

Missouri Botanical Garden
Museum
Missouri Botanical Garden
2345 Tower Grove Avenue
St. Louis
Missouri

HABS No. MO-1135-C

HIABS
MO,
96-SALU,
1056-

PHOTOGRAPHS
REDUCED COPIES OF MEASURED DRAWINGS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

MISSOURI BOTANICAL GARDEN
MUSEUMHABS
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- Location: Garden headquarters at 2345 Tower Grove Avenue, St. Louis, Missouri. The museum stands ten yards south of the garden gate at 2221 Tower Grove Avenue.
- USGS Webster Groves Quadrangle, Universal Transverse Mercator Coordinates: 15.738790, 4277080
- Present Owner: Board of Trustees, Missouri Botanical Garden.
- Present Use: Office and meeting hall for garden staff and Herb Society.
- Significance: Representative of the classical mode popular in mid-nineteenth century St. Louis, the museum's significance lies in its being one of the first botanical library-museum-herbarium complexes in the country.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: June, 1859 (Shaw Mss. Daybook, p.44) January 1860 (Shaw Mss. Cashbook, p.35).
2. Architects: George I. Barnett and Mahlon Weber (Shaw Mss., Cashbook, p.35). For biographical information about Barnett, see the HABS report on the Missouri Botanical Garden (MO-1135).
3. Original and subsequent owners: Description of property: The museum was built within the Missouri Botanical Garden, on land purchased by Henry Shaw from Thomas Payne through Sheriff's sale in 1842 for \$95 (Shaw Mss. 'Real Estate-Barriere des Noyers'). Now city block 4104, it is bounded on the north by Shaw Avenue, South by Magnolia Avenue, east by Tower Grove Avenue, and west by Alfred Avenue. The Garden became the property of the Board of Trustees as designated in Shaw's will upon his death on August 25, 1889.
4. Builder, contractor, suppliers: Barnett and Weber supervised construction. Foundation stonework was laid by Thomas Eagan (Shaw Mss. Cashbook, p.66). Additional stone cutting was done by James Coughlin (Shaw Mss., Cashbook, p.34), who also laid the bricks supplied by Price and Sexton (Shaw Mss., Cashbook, p.33). Lumber was furnished by Thomas West (Shaw Mss., Cashbook, p.34). The stair railings were carved by Isaac Fisher (Shaw Mss. Cashbook p.66). Ironwork was supplied by Morris Pawley and Excelsior Ironworks (Shaw Mss., Cashbook, p.33).

5. Original plans and construction: The building is popularly supposed to be a copy of the museum at Kew Gardens in England: Dr. Engelmann wrote to Asa Gray from St. Louis on September 28, 1858:

He [Shaw] had also prepared his plans for a museum, library, and herbarium; of course, according to the Kew plan--but unfortunately he has had the plan of the old museum only, and worked and planned on that--the rooms, one for Library, two for Herbarium, are too small, and there is no working room in the whole building if it be not the basement (Kobuski, p. 102).

In fact, rather than being a "copy," the building seemingly was not only inspired by the concept of having such a complex with a galleried interior. Photographs and descriptions of Shaw's buildings have been forwarded to the librarian at Kew for further corroboration but there has been no response thus far. The original plans for the structure were destroyed during the 1930s (Paolinelli interview).

The ceiling decoration was painted under Shaw's supervision (Moore, p. 12).

6. Alterations and additions: In 1890, Joseph W. Givens supervised the addition of a water closet, basin, and steam heating system (Trustees' Minutes, 8/13/90). In 1895, Thomson, Anderson and Kennedy completed work on a new steam heating system (Trustees' Minutes, 1/6/96).

A portion of the basement was adapted to a pathological laboratory for Dr. Hermann Von Schrenk in 1902 (Trustees Minutes, 12/31/17, p. 5).

In 1917 electric lights were installed (Trustees' Minutes 12/31/17, p. 5).

The building was extensively refurbished in 1929-1930. Exterior repairs included a new roof skylight, gutters, and tuckpointing (Moore, pp. 2-4). The ceiling was restored by replastering and by having Captain Harry A. Moss repaint it according to the original design done under Shaw's supervision (Brockhoff interview). Indirect lighting, a stereoptican booth, and a moving picture projection system were added. This presumably necessitated the straightening of the curved stairway to the balcony. It now has a second landing and descends along the south wall of the main room. Composition flooring over the original tile, and paired columns on the entry axis under the gallery on the north and south walls of the main room were probably added at this time, as the 1932 Director's report states that "little or no alterations had been made previously" (Moore, p. 2).

