National Park Service
Cultural Landscapes Inventory

2010

Kenilworth Aquatic Gardens
National Capital Parks-East - Anacostia Park

Table of Contents

Inventory Unit Summary & Site Plan

Concurrence Status

Geographic Information and Location Map

Management Information

National Register Information

Chronology & Physical History

Analysis & Evaluation of Integrity

Condition

Treatment

Bibliography & Supplemental Information

Inventory Unit Summary & Site Plan

Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI), a comprehensive inventory of all cultural landscapes in the national park system, is one of the most ambitious initiatives of the National Park Service (NPS) Park Cultural Landscapes Program. The CLI is an evaluated inventory of all landscapes having historical significance that are listed on or eligible for listing on the National Register of Historic Places, or are otherwise managed as cultural resources through a public planning process and in which the NPS has or plans to acquire any legal interest. The CLI identifies and documents each landscape's location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management. Cultural landscapes become approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into a national database. In addition, for landscapes that are not currently listed on the National Register and/or do not have adequate documentation, concurrence is required from the State Historic Preservation Officer or the Keeper of the National Register.

The CLI, like the List of Classified Structures, assists the NPS in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, National Park Service Management Policies (2006), and Director's Order #28: Cultural Resource Management. Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report information that respond to NPS strategic plan accomplishments. Two GPRA goals are associated with the CLI: bringing certified cultural landscapes into good condition (Goal 1a7) and increasing the number of CLI records that have complete, accurate, and reliable information (Goal 1b2B).

Scope of the CLI

The information contained within the CLI is gathered from existing secondary sources found in park libraries and archives and at NPS regional offices and centers, as well as through on-site reconnaissance of the existing landscape. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape, placing it in context of the site's overall significance. Documentation and analysis of the existing landscape identifies character-defining characteristics and features, and allows for an evaluation of the landscape's overall integrity and an assessment of the landscape's overall condition. The CLI also provides an illustrative site plan that indicates major features within the inventory unit. Unlike cultural landscape reports, the CLI does not provide management recommendations or

treatment guidelines for the cultural landscape.

Inventory Unit Description:

Kenilworth Aquatic Gardens encompass eight and a half acres on the edge of the marsh bordering the east side of the Anacostia River, on the 1500 block of Anacostia Avenue in the northeast quadrant of Washington, DC. Just south of the District of Columbia line with Maryland, the site boundaries roughly approximate the original property line following acquisition by the National Park Service between 1939 and 1942. The curving path of Anacostia Avenue, N.E. defines its eastern edge, while to the north, south and west the boundary roughly follows the perimeter of the currently existing ponds. Today, a network of grassy paths lead between 45 ponds separated by earthen dikes whose underground drainage pipes control water flow. To the east of the ponds, the building complex includes a visitor center, two greenhouses and a restroom facility. Access to the site is provided by a gravel path that leads from a parking lot through a chain link fence to the northeast corner of the gardens (Figure 1). The Corps of Engineers bought the aquatic gardens from Lucy Helen Fowler, the daughter of founder Walter B. Shaw, in 1938, and the property came under the jurisdiction of the National Park Service the following year.

Civil War veteran and U.S. Treasury clerk Walter B. Shaw bought this property in 1879 with his wife, Luciana Miller. A native of Maine, Shaw soon began adapting a nearby ice pond for use in growing a few hardy water lilies brought from his New England origins. He quickly expanded the number and variety of lilies through travel and experimentation with hybridizing new plants, and before long, what had begun as a hobby had become a booming business enterprise. Winding, willow-shaded paths led through a growing network of pools thick with water lilies, lotus, and other aquatic plants. Shaw's daughter, L. Helen Shaw Fowler, took over the gardens in 1912, the same year they put up a new two-story sales building next to the ponds. The following year, two steam-heated greenhouses were built on either side of this structure, to help properly care for new plants and bring the tropical lily varieties through the cold winter months. Fowler continued the work of her father into the 1930s, by which time the property encompassed 42 pools. In the meantime, however, work on the Anacostia River by the Army Corps of Engineers had advanced to the point of condemning her property as federal land. After years of contesting this appropriation, Fowler eventually agreed to sell the core 8.5 acres of the gardens to the government in 1938.

As the only National Park Service site devoted entirely to the propagation and display of aquatic plants, Kenilworth Aquatic Gardens is a unique resource. More specifically, it is nationally significant for its unique landscape and botanical, educational and recreational contribution to the history of the District of Columbia and the nation. The historic period of significance for the site is 1882 to 1938, lasting from the first year that Shaw may have planted water lilies there to its conversion from a commercial farm to a public park. As a landscape associated with the lives of persons significant to our past, in particular early aquatic horticulturalist Walter B. Shaw and his daughter, Helen Fowler, the gardens meet Criterion B of the National Register of Historic Places Criteria for Evaluation. The site also qualifies for listing under Criterion C, for its significant and distinguishable character as a once nationally-recognized aquatic water garden that was one of the first of its kind in the United States. Consequently, the park has been listed on the National Register of Historic Places since August 25, 1978.

Today, the cultural landscape of Kenilworth Aquatic Gardens is in fair condition, and retains a high level of integrity to its historic period of significance. The site consists of 45 ponds, six display pools and three associated structures. Although some changes in vegetation and pond layout have taken place, the wandering paths and beautiful water lily displays make it easy for visitors to envision the site as it was historically. Views across the ponds are still marked by overhanging hardwood trees, while the buildings nearby have undergone only minimal alterations from their original appearance.

Site Plan

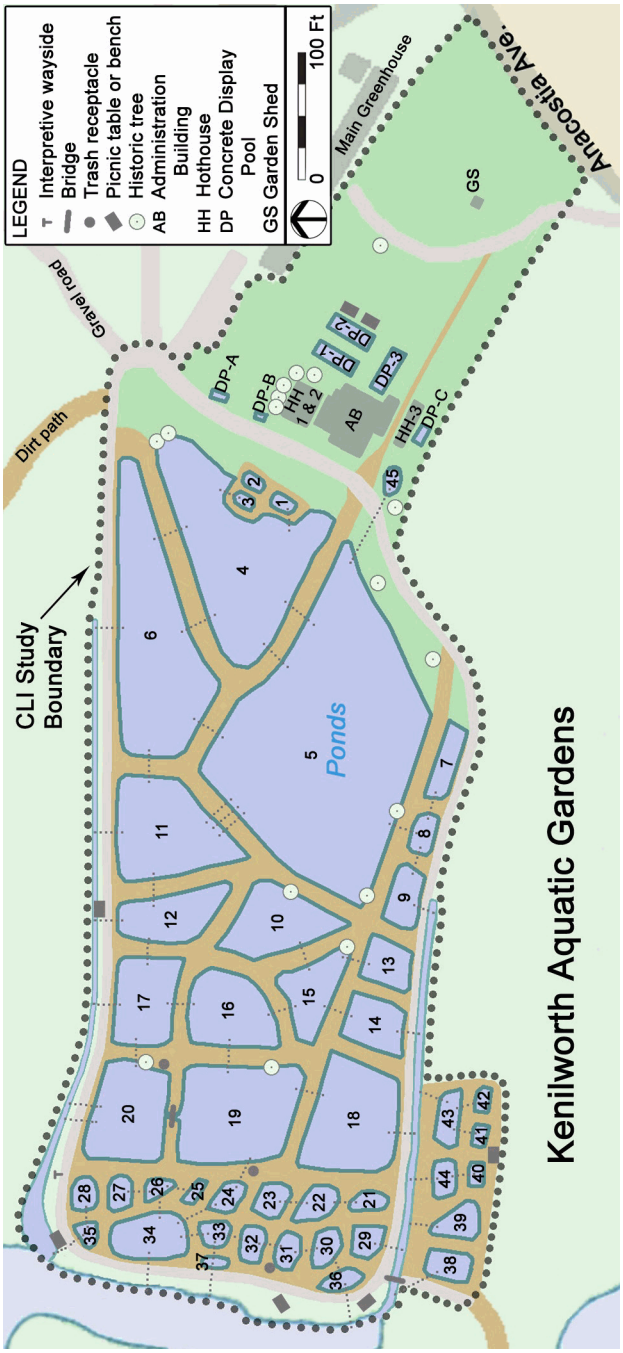

Figure 1. Site Plan of Kenilworth Aquatic Gardens, showing the site layout and primary landscape features.

CLI Hierarchy Description

Kenilworth Aquatic Gardens was first identified as an important cultural and horticultural site in 1938, when it was acquired by the federal government. Once known as the Shaw Aquatic Gardens, this site began with a single pond of water lilies planted by Walter B. Shaw on the edge of the Anacostia River marsh. As Shaw's commitment to water lilies and their cultivation grew, the number of ponds expanded to eventually encompass some 42 pools over nine acres of land by 1938. Shaw built a small cluster of associated structures, including a sales building and two greenhouses, to support his burgeoning business. Together these two landscape elements embody the original function and purpose of the gardens, to cultivate, hybridize and share the beautiful aquatic plants grown there. As a property developed into a farm by Walter B. Shaw and his daughter, L. Helen Shaw Fowler, this site is clearly distinguished from the neighboring landscapes of Kenilworth Park and Kenilworth Marsh. The boundary of the cultural landscape therefore reflects this historic meaning and association.

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

This CLI represents a continuation of the documentation of Kenilworth Aquatic Gardens. Both primary and secondary sources were consulted in generating the History and Chronology sections, while in-depth site investigations and additional research were used to inform the Analysis and Evaluation section. Archival research was conducted in the Cultural Resource Files of National Capital Parks – East (NACE) and National Capital Region (NCR), as well as at the Washingtoniana Room of the Martin Luther King Branch, Washington, DC Public Libraries; the National Archives and Records Administration; the Library of Congress; the District of Columbia Archives and Recorder of Deeds; the Maryland State Archives; the Smithsonian Botany and Horticultural Library; the Cullman Library of Rare Horticultural Books; the Historical Society of Washington, DC; the Maryland Province Archives and Nidiffer Collection of Georgetown University; and the USDA National Agricultural Library. Site investigations were conducted by the National Capital Region Cultural Landscapes Program (CLP).

The inventory was completed in 2010 by Emily Donaldson, National Capital Region Landscape Historian. The following National Capital Parks – East staff also provided valuable insight during the inventory process: Stephen Syphax, Supervisory Resource Management Specialist; Sue Bennett, Anacostia Park Site Manager; and Doug Rowley, Gardener Supervisor for Kenilworth Aquatic Gardens. Support was also provided by the staff of the National Capital Region, including Perry Wheelock, Chief of Cultural Resource Preservation Services; Maureen Joseph, Regional Historical Landscape Architect; and Martha Temkin, CLI Coordinator. In addition, valuable assistance was provided by Joe Lapp regarding the park's history; and Kit Knotts regarding the history and nomenclature of hybrid waterlilies and lotus.

Concurrence Status:

Park Superintendent Concurrence: Yes

Park Superintendent Date of Concurrence: 06/28/2010

National Register Concurrence: Eligible -- SHPO Consensus Determination

Date of Concurrence Determination: 05/28/2010

National Register Concurrence Narrative:

The Historic Preservation Officer for the District of Columbia concurred with the findings of this inventory on 5/28/2010, in accordance with Section 110 of the National Historic Preservation Act. It should be noted that the Date of Eligibility Determination refers to this Section 110 Concurrence and not the date of National Register Eligibility, since that is not the purview of the Cultural Landscapes Inventory.

Concurrence Graphic Information:

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

May 5, 2010

Memorandum:

To: Regional Historical Landscape Architect, National Capital Region

From: Acting Superintendent, National Capital Parks – East

Subject: Statement of Concurrence, Kenilworth Aquatic Gardens Cultural Landscapes Inventory

I, George Liffert, Acting Superintendent of National Capital Parks – East, concur with the findings of the Cultural Landscapes Inventory for Kenilworth Aquatic Gardens, including the following specific components:

MANAGEMENT CATEGORY: Must Be Preserved and Maintained

CONDITION ASSESSMENT: Fair

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements, will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscapes Inventory for Kenilworth Aquatic Gardens is hereby approved and accepted.

George C. Liffert 6-28-10

Acting Superintendent, National Capital Parks – East Date

Concurrence letter signed by the NACE superintendent on 6/28/2010

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

May 5, 2010

Memorandum

To: Regional Historical Landscape Architect, National Capital Region

From: State Historic Preservation Officer, District of Columbia Historic Preservation Office

Subject: Statement of Concurrence, Kenilworth Aquatic Gardens Cultural Landscapes Inventory

I, David Maloney, District of Columbia State Historic Preservation Officer, concur with the findings of the Kenilworth Aquatic Gardens Cultural Landscapes Inventory as submitted on May 5, 2010.

David Maloney
District of Columbia
State Historic Preservation Officer

5/28/2010
Date

Concurrence letter signed by the DC SHPO on 5/28/2010

Geographic Information & Location Map

Inventory Unit Boundary Description:

Kenilworth Aquatic Gardens comprise 8.5 acres of land on the edge of the marsh east of the Anacostia River (Figure 2). The site boundary runs along the edge of the historic pools, including the small building complex just east of the gardens. Despite their 1950s layout, this also encompasses the several small pools in the southwest corner of the main ponds, whose location dates to the 1920s. In accordance with the property's historic design, the boundary also extends east beyond the current building complex, to meet Anacostia Avenue as it curves around to the northeast. The site does not include the long, rectangular greenhouse or the relatively new parking lot and entrance walk to the north and east of the building complex, since these features were added to the landscape after the period of significance and do not contribute to its historic character. Thus, the study boundary around the ponds and associated structures faithfully reflects the Shaw Aquatic Gardens as they existed in 1938.

