilities it would be a wonderful thing for Carleton in the days ahead. I still feel that if whatever work is done at this time could only be a part of a well thought out comprehensive plan then you would be gaining ground with little fear of undoing any of your work or danger of spoiling certain possibilities that exist. I am sure you see what I have in mind.

Something like this has suggested itself to me. Surely there is some young landscape architect in the country, possibly a graduate of Harvard who has been in touch with their arboretum, or from any standard school who has ability and vision who might be sold on the idea of devoting his life work to it. Such a one might in the early stages at least be a part of your faculty and not be too much of an expense. He could then study it out as a landscape architect would, analyze the principles of the big parks of the country and then work this thing out for you year by year.

Right at this stage perhaps some landscape architect could be employed such as Phelps Wyman, and there may be an even better man in the East, who would be able to lay out a major plan. I have thought of the possibility of Phelps Wyman being attracted to your institution. He was a landscape lecture professor in Illinois and I suspect his private business is poor enough right now in Milwaukee but I realize he is getting on in years and if you happen to get the right young man he would grow with you through the years as Chinese Wilson at Harvard.

WHAT WILL AN ARBORETUM COST?

By Harvey E. Stork, Professor of Botany

This question is not readily answered offhand. One fact is clear, and that is that an arboretum of any pretensions at all must be founded on the basis of a sure income for all time. That is to say, it must have an endowment fund, the earnings of which can be depended upon. It is this which has made our state legislature pause upon the question which Professor Cheyney of the University has called "perennial"--the establishment of a state arboretum. Legislatures cannot be expected to place the burden of an endowment for all posterity upon the shoulders of the present generation. Such an endowment must come from those whom personal initiative and energy combined with favorable circumstances of economic law and natural resources have made trustees of large wealth. It is said that more and more the feeling is apparent among holders of large fortunes that they regard their holdings as a trust for the public good.

It is not altogether inconceivable that there may exist in the Northwest a fortune built on our vanished forests or on our mines or wheatfields, the holder of which might take an object lesson from the New Bedford merchant, James Arnold. Arnold had achieved success as a merchant and wanted to use his fortune in a way that it might perpetuate his name. It seems that he took no chances on a single project. Much of his fortune was dissipated among enterprises that the world has not heard of or else has long since forgotten. Only about one-twentieth part was given in trust for the establishment and maintenance of an arboretum. It is this small part of his fortune that has carried his name around the world and that will perpetuate his memory for all time to come.

I would hesitate to say to a man of means: Here is your obligation; it is your duty to devote what resources you have acquired to making this great natural area beautiful in its waysides and homes, to make cheerful the barren windswept areas, and to help teach us in hamlet, town, and city to use our leisure time in making this region what the East has been for a generation or more,--not an unkempt pioneer territory but a well-groomed region, fragrant and green with flowering shrub and tree and vine. Rather would I say: Here is the site, here is the plan, here is an institution whose stability and fitness as a trustee are assured; it is your privilege to give such permanence to this project as will assure your name a place in the history of the Northwest like that of James Arnold holds in the East.

The architect who planned the greater Chicago some years ago said, "Make large plans; they excite men's imaginations and find accomplishment when small plans do not interest them." Our plans should be laid for an endowment of \$100,000. Anything less would not be adequate and could not make a wide appeal. As a means for keeping the plan before the public I believe it important that we continue to plant on a small scale in so far as funds can be secured for that purpose. Even though we do not realize our larger arboretum plans in the near future, these beginnings are essential for vitalizing the work in general botany teaching and in developing the course in the materials of landscape gardening which is now being offered.

HARVARD UNIVERSITY

ENDOWMENT FOR THE ARNOLD ARBORETUM

Friends of the late Professor Charles Sprague Sargent and others interested in the Arnold Arboretum of Harvard University, in Jamaica Plain, on November 30 gathered at Sherry's Restaurant, New York City, to hear of plans for the completion of a \$1,000,000 endowment fund for the arboretum. The fund, about \$600,000 of which has been raised since Professor Sargent's death last March, will be used to perpetuate the great botanical station as he had planned it. About 500 persons attended the dinner, held under the auspices of the New York committee.

David Fairchild, agricultural explorer in charge of foreign plant introduction for the U. S. Department of Agriculture; Professor Oakes Ames, present supervisor of the arboretum and successor to Professor Sargent, and the Right Reverend William Lawrence, formerly Bishop of the Episcopal Diocese of Massachusetts, were the speakers. All urged support of the arboretum, painting it as a vital part of the country's life and as a great power both in the economic world and for the beauty of the nation.

It was announced on December 3, by Mr. J. P. Morgan, who is acting as treasurer, that since the opening of the New York campaign to raise part of the proposed \$1,000,000 endowment fund for the arboretum, \$109,250 has been contributed by New Yorkers.

A gift of \$50,000 to the fund has been offered by Edward S. Harkness, on condition that the New York committee match the \$460,000 already contributed in Boston.

New York contributors to the fund so far are Moreau Delano, \$25,000; J. P. Morgan, \$20,000; Mrs. Harold I. Pratt, \$15,000; Mrs. W. Bayard Cutting, \$5,000; William Adams Delano, \$5,000; T. A. Havemeyer, \$5,000; Mrs. James H. Metcalf, \$5,000; Charles A. Stone, \$5,000; William Nelson Cromwell, \$2,500; Henry W. de Forest, \$3,000; John E. Aldred, \$2,500; R. W. de Forest, \$2,500 plus \$500; J. N. Jarvie, \$2,500; anonymous, \$1,000; Paul D. Cravath, \$1,000; Mrs. Max Farrand, \$1,000; Mrs. W. L. Harkness, \$1,000; Clarence Hay, \$1,000; Charles Hayden, \$1,000; G. O. Muhlfield, \$1,000; Anton G. Hodenpyl, \$500; Mrs. Arthur Curtiss James, \$500; Mr. and Mrs. A. R. Graustein, \$500; Victor Morawetz, \$500; W. H. Bush, \$250, and Elihu Root, \$250.

December, 1927.