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NAME
HISTORIC
Missouri Botanical Garden

AND/OR COMMON
Same

LOCATION
STREET & NUMBER
2345 Tower Grove Avenue

CITY, TOWN
St. Louis

STATE
Missouri

CLASSIFICATION
CATEGORY
DISTRICT
BUILDINGS
STRUCTURE
SITE
OBJECT

OWNERSHIP
PUBLIC
PRIVATE
BOTH

PUBLIC ACQUISITION
IN PROCESS
BEING CONSIDERED

STATUS
X OCCUPIED

PRESENT USE
AGRICULTURE
MUSEUM
COMMERCIAL
PARK
EDUCATIONAL
PRIVATE RESIDENCE
ENTERTAINMENT
RELIGIOUS
GOVERNMENT
SCIENTIFIC
INDUSTRIAL
TRANSPORTATION
MILITARY
OTHER

OWNER OF PROPERTY
NAME
Board of Trustees, Missouri Botanical Garden

STREET & NUMBER
2345 Tower Grove Avenue

CITY, TOWN
St. Louis

STATE
Missouri

LOCATION OF LEGAL DESCRIPTION
COURTHOUSE
Office of Recorder of Deeds, St. Louis City Hall

REGISTRY OF DEEDS, ETC.

STREET & NUMBER
12th and Market Streets

CITY, TOWN
St. Louis

STATE
Missouri

REPRESENTATION IN EXISTING SURVEYS
TITLE
Historic American Buildings Survey

DATE
1975

DEPOSITORY FOR SURVEY RECORDS
Library of Congress, Prints and Photographs Division

CITY, TOWN
Washington, D.C.
The following physical history of the Missouri Botanical Garden was prepared by historians working with the Historic American Buildings Survey. The report was prepared in 1975 in conjunction with the HABS survey of the garden.

The Missouri Botanical Garden, present city block 4104, is bounded on the north by Shaw Avenue, the south by Magnolia Avenue, the east by Tower Grove Avenue, and the west by Alfred Avenue, the center of which is the treed area known as Tower Grove. Title to the grove belonging to Thomas Jefferson Payne was procured by Shaw in a sheriff's sale for $95 on August 27, 1842. The 75-acre tract which constituted the garden passed into the hands of the board of trustees of the garden as designated in Shaw's will upon his death on August 25, 1889.

Shaw's biographer claims that the idea for the Missouri Botanical Garden was fostered during Shaw's last trip to Europe in 1850.

Two years later he announced to local real estate agents that he intended to have a botanical garden, with proper accessories, that would be open to the public.

By 1855 the grounds had been laid. During the next two years, Dr. George Engelmann, a local medical botanist acted as Shaw's lieutenant in a Europe-wide search for 'proper accessories' for the garden. This included obtaining the advice of Sir William Hooker of the Royal Botanical Gardens at Kew, and that of Asa Gray of Harvard; purchasing the Theodor Bernhardi herbarium in Erfurth, Germany; and forwarding seeds and specimens to Shaw.

By 1856 the garden had been trenched and two sides of stone walls completed; and the west entrance and the plant houses were expected to be completed the next year, the museum within two years. According to George H. Pring, who joined the garden staff around the turn of the century, the original greenhouse range consisted of a quadrangle--the east, domed Fern House, then the East Indian House, Orchid House, Small Bromeliade House, Acacia House, domed Yucca House, and Cactus House--with the later main conservatory centered behind the parterre with its statue of Juno on axis with the east entrance gate. That gate was designed by George I. Barnett and built in 1858. The museum, designed by Barnett and Weber, was still under construction when the garden opened to the public in 1859.

The general plan and planting of the garden were done by Shaw himself: "All this I am doing according to my own ideas gathered from the horticultural works of Loudon, McIntosh, etc.--no one here can give me the least information." 1 Shaw's

plan described and lauded by Thomas Meehan, arboriculturist and editor of Gardener's Monthly, in 1868, was described in detail by Shaw himself in his guide to the garden in 1880. The sixty-some developed acres were divided into three sections:

First, the Garden proper, containing the plant houses for tropical and other plants requiring protection, the herbaceous ground with plants scientifically arranged and named, and the cacti in the north end of the Garden next the wall.

Second, the Fruticetum for shrubbery and experimental fruit gardens.