State and County:

State: DC

County: District of Columbia

Size (Acres): 8.53

Boundary UTMS:

Source:	USGS Map 1:24,000
Type of Point:	Point
Datum:	NAD 83
UTM Zone:	18
UTM Easting:	331,640
UTM Northing:	4,308,740
Source:	USGS Map 1:24,000
Type of Point:	Point
Datum:	NAD 83
UTM Zone:	18
UTM Easting:	331,340
UTM Northing:	4,308,630
Source:	USGS Map 1:24,000
Type of Point:	Point
Datum:	NAD 83
UTM Zone:	18
UTM Easting:	331,560
UTM Northing:	4,308,620
Source:	USGS Map 1:24,000
Type of Point:	Point
Datum:	NAD 83
UTM Zone:	18
UTM Easting:	331,360
UTM Northing:	4,308,760

Location Map:

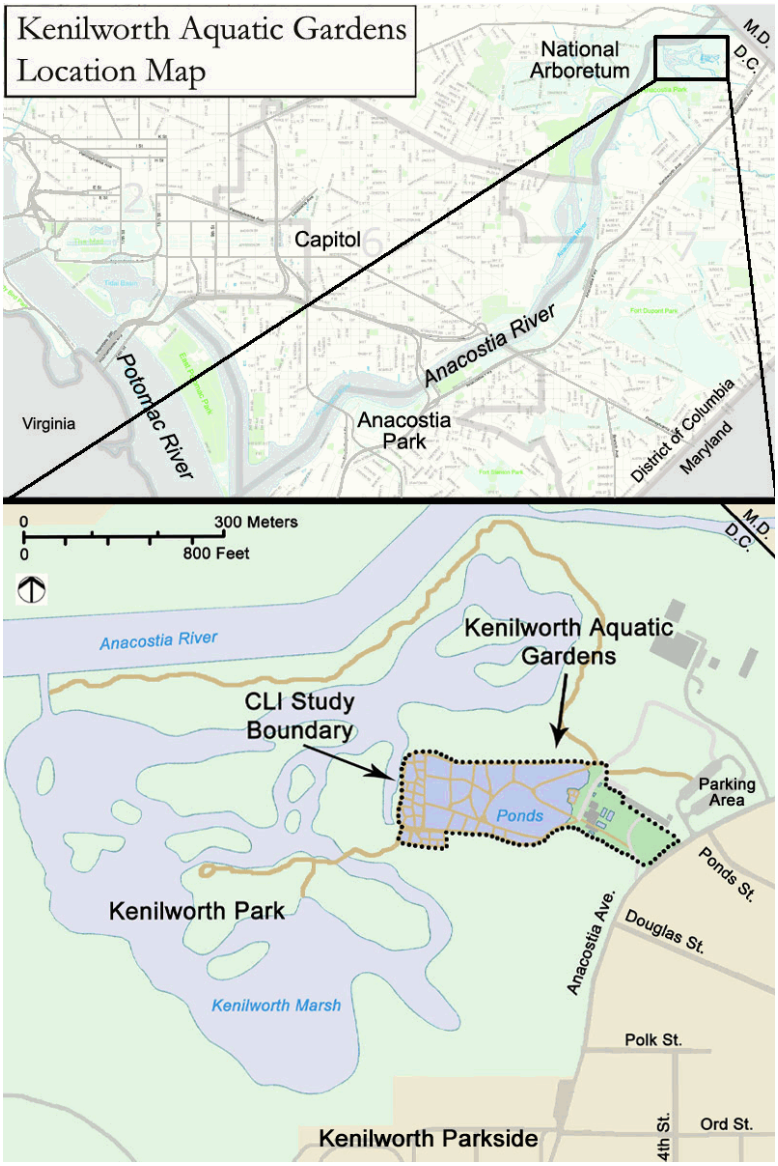

Figure 2. Annotated map showing Washington, DC and the location and layout of Kenilworth Aquatic Gardens therein (NCR CLP 2010).

Management Unit: NACE

Tract Numbers: Portion of U.S. Reservation 343 G (8.527 acres); formerly known as Plat B-58-112, or Parcel 179/2, and a portion of Parcel 184/9.

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 06/28/2010

Management Category Explanatory Narrative:

The Kenilworth Aquatic Gardens were listed in the National Register of Historic Places on August 25, 1978. Its nomination for listing has never been revised. Although it identifies the site as locally significant, the park's unique value as a cultural landscape of the District of Columbia and American aquatic gardening history indicates its national significance. As recognized by the National Register of Historic Places, the age, design, and scientific and educational potential of the gardens make them a rare natural and cultural resource that must be preserved and maintained. The Management Category Date is the date that the CLI was approved by the superintendent of National Capital Parks – East.

NPS Legal Interest:

Type of Interest: Fee Simple

Other Agency or Organization: U.S. Army Corps of Engineers

Explanatory Narrative:

The U.S. Army Corps of Engineers purchased the Shaw Aquatic Gardens, now known as Kenilworth Aquatic Gardens, from Charles M. Shaw, his wife, and L. Helen Fowler for $50,000 in 1938 (District of Columbia Land Records, Liber 7300, folio 69). The National Park Service assumed jurisdiction of this property, measuring 8.527 acres and known as Parcel 179/2, on March 6, 1939. Forthwith it became a portion of Anacostia Park, Section G, U.S. Reservation Number 343.

Public Access:

Type of Access: Other Restrictions

Explanatory Narrative:

Kenilworth Aquatic Gardens are open to the public from 7 a.m. to 4 p.m. every day except Thanksgiving, December 25, and January 1.

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

Kenilworth Aquatic Gardens is bordered on its south, west, and north sides by Kenilworth Marsh, a part of Kenilworth Park that encompasses a broad expanse of restored wetlands (Figure 3a). This marsh stretches along the Anacostia River and provides a home for myriad terrestrial, aquatic and avian species. From a historic perspective, the preservation of this area owes much to the neighboring aquatic gardens. The level floodplain known as the Anacostia Flats were largely eliminated by the dredge and fill operations of the Corps of Engineers (COE) in the late nineteenth and early twentieth centuries. As the COE gradually channelized the river into a carefully defined water course, seawalls and associated artificial levees were erected along much of its length. The area that would one day be occupied by Kenilworth Park and Aquatic Gardens was the one exception to this rule, in part because it served a crucial purpose in feeding water into the garden ponds, and its original topographic layout was left relatively untouched (Rummel et al. 1981: 61-2).

Today, the close proximity of Kenilworth Marsh both reinforces and greatly enhances the serenity and natural setting of the aquatic gardens. Small islands and winding passages among the marshes provide a place of refuge for wildlife that also frequent the gardens, and might otherwise be driven out of the area. Foot paths and boardwalks provide easy access to the marsh from the more formal gardens, and it is common for visitors to wander fluidly from one to the other. More importantly, the border of wetland vegetation and open marsh area along the edge of the gardens has remained constant throughout the years. Together, the marsh and the gardens are thus two components of a carefully integrated whole whose production stems from the subtle interplay of biological, cultural and historic factors. As a result, Kenilworth Marsh contributes to the symbolic meaning and historic significance of Kenilworth Aquatic Gardens.

To the north, a section of Kenilworth Park houses a parking area, greenhouses and a number of associated structures (Figure 3b). This area was developed after the historic period of significance for Kenilworth Aquatic Gardens, and does not contribute to the cultural landscape of the site. The location and visibility of the parking area, in particular, is inconsistent with the more historic and natural character of the neighboring aquatic gardens.

Figure 3. (a) View southwest to Kenilworth Marsh, with Ponds 14 and 18 in the foreground (b) Looking east from the entrance path into the gardens, to the employee parking area and partially screened Main Greenhouse beyond (NCR CLP 2009).

National Register Information

Existing NRIS Information:

Other Names:	78000258
Primary Certification Date:	08/25/1978

Significance Criteria:	B - Associated with lives of persons significant in our past
Significance Criteria:	C - Embodies distinctive construction, work of master, or high artistic values

Period of Significance:

Time Period:	AD 1882 - 1938
Historic Context Theme:	Expanding Science and Technology
Subtheme:	Biological Sciences
Facet:	Botany
Time Period:	AD 1882 - 1938
Historic Context Theme:	Developing the American Economy
Subtheme:	Agriculture
Facet:	Small-Scale Commercial Agriculture (Crops, Orchards)
Other Facet:	Aquatic gardening

Area of Significance:

Area of Significance Category:	Science
Area of Significance Category:	Landscape Architecture
Area of Significance Category:	Conservation
Area of Significance Category:	Entertainment - Recreation

Statement of Significance:

Application of the National Register of Historic Places Criteria for Evaluation to the cultural landscape of Kenilworth Aquatic Gardens reveals that this site is significant to the history of the United States. It meets Criterion B for its association with the lives of persons significant in our past, in particular early aquatic horticulturalist Walter B. Shaw and his daughter, Helen Fowler. It also meets Criterion C for representing a significant and distinguishable entity whose components may lack individual distinction. As a cultural landscape representing one of the earliest and premier commercial aquatic gardens in the country, Kenilworth Aquatic Gardens is a rare historic site with enormous educational and botanical value. Although the 1978 National Register nomination determined the park as locally significant, further analysis of the site and its unique past clearly indicate the gardens' national significance.

The period of significance for Kenilworth Aquatic Gardens, as defined by the National Register, is 1882 to 1938. This period lasts from the earliest year that Shaw may have first planted water lilies at the site to the end of its private ownership and use as a commercial farm. It encompasses not only some of the best years in terms of the site's condition, but captures its greatest productivity and innovation in water lily cultivation and hybridization. It also marks the known years in which Walter B. Shaw and his daughter, L. Helen Shaw Fowler, used and developed the gardens to grow water lilies, lotus, and other aquatic plants and fish. Although not in and of itself a change in the landscape, the subsequent transfer of the gardens to government ownership signified the end of the Shaw commercial enterprise in aquatic plants, and thus marks a crucial shift in the use and perceived purpose of the site, as well as its maintenance philosophy and condition.

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Vernacular

Current and Historic Use/Function:

Primary Historic Function: Agriculture/Subsistence-Other

Primary Current Use: Outdoor Recreation

Other Use/Function	Other Type of Use or Function
Concession	Historic
Outdoor Recreation	Both Current And Historic
Interpretive Landscape	Both Current And Historic

Current and Historic Names:

Name	Type of Name
Kenilworth Aquatic Gardens	Current
Shaw Aquatic Gardens	Historic
W.B. Shaw Lily Gardens	Historic
Shaw Water Gardens	Historic
Shaw`s Water Gardens	Historic
Shaw Water Lily Gardens	Historic
Walter Shaw Water Gardens	Historic

Ethnographic Study Conducted: No Survey Conducted

Chronology:

Year	Event	Annotation
2200 BC	Inhabited	By this date, the Savannah River people are living along the major rivers east of the Blue Ridge Mountains (Bedell et al. 2009: 20).
1500 BC	Inhabited	The region of the District of Columbia is first inhabited by humans around this time (Bedell et al. 2009: 34).
AD 1400 - 1450	Settled	The first Conoy arrive on the inner coastal plain to settle along the Potomac River (Hodge 1906).
AD 1608	Farmed/Harvested	By this date, the Conoy groups living along the eastern shore of the Potomac River are cultivating corn, fishing, hunting, and making ceramics. The total population, centered around Nacotchtank village, numbers between 400 and 500 people (Potter 1993: 11; Bushong 1990: 9).
	Explored	Early European visitors describe the area around the future District of Columbia as a lightly wooded, marshy flatland marked by vegetation such as sweet gum, oak, and hickory (Toner 1874; Joseph and Wheelock 1999: 13).
AD 1650 - 1700	Settled	European settlers establish themselves in the DC area, and soon clear much of the land for the cultivation of tobacco (Potter 1993).

AD 1658	Established	Lord Baltimore creates Charles County, which reaches along the Potomac River as high as the settlements extend (Gahn 1936: 12).
AD 1686	Platted	On April 13, John Beall surveys a tract known as The Barrens, or The Barrons, that includes what would later become the Kenilworth Aquatic Gardens land (Maryland State Archives Patent Records, Liber 22 folio 239).
AD 1687	Established	John Beall receives a patent for The Barrens, a property of 472 acres (Maryland State Archives S 1596-455, Patent Record NS 2, p. 361).
AD 1695	Established	Lord Baltimore creates Prince Georges County, reaching from present-day Oxon Branch north to Potomac Falls (Gahn 1936: 12).
AD 1748	Established	On September 29, Fife is patented to Joshua and Ninian Beall. This parcel measures 940 acres and includes the land formerly known as The Barrens (Maryland State Archives, S 1203-886, Patent Certificate 815).
AD 1764	Established	On April 16, the 1,024-acre Fife Enlarged, which includes the former Fife, is patented to Joshua Beall (Maryland State Archives, S 1203-887, Patent Certificate 816).
AD 1790 - 1800	Planted	By this decade, some of the fields around the District of Columbia had been allowed to return to successional woodland due to depletion of the soil by tobacco crops (Joseph and Wheelock 1999: 13).
AD 1791	Designed	Pierre L`Enfant lays out his design for the new capital city at the confluence of the Potomac River and the Eastern Branch, later known as the Anacostia River (LeeDecker and Baynard 2009: 24).
AD 1799	Established	The Washington Navy Yard is established on the west bank of the Eastern Branch (NPS NR 2009: 2).
AD 1815	Established	After years of work by the Washington Canal Company, the Washington Canal is opened, creating a new link between the bustling business of Georgetown and the Eastern Branch (Gutheim and Lee 2006: 85).

AD 1840	Land Transfer	On January 25, Alexander McCormick conveys 105.5 acres of the former Fife Enlarged to Henry Naylor (District of Columbia Land Records, Liber N.C.T. 7, folio 42).
	Land Transfer	On January 28, Henry Naylor conveys the same 105.5 acres, or part of the former tract Fife Enlarged, to Thomas Gibson (District of Columbia Land Records, Liber N.C.T. 7, folio 42).
AD 1848	Land Transfer	On February 12, William H. Brown purchases the 105.5-acre portion of Fife Enlarged at auction, following the death of former owner Thomas Gibson (District of Columbia Land Records, Liber N.C.T. 7, folio 42).
AD 1853	Land Transfer	James Van Hook purchases 240 acres along the river to the south, opposite the Navy Yard. In the years that follow, this property is developed into the first suburb on the east side of the Eastern Branch, or eighteen blocks of city housing known as Uniontown (NPS NR 2009: 2).
AD 1854	Land Transfer	On May 24, David Cole and his wife Lucy purchase 105.5 acres of the former Fife Enlarged from William H. Brown (District of Columbia Land Records, Liber J.A.S. 77, folio 362).
AD 1863	Land Transfer	On June 16, David Miller purchases the 105.5-acre portion of Fife Enlarged, located east of the Eastern Branch and including the future Kenilworth Aquatic Gardens, from David Cole (District of Columbia Land Records, Liber N.C.T. 7, folio 42).
AD 1867	Established	The responsibility for maintenance of public works in the District of Columbia is transferred to the U.S. Army Corps of Engineers (LeeDecker and Baynard 2009: 14).
AD 1870	Engineered	The U.S. Corps of Engineers begins dredging along the Potomac River following an appropriation of funds by Congress (LeeDecker and Baynard 2009: 14).
AD 1871	Built	The Maryland Railroad Company purchases land east of the Anacostia River in order to extend rail lines across the river for the first time (NPS NR 2009: 3).

AD 1872	Explored	At the request of Congress, the U.S. Corps of Engineers conducts a study of the Anacostia River for the first time since the Civil War. Despite the recommendation of a six million dollar project to resolve silt buildup and health-related issues, no action is taken (Gordon 1984: 2).
AD 1875	Established	The Washington Engineer District is formed with the primary purpose of managing the Potomac River (Scott 2005: 72).
AD 1879	Land Transfer	On May 26, Walter B. Shaw and his wife, Luciana, purchase 33 acres of land then known as Parcel 179/2 from Lucy and David Miller (District of Columbia Land Records, Liber 915, folio 205).
AD 1880 - 1882	Established	Walter B. Shaw plants his first water lilies in a disused ice pond down by the Anacostia marsh, near the western edge of his property (Kearney 1943; The Washington Post, July 25, 1943; Unna 1953; Dillon 1976: 1; Brown 1992; Palmer Reporting Service 1982b: 27; Holmes and Heine 1959: 391; Cawood n.d.).
AD 1882	Planned	For the first time, the Annual Report of the Corps of Engineers lays out a plan to dredge the Anacostia River as far north as Bladensburg and use the dredged materials to fill in the adjacent flats (Gordon 1984: 3).
AD 1887	Built	On February 23, a new bridge across the Anacostia River at Pennsylvania Avenue is approved by Congress (NPS NR 2009: 3).
AD 1890	Established	On March 20, the new Pennsylvania Avenue bridge across the Anacostia is officially opened to traffic (NPS NR 2009: 3).
AD 1891	Excavated	Following a Congressional appropriation of $20,000 for the purpose, work begins on the dredging of the Anacostia River between the Navy Yard and Giesboro Point (NPS NR 2009: 4).
	Explored	Col. Peter Hains of the U.S. Corps of Engineers undertakes a detailed survey of the Anacostia River within the District of Columbia (Washington Post, November 16, 1905).