The ceiling was rebuilt and side walls braced with metal ties in the south room in 1949 (MBG Bulletin, January 1949, p. 5). In 1953 the stereopticon booth was removed and the flooring of the north balcony replaced (Cutler interview). In 1956-1957 the roof was strengthened, the skylight roofed over, (MBG Bulletin, March 1957, p. 38) and the ceiling painting retouched by Raymond Matteuzzi (Cutler interview).

A modern kitchen was placed in the south room in 1968 (MBG Bulletin, September-October 1968, p. 34).

In 1971 the ironwork on the south entrance was recast under the direction of James Hampton, chief engineer of the Missouri Botanical Garden (MBG Bulletin, June 1971, pp. 30-31).

B. Historical Events and Persons Connected with the Structure:

1. Henry Shaw (1800-1889). For biographical information about the founder of the garden, see the HABS report on the Missouri Botanical Garden (MO-1135).
2. Sir William J. Hooker (1785-1865) and Asa Gray (1810-1888). The importance of building a museum-library-herbarium for the educational value and prestige of his botanical garden was impressed upon Shaw by Sir William J. Hooker (Kobuski, pp. 100-110), the renowned botanist and Director of the Royal Botanical Gardens at Kew from 1841-1865 ("Hooker," p. 729); and by Asa Gray, writer of the best-known botanical textbooks of the time, Fisher Professor of Natural History at Harvard University, and cataloguer of North American Flora ("Gray," pp. 668-669).
3. Dr. George Engelmann (1809-1884). Engelmann was author of "The Monography of North American Cuscutinae," written in 1842, an internationally renowned botanical treatise. He was also a pioneer meteorologist and founder and first president of the St. Louis Academy of Science (Kelly, pp. 159-162). He procured the advice of Hooker and Gray which influenced Shaw to build the museum; purchased Dr. Bernhardt's herbarium in Erfurth, Germany, for the museum; and did much research there when it was completed (Kobuski, pp. 100-110).
4. Dr. Hermann Von Schrenk (1873-1953). Von Schrenk was in charge of the Mississippi Valley Laboratory of the U.S. Department of Agriculture and the U.S. Forest Service and was a major contributor to the wood preserving industry (Cattell, p. 2588). He was pathologist for the Garden from 1907 until his death and had his laboratory in the museum basement.
5. Dr. Edgar Anderson (1897-1969). Anderson, third director of the garden and contributor of the introgressive hybridization theory of ecological genetics (Gates, p. 1) had his offices in the museum in the 1940s, 1950s, and 1960s.

C. Sources of Information:

1. Old views: One circa 1867 exterior view from south; one 1889 interior view showing stairway before alteration; one interior view after alteration in 1931; and a ceiling detail before the 1956 alteration, are in the Shaw Mss. Art and Architecture file in Lehmann Library.

2. Bibliography:

a. Primary and unpublished sources:

1. Manuscripts, etc.: The Minutes of the Trustees of the Garden from 1889-1933; an unpublished paper by Dorothy A. Brockhoff, March 8, 1962, titled "A Study of Henry Shaw and His Houses"; a transcript of an interview between Brockhoff and Henry V. Moss, February, 1962, 9 Covington Place, St. Louis, Mo. concerning the restoration of the museum ceiling done by his father; and the Shaw Manuscripts containing the Cashbook 1856-1866, v. 2, pt. 2 and Daybook Ledger 1856-1858, v. 2, pt. 1 are all in the Lehmann Library of the Missouri Botanical Garden.
2. Deed books: The title to land becoming the Missouri Botanical Garden is in Shaw's 'Real Estate—Barriere des Noyers' Ledger in the John S. Lehmann Library, Missouri Botanical Garden.
3. Interviews: June 14, 1974, 5 Shaw Place, St. Louis, Missouri with former director of the garden, Hugh Cutler, concerning alterations to the museum from 1930-1974.