Third, The Arboretum (begun 1860), containing a collection of trees, comprising all that will grow in the open air in this climate and locality; a Pinetum for the Pine family, a Quercetum for oaks, and a Salicetum for willows. 2

Barnett designed the central pavilion, now removed, in 1963, having also a limestone mausoleum, near Shaw's house 'Tower Grove' in the center of the garden, which was built the previous year. In 1868, a Palm House was built in the north-central part of the garden, and in 1881, yet another greenhouse, this one an orangery dedicated to Linnaeus and situated in the far north, was necessitated. A Lodge or Casino, later a restaurant, was constructed in 1873 by architect Eugene L. Greenleaf at the northwest corner of Magnolia and Tower Grove Avenues and was sometimes used to house students of Shaw's School of Botany after 1885.

Little extensive change occurred until the 1890's. First came the re-erection of Shaw's Town House inside the garden at 2315 Tower Grove Avenue. At this time the labyrinth in the Arboretum was removed. In 1895, the Cleveland Avenue Gatehouse at 2221 Tower Grove Avenue was built; two years later the east addition to Tower Grove House was completed to accommodate the family of the second director, William Trelease; a Victoria Regia pond replaced the entrance parterre at about this time.

It was in 1896 that the first landscape architects were hired to work on the garden. Messrs. Frederick Law Olmsted and John Charles Olmsted, of Brookline,

Massachusetts, submitted a master plan. A synoptical garden and the removal of the Linnaean House were among their recommendations. Little of their plan was implemented save in the southwest area known as the North American Tract, a 220-acre addition along Magnolia Avenue made in 1899, designed by Olmsted Brothers and executed in 1904-05.

A few years before its completion, in 1902, Messrs. Mauran, Russell, and Garden were retained to develop a master plan for future architectural work in the garden. In 1908-09 the first phase of a plan, suggested by Olmsted, for constructing an addition to the south section of the Town House as a wing of a quadrangular herbarium-library-administration building complex was completed according to their design.

With George Moore's assumption of the directorship in May of 1912 came the first major additional building campaign. The Palm House and smaller flanking house, presently the Desert and Mediterranean Houses, begun under Trelease's term, were completed. Moore reported construction under the first five years of his term to have consisted of: Floral Display House and fifteen large concrete cold-frames (1914-15); a new director's residence (accommodated by the removal of the Casino at Magnolia and Tower Grove Avenues, 1915); an engineer's house, brick storage shed, and concrete steam heating tunnel in the northwest; and removal and re-erection of all old greenhouses except the old brick Palm House behind the Linnaean garden wall.

Moore also listed several landscape additions: The Italian Garden; the Perennial Garden bounding the Linnaean House, replete with heated pools; the Knolls, permanent shrubbery beds, hedges, and magnolias around the water garden, new shrubbery around all greenhouses and along all walks, and more trees.

This surge in landscaping activity was due to the fact the John Noyes had been hired as an instructor at the Shaw School of Botany in 1913. Noyes was the first landscape architect to work on the garden since the termination of the Olmsted contract nearly ten years before. Noyes was a graduate of the Massachusetts State Agriculture College and had been an associate of Jens Jensen of Chicago and Warren Manning, formerly with Olmsted, of Boston. He did not submit a radically changed master plan of his own, but rather was responsible for the new gardens put in at this time and the Olmsted Master Plan was not officially abandoned until 1960. By 1915, a policy had been formulated under which Noyes became responsible for the design of new gardens and greenhouses. The first of
these was a rose garden south of Tower Grove and west of the Town House, where Shaw's stables had been. This was created in 1913-14 and had a raised pergola in its center. It became an iris test garden when the rose garden was established near the main gate in 1916, becoming St. Louis' first successful rose garden, and utilizing rare specimens donated by Dr. Sargent of Harvard's Arnold Arboretum. In between the first and second rose garden came the topographic feature known as the Knolls. The trees and landscaping replaced the pavilion and surround a maze-like hedges and walks which had been centered on the axis from Shaw's balcony at Tower Grove House to the Linnaean House's south door. The three-tiered southwest Economic Garden, the Italian Garden with pergola to the northwest, and the Linnaean Garden with pools to the extreme north were also added.

A new decade and a new phase of garden history began with the completion of the new main entry gate designed by Jamieson and Spearle in 1921, which retained the title and date from Barnett's original. During the preceding year the garden had been increasingly plagued by the ill effects of a city location. The western portion of the garden, to become known as "Shaw's Subdivision," was sold in 1923 in order that the garden might buy a tract of land outside of the industrialized city area. A tract at Gray's Summit, Missouri, consisting of 12,000 acres on the Meramec River was purchased in 1925. The following year, when a tropical garden in the Canal Zone was also acquired, 323 acres on the south side of the Meramec River were purchased to protect the property on the opposite shore. That same year the landscaping for the main Gray's Summit Tract was designed by John Noyes.