AD 1894	Built	By this date, W.B. Shaw had constructed a second building on his property, down next to his first lily pond by the marsh`s edge (Hopkins 1894).
AD 1898	Planned	On April 11, Congress appropriates funds to improve the Anacostia River and reclaim the associated flats, in accordance with plans laid out by Colonel Allen of the U.S. Corps of Engineers (The Washington Post, December 17, 1898).
AD 1900	Developed	Shaw introduces Nymphaea odorata `Helen Fowler,` a deep rose colored water lily named after his daughter (Perry 1938: 52).
AD 1901 - 1902	Planned	The Senate Park Commission, also known as the McMillan Commission, lays out a master plan for development of the capital city, including the Anacostia River. The submitted plan includes designs for a 1,100-acre Anacostia water park that would consist of half water, half land (Joseph and Wheelock 1999: 15).
AD 1902	Established	W.B. Shaw leaves his position at the U.S. Treasury to cultivate and sell water lilies full time (L. 1908).
AD 1903	Cultivated	Around this year, W.B. Shaw first begins paying special attention to the cultivation of lotus, in response to a rise in demand for these plants as well as water lilies (L. 1908).
AD 1905	Excavated	By this year, dredging along Section One of the Anacostia, or the area between the river mouth and the Navy Yard Bridge, had been completed, and several thousand acres of adjacent ground reclaimed (Washington Post, November 16, 1905).
AD 1907	Developed	By this year, Shaw has introduced Nymphaea odorata `Luciana,` a pink water lily named after his wife (Bisset 1907: 49-50).
	Established	Shaw grosses an approximate $1,200 an acre from his aquatic gardens. Lilies are shipped regularly to New York, Boston, Philadelphia, and Chicago. Shaw is also keeping Japanese carp and paradise fish for sale (L. 1908).

AD 1908	Cultivated	At this point, Shaw has nine ponds spread out over four acres and housing 40 different types of water lilies, fifteen of which are night-blooming varieties (L. 1908).
AD 1911	Established	Congress establishes the Board on Reclamation and Development of the Anacostia River and Flats, formed to help revitalize the plans for reclamation of the flats between the Navy Yard and the District line (Gordon 1984: 10).
AD 1912	Expanded	Shaw takes steps to more fully commercialize his business, with increased bulk shipments to out-of-town markets and a new lily truck for the sale of lilies around Washington (Cawood n.d.).
	Built	Shaw has a small, two-story board and batten building constructed to serve as the sales building for his growing aquatic enterprise (NPS NR 1978: 2).
AD 1913	Built	Shaw has two steam-heated greenhouses (current Hothouses 1, 2 and 3) constructed on either side of the new sales building, to help care for the tender new water lilies and tropical varieties (NPS NR 1978: 2).
	Developed	Shaw introduces Nymphaea `Eugenia de Land` (also known as `Eugenie de Land`), a pink lily named after a local artist (National Park Service 1940).
AD 1915	Developed	Helen Fowler introduces the coral-pink colored Nymphaea `Pink Opal` (Perry 1938: 54).
AD 1916	Planned	The Board on Reclamation and Development of the Anacostia River and Flats decides against the original idea of building a dam, and instead draws up plans to open a western channel in the river to create today`s Kingman Lake and Kingman Island (Gordon 1984: 10-11).
	Established	On August 25, Woodrow Wilson approves legislation to create the National Park Service (Mackintosh 1999).
AD 1918	Established	On August 31, Congress lays aside the reclaimed land along the Anacostia River as part of the District of Columbia`s park system, naming it Anacostia Park (Scott 2005: 206).

AD 1921	Developed	Fowler introduces Nymphaea `Rose Arey,` a rich pink colored lily named after a cousin and awarded the silver medal for best new lily by the New York Horticultural Society (National Park Service 1940; The Mayflower's Log, August 1936).
	Expanded	This year, the gardens produce 75 different varieties of water lilies, in addition to other aquatic plants.
AD 1927	Built	By this year, a group of three additional ponds have been constructed to the south of the gardens and at their west end, correlating roughly to current Ponds 42, 43 and 44 (1927 Historic Aerial Photographs, Record Group 328, No. 960, National Archives and Records Administration).
AD 1927 - 1935	Expanded	Between these years the final few pools are added to the gardens` southwest corner, including today`s Ponds 29, 30, and 36 (1927 Historic Aerial Photographs, Record Group 328, No. 960, National Archives and Records Administration).
AD 1930	Developed	Fowler introduces Nymphaea `Radiance,` an iridescent pink flower whose color deepens toward its center (W.B. Shaw Aquatic Gardens 1930; Perry 1938: 55).
AD 1933	Planned	Congress again authorizes a plan to fill in the Anacostia marsh areas, in the name of controlling malaria-bearing mosquitoes (Thomas 1963: 1).
	Altered	Administration of the parks in the capital is transferred to the National Park Service (Thomas 1963: 1).
AD 1935	Expanded	By this year, the gardens have grown to encompass 42 ponds covering nine acres (Warren 1935).
	Established	The residential neighborhood known as Eastland Gardens is founded to the south and east of the Shaw property (Lategola 1996: 9).
AD 1936	Damaged	In March, the Great Flood of 1936 inundates the Shaw ponds with water from the Anacostia River. Luckily, the associated structures at the site are left undamaged, and the gardens recover in time for the summer lily season (1936 Historic Aerial Photographs, Record Group 328, No. 960, National Archives and Records Administration).

AD 1938	Land Transfer	On December 19, the U.S. Corps of Engineers purchases Parcel 179/2 and a portion of Parcel 184/9, in all totaling some 8.5 acres, from Charles Shaw, his wife Alberta, and Helen Fowler. The acquisition is made possible only by a special appropriation of funds by Congress under the District Appropriation Act (District of Columbia Land Records, Liber 7300, folio 69).
AD 1939	Altered	The National Park Service assumes jurisdiction of what is now known as Kenilworth Aquatic Gardens. This area becomes known as Anacostia Park, Section G, U.S. Reservation 343 (NPS Land Transfer Order No. 767; Gillen 1940: 1).
AD 1940 - 1942	Land Transfer	During this period, various small tracts of land to the east of the gardens are acquired by the National Park Service to complete its ownership of the land within the current site boundaries (NPS Land Transfer Order No. 1276; Gartside 1942: 2).
AD 1941	Developed	The Army Corps of Engineers reports that the dredge and fill operations along the Anacostia River are 89 percent complete, only to cease work on the project soon afterwards due to World War II (Jones 1996: 4).
AD 1942	Established	Open burning of trash begins at the Kenilworth Landfill, to the south of Kenilworth Aquatic Gardens (Palmer Reporting Service 1982: 7).
	Land Transfer	On December 2, the remaining portion of the original Shaw Aquatic Gardens, including the buildings directly east of the gardens, is acquired by the National Park Service (NPS Land Transfer Order No. 1269; Gartside 1942: 1).
AD 1945 - 1950	Built	The government builds a large war veteran housing complex adjacent to Kenilworth Aquatic Gardens, effectively surrounding the site on its north and east sides (Aerial photograph 1338-B, August 21, 1950, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center).
AD 1946	Built	Mayfair Mansions is built as an elite housing complex for upwardly-mobile African Americans who cannot find housing downtown due to racial discrimination (Lategola 1996: 9).

AD 1952	Built	In February, a group of four new ponds is built in the southwest corner of the main gardens, adjacent to the three pools added in the 1920s, correlating with current Ponds 38, 39, 40 and 41 (Rowe 1952, photograph 1573-F, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center).
	Cultivated	Mrs. Ruth Gover, a former employee of Mrs. Fowler`s, coaxes a 1,000 year old lotus from Southern Manchuria into bloom (The Washington Star, June 30, 1952).
	Planted	By this year mosquito fish, a recent introduction to the ponds, are thriving.
AD 1953	Altered	This year, the gardens are documented as containing 80 varieties of water lilies kept in a total of 49 ponds (The Washington Post, July 12, 1953).
AD 1959	Built	The Kenilworth Courts housing development is built to the east of the aquatic gardens (East Washington Life, June 2006: 44).
	Developed	Development of Anacostia Park is completed (Stanley W. McClure to Chief of Division of Interpretation and Visitor Services, July 14, 1965, NACE files).
AD 1962	Planned	The National Park Service revisits the idea of reclaiming the Anacostia flats, and plans to continue with the reclamation efforts originally begun by the U.S. Corps of Engineers (L.K. Thomas to Assistant Regional Director, February 14, 1963, NACE files).
AD 1963 - 1968	Altered	During these years, two of the large historic ponds in the gardens are divided into seven smaller pools (currently known as Ponds 10, 12, 15, 16, 17, 19, and 20; (National Park Service GIS 1963; National Park Service GIS 1968).
AD 1968	Altered	After a child is fatally burned at the Kenilworth Landfill, open burning at the site ends and it is converted to a sanitary landfill (Palmer Reporting Service 1982: 7).

	Altered	The National Park Service ceases its practice of supplying water lilies and other aquatic plants to the Lincoln Memorial Rainbow Pool. Much of this vegetation had historically been cultivated at Kenilworth Aquatic Gardens before being sourced out to local parks (Joseph and Wheelock 1999: 65).
AD 1972	Abandoned	After thirty years of use as both an open burning site and a sanitary dump, the Kenilworth Landfill is closed (Palmer Reporting Service 1982: 7).
	Established	On March 25, Kenilworth Park is opened (Rottier 1972, Kenilworth Park opening photographs, National Park Service Museum Resource Center).
AD 1974	Planned	At the request of the Director of the National Capital Planning Commission, a study of the situation at Kenilworth Marsh is completed in April and entitled Preliminary Master Plan Comments (National Park Service 1964).
AD 1975	Excavated	An archeological reconnaissance survey conducted for the planned installation of a 108-foot Anacostia force water main unearths Native American artifacts including a potsherd, lithic flakes, a quartzite biface, and two projectile points. The estimated dates for this assemblage range from the Late Archaic to the Late Woodland period (Hume 1975: 11).
AD 1978	Preserved	The Kenilworth Aquatic Gardens are added to the National Register of Historic Places (NPS NR 1978).
AD 1979	Cultivated	By this year, the number of water lilies growing in the gardens had shrunk to sixty, including five types of lotus (Rummel et al. 1981: 231).
AD 1981	Planned	The National Park Service develops an Environmental Assessment and Information Base for Kenilworth Park and Aquatic Gardens (Rummel et al. 1981).
	Cultivated	By this year, the gardens are growing roughly 75 different varieties of water lily, including several types of lotus (Rummel et al. 1981: 92).

AD 1983	Planned	The Division of Special Programs and Populations issues an Accessibility Survey of Selected NCR - East Park Units that includes an assessment of Kenilworth Aquatic Gardens and recommendations for how to improve accessibility at the site (Division of Special Programs and Populations 1983).
AD 1984	Removed	Around this date, the old willow oak on the southwest corner of the Administration Building is removed (Doug Rowley, Personal communication, February 3, 2010).
	Maintained	In April, Ponds 9 and 10 are successfully dredged for maintenance purposes (Doug Rowley, Personal communication, February 3, 2010; National Park Service 1990).
AD 1989	Built	A series of additions are made to the Administration Building, including ramps on the west and south sides for accessibility. A small entryway is added on the south side, and a larger shed to contain the restrooms is built on the north side (Statement for Management, Kenilworth Park and Aquatic Gardens, NPS c. 1990, Kenilworth Aquatic Gardens files, National Capital Parks - East).
AD 1990	Planned	A preliminary draft Kenilworth Aquatic Gardens Pond Management Plan lays out procedures for management of the gardens, including dredging and control of vegetation in ponds and repairs to display ponds in the vicinity of the administration building. It also calls for an increase in pond maintenance staff and provides a list of equipment needed for proper care of the gardens (National Park Service 1990).
	Altered	One of the smaller display ponds, located to the north of the Shaw sales building and next to the employee parking lot, is filled in and used instead as a flower bed (National Park Service 1990).
AD 1993	Established	The 32-acre restored Kenilworth Marsh is dedicated on September 21 (D'Vera 1993: D2; Jones 1996: 10).
AD 1996	Established	The northern snakehead fish, an invasive species from Asia, appears in the ponds (Fahrenthold 2006).

AD 1997	Removed	A large, historic white fir standing just north of Display Pond B is struck by lightning and removed (Doug Rowley, Personal communication, February 3, 2010).
AD 2000 - 2002	Built	During these years, a boardwalk with interpretive display boards is built from the southwest corner of the gardens out into Kenilworth Marsh (National Park Service photographs 2000, Kenilworth Aquatic Gardens files, National Capital Parks - East; Doug Rowley, Personal communication, January 25, 2010).
AD 2000 - 2001	Removed	Two Shaw-era hemlocks by the display ponds blow over and are removed (Doug Rowley, Personal communication, February 3, 2010).
AD 2002	Maintained	In the spring of this year, Pond 4 is dredged for maintenance purposes (Doug Rowley, Personal communication, February 3, 2010).
AD 2003 - 2006	Built	A series of water service upgrades are made throughout the garden ponds, including the installation of new, shallower 4-inch PVC pipes to allow continuing water circulation between pools (Doug Rowley, Personal communication, February 3, 2010).
AD 2007	Built	A network of internal wire fencing is installed within the dikes throughout the ponds in order to prevent further damage from the tunneling of muskrats (Doug Rowley, Personal communication, February 3, 2010).

Physical History:

12,000 BC to 1686 AD

GEOLOGIC FORMATION AND EARLY SETTLEMENT

The Earliest Peoples of the Chesapeake

Paleoindians, or the early inhabitants of North America, first came to live in the Washington, DC area around 12,000 years ago (Fiedel et al. 2008: 3; Bedell et al. 2009: 8). The onset of a colder ice age climate roughly two million years before had resulted in the formation of enormous glaciers that absorbed much of the earth's water, causing global sea levels to drop to 400 feet below today's level. Consequently, by the time humans arrived the Atlantic coast was hundreds of miles east of where it is now, and in place of the Chesapeake Bay the Potomac joined the Susquehanna to form a single, giant river running out towards the distant ocean. In the future District of Columbia, spruce trees and other evergreens characterized the landscape, which was roamed by a myriad of "megafauna," or huge animals of the ice age, before their persistent human predators drove them to extinction (Bedell et al. 2009: 8). The earliest hunter gatherer populations who came to this area would have found woodland caribou, elk, moose, black bear, mastadon, mammoth, and musk ox (Bushong 1990: 7).

Following a period of severe cold that lasted roughly a century and may have driven humans out of this region entirely, temperatures once again rose, and by 7000 BC the area was at least as warm as it is today. Shifting to accommodate this new climate, vegetation in the Potomac Valley became characterized by the same type of oak-hickory forest as can still be found there (Bedell et al. 2009: 11). The coastline itself remained in flux, however, and it was not until around 3000 BC that the rising sea level began to flag, "allowing the formation of stable estuaries at the mouths of rivers along the Atlantic coast" (Bedell et al. 2009: 19). These areas became welcoming new habitats for a variety of fish and shellfish, whose collection was soon one of the primary food sources for local inhabitants. The American Indians living here after 2200 BC have been recognized by archeologists as a group who used Broadspear points and have been referred to as the Savannah River people. They established a strong presence along the major rivers east of the Blue Ridge Mountains. Unlike their predecessors, these peoples seem to have spent much of each year at established sites on the water, rather than in the forests inland (Bedell et al. 2009: 20; Fiedel et al. 2008: 6).