June 8, 1974; Offices of Sylvester Schmidt Associates, 601 Olive St. (Railway Exchange building) St. Louis, Missouri with Fernando Paolinelli concerning the destruction of the original Museum plans.

b. Secondary sources:

"Barnett, Haynes, and Barnett," The Church Progress (July 27, 1922) p. 10.

Barnett, Thomas P. "Pioneer Architect of the West," Western Architect (February 1912), pp. 13024.

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- MacAdam, David H. Tower Grove Park. St. Louis: R. P. Studley Co., 1883.
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- "George I. Barnett," Missouri and Missourians: Missouri Biography, V. Floyd Calvin Shoemaker, ed. Chicago: The Lewis Publishing Co., 1943, p. 73.
- "Some Facts about the Garden," Missouri Botanical Garden Bulletin XXXI, #7 (September 1943), n. p.

"Who, What, When, Where," Missouri Botanical Garden
Bulletin LVI, #5 (October 1968), p. 34.

Prepared by: Carolyn Hamm
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July 29, 1974

PART II. ARCHITECTURAL INFORMATION

A. General Information:

1. Architectural character: The museum has a simple rectangular plan. It is embellished with the Classical Revival decoration made of limestone that was favored by architect George I. Barnett. The interior features a central two-story space with a gallery running along all four walls.
2. Condition of fabric: Good.

B. Description of Exterior:

1. Over-all dimensions: Rectangular, 25'-10" (three-bay north front) by 75'-6" (four bays). Two stories, basement.
2. Foundations: Limestone masonry. The lowest course is smooth; the second and third courses are rusticated.
3. Wall construction, finish and color: Red brick, running (stretcher) bond, with limestone details consisting of rusticated quoins, fluted columns and Roman Doric capitals, and smooth-surfaced pilasters, window arches, sills, cornice, modillions, and voussoirs over the main entry.
4. Structural system: Load-bearing walls; iron tie bars added.
5. Stoops:
 - a. South stoop: There are stone steps leading to a wide apron in front of the door. Cast-iron guard rails run up either side of the stairs and have plain balusters modeled in double "S" curves and a newel post at their base. The tapered, round newel post has a plain octagonal base, surmounted by leaf motifs, rosettes, and beading. A grape vine in medium relief winds up the shaft to a cluster of grapeleaves at the junction with the handrail. The post is capped with an unornamented ball.

Cast-iron rails run out from the stoop to the east and west, guarding the basement stairs. They have a plain handrail and fluted, cylindrical shafts which widen into tulip-bulb motifs at their tops and bases.

Round-arched openings are cut into the east and west sides of the stoop. Steps on both sides lead down to the basement door beneath the arches and directly below the first floor door.

- b. North stoop: Broad stone steps with stone string lead to a recessed doorway.
6. Chimney: There is one plain chimney over the south bay.
 7. Openings:
 - a. Doorways and doors:
 1. North: The entrance has a double door, recessed behind double arches which are carried by one set of fluted Roman Doric columns in antis and a matching pair of smooth pilasters. The outermost arch is composed of smooth stone voussoirs and a keystone which has a carved, curved leaf motif, all forming a sawtooth pattern at the outer edge. The columns carry an entablature which extends across the north front to the edges of the quoins on the east and west sides. Above it, on either side of the double arch are small circular windows. The inner arch is slightly recessed, of smooth-surfaced stone with a band of low-relief molding running around its inner edge.

The door itself is double, painted green, and surrounded by white trim. It is surmounted by a pediment carried by acanthus leaf scrolled brackets.
 2. South: This secondary entrance has double doors painted green. It is surrounded by molding and surmounted by a plain wooden entablature, both painted white.
 3. Details: Both north and south doors have panels with circular moldings.
 - b. Windows: On the south, east, and west sides, the windows have round-headed sashes with hoods and sills of smooth limestone. The basement windows are protected by wrought iron window guards whose tracery is in a symmetrical pattern consisting of two fancifully curling, back-to-back, 'S' - shaped members.

8. Roof:

- a. Shape and covering: The gable roof has sheet metal covering and copper gutters.
- b. Cornice, eaves: A heavy stone cornice with modillions runs around all sides of the building and outlines the pediment on the south elevation.
- c. Decoration: There are classical iron urns embellished with scalloped and floral motifs at the corners and on the roof ridge at the peak of the gables on the north and south.