A section of the first floor of the Town House had been opened as a public museum in 1929, and in 1933 the dam in the North American Tract had been replaced, the footbridge widened, and the road continued around the Olmsted lake.

During the late 1950's Noyes was replaced by Emmet Layton as staff landscape architect. In 1959 the Palm House was wrecked and the Climatron by Mackey and Murphy with a geodesic dome was begun in its site.

Layton, Layton, and Rohrbach submitted the first new master plan since the Olmsted in 1960. Their plan called for the re-establishment of the original north-south main axis usurped by the strong east-west link between the entrance gate and the Climatron. This was to be done by creating a new parking lot and main entrance from the north, and re-erecting the Linnaean House in the southeast section of the garden, thereby creating a concentration of historic structures in the south. A public restaurant and visitor information center and a restricted research facility were also suggested. A copy of the Layton Master Plan map is included.
Since that time, no landscape architect per se has been on the staff. Minor changes have been left in the charge of the chief horticulturists—initially George H. Pring, then his successor Derek Burch, and now Robert Dingwall, designer of the northeast "Scented Garden for the Blind" done in 1972; and the present Curator of Hardy Plants, John Elsley; and Superintendent of Grounds, Walter Bryan Ward. Major developments such as the new southwest rose garden by Eugene Mackey III, and Harriet Rodes Bakewell, L.A., are effected by specialists called in for the specific project.

The Environmental Planning and Design Master Plan done in 1972 with Geoffrey L. Rausch supervising, reiterates the Layton recommendation for re-establishing the north-south axis. The new suggestion is to make the public entrance through the Linnaean House at the north. This as yet has not been implemented. The recommended Shapleigh walk-through fountain, and Lehmann shelter and library to the west were completed in 1972-74. In the summer of 1974, preparatory draining was commenced prior to the implementation of the recommendation to turn the Olmsteds' North American Tract into a Japanese Garden with an additional lake. Also in the summer of 1974, renovation of the Town House by Hellmuth, Obata, and Kassabaum was begun.
In 1859, the Missouri General Assembly passed an act "...to enable Henry Shaw to convey or devise to trustees certain lands." The act read in part:

Whereas, Henry Shaw, of the county of St. Louis, contemplates to convey or to devise to Trustees certain tracts of land...partly within and partly without the present limits of the city of St. Louis...in trust upon a portion thereof to keep up, maintain, and establish a botanic garden, for the cultivation and propagation of plants, flowers, fruit and forest trees, and for the dissemination of the knowledge thereof among men, by having a collection thereof easily accessible; by the establishment of a museum and library in connection therewith, as also by establishment of public lectures and instruction upon botany and its allied sciences. 1

And, thus, thanks to the generosity of a wealthy St. Louis merchant and real estate investor, the Missouri Botanical Garden was born. "At first it displayed interesting plantings about the grounds and original dwelling house," a student of America's botanical gardens wrote, "but as the Missouri Botanical Garden obtained more and more specimens, it fast became the world famous institution that it is today." 2

The Founder

The Missouri Botanical Garden was in large measure the creation of Henry Shaw. Shaw formulated the basic conception for the botanical garden, gave the land, donated the necessary funds for its operation, and from 1859 to 1899, directed its affairs. Although Shaw wished that the institution be called the Missouri Botanical Garden, it was for many years known simply as Shaw's Garden, an indication of how closely he was identified with his creation.

Henry Shaw was born July 24, 1800, in Sheffield, England. His father manufactured grates and fire-irons. Shaw was educated at a school near London where he studied French and mathematics. In 1818, his father emigrated to Canada and soon thereafter eighteen year old Henry was sent to New Orleans to learn the cotton business. In 1819, Shaw left New Orleans and moved to St. Louis with the intention of becoming a merchant. The times were favorable. St. Louis, already an agricultural center,
became the commercial headquarters of both the western fur trade and the Santa Fe Trail trade. As St. Louis grew and prospered so did Henry Shaw. By the time he was 40, Shaw had accumulated a quarter of a million dollars. Satisfied with his success as a mercantile capitalist Shaw retired from the merchant business.

He next decided to live and travel in Europe as a leisured gentleman interested in languages and science. Carefully investing his money in St. Louis land and real estate he left the city and spent the next ten years in Europe. Upon returning Shaw in 1849, built himself an estate on what at the time was St. Louis country property. His house, an attractive Italianate villa called Tower Grove, and its gardens became the nucleus around which the Missouri Botanical Garden grew.