Though it was first noted in the archeological record of this period, indigenous habitation of the Potomac floodplain proved to be a long tradition. Hundreds of years later, the Europeans who arrived here were greeted by established communities descended from these original groups. In the interim, local cultures continued to practice the same mix of hunting, fishing and gathering from seasonal camps that had been used by their predecessors, even as they developed a range of technologies that helped them capitalize off of their surrounding environment in new ways (Bedell et al. 2009: 33).

In 1975, an archeological reconnaissance survey was conducted for the planned installation of a 108-foot Anacostia force water main through Anacostia Park property (Sites 51NE005 and

51NE017; Trocolli 2010). The project unearthed several American Indian assemblages, one to the north of the present-day Kenilworth Aquatic Gardens and one in the vicinity of the future building complex. Artifacts found at these sites included a potsherd, lithic flakes, a quartzite biface fragment, and two projectile points dating to sometime between the Late Archaic and Late Woodland period. The assortment of items as well as their estimated date range suggest that this area was used by indigenous peoples over a long period of time (Hume 1975: 11).

Between 1000 and 1600 AD, American Indians in the Chesapeake Bay area fished, gathered, hunted, and cultivated native plants including sunflower and goosefoot. They also began practicing agriculture on a larger scale with maize, beans, and squash. Mass storage of these higher yield crops in turn allowed groups to settle in more permanent village arrangements. Many such settlements along the Potomac River were located near fish weirs, whose catch of shad and eels was used to supplement the local diet. Inhabitants of these villages would also send out groups to set up smaller camps elsewhere, in order to hunt and gather at different times of year (Bedell et al. 2009: 34, 38; Fiedel et al. 2008: 6).

The Nacotchtank

Shortly before the arrival of Europeans, the area currently occupied by Kenilworth Aquatic Gardens consisted of marshland hugging the east bank of the Anacostia River. Here on the inner coastal plain, a group of American Indians of Eastern Algonquian linguistic stock known historically the Kanawha, or the Conoy, had settled sometime before the fifteenth century (Hodge 1906). Evidence of these peoples is today found in archeological assemblages of pottery and worked rhyolite, a volcanic rock similar to granite, at sites in the area. Although political relations of the time were complex and constantly shifting, their territory stretched roughly from the Potomac River to Baltimore, including much of southern Maryland (Bushong 1990: 9). In 1608, groups of Conoy living on the Maryland side of the Potomac River included the Nacotchtanks, Piscataways, Pamunkeys, Nanjemoys, Potapacos, and Yaocomacos, with some influence also extending to the nearby Tauxenents (Potter 1993: 11, 19, 125, 138, 145, 153, 187). Most of these Conoy chiefdoms, as they were known, had their own werowance, or chieftain, who with his or her advisors formed an elite class distinguished by their dress, wealth and privileged status (Potter 1993: 19-20).

By the early seventeenth century, a village known as Nacotchtank stood on the eastern bank of the Eastern Branch (later known as the Anacostia River) just north of its junction with the Potomac. According to early sources, this location was the seat of the Nacotchtank chiefdom, which was likely made up of between 400 and 500 people spread out among a series of riverside villages along the Potomac River and Eastern Branch. In fact, the word, “Anacostia,” was a European corruption of the native word, “Nacotchtank,” or “Nacostin” (Part 2, Hodge 1906: 8; Bushong 1990: 9).

The central location of the Nacotchtank village on the Eastern Branch took full advantage of local trade routes as well as the fish, shellfish and water birds that lived in and along the river. The Potomac’s inner coastal plain was a primary fish spawning ground for the region, attracting a wide range of species including herring, shad, salmon, and sturgeon (Gutheim and Lee 2006:

16). Particularly in the late winter and early spring, when crops were not yet in the ground and the agricultural and nut harvests from the previous year were nearly exhausted, fish runs along these rivers provided the Nacotchtanks with a convenient, plentiful and much-needed supply of protein (Potter 1993: 153). The local inhabitants thus took full advantage of these resources from their villages along the river's edge, many of whose names in 1612 gave away their primary occupation: Namassingakent, meaning "plenty of fish;" Assaomeck, or "middle fishing place;" and Namoraughquend, or "fishing place", were all located along the west bank of the Potomac River, near the spot where the Anacostia empties into it (Potter 1993: 15, 153).

Early European accounts offer some impression of the landscape inhabited by these peoples, who shared the wetlands and lightly wooded forest with deer, turkeys, and other wildlife. An expanse of marsh bordered the broad banks of the westward-flowing Anacostia, which early settlers called the Eastern Branch of the Potomac (Toner 1874; Joseph and Wheelock 1999: 13). Clusters of sweet gum (Liquidambar styraciflua), oak (Quercus sp.), and hickory (Carya sp.) stood in the flatlands here, while the stream valleys feeding into the Potomac and Anacostia Rivers were marked in places with sycamore (Platanus sp.), willow (Salix sp.), and birch (Betula sp.) (Gutheim and Lee 2006: 16). The damp, marshy environment of this general area is further implied by the use of mosquito repellent among local inhabitants. According to European descriptions, the Conoy rubbed their skin with a mixture of red paint and oil to keep the bugs away; a practice which may offer one explanation for why American Indians were described by some early visitors as "red" skinned (Hodge 1906).

Even before the arrival of Europeans, struggles over territory flared between the various branches of Five Nation Iroquois, Conoy or Piscataway, and Powhatan groups that lay claim to this area. As the seventeenth century advanced, these complex social and political relations were only aggravated by the addition of a new and imposing entity: the tassantasse, or white man (Potter 1993: 185). The first white man known to have reached the junction of the Potomac and Anacostia Rivers, Captain John Smith, described the Nacotchtank village on the east bank of the Potomac's Eastern Branch as a bustling Indian village with eighty warriors in 1608 (Snell 1978: 1). Situated at the site of today's Bolling Air Force Base and the Pepco power plant, almost all remnants of this original settlement have disappeared. However, judging from the materials gathered at the site in the nineteenth century as well as comparative archeological evidence, the village of Nacotchtank probably "had a small central palisade containing the district chief's residence and important associated religious structures" (Bushong 1990: 12). Associated with these buildings were a number of dispersed, bark-covered long-houses outfitted with light wooden frames, drying racks, and cooking spits. Clusters of dwellings stood next to large agricultural fields planted with beans, squash, corn and other agricultural products. The local diet also included deer, elk, bear, wolf, beaver, wild turkey, and duck, as well as freshwater clams, turtles, and fish (Bushong 1990: 12).

Although this Nacotchtank village eventually dissolved under the pressure of intertribal wars and European encroachment, like other American Indian groups its inhabitants struggled at first to maintain their position through trade with the settlers. Even in the face of unstable and constantly-shifting relations between the various indigenous groups, a prosperous Potomac Valley fur trade was underway by the late 1620s (Potter 1993: 188). American Indians traded

corn and tobacco for beads, copper, metal, and, increasingly, firearms (Potter 2009).

The first account of firearms passing into the hands of American Indians along the Potomac River dates to 1622. According to the sole survivor, that year a group of Nacotchtanks attacked and killed all but one of a twenty-man trading party led by Captain Henry Spelman (Potter 1993: 209). The only one to come out of this encounter with his life, a man named Henry Fleet, was held captive by the Nacotchtank for five years afterwards. However, this experience later proved a great boon to his career. After regaining his freedom, he quickly became one of the leading traders with American Indians on the Potomac River, thanks to his exceptional knowledge of the local language (Potter 1993: 188). Fleet's 1632 description of the land that would one day be home to the nation's capital is highly complementary:

"This place without all question is the most pleasant and healthful place in all this country, and most convenient for habitation, the air temperate in summer and not violent in winter. It aboundeth in all manner of fish. The Indians one night commonly will catch thirty sturgeon in a place where the river is not twelve fathoms broad. And as for deer, buffaloes, bears, turkey, the woods do swarm with them, and the soil is exceedingly fertile." (Neill 2007 [1871])

European Settlement

The original European settlers found a foothold in this abundant but unfamiliar landscape by adopting certain American Indian agricultural strategies, such as planting corn and tobacco "among the stumps, fallen logs, and ashes of a swidden plot tended by hoe cultivation" (Potter 1993: 221). Yet, the increasingly competitive fur trade also led to an escalation in violence among the different American Indian groups, an effect whose costs were amplified by the gradual spread of firearms (Bedell et al. 2009: 49). Additional conflict between the European factions and their various American Indian allies was sparked by the royal patent awarded to the second Baron of Baltimore, Cecil Calvert, in 1634. This patent included the northern two thirds of the Chesapeake Bay, and marked the beginning of large-scale land acquisition by European settlers in this area (Potter 1993: 189, 193).

Colonists' interest in this new territory was fueled by the ease and profitability of tobacco cultivation. By the mid-seventeenth century, tobacco had surpassed the fur trade as the region's leading employment, and portions of Virginia and Maryland were being carved into counties (Potter 1993: 193, 220). Settlement that had begun close to the mouth of Chesapeake Bay quickly began spreading north in a pattern that followed the branching waterways. Colonists first started filing claims for the land along what was then known as the Eastern Branch (or the Anacostia River) in the 1660s, and by 1696 the great majority of the riverside had been divided up for settler ownership in the form of royal patents and other land purchases (Gelders 1976: 4-5). Lord Baltimore created Charles County in 1658, to reach up the Potomac River "as high as the settlements extend," and in 1695 formed Prince Georges County from the land north of Mattawoman Creek (Gahn 1936: 12). When the counties were subsequently divided into "hundreds" of acres, the area now occupied by the District of Columbia became known as the New Scotland Hundred, stretching from what is today Oxon Branch north to Potomac Falls (Gahn 1936: 12; Gelders 1976: 4-5).

The patterns followed by settlers as they spread through the region closely reflected the agricultural potential and productivity of the soil, particularly for tobacco cultivation. As described in an archeological report on the area:

"Throughout the seventeenth century the cultivation and export of tobacco dominated the socioeconomic structure of Colonial Maryland. Settlement was strongly influenced by the availability of soils suitable for growing tobacco and by the presence of many navigable waterways along which the cured crop could be transported…Corn and wheat typically followed the initial planting of tobacco, and constituted, along with hogs and cattle, the most important staple in the Colonial diet, but tobacco was the principal cash crop and also served as currency." (LeeDecker, Fiedel and Bedell 2007: 42)

This period therefore marked the earliest human explorations of the future Kenilworth area, from the occasional use and eventual settlement of the area by American Indians to the discovery of its potential by capitalizing Europeans. By the final decades of the seventeenth century this landscape was still marked primarily by a mixture of natural wetland and hardwood vegetation, interrupted only rarely by small cleared areas where the small farms of European settlers had begun cultivating corn, wheat, and tobacco.

1686 to 1790 AD

THE BEALL FAMILY AND SETTLEMENT OF THE ANACOSTIA FLATS
The Barrens

With this in mind, a tract along the east side of the Eastern Branch was claimed by Colonel Ninian Beall (also spelled Beale) in the late 1600s. Containing what is today Kenilworth Aquatic Gardens, this parcel of 1,050 acres was called "Fife Enlarged" after the place of Beall' s birth in Largo, Fifeshire, Scotland (Gahn 1936: 38; see Appendix A of the Supplemental Information Chapter for full chain of title). Although an actual patent for this parcel was not located during the current research, it could simply be missing from the current records. Indeed, during the relocation of the capital of Maryland from St. Marys to Annapolis in 1694, many state documents were severely damaged or lost (Gahn 1936: 12). Ninian Beall's original patent for "Fife Enlarged" may have been among these.

After fighting in the Scotch-English Army against Oliver Cromwell, Ninian Beall was imprisoned on September 3, 1650 and soon came to the Americas as an indentured servant. Over the course of five years of service to plantation owner Richard Hall of Calvert County, Beall earned his freedom and 50 acres of land (Gahn 1936: 36). Through hard work and an apparently charismatic personality he met with great success, and eventually became a Colonel of the Calvert County militia and the Deputy Surveyor for Calvert County. Thanks in no small part to this advantageous position, Beall patented or gained ownership of thousands of acres in Prince George's, Charles, Baltimore, Calvert, Dorchester and Somerset Counties in the late 1600s (Jourdan 1998: 133; Belt 1997: 470). Colonel Beall's role as protector of colonists against American Indian attacks, Representative for Prince George's County in the House of Burgesses, and local land surveyor made him highly influential in the early settlement of what

would become the District of Columbia (Gelders 1976: 2). His property, Rock of Dumbarton, was granted to him by Queen Anne in 1702 and included the present-day Georgetown neighborhood (Belt 1997: 472).

John Beall was born in 1670 and was one of Ninian's sons by his second wife, Ruth Moore (Gelders 1976: 5). On April 13, 1686 John surveyed a tract known as "The Barrens," or The Barrons, a portion of his father's original patent for "Fife Enlarged" that contained the present-day Kenilworth Aquatic Gardens (Maryland State Archives Patent Records, Liber 22 folio 239). He went on to patent this property, measuring a total of 472 acres, in 1687 (Maryland State Archives S 1596-455, Patent Record NS 2, p. 361; MSA S 1596-454, Patent Certificate 22, p. 239).

The choice of the name, "Barrens" for this particular parcel on the river was probably not coincidental, and indicates that the somewhat marshy character of this area has changed little over time. According to its dictionary definition, the word "barren" traces its origins to the thirteenth century, and when used in reference to land means "producing little or no vegetation; not fertile, sterile, unproductive, bare" or even "unprofitable" (Oxford University Press 1971: 681). This quality was crucial for colonists whose interests were heavily vested in the productivity of their new land, and so in some cases it was used to distinguish properties. For example, the New Jersey Barrens, also known as the Pine Barrens, of southern New Jersey have been characterized by sandy, shifting soils "where the vegetation is depauperate and favorable conditions for plant growth evidently at the minimum" (McAtee 1918: 87). According to another source, the term "barren" was historically "used by settlers to refer to a landscape or landscape feature with little, if any, timber-sized trees, although tree species may have been present in smaller size classes" (Tyndall and Hull 1999: 67). As a tidal floodplain for the Eastern Branch, the Beall tract known as "The Barrens" was thus probably well-suited to its name.

Although according to one source John Beall had four children, none of the consulted sources made any specific mention of his wife or heirs (Gahn 1936: 37). Therefore, upon his death at the age of 41 in 1711, John's property most likely reverted to his father, who may have included it in a tract he called "Dunn Back" in his will. When Ninian died in 1717, he willed this parcel to his son, Charles: "I give and bequeath unto my son, Charles, a thousand acres of land called Dunn Back, lying on the South side of great Choptank in a Creek called Wattses Creek, unto him and his heirs forever" (Magruder 1911: 43; Prince George's County Record of Wills, Ninian Beall, probate February 28, 1717, Liber 1, folio 92). Choptank was one of the early terms used to describe the Anacostia River or Eastern Branch, named after the Nacotchtank tribe originally found living there. "Wattses Creek," or what is today known as the Watts Branch, runs into the Anacostia just south of Kenilworth Aquatic Gardens. Its central role in identifying "Dunn Back" therefore suggests that this historic tract included the land that would later form the park.

Charles Beall was a carpenter who later became a planter and a captain in the county militia rangers (Gelders 1976: 5; Jourdan 1998: 136). In the early 1700s he lived with his wife and family at a residence called The Cedars on property east of the Eastern Branch, or what is

today the Anacostia River, in an area later known as Benning (Jourdan 1998: 137). On the whole, seventeenth-century settlement along the river's edge was more a question of necessity than preference. The river not only provided vital access to trade coming in from Chesapeake Bay, but offered an important escape route should aggressions between settlers and American Indians escalate out of control. Soon, rising numbers of tobacco-driven entrepreneurs began spreading out from the coastline and river edges, clearing much of the native forest of the future District of Columbia as they went (Potter 1993: 220).

As the tobacco trade flourished and land acquisition spread, settler contact with American Indians intensified and the social structure of local indigenous groups began to erode. Traditional authorities were confronted and challenged by the new European technologies, even as the populations they led were increasingly weakened by disease, fighting, displacement and loss of land. Thus, over the course of the seventeenth century, the entire region was gradually abandoned by its original inhabitants or taken by force. According to one estimate, the epidemics that swept through the continent even before large-scale European settlement began caused such a high mortality rate that "the groups actually encountered by colonists in the seventeenth century generally numbered only about ten percent of their pre-contact population" (Bedell et al. 2009: 49).

Political tensions between American Indian groups as well as between these groups and settlers also led to ongoing warfare whose consequences escalated as firearms spread. Indeed, the name that Colonel Ninian Beall made for himself in the colonies was closely related to his influential military career with the Calvert County Militia, and in particular his role in "dealing with the Indians" (Belt 1997: 470).

As a result, by the time Ninian Beall and his descendants had established themselves as landowners on both east and west sides of the Eastern Branch (or Anacostia River), the early Nacotchtank inhabitants of the eastern riverside were gone. In the vicinity of the future Kenilworth Aquatic Gardens, agriculture began where possible, transforming the landscape into a mix of agrarian and marsh lands.

Fife and Fife Enlarged

Upon his death in 1740, Captain Charles Beall willed to his son, Joshua Beall, "all my land between Pine Branch and Beaver Dam Branch" (Will of Charles Beall, probate November 27, 1740, Maryland State Archives; Jourdan 1998: 138). This tract was located just south of the boundary between present-day Maryland and the District of Columbia, by what is today known as Lower Beaverdam Creek. Including the land known as "The Barrens," this parcel was resurveyed by Joshua and his brother Ninian Beall (not to be confused with their grandfather, Colonel Ninian Beall) on June 10, 1744. They named their newly-surveyed tract "Fife," perhaps in honor of their grandfather's home in Fifeshire, Scotland (Gelders 1976). The parcel included "The Barrens," which then measured 320 acres, in addition to some adjoining vacant land to the north and a nearby tract called "Charles and Mary" (Maryland State Archives, S 1203-866). The latter parcel of land had been named after the brothers' parents, Captain Charles and Mary Beall. Upon his death, it was bequeathed by Charles to his son Ninian, as

"all my land between Mill branch and the Pine Branch," adjoining the land of his brother Joshua (Will of Charles Beall, probate November 27, 1740, Maryland State Archives; Jourdan 1998: 138).

The product of this fraternal partnership, "Fife" was patented to Joshua and Ninian Beall on September 29, 1748 (Maryland State Archives, S 1203-886, Patent Certificate 815). All told, it accounted for 940 acres of land, including "two hundred pannels of fence a dwelling house sixteen foot by twelve as [well as a] tobacco house forty foot by twenty two, twenty apple trees and about forty acres of cultivated land" (Maryland State Archives, S 1203-866).

The brothers' reference to their grandfather's estate was confirmed a few decades later, when the future Kenilworth property was again included in a newly surveyed tract named "Fife Enlarged." The patent was made out to Captain Joshua Beall alone on April 16, 1764, and spanned a total of 1,024 acres of land east of the Eastern Branch (Maryland State Archives, S 1203-887, Patent Certificate 816). This development was apparently precipitated by the death of Ninian Beall, Joshua's brother and former partner, in 1763 (Prince George's County Record of Wills, Will of Charles Beall Son of Captain Charles Beall, probate June 10, 1763, Liber 1, folio 556; Jourdan 1998: 139-40). Captain Joshua Beall's new "Fife Enlarged" included the former "Fife," which was resurveyed, and two adjacent vacancies (Maryland State Archives, S 1203-887). The language used to describe several stone boundary markers in 1764 suggests that these features may have been installed not long before the survey was taken. The surveyor writes:

"Lastly beginning…by virtue of the beforementioned warrant of resurvey at two bounded hickorys [sic.] growing together at the roots standing, on the south east side of the Eastern branch of Potowmack River, being the original boundary [of] Fife, at the root of which said trees is now fixed a stone marked B. Fife…" (Maryland State Archives, S 1203-887, Patent Certificate 816, April 16, 1764)

This stone thus marked the boundary of the historic tract known as "Fife Enlarged." Photographed by Charles Shaw in 1929, it has more recently been mentioned by neighborhood children and most likely still stands down by the Anacostia River today (Shaw 1929, Historical Society of Washington, DC). During his ownership of "Fife Enlarged," Captain Joshua Beall appears to have rented out parts of the property, most likely for agricultural purposes. In 1768 he leased a portion of it called "Fife," measuring 100 acres, to Samuel Lanham (Lanham 2009; Prince George's County Register of Wills, Col. Joshua Beall Will, probate February 17, 1796, Maryland State Archives, C 1326-4, Liber T 1, folio 376-78). In later years he also served in a number of positions with authority. He fought in the Revolutionary War, and became a Major and then a Colonel of the 25th Battalion of militia from 1775 to 1776. He also served as a Delegate to the Maryland Convention from 1775 to 1776, and Justice of the County Court between 1777 and 1778. From 1777 to 1781 he was a County Lieutenant, and in 1780 he was Speaker of the House of Delegates (Peden 2006: 16).

Colonel Joshua Beall himself appears to have been living on his estate down on the Eastern Branch in 1790, when a detailed map of the area was drawn by John Frederick Augustus

Priggs. To the north of Turtle Creek and just south of Beaverdam Branch, near the east bank of the Eastern Branch, Priggs depicted a two-story farm house labeled "Col. Beals" (Figure 4; Goode and Schiavo 2004: 19). Judging from the other homes drawn on the same map, which vary considerably in their size and style, this portrayal of Colonel Beall's home may actually be fairly accurate. However, a long, thin island shown in the river just west of the house may have been inaccurate, as Ellicott's 1794 map and other later maps depict this area as marshlands divided by Piney Branch (Figure 5; Miller 2002: 49; Goode and Schiavo 2004: 71).

The Bealls were not only a family of landowners and planters, but slave owners who like their neighbors probably used "The Barrens" and, later, "Fife" and "Fife Enlarged," to grow tobacco, wheat, and other crops. One fellow slave owner and farmer from Virginia, William Benning, bought 330 acres of nearby Beall land in the late 1700s. So-called "Captain Benning" was rumored to be a river pirate who came here to settle down in his retirement. Whatever his past, however, Benning proved to be highly enterprising and went on to build the first bridge across the northern part of the Eastern Branch, on what became known as Benning Road. Established as Benning's Bridge by 1861, both the bridge and the road served a crucial role in providing access in and out of the city from the east (Lapp 2006: 3).

By the final decades of the 1700s, the unforgiving nature and intensity of tobacco planting had led to the severe depletion of soils throughout the future District of Columbia. Low crop yields had even forced some local farmers to let their fields return to successional woodland (Joseph and Wheelock 1999: 13). In fact, a part or all of today's Kenilworth Aquatic Gardens may never have been cultivated in the first place, due to its tidal wetland character. Like similar marsh areas along the nearby Potomac River, the marshlands of the Eastern Branch harbored flocks of quail and other waterfowl among clusters of wild rice, reeds, berry bushes and shrubs (Joseph and Wheelock 1999: 13). Learning from the region's first inhabitants, settlers still relied heavily upon the resources of the local rivers, which teamed with herring, shad, salmon and sturgeon on a seasonal basis. Although much of the region was still covered in woodland, a growing number of agricultural clearings had begun opening up the landscape. Log or frame houses and associated outbuildings, including slave cabins, marked out the first colonial homesteads on either side of the Eastern Branch and Potomac Rivers (Bushong 1990: 18). Full of promise and ambition, the small settlement at the river junction was only just beginning to realize its future potential.

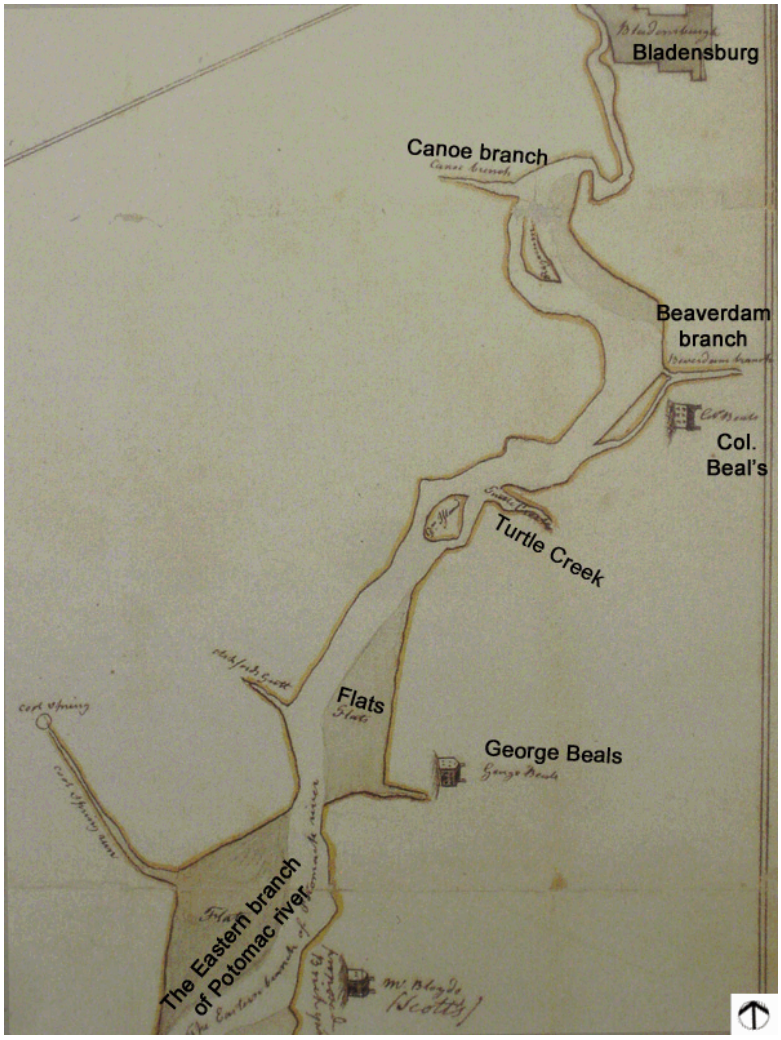

Figure 4. Detail of an annotated 1790 map illustrating the property of Colonel Joshua Beal, the adjacent Beaverdam Branch, and general marsh environment of the Eastern Branch, by John Frederick Augustus Priggs (Goode and Schiavo 2004: 19).

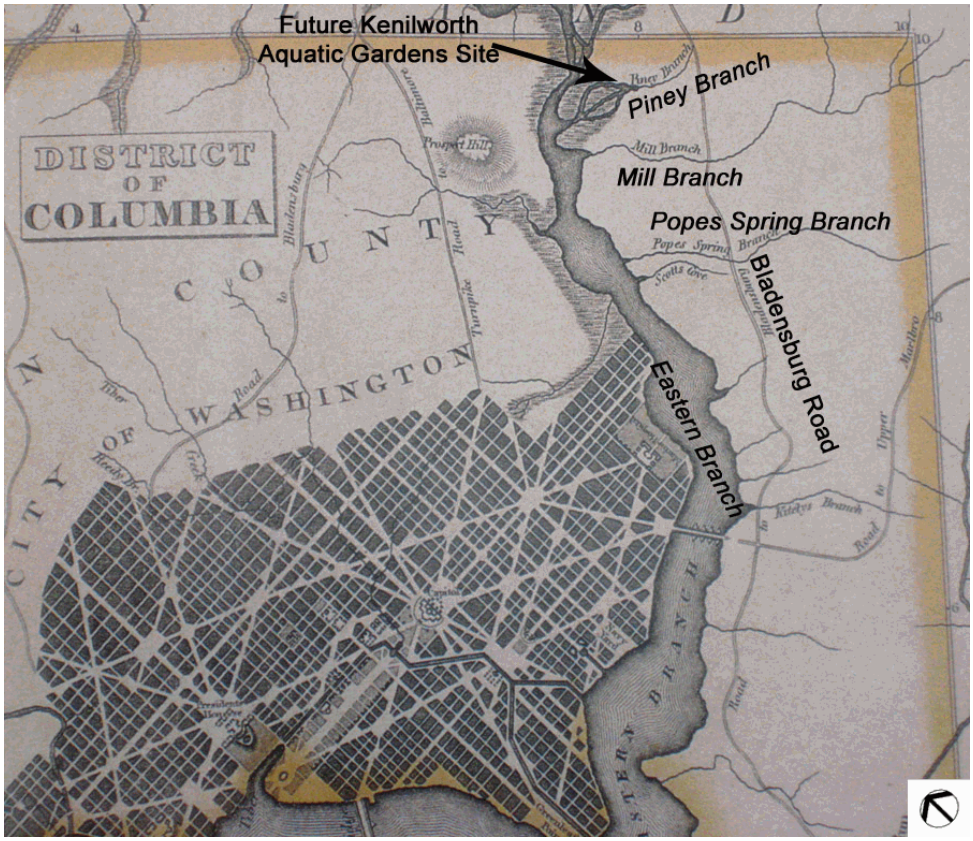

Figure 5. Detail of an annotated 1823 map showing the development of Washington, D.C. and the wetland character of the future Kenilworth Aquatic Gardens site (Goode and Schiavo 2004: 71).

1791 to 1880 AD

A NEW CITY

The Navy Yard and the Growth of Commerce

In 1791, Pierre L'Enfant laid out a design for a new capital city that would perch on the hills and ridges overlooking the confluence of the Potomac River and Eastern Branch. Modeled upon European architectural styles intended to impart a feeling of age and stateliness, L'Enfant' s plans proved in some cases to be overly ambitious for the fledgling metropolis (LeeDecker and Baynard 2009: 24). For example, according to L'Enfant's vision:

"The Washington City Canal would connect the Potomac and Anacostia rivers via Tiber and James creeks, thereby facilitating traffic between Georgetown and the deepwater ports of the Anacostia. River traffic between these points was difficult because of tidal fluctuations, a problem that would be addressed by construction of an inland canal." (LeeDecker and Baynard 2009: 24)

Hoping to feed this new network of water commerce around the capital city, private landowners began building their own wharves along both sides of the Eastern Branch. In 1799 the Washington Navy Yard was established on the river's west bank; today it holds the title of the Navy's oldest shore station and longest continuously operated federal facility in the United States (NPS NR 2009: 2). L'Enfant's ideas for a metropolitan waterway also received a boost when the Washington Canal Company was formed under the leadership of Thomas Law, a wealthy local landowner and investor, in 1802 (Law 1804: 158-68). Law was an enthusiastic supporter of the canal plan, which relied heavily upon the navigation of the Eastern Branch. According to Law, among the benefits of the canal were the following:

"1st. Hemp, timber, flour, iron, copper, wood, stone, slate, lime and sand, potatoes, corn, etc. may be conveyed from the Potomack to the Navy-yard on the Eastern Branch, which is rapidly advancing, without taking the circuitous and hazardous route by Turkey Buzzard point, which requires also two tides. 2d. Wood, lumber, corn, etc. may come by water from Bladensburg and the Eastern Branch to the city and George-town…I do not hesitate to say, that if the canal is carried through the city to the Eastern Branch, so that boats drawing six or seven feet water may conveniently pass, it will be the foundation for commerce in the branch." (Law 1804: 161, 167)

With Law's help and the persistence of the Washington Canal Company, the Washington Canal was opened in 1815. Still, despite his ambitions it soon became clear that this grand dream of flawlessly circulating commerce through the new capital city would remain elusive. In the succeeding decades, severe silt buildup persisted and the waterway fell into disuse. By the 1870s, it had become a foul, sluggish receptacle for trash and sewer waste from the poor neighborhoods on either side of it (Gutheim and Lee 2006: 85).