C. Description of Interior:

1. Floor plans:

- a. First: Entering through the north doors, one enters the two-story high exhibition room, 45'-7" by 29'-10". To the south is a room measuring 26'-4" by 19'-10", now used as a kitchen and entered by a door on the west part of the south wall of the exhibition room.
- b. Second: Above the exhibition room a balustraded gallery runs along each of the four walls. To the south, above the present kitchen, is the old library, now the office of Dr. Hugh Cutler, Director Emeritus of the garden.
- c. Basement: Four rooms were created to house botany workshops. The walls are rough plastered or whitewashed.

2. Stairways: At the southeast corner of the exhibition room is a quarter-turn stairway leading to the gallery and office. It has one landing, in the straight section, indicating that it had been designed as a half-turn stair with landing, and was straightened to run along the south wall. Under the stairway are a sink and cabinets. Stair balusters are simple pine spindles, varnished black.

3. Flooring: Beige linoleum tile over original stone tile.

4. Wall and ceiling finish: The walls are plastered. They have base board moldings. Under the cornice molding is a frieze with a Vitruvian scroll motif. All moldings are painted white.

The trayed ceiling is frescoed with a pattern of trellises, peacocks, and botanically accurate depictions of tropical flora.

5. Doorways and doors: The main entrance at the north is flanked by two fluted Roman Doric columns. A matching pair supports the gallery at the south end of the exhibition room.

6. Special decorative features, trim, cabinet work: The underside of the gallery is paneled and painted white. A pine guardrail runs along the gallery, consisting of thin, tapered, lathe-turned balusters; it is divided into sections by heavy, turned members resembling newel posts, which have egg-shaped caps projecting above the handrail and bulbous pendants extending below the bottom of the gallery floor.

Story-high specimen cases abut the walls on both levels of the exhibition room. They have eight-paned, double casement doors. Thin pilasters run between each set of doors up to the top of the cabinets. The cornices of the cabinets form a continuation of the ceiling cornice and also have a frieze with Vitruvian scroll ornament.

7. Mechanical equipment:
 - a. Heating: radiators.
 - b. Lighting: recessed electric lighting.

D. Site:

1. General setting: The museum faces north towards the Cleveland Avenue Gatehouse and the walkway leading from the museum gate into the garden and the east edge of the park. The Thomas Nuttall Monument, an obelisk, stands in front of the main entrance. Since the date of erection (1858) the surrounding landscape has changed; now, the museum is well-shaded by oaks.

Prepared by: Peter Dessauer
Supplemented by: Carolyn Hamm
Historians
National Park Service
August, 1975

PART III. PROJECT INFORMATION

The Tower Grove Park and Missouri Botanical Garden Project was jointly sponsored by the Historic American Buildings Survey of the National Park Service, the Board of Commissioners of Tower Grove Park, and the Board of Trustees of the Missouri Botanical Gardens.

Recorded under the direction of John Poppeliers, Chief of HABS, and Kenneth L. Anderson, HABS Principal Architect, the project was conducted during the summer of 1974 and 1975 at the Historic American Buildings Survey field office at the Missouri Botanical Garden, St. Louis.

1974 Team: Robert Harvey, Project Supervisor, (Landscape Architect); Steven Bauer, Project Foreman, (architect, University of Kansas); Carolyn Hamm, project historian, (Cornell University); Patrick Ackerman, student assistant architect, (Washington University); Suzanne Fauber, student assistant landscape architect, (University of Virginia); and Carol Macht, student assistant landscape architect, (University of Michigan).

1975 Team: Stuart Mertz, A.S.L.A., project supervisor, (landscape architect); Steven Bauer, project foreman, (Columbia University); Peter Dessauer, project historian, (Clemson University); Lennard A. Roberts, student assistant architect, (Cornell University); John R. Temmink, student assistant architect, (University of Virginia); and Theodore Torpy, landscape architect, (WASO).

The drawings were revised by HABS architect Paul Dolinsky, and the written data were edited by HABS Architectural Historian Denys Peter Myers, in the HABS Washington office in 1982. The photographs were taken by HABS/HAER Photographer Jet Lowe in 1983.