Like other cultured gentlemen of the period Shaw was interested in natural history. In particular botany attracted his attention and he especially admired Linnaeus, the Swedish father of modern systematic botany. Upon returning to the United States Shaw became an intimate friend of Dr. George Engelmann, a St. Louis physician who was also a well known botanist and meteorologist. It was apparently primarily Engelmann's influence that turned Shaw's interest in botany from that of a well intentioned amateur to that of a semi-professional. It was also Engelmann who urged Shaw to develop a truly scientific institution in St. Louis for the study of plants. In these efforts Engelmann enlisted the help of Asa Gray, America's best known botanist, and Sr. William Hooker, the director of England's famous Kew Gardens. From 1851 to his death in 1889 Shaw hardly left St. Louis. He devoted his energies to managing his investments and, above all, to planning and developing the Missouri Botanical Garden. Following the advice of Gray, Hooker, and Engelmann, Shaw designed the Missouri Botanical Garden according to the prevailing standards for botanical gardens both in the United States and Europe. The garden would contain display areas designed not only to be ornamentally pleasing but also to be botanically important in the scope and range of the displayed plants. In 1859, Shaw built a museum which housed the garden's library, herbarium, and administrative headquarters. In the following years he also built greenhouses, the most important of which is the Linnaean House, and started an arboretum. Shaw sponsored a trip by Dr. Engelmann to Europe where the latter purchased books on botanical subjects as well as specimens for the herbarium. He hired an Englishman named James Gurney to superintend the garden and he also employed a professional curator to manage the library and herbarium. Shaw himself acted as the garden's director. He planned the facilities basic design and managed its affairs. By the time of his death in 1889, the foundation had been laid for a truly outstanding botanical garden.
As the years passed, Henry Shaw became one of St. Louis' most distinguished citizens. He participated in the cultural affairs of his adopted city and was active in philanthropy. In addition to the botanical garden he also gave the city Tower Grove Park, one of the Nation's finest extant Victorian walking parks. On his 70th and 80th birthdays banquets attended by the St. Louis "establishment" were given in his honor. When Henry Shaw died on August 25, 1889, the St. Louis newspapers eulogized him in glowing terms. Leading the list of his accomplishments was the Missouri Botanical Garden.

The Missouri Botanical Garden

In his will, whereby he give the Missouri Botanical Garden to the public, Henry Shaw outlined the garden's basic purpose:

Whereas I have for many years been engaged in laying out and establishing a botanical garden with a museum and library connected therewith...with the design at the time of my death to convey the same with other property to Trustees for the object and with the view of having for the use of the public a Botanical garden easily accessible, which should be forever kept up and maintained for the cultivation and propagation of plants, flowers, fruits and forest trees...and a museum and library connected therewith, and devoted to the same and to the science of Botany, Horticulture, and allied objects....

At the same time Shaw endowed a school of botany at St. Louis Washington University and stipulated that the faculty of the school would also serve the botanical garden.

From the beginning, the Missouri Botanical Garden has thus had a twofold function: first, a democratic objective of providing the public with the ornamental delights of plants as well as educating the average citizen in basic botany and horticulture, and second, the pure or basic science objective of conducting botanical research according to the highest standards of the discipline.

The display of a wide variety of flora has long been a major Missouri Botanical Garden concern. Over the years both the quantity and quality of the display

areas have grown. Traditionally, the garden's most prominent displays have been its waterlilies, roses, and chrysanthemums. The greenhouses developed as major display areas. The Linnaean House, with its collection of camellias, is the oldest greenhouse, whereas the Climatron, with its large collection of tropica ls, is the newest. In between are a variety of greenhouses such as the Desert House for displaying desert flora and the Mediterranean House with its extensive Mediterranean collection.

The pursuit of botanical research has been a function of the Missouri Botanical Garden since its inception. Although all the major divisions of botany have been studied at the garden, such as physiology, genetics, and morphology, taxonomy or systematic botany has the longest tradition. The garden is perhaps best known for its systematic work in Panama. The garden is also well known for its work in paleobotany. Literally thousands of plant remains from archaeological sites have been identified at the Missouri Botanical Garden. In more recent years the garden has developed considerable expertise in ecology. Today, the garden offers ecological services and is a depository for endangered plant species. The garden's staff of professional botanists has consistently been of a high quality. Among the nationally known professionals that are associated with the garden were Dr. William Trelease, Dr. Hermann Von Schrenk, and Dr. Edgar Anderson.