Meanwhile, development along the Eastern Branch began to grow around the Navy Yard as early as the first decade of the eighteenth century. In these initial years of use, the yard served as the chief manufacturing establishment in the city. Although limited to equipping and repairing ships until 1806, that year a new commission opened up 175 civilian jobs to help build fifty gunboats (Green 1962: 36). The local economic growth not only touched the shipbuilding and materials businesses, but those in other goods as well.

"Navy Yard orders kept two local rope-walks busy and benefited whiskey dealers, for workmen expected the equivalent of the modern coffee break, and Commandant Tingey, upon discovering how much time went into their morning visits to the grog shops, purchased 100-barrel lots of whiskey and issued 'refreshments' on the job." (Green 1962: 36)

The boost in civilian employment thus increased activity and local business along the Eastern Branch. Yet much of the action remained concentrated along the west bank of the river. The land to the east, by contrast, remained an expanse of marsh, woods and farms throughout the late eighteenth and well into the nineteenth century. Indeed, the great majority of District maps from this period make no indication of what existed here, but instead frequently used the area east of the river as a place for the map title.

Included in this largely uncharted expanse was "Fife Enlarged," a tract probably still being used as a working farm. Joshua Beall had become a Colonel by the time of his death in 1796, and had utilized his property to cultivate tobacco, keep livestock, and rent out to tenants. As the first item listed in his will, "Fife Enlarged" was probably one of his most valuable possessions. Encompassing all of his land between Beaverdam Branch and Piney Branch, also known as Turtle Branch, Joshua bequeathed the tract to his wife, Elizabeth Beall, upon his death. As mentioned in early deeds, this included the Fife boundary stone standing at the root of the two "bounded mapails [sic.]," or what had previously been identified as hickories, on the north side of Beaverdam Branch (Prince George's County Register of Wills, Col. Joshua Beall Will, probate February 17, 1796, Maryland State Archives, C 1326-4, Liber T 1, folio 376-78).

In speaking of all his lands along the Eastern Branch, including "Fife Enlarged," Colonel Joshua Beall's will mentions the presence of timber and references the building and repair of "the plantations thereon," thus implying that the property contained not only woodlots, as was customary for the period, but the types of dwellings and other improvements mentioned in the 1748 patent for the property (Prince George's County Register of Wills, Col. Joshua Beall Will, probate February 17, 1796, Maryland State Archives, C 1326-4, Liber T 1, folio 376-78). At the very least, the wooded areas of the property likely included the strips of land along streams and in swampy areas where cultivation of crops was not possible. The presence of woodlots on agricultural properties during the eighteenth and nineteenth centuries served not only as a key source of timber for fuel, building, and fence repairs, but windbreaks for the crops and livestock kept in the open, exposed fields. In all, Joshua's will conveys a total of four slaves to his wife and other relatives, in addition to fifteen head of horned cattle and a number of sheep, horses, and hogs.

As further laid out by Colonel Joshua Beall's will, upon the death of his second wife, Elizabeth Waring Beall, the property "Fife Enlarged" passed to their granddaughter Alethea (or Althea), daughter of Amelia Beall and her husband, General Rezin Beall (Peden 2006: 16). Alethea was married to Archibald Van Horn, whose heirs were listed in 1831 as owing taxes on 229 acres that included part of Fife Enlarged (Baltimore Patriot, April 1, 1831; Will of Joshua Beall, December 12, 1811, Docket 1, page 158, Case 490, NARA General Records of the Department of Justice). According to the same article, if the requested payments were not made in full by the end of two months, the land would be sold at public auction by the Levy Court of Prince George's County. However, in the end the land apparently remained in the Beall family, as indicated by an 1807 indenture from Archibald Van Horn and Alethea Beall. According to this document, William Thomas Beall and Eleanor, his wife, inherited the property that would one day contain Kenilworth Aquatic Gardens (Archibald Van Horn, indenture August 29, 1807, Prince George's County, Maryland Records JRM #12, p. 340).

Further research is necessary to determine whether the land then passed from them to their daughter, Eliza Beall Van Horn, or was sold out of the family. However, the records do show that on December 7, 1832 a man named Benjamin Bean sold this piece of land, then known as a portion of "Fife Enlarged," to Eliza Beall Van Horn's husband, Alexander McCormick (District of Columbia Land Records, Liber W.B. 44, folios 29, 30, 31, 32). On January 25,

1840, McCormick conveyed 105.5 acres of land to Henry Naylor, who was then serving as Justice of the Peace (District of Columbia Land Records, Liber N.C.T. 7, folio 42; Greenleaf and Stott Deed, Box 2, Folder 8, Nidiffer Collection, Georgetown University). Only three days later, Naylor and his wife, Susan, conveyed the same property to Thomas Gibson, who was in possession of it until his death in 1848 (District of Columbia Land Records, Liber N.C.T. 7, folio 42).

In February of 1848, the tract was bought at public auction by William V.H. Brown for $1,688 (District of Columbia Land Records, Liber N.C.T. 7, folio 42). Six years later, David Cole and his wife Lucy bought the same 105.5 acres from Brown (District of Columbia Land Records, Liber J.A.S. 77, folio 362). They held on to the property until 1863, when it was sold to David Miller for $6,000 (District of Columbia Land Records, Liber N.C.T. 7, folio 42).

The relatively quick transfer of property during these years was not uncharacteristic for the Benning area, whose position on the fringes of the new capital provided it with a certain allure. Although it remained a largely undeveloped and agrarian landscape, the appeal of this real estate was on the rise. For example, among those eager to meet the growing demands of the nearby Navy Yard was capitalizing settler James Van Hook, who with his partners purchased 240 acres on the east side of the Eastern Branch in 1853. This area was soon developed into eighteen blocks of city housing for yard workers that became known as Uniontown, the first suburb east of the Eastern Branch, or Anacostia River (NPS NR 2009: 2).

Civil War

Yet even as development of the capital city advanced, a deep ideological divide was growing down the middle of the nation it represented. One of the early and most threatening indications of this tension shocked the nation on October 16, 1859, when abolitionist John Brown staged a raid on the town of Harpers Ferry, Virginia. Leading a band of eighteen men and a wagon full of firearms under cover of darkness, Brown seized several buildings including the armory, only to be confronted with a force of ninety United States Marines the next morning (Ward et al. 1990: 2-4). His raid failed and Brown was summarily executed, but the underlying issue of these events soon came to a head with the 1860 election of Abraham Lincoln as President of the United States. In anticipation of the new administration's abolition of slavery, the states of the Deep South withdrew from the Union in January of 1861. Stuck straddling the line between the two sides, Virginia remained undecided on the issue of secession until April 12, 1861. On that day, Lincoln called for troops to defend against the Confederacy's attack on Fort Sumter, and thus began the Civil War (Dabney 1971: 290-4; Ward et al. 1990: 39). Virginia promptly voted to secede from the Union, and Richmond was named the new Confederate capital.

On the east bank of the Eastern Branch, a number of forts were swiftly erected in order to defend the capital city and protect its eastern approach, including Fort Greble, Fort Carroll, and Fort Mahan. Army troops were posted at both bridges crossing the river, at 11th Street and Benning Road, and one of the Union's largest horse depots was set up at Giesboro Point. In addition to the Navy Yard, the Washington Arsenal was also located in this area (NPS NR 2009: 2). One story goes that President Abraham Lincoln himself paid a visit to the plantation

located at the future site of the Kenilworth Aquatic Gardens, around this time. According to one historian, a water trough was then located at the end of Douglas Street, where Lincoln stopped to water his horse. The street itself was apparently named after Stephen A. Douglas, the man who toured Illinois in a series of seven debates with Lincoln in 1858 (Palmer Reporting Service 1982: 28).

Beginning on May 5, 1864, Union General Ulysses S. Grant's Army of the Potomac swept south through Virginia in an Overland Campaign that turned into the six bloodiest weeks of the war, as his repeated attempts to advance around the right flank of General Robert E. Lee's Confederate army were blocked (Ward et al. 1990: 289). The fighting began in the "Wilderness" of Northern Virginia, near the Rapidan River. When the two sides clashed for a second time at Spotsylvania less than a week later, Winfield Scott Hancock led twenty thousand Union men against the log breastworks of Confederate forces commanded by John B. Gordon. Hancock's line of attack formed a curved salient that the men called "the Mule Shoe," but which was later dubbed the "Bloody Angle" due to its outcome (Ward et al. 1990: 193).

Indeed, the day quickly turned long and ugly, as Gordon's men eventually regained the breastworks and "the battle went on, surging back and forth all day as attack followed counterattack. A Union veteran remembered it simply as 'the most terrible day I have ever lived'" (Ward et al. 1990: 291). Union General Horace Porter elaborated upon the terrible scene in his own words:

"Rank after rank was riddled by shot and shell and bayonet thrusts, and finally sank, a mass of torn and mutilated corpses…Trees over a foot and half in diameter were cut completely in two by the incessant musketry…We had not only shot down an army, we had shot down a forest… Even the darkness failed to stop the fierce contest, and the deadly strife did not cease till after midnight." (Ward et al. 1990: 291)

On that day, May 12, 1864, a young corporal named Walter B. Shaw was serving on the Union side. He had been drafted into one of New England's first regiments, Company B of the 19th Maine Infantry, on July 16, 1863. Then 25 years of age, he became a private in the 3rd District of Augusta, Maine, and recorded his occupation at the time as merchant (W. B. Shaw, NARA Military Service Records; NPS CWSS 2009: Film M543, roll 19; Kinsbury and Deyo 1892: 154; Historical Data Systems 2009). During his service as a soldier, Shaw's company fought in a series of engagements throughout Virginia, including the Battles of Bristoe Station (October 14, 1863), Mine Run (November 26-December 1, 1863), and Wilderness (May 5-7, 1864) (State of Maine 2009).

Years later, as the founder and owner of Shaw Aquatic Gardens in Kenilworth, Shaw recounted how he lost his arm during the fighting at Spotsylvania Court House (L. 1908). Now a corporal, Shaw was leading an advance against enemy lines when he was hit with a Minnie ball in his lower right arm. This injury later led to partial amputation of that arm, forcing Shaw to learn to write with his left hand (Affidavit from Shaw dated May 2, 1865, NARA Military Service Records). Many others fell on May 12, as well. In the course of a single day, the two

sides lost a total of twelve thousand men. For several more days the fighting around Spotsylvania persisted, but eventually both armies moved south to continue fighting elsewhere. The Wilderness campaign, as it came to be known, continued on all the way to Petersburg, Virginia and is still remembered as the six bloodiest weeks of the war. The Union's Army of the Potomac, alone, lost fifty thousand men. The tables soon turned, however, and barely a year later, on April 9, 1865, the Civil War ended with General Lee's surrender at Appomattox (Ward et al. 1990: 293, 305, 377).

Development East of the Anacostia River

While war tore through the heart of the United States, plans for the District of Columbia continued. As illustrated in an 1861 map of the nation's capital, the area east of the Anacostia River had been relatively slow to develop, up to that point (Boschke 1861). Surveyed in the late 1850s, the land here was meticulously carved into city blocks in what was then downtown Washington, between the Potomac River and Eastern Branch (see Figure 5). Across the Eastern Branch in what later became the vicinity of Kenilworth and its surroundings, however, was a heavily wooded landscape whose layout still echoed the earliest land plat divisions (Figure 6). Heading northeast on what was then known as Bladensburg Road or Eastern Branch Road (now the Anacostia Freeway, or DC Highway 295), one would have passed a series of small farms and associated buildings, orchards and woods. The remarkable distinction between the river's two banks was in part due to the limited traffic flow across it, which at the time relied wholly upon the Benning Road and Navy Yard Bridges.

Ongoing problems with silting along the river had also helped to prevent development along the Eastern Branch, severely limiting the realization of the plans envisioned by L'Enfant and others. Attention to these issues along both the Potomac River and the Eastern Branch underwent a crucial shift in 1867, when responsibility for the maintenance of public works in the District of Columbia was transferred to the U.S. Army Corps of Engineers (COE), then under the command of Major Nathaniel Michler. Almost immediately, Michler embarked on a series of studies to improve conditions in the city, and in particular the severity of flooding. Rainwater runoff from the continuous construction in the capital, combined with heightened agricultural activities upstream from the city, had become an increasing threat to shipping activities along both waterways. Some stretches of river were rendered too shallow for the draft of large vessels, while the city's downtown was ever more vulnerable to dangerously high flood levels. Using funds granted by Congress in 1870, Michler began an ambitious dredging project along the Potomac River that eventually led to the creation of East and West Potomac Parks (LeeDecker and Baynard 2009: 14). Around the same time, the Anacostia River came to be known by its current name, rather than Eastern Branch.

At the request of Congress in 1872, the COE scrutinized the condition of the Anacostia River for the first time since the Civil War. They found that many of the issues encountered on the Potomac, including silt buildup and health concerns associated with tidal wetlands and sewer outlets, were also present along the Anacostia River. A six million dollar project to resolve these concerns and provide new land along both waterfronts was recommended, but no action was taken in response (Scott 2005: 125; Gordon 1984: 2). In 1875, the Washington Engineer

District was formed with the primary purpose of managing the Potomac River; yet progress remained slow (Scott 2005: 72). Following the particularly severe Potomac River flood of 1881, Congress authorized the Army Corps of Engineers to devise a permanent plan for silt collection and disposal along the Potomac and Anacostia Rivers (Scott 2005: 126; Joseph and Wheelock 1999: 14; Gordon 1984: 3). A complex design involving containment barriers, sluicing basins and sewer canal systems along the Potomac River was soon drawn up by S.T. Albert, the civil engineer in charge of the Washington Engineer Office. Laid out in the 1882 Annual Report of the Corps of Engineers, his project also involved the dredging of the Anacostia River as far north as Bladensburg, and use of the dredged material to fill in the adjacent flats (Gordon 1984: 3). The need to aid commercial navigation and define harbor lines was clear, but still these recommendations were met with no immediate action. As work on the Potomac flats moved with relatively greater efficiency in the years that followed, this area became a precedent for plans to address sewer waste, silting, and agricultural runoff along the nearby Anacostia and the vicinity of the future Kenilworth Aquatic Gardens (NPS NR 2009: 3).

Meanwhile, the installation of sewer lines downtown by 1873 went a long way to generating a new and improved image of the capital city. Solid ground now stood where the old, waste-strewn canal had stretched from 7th Street to the Potomac River south of the White House, supported by a network of underground sewers that emptied into the Potomac, Rock Creek, and Anacostia. At the same time, throughout the city water mains were extended and brick or cement sidewalks, wooden pavement, and concrete or macadam roadways were built to cut down on the seasonal bouts of dust and mud (Green 1962: 354).

Other important developments included the extension of the rail lines across the river, to the east side of the Anacostia River. Beginning with the Maryland Railroad Company's purchase of land to lay new tracks here in 1871, access to this area slowly began to improve. In the years that followed, what eventually became the Baltimore and Ohio Railroad extended its way up the east bank of the Anacostia and into Maryland (NPS NR 2009: 3). Centered around the nearby intersection of Benning Road and Eastern Branch Road, the town of Benning flourished during the 1870s. By 1879 the intersection boasted a post office and a train station, and these were soon joined by an elementary school (Lapp 2006: 4). Down by the edge of the river marsh, between Benning Road and the future site of Kenilworth Park, a local horse-racing track known as Benning's Track began operating on a small scale during these years. During its height between 1890 and 1908, when a Congressional anti-betting law led to its closure, thousands of visitors flocked to the track to bet, socialize, and be entertained (Lapp 2006: 4). The growing neighborhood of Deanwood, located next to the rail line just south of here, likely drew great benefit from the race track's popularity during this period. After the races were outlawed, horse owners continued to use Benning Race Track for spring training purposes into the 1930s. It its later years the track hosted automobile events as well, such as the popular Labor Day races (Lapp 2006: 4).

Walter B. Shaw

On May 26, 1879, Walter B. Shaw and his wife, Luciana M. Miller, purchased 33 acres of land from his wife's parents, Lucy and David Miller, in the vicinity of the growing Benning and

Deanwood neighborhoods. Known as Parcel 179/2, this tract was located east of the Anacostia River, down on the edge of the marsh just south of the District line, and comprised only a portion of the Miller farm (District of Columbia Land Records, Liber 915, folios 205 and 207).

The son of George and Rebecca Shaw, Walter B. was born on the island of Vinalhaven, Maine on July 20, 1838 (April 11, 1915 Pension Voucher from Walter B. Shaw, Civil War Pension Application File, NARA Military Service Records). Raised on a farm, he lived on the water throughout his youth and by the age of twelve was living with his family in the bustling coastal town of Rockland, Maine. However, by 1860 the Shaws had moved inland to Kennebec County, and father George listed his occupation as "farmer" on that year's census (Rockland Township of Lincoln County, Maine, United States Census Bureau 1850; Vassalboro Township of Kennebec County, Maine, United States Census 1860).

On July 16, 1863, at the age of 24, Walter B. was drafted into the 19th Regiment of the Maine Volunteers in Vassalboro, Maine (Walter B. Shaw, Co. B, 19th Maine Infantry, NARA Civil War Compiled Military Records; L. 1908). Following his injury in the line of fire at the Battle of Spotsylvania, Shaw was taken to Columbian Hospital in Washington, DC and later treated at the Broad Street Hospital in Philadelphia, Pennsylvania. The lower third of his arm was amputated due to the damages incurred from the bullet in his arm, and he was honorably discharged from the army on March 24, 1865 (May 2, 1865 Affidavit from Walter B. Shaw, Co. B, 19th Maine Infantry, NARA Civil War Compiled Military Records).

Following his release from the hospital, Shaw returned home to Browns Corner in Kennebec County, where he had lived before the war (May 2, 1865 Affidavit from Walter B. Shaw, Co. B, 19th Maine Infantry, NARA Civil War Compiled Military Records). He soon relocated to Washington, however, where his neat, meticulous and self-taught left hand script helped get him a job as a clerk and copy writer with the U.S. Treasury Department. There he apparently "worked with the sons of well-known black orator Frederick Douglass, writing in his diary that 'their appearance caused some commotion at first, but I think it will subside'" (Lapp 2006: 5).

When he first moved to Washington, Shaw lived in a boarding house downtown. However, he soon got to know the three daughters of local farmer David Miller (Lapp 2006: 5). He took a particular fancy to one of these young ladies, and on August 2, 1870 he married Luciana M. Miller (National Park Service 2009; L. 1908; District of Columbia Marriage Records 1870: 104). Where the new couple lived initially is not well documented, but they probably resided somewhere in the District. By 1879, they had three children and Shaw was receiving his war pension at an address that no longer exists, "No. 56 College Hill" (1879 note from Walter B. Shaw, Civil War Pension Application File, NARA Military Service Records). That same year, Shaw purchased 33 acres of farmland down by the Anacostia River from his father-in-law, David Miller, for $2,500 (District of Columbia Land Records, Liber 915, folio 205).

In order to make the purchase, Shaw and his wife had to take out a hefty $1,800 loan, which may also have covered some improvements to the property (District of Columbia Land Records, Liber 915, folios 205 and 207). Indeed, this might explain why Shaw and his family

were not actually living on the farm a year later, when they were surveyed by the 1880 federal census. In addition to his wife, who was apparently born in New York, Shaw's household at this time included: Charlie, age 7; Nellie, age 5; Bradford K., age 4; and two African American servants named John and Penney C. Jackson, who helped out around the house and in the kitchen (United States Census Bureau 1881: 141). Only Charlie and Nellie, or Lucy Helen, would survive to adulthood, along with another son by the name of L. Robert G. who was born in May of 1887 (United States Census Bureau 1900: 7). The Shaw family likely relocated to the Kenilworth property sometime shortly thereafter, and were living there by 1900.

Even at this early stage, Walter B. Shaw may have already begun growing water lilies on a casual basis. Although the exact date that he introduced plants from his native Maine to a nearby pond is a matter of some disagreement, some sources say that it began as early as 1880 (Kearney 1943; The Washington Post, July 25, 1943; Unna 1953) or, according to the National Register of Historic Places nomination and several other later sources, 1882 (Dillon 1976: 1; Brown 1992; Palmer Reporting Service 1982b: 27; Holmes and Heine 1959: 391).

Strangely enough, Walter B. Shaw listed his occupation as "farmer" in the census of 1880, even though according to other sources he was then still working as a treasury clerk (United States Census Bureau 1881: 141). With his newly-acquired 33 acres on the river in Kenilworth, Shaw probably began farming as a hobby almost immediately. Having grown up on a farm, it is possible that he identified more with this hobby than with his salaried government position. In any case, it appears that he probably planted his first water lilies around this time, though he did not begin actively cultivating or selling them until a few years later (L. 1908).

As a result, for the time being the vicinity of today's Kenilworth Aquatic Gardens remained largely unchanged from its appearance during the previous century. Along the western edge of the property stretched the broad, lazy Eastern Branch, hugging the tidal marsh later known as the Anacostia flats. In this marsh grew a variety of bog plants, including red maple (Acer rubrum), swamp holly (Ilex sp.), and wildrice (Zizania aquatica) (Lawrence Halprin & Associates 1970). As aptly illustrated in A. Boschke's 1861 map of the area, the riverside wetlands were bordered by a buffer of woods likely left unaltered for use as both a floodplain and a woodlot (see Figure 6; Boschke 1861). Made up of various species native to the area and growing naturally along the wetlands edge, this forest consisted of river birch (Betula nigra), black willow (Salix nigra), elm (Ulmus sp.), and hickory, among other plant types (Lawrence Halprin & Associates 1970; Maryland State Archives, S 1203-887, Patent Certificate 816, April 16, 1764). To the east of these woodlands, near a slight rise in the land, stood an expanse of cleared agricultural fields, some fences, and a number of orchards of varying size. From here the land stretched in a flat expanse east to the Eastern Branch Road, or what would later become known as Anacostia Road. On what was then the property of David Cole, just north of Piney Branch, a large orchard extended west from Eastern Branch Road. A small dirt lane provided access to a fenced yard and farm house. Thus, the area presented a fairly open agrarian landscape broken occasionally by orchards and fairly isolated farm buildings. Views would have been fairly restricted, since the land was flat and the fields enclosed by wooded areas both along the marshlands of the Eastern Branch and the two associated streams, Watts Branch and Piney Branch.

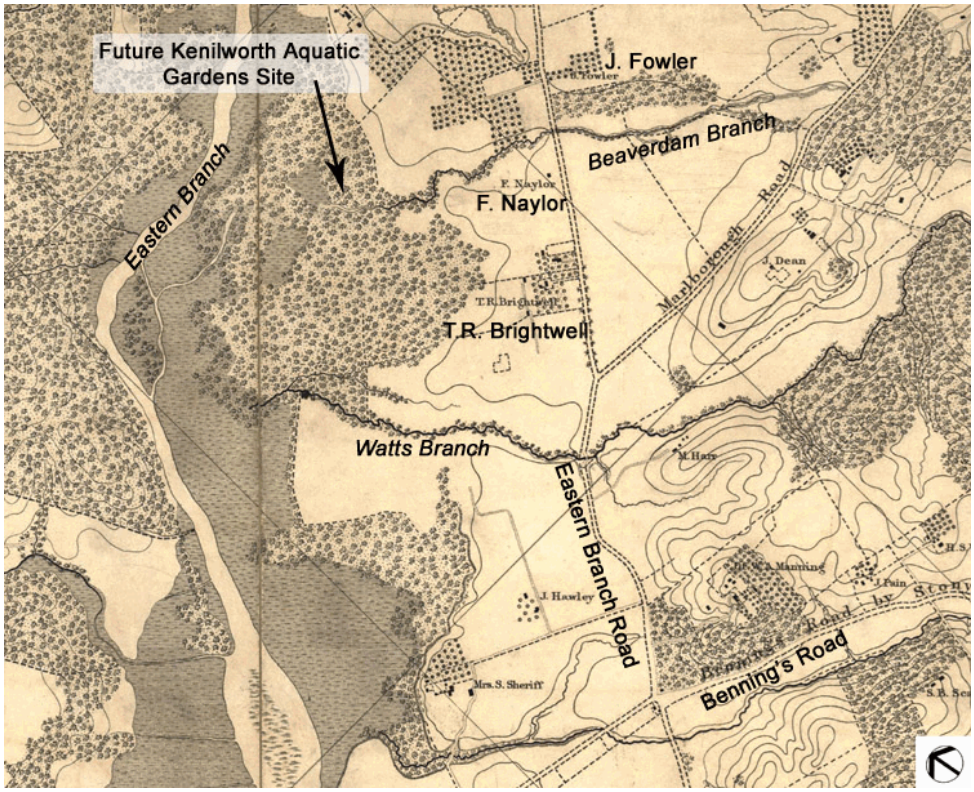

Figure 6. Detail of an annotated 1861 map by A. Boschke, showing the vegetation and residents of the future Kenilworth neighborhood (Boschke 1861). Note the agricultural use of the landscape, evidenced by the open fields and orchards.

1882 to 1912 AD

SHAW OWNERSHIP AND THE DEVELOPMENT OF THE AQUATIC GARDENS AT KENILWORTH

The Beginnings of Kenilworth and Reclaiming the Anacostia Flats

Walter B. Shaw's only daughter, Lucy Helen Shaw, married James M. Fowler on July 8, 1891, and by the turn of the century was living near her parents in Kenilworth (District of Columbia Marriage Records 1891: 494). The son of a local land-owning family, Fowler was listed in the 1900 census as a "draughtsman," or draftsman, who owned a home on Benning Road (United States Census Bureau 1900). In 1895, some nearby Fowler farmland was purchased by real estate developer Allen Mallery, who promptly subdivided the property into a new suburb that he called Kenilworth. This unique name apparently came from Kenilworth Castle in Warwickshire, England, about which Mallery's wife had just read a book. Sir Walter Scott's novel, "Kenilworth," tells the story of a famous visit to the castle by Queen Elizabeth I in 1575, that included days of parties and entertainment (Lapp 2006: 7-8). Thus, Kenilworth was born.

An 1887 survey map offers some idea of Kenilworth's layout around this time. In the vicinity of the Shaw property, a number of 20- to 30-acre tracts branch off of Anacostia Road as it leads north and stretch down to the river marsh. Each tract has a dirt entry lane and associated structure or two. One of these little unpaved roads leads west to the single home or farm house owned by Walter B. Shaw, an address known in later years as 1530 Kenilworth Avenue (Hopkins 1887: Plate 44; Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). By 1894, a number of buildings had been added to this neighborhood, including one on Shaw's property (Figure 7; Hopkins 1894). As illustrated in this later map, a dirt lane now connects the original driveway and farm house, running west to a small cottage down by the marsh. Shaw built this structure sometime after launching into his water lily hobby, and it may have originally served as a tenant house (The Washington Post, July 1, 1935; The Washington Star, April 30, 1951). Additional research is necessary to determine exactly when the structure was built; however, it reflects an escalation in the activity taking place down by the marsh, and was probably the work of W. B. Shaw. The pond shown in this 1894 map, just on the edge of the wetlands, served as home for Shaw's first three lily pools, whose outline can be seen in the east end of the pond (see Figure 7).

Since 1861, the small suburb of Uniontown had been the only subdivision on the east side of the Anacostia. The old, rickety wooden Anacostia River Bridge from the Navy Yard was replaced by a wrought-iron truss bridge in 1874, due to heavy use and following an accident where a broken span sent a four-horse carriage tumbling into the river below (Scott 2005: 121-2). By the final decades of the nineteenth century, development of the area across the Anacostia had begun to spread. A new bridge across the river at Pennsylvania Avenue was approved by Congress on February 23, 1887, and opened to traffic on March 20, 1890 (NPS NR 2009: 3; Scott 2005: 124). Soon thereafter the Benning Road Bridge, which had originally been constructed in 1830, was also replaced. In 1892 the old bridge was judged unfit for handling the rising levels of traffic across the Anacostia, and a new one made of iron was built the same year (NPS NR 2009: 3).

Yet, even as development of the capital advanced, navigation along both the Potomac and Anacostia Rivers remained unreliable. Work to address these issues along the Anacostia was particularly slow, and the proposed COE project for this area did not receive a comprehensive plan until 1890 (Gordon 1984: 4). Following a Congressional appropriation of $20,000 that year, work on dredging the Anacostia between the Navy Yard and Giesboro Point began in 1891 (Stanley W. McClure to Chief of Division of Interpretation and Visitor Services, July 14, 1965, Kenilworth Aquatic Gardens files, National Capital Parks - East; NPS NR 2009: 4). Seawalls were built along portions of this part of the river, and dredged materials used to create embankments along the eastern shore between Poplar Point and the Insane Asylum Channel at the Government Hospital for the Insane (later known as St. Elizabeth's) (NPS NR 2009: 4). Additional work was needed , however, both here and elsewhere along the Anacostia. Extensive survey of the entire river was undertaken and reported by Col. Peter Hains of the Corps of Engineers in October, 1891. The division of the river into three sections between its mouth and the District line, first utilized by this report, served as a key tool in later development projects along the Anacostia (The Washington Post, November 16, 1905).

On April 11, 1898, the future of the river and its surroundings was charted with a joint resolution by the Senate and the House of Representatives to appropriate funds in order to improve the Anacostia River and reclaim the associated "flats," or tidal areas (The Washington Post, December 17, 1898). The joint resolution plans recommended specific depth and width measurements for the river at low tide, with separate guidelines for north and south of the Navy Yard. Improvements also included the construction of a seawall and embankment to a height of fourteen feet above low tide, and the deposition of dredged material on the flats in order to raise them up to the same height. Total project costs were estimated at 6 million dollars, and a short disclaimer stated that river improvements north of Benning Bridge might be "deferred for the present" (The Washington Post, December 17, 1898). This design became known as Colonel Allen's plan, after the man who originally presented it to Congress in 1898 (The Washington Post, November 16, 1905).

One of the great champions of the movement to reclaim the tidal areas of the Potomac and Anacostia Rivers was the new officer in charge of the Army Corps of Engineers Office of Public Buildings and Grounds (OPBG), Colonel Theodore A. Bingham. As Officer in Charge of Public Buildings and Grounds from 1897 to 1903, Bingham saw the river flats project as an opportunity to create the ideal park landscape of the day, or a place for the city to cultivate "breathing spaces" for the "promotion of mental growth" (Scott 2005: 138; Gutheim and Lee 2006: 97).

Complementary to Bingham's ideas were the plans of the Senate Park Commission, which was formed in 1901 and came to be known as the McMillan Commission. Tasked with developing a master plan for the District of Columbia by the Senate Committee and its chair, Michigan Senator James McMillan, this commission became one of the most powerful design forces behind the public parks and buildings of the capital city. Comprised of some of the greatest American architects and landscape architects of the day, including Daniel Burnham, Charles Follen McKim, and Frederick Law Olmsted, Jr., the commission used many of the same principles that had guided L'Enfant's original designs from over a century earlier. Informed by some of the nation's greatest cities as well as European tradition, the report submitted by the commission to Congress in 1902 contained a number of proposals and recommendations for development of the District's monuments and parks (Joseph and Wheelock 1999: 15). As a result, although it extended far afield from the original L'Enfant designs for the city to include places like Mount Vernon, Great Falls, and the upper Anacostia River Valley, the McMillan Plan still utilized many of the same original principles used in 1791.

Most importantly for the Kenilworth area, the McMillan Commission called for the linking of existing park lands to carry the park system out into the suburbs of the District and across the Anacostia and Potomac Rivers; a concept of which Anacostia Park was a crucial part. Olmsted, in particular, urged the federal government to reclaim the Anacostia mudflats in the name of expanding opportunities for recreation in this area (NPS NR 2009: 5). In particular, he suggested that over a thousand acres along the Anacostia River be set aside for a park that would provide public access to the waterfront and prevent overly zealous industrial development of the area (Gordon 1984: 9). The lower portions of the river would meanwhile be outfitted like the quays of the Seine, with grand stone wharves instead of river banks and scenic

boulevards above (Green 1962: 136).

The eventual plans submitted by the McMillan Commission involved not only the draining of the Anacostia swamplands but the transformation of the stream's upper end into a 1,100-acre "water park" similar to Detroit's Belle Isle and created by installing a dam across the river on a line with Massachusetts Avenue (Green 1962: 136). More extensive development of the lower part of the river into a bustling river port would pay for this park, which would consist of half water, half land (Gordon 1984: 9).

High hopes for developing the Anacostia's muddy banks were shared by many. An article of the Suburban Citizen, published in September, 1901, advertised the emerging suburb of Kenilworth as "one of the prettiest and most promising villages of the northeast section of the District" (Suburban Citizen, September 7, 1901). Among the apparent merits of living in this neighborhood of some forty residences were the benefits of breathing "healthful" country air, and enough space to keep a cow and a "yard full of chickens" (Suburban Citizen, September 7, 1901). In addition, a local public school was already under construction and a network of new streets laid out, all of which was accessible by only a five-cent ride from downtown on the recently-extended Columbia Railway. The article goes on to predict:

"In short, Kenilworth will soon have all the advantages of the city without the woes and worries which people in ordinary circumstances in life endure who live in rented and poorly ventilated houses in town…It is not to be doubted that property in the village will advance in value several hundred per cent, within the next five years. At the sale on Labor Day a number of lots were sold at ten cents a foot." (Suburban Citizen, September 7, 1901)

Still, by 1905 work had only sluggishly progressed on the reclamation plans laid out in 1898. Dredging had been carried out in what was known as "Section One," or the area from the river mouth to the Navy Yard Bridge, and several thousand acres of ground reclaimed by the deposition of dredged material on the flats between Giesboro Point and the Navy Yard Bridge (The Washington Post, November 16, 1905). In 1908 the 6,000-ton cruiser Dixie docked at the Navy Yard and became the first ship of its size to navigate this far up the Anacostia (The Washington Post, October 10, 1909). However, questions of appropriation had already begun casting doubt on upon the continuation of these plans into Sections Two and Three to the north. By way of response, some community members made a point of publicizing their attitude toward the marsh reclamation. According to The Washington Post,

"The main thing in the minds of citizens interested in the project is that Congress shall take that initiative and carry on the work along the lines already begun. To this end Commissioner Macfarland is seeking to crystallize public sentiment upon a practical plan of action, which shall not incur too great expense, but which shall, within a reasonable time, rid the east end of the city of the vast morass which has disfigured the Capital since the days of the British invasion." (The Washington Post, November 16, 1905)

This was neither the first, nor the last, negative tone used to refer to the marshlands along the Anacostia. A number of articles from this period spend paragraphs discussing the "worthless"

nature of these flats, and the numerous projected benefits to be gained by filling them (Washington Post, October 11, 1909). For example:

"Public opinion has been thoroughly aroused to the necessity for doing away with these flats, which are little better than pest holes…At low tide the Eastern Branch is unsightly, a mass of murky flats, muddy and unhealthful. There are acres and acres of these marshes, all of which will be converted into rich soil when the project of reclamation has been put through. It is estimated that a park above the Benning bridge on the reclaimed land would cover 1,100 acres of land…" (The Washington Post, October 10, 1909)

The value of this land, as well as the benefits of creating a more navigable river, strengthened the social, economic and aesthetic reasoning behind the argument to reclaim the marshes. The personal stake of Robert A. Boyd, the secretary of the Southeast Citizens' Association, in the project made his argument on the matter particularly passionate:

"We have appointed a special committee to investigate this more than worthless tract of swampy land, where nothing but mosquitoes and cat o'nine tails grow, but the committee has not yet made a report. For years the people of the neighborhood have been praying and pleading to have the flats reclaimed, without hope until recently. When I think of the beautiful park that could be made on the site of these mud flats, which would be of inestimable value to every resident of the city, and to the numerous children in this section, who have absolutely no place to play or romp, I have no words to express my indignation to a government that would allow such conditions to exist. We could have a park here that would be the equal of Potomac park in every respect. Besides, I will venture to say that the sickness and death rate of Washington would be decreased by at least 25 per cent, for I have heard many physicians say that most of the malaria came from the swamps below Anacostia." (Washington Post, October 11, 1909)

Thus, as the other ongoing dredge and fill project in the nation's capital, Potomac Park continued to set the precedent for the Anacostia flats project. Serving as a kind of foil, its comparative success in the years to come would become a continuous source of inspiration for the champions of Anacostia Park. The growth of the City Beautiful movement during these years also provided an impetus for the work, as its emphasis on the planned use of open spaces found an excellent candidate in the prospect of reclaimed land (Gordon 1984: 10).

In addition, Boyd raised what turned out to be one of the most powerful factors in motivating the reclamation of the flats: or the issue of public health. Back in 1887, Congressional concern regarding the health of soldiers at Washington Barracks (now Fort McNair) were behind some of the first inquiries into the question of sanitary waterways. By 1890, nearly half of Washington's sewage was already flowing into the Anacostia, and this problem only escalated as the city's population grew (Gordon 1984: 3,4). Yet water purity soon became secondary to disease, as a report came from Dr. Walter Reed in 1897 that Fort Myer and the Washington Barracks exhibited the highest rates of malaria in the U.S. Army. Meanwhile, the East Washington Citizens' Association submitted a report supporting the continued dredging of the river, along with medical evidence that the number of deaths in the vicinity of the Potomac flats

had decreased as a result of the land reclamation there (Gordon 1984: 6). With the health of the city's inhabitants on the line, the future of the Anacostia marsh was increasingly tenuous.

The issue of public health persisted over the years, even as funding constraints caused the Anacostia flats project to progress fitfully. The October 11, 1909 article that graced the front page of The Washington Post proclaimed: "Menace to Health: Anacostia Flats Responsible for Malaria, Says Doctor" (The Washington Post, October 11, 1909). The subsequent text included a lengthy statement from Dr. Richard A. Pyles, a local resident and leading member of the Anacostia Citizens' Association, on the health hazards and unsightly nature of the marshes. Pyles concluded with the words: "As a matter of health, I urge that the Anacostia flats be reclaimed and made sanitary" (The Washington Post, October 11, 1909).

A quote from the commandant of the Navy Yard, Admiral Leutze, from the front-page article of the day before ran along similar lines:

"There can be no doubt that the reclamation of the flats will improve the health conditions about the navy yard. Several years ago malarial fevers were the rule among the men who worked here. Since the channel has been improved and the marshes in part pumped out and some of the land reclaimed, the disease has fallen off greatly." (Washington Post, October 10, 1909)

With the weight of public opinion in strong support of its success, the reclamation project was soon advancing north along the Anacostia River. In 1911, Congress established the Board on Reclamation and Development of the Anacostia River and Flats, a committee comprised of three engineer officers who would reassess and revitalize the plans for reclaiming the flats between the Navy Yard and the District line (Gordon 1984: 10). The work of the board influenced the man in charge of the river project, Major Charles W. Kutz, who enthusiastically continued dredging efforts in this area in 1914 (Gordon 1984: 10).

In August of that year, The Washington Post reported the following, relating to work north of the Benning Road Bridge:

"In the Anacostia channel dredging has been in progress for some months past, the material removed having been deposited on section 3 of the flats. Several embankments were repaired and 10,185 feet of seawall was constructed." (Washington Post, August 12, 1914)

A year later, additional stages of the dredging project were underway. Already the new land reclaimed from the flats was being referred to as a "large water park," though much of the overall river work was still concentrated on areas south of the Benning Road Bridge (Washington Post, August 1, 1915). Under the guidance of Frederick Law Olmsted, Jr. the possibility of a dam, long a topic of discussion by the COE, was finally discarded as impractical by the Board on Reclamation and Development of the Anacostia River and Flats in 1916 (Scott 2005: 181). Upon reconsideration of the plans, the board decided to mitigate silt and pollution issues by opening a western channel in the river, forming what are now Kingman Lake and Kingman Island, and creating a swath of parklands reaching north along the river (Gordon 1984: 10-11).

In 1918, Congress laid aside the reclaimed land along the Anacostia River as part of the District of Columbia's park system, and named it Anacostia Park. As the river itself was channeled, large swaths of previous wetlands on either side were separated from the water by seawalls and then filled in with dredged silt, sediments, and even city refuse (Jones 1996: 4). Kingman Lake, to the west, and East Lake, located south of the Aquatic Gardens, were planned as recreational areas whose water flow would be monitored by gates. By mid-year, 1920, the COE's progress in dredging and filling had resulted in improved sanitary conditions and navigation along the portion of river to the south of Pennsylvania Avenue. In 1923, responding to Congressional skepticism regarding the continuation of the project north of Benning Road, the board argued that the once common plague of malaria had nearly disappeared from the institutions along the river including the Navy Yard, Government Hospital for the Insane, Washington Barracks, and District Jail. In view of this progress, the board strongly recommended that the section of park north of Benning Road, as "the only remaining mosquito-breeding marsh in the District of Columbia," should be filled posthaste (Scott 2005: 206).

Consistently overlooked by the broader community and the COE alike, however, was the underlying value of this wetland environment. Woodrow Wilson approved legislation to create the National Park Service (NPS) on August 25, 1916. Yet many years would pass before the bureau's true purpose in conserving "the scenery and the natural and historic objects and the wild life therein" for future generations was fully realized (Mackintosh 1999). Still, long before the natural resource potential of the Kenilworth wetlands was recognized, Walter B. Shaw had already come to appreciate the flats for their beauty and nurturing potential.

The Rise of Aquatic Gardening

Flowering water plants have long attracted the curiosity and attention of humanity. Various parts of both the lotus and the water lily have historically been used for medicinal purposes as well as a source of food (Perry 1938: 4). Yet beyond their basic utility, the mysterious beauty of these plants has captivated the human imagination for centuries. The lotus or water lily symbol was used, sometimes apparently interchangeably, by both the ancient Greeks and Egyptians. In Egyptian tombs, the lotus has been found in the mummies of females and depicted as the flower of resurrection (Perry 1938: 2-3; Fitzgerald 2003). Representations of water lilies ornament the capitals of Egyptian columns, and decorate the famous tomb of King Tutankhamen, from 1361 BC (Fitzgerald 2003). The Hindu god of creation, Brahma, is said to have emerged from a lotus, while in Chinese legend, the lotus is the symbol of purity and abundance.

Like Brahma, Buddha is often depicted sitting on or holding a lotus, and behind each of his first seven steps he is said to have left a lotus blossom (Fitzgerald 2003). Indeed, the allure of the water lily was apparently global in its scope, since a number of legends surround its presence in North America as well. One story of the Dakota people of modern-day North and South Dakota recounts how the first native yellow pond lily of this area came into being.

"A Star Maiden came down from the night sky and wanted to live with the Dakota. The chief, Red Strawberry Man, sent his son with the maiden to consult the tribe's advisor who lived across the lake. While rowing across the lake in the darkness, the son's canoe hit a log and the Star Maiden tumbled into the waters. In the morning, the first yellow water lily appeared at the same spot." (Fitzgerald 2003)

Despite its ancient history, aquatic gardening was little known in the Western world before its eighteenth-century introduction to England. One of the earliest references to it as a pastime was by Philip Miller in his 1731 book, "Gardener's Dictionary," which recounts the presence in some gardens of plants growing in "large troughs of water" (Perry 1938: 5). The North American hardy water lily, or Nymphaea odorata, was first transported across the Atlantic in 1786, but a broader interest in the plant did not take hold until the mid-1800s. A dramatic increase the popularity and notoriety of water lilies was in fact triggered by a single, momentous event: the successful propagation of the largest water lily in the world in a pond on British soil. According to one historical account: "The earliest water garden of any repute was at Chatsworth, the home of the Duke of Devonshire. Here it was, in 1849, that the Victoria Regia [now known as Victoria amazonica] was first flowered in Europe. From this time until about 1860, a craze arose for cultivating Nymphaeas…" (Perry 1938: 5).

Pivotal in the flowering of this and other tropical plants throughout the mid-nineteenth century was the invention of the modern greenhouse. What has been known as "the industrial marriage of glass panes and iron ribs" opened up a whole new world of botany to the European nobility who could afford it. In December of 1843, Queen Victoria visited her namesake lily, the Victoria Regia, at its new home in one of the greatest among these early greenhouses, or the so-called "Great Stove" at Chatsworth (Schama 1995: 565). Built by Joseph Paxton specifically to house the duke of Devonshire's collection of gigantic water lilies, this structure stood

"nearly three hundred feet long and sixty-seven feet high. This colossus of palm houses used eight coal-fired furnaces to send hot water through seven miles of pipes, all carefully concealed beneath a stone floor lest the illusion of paradise-come-to-Derbyshire be spoiled for the duke [of Devonshire]. Subtropicals like hibiscus and bougainvillea threw bombs of brilliant color within the dense greenery of palms and dracaena. Brilliant birds flew about in the steamy radiance." (Schama 1995: 566)

This tropical wonderland was illuminated by twelve thousand gas lamps, while a fountain driven by a hidden steam pump shot water fifty feet into the air (Schama 1995: 566). The exotic allure of greenhouse environments like this one, together with the Victoria Regia itself, captured the imagination of Europe and effectively sparked a new era in the exploration of aquatic plants (Tricker 1897: 54). Since its initial discovery by Europeans in 1801, the Victoria Regia had fascinated explorers as one of the great and mysterious oddities of the wild Amazon. Known as the "Queen of Aquatics," the pads of this fantastic plant grow to a spread of seven feet in diameter and are strong enough to support the weight of a child (Figure 8; Allen 1854: 5-6). Its exotic allure is enhanced