Supporting the botanical research at the garden are a major botanical library and an extensive herbarium. Both collections date to Henry Shaw who purchased botanical literature in Europe and the Bernhardi Herbarium in Germany. Among the other noteworthy collections that form the base of the library and herbarium are the cacti collection of Dr. George Englemann and the library and specimens of E. Lewis Sturtevant. By means of donation, purchase, and exchange, the Missouri Botanical Garden has built one of the finest botanical libraries and one of the largest herbaria in the United States and indeed in the world. According to David M. Gates, former director of the garden, "These great collections represent an important cornerstone of botany and natural history. In many ways they are the most significant assets at the Missouri Botanical Garden." 4

Closely allied to the garden's scientific pursuits are its educational efforts. Seasonal shows, which date to the garden's beginnings, are regularly held. Over the years the garden has developed an extensive program of both youth and adult education. The diffusion of knowledge in the classic 19th century sense of the term has also been a traditional Missouri Botanical Garden concern. The Missouri

Botanical Garden Bulletin dates to the 19th century. It contains articles of interest to both the backyard gardener and to the trained horticulturist. In March 1914, the garden published the first issue of the *Annals of the Missouri Botanical Garden*. This publication serves as a vehicle for the professional papers of the garden's staff as well as other botanists and horticulturists. The *Annals* has long been recognized as one of the most important periodicals in American botany.

The significance of the Missouri Botanical Garden in the history of science in America is that since the middle of the 19th century the garden has served as a major institution for the study of botany in the United States. The Missouri Botanical Garden is the oldest extant botanical garden in the country. It is one of two American botanical gardens which rank with the finest in the world (the other is the New York Botanical Garden, a national historic landmark). The Missouri Botanical Garden's physical environment, its library and herbarium, and its programs and publications document the historical development of botany in the United States from the middle of the 19th century to the present. From Henry Shaw's restored 1849 Tower Grove House to the 1960 Buckminster Fuller inspired Climatron, the Missouri Botanical Garden reflects a 175-year tradition of American scientific concern for the world of plants and man's relationship to them.
MAJOR BIBLIOGRAPHICAL REFERENCES


GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 75 acres

UTM REFERENCES

ZONE EASTING NORTHING ZONE EASTING NORTHING
A 15 1738900 142760 815 173480 142742
C 5 1738345 142768 815 1738625 1427162

VERBAL BOUNDARY DESCRIPTION

The Missouri Botanical Garden is bounded on the north by Shaw Ave. between Tower Grove Ave. and Alfred Ave.; on the east by Tower Grove Ave. between Magnolia Ave. and Shaw Ave.; on the south by Magnolia Ave. between Alfred Ave. and Tower Grove Ave.; and on the west by Alfred Ave. between Shaw Ave. and Magnolia Ave.

FORM PREPARED BY

NAME / TITLE
James Sheire, Historian

ORGANIZATION
National Park Service, Historic Sites Survey

STREET & NUMBER
1100 L Street, NW.

CITY OR TOWN
Washington, D. C.

STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL__ STATE__ LOCAL__

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

KEEPER OF THE NATIONAL REGISTER

DATE

DATE

DATE

**Photo Log:**

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<td>City or Vicinity:</td>
<td>St. Louis [Independent City]</td>
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Description of Photograph(s) and number, include description of view indicating direction of camera:

1 of 4. The Climatron, a geodesic domed, climate controlled greenhouse constructed of aluminum tubing and Plexiglas on a concrete base. This was the world’s first completely air conditioned greenhouse and first geodesic dome enclosed in Plexiglas. Built in 1960, the architects, Mackey and Murphy, received the 1961 Reynolds Award, the first to Americans, for their use of aluminum. View from E to W.

2 of 4. The octagonal granite mausoleum that contains the remains of Henry Shaw. This structure was built in 1889 to replace the earlier limestone mausoleum still on the property. Due to its soft material, Shaw worried that the structure might not endure. The granite mausoleum houses a statue of Shaw in death, holding a rose. The abandoned tomb contains a statue of “victory of Science over Ignorance.”

3 of 4. The Linnean House, built in 1882 and dedicated to the Swedish botanist, Carl von Linne. This is the only remaining greenhouse of Shaw’s original ranges. It is still used to grow and display roses. View from S to N.

4 of 4. Present view of Tower Grove. The E wing of the original brick building was enlarged in 1889 and the entire exterior was stuccoed. The house still contains its original furnishings and is opened to the public as a historic house museum. View from N to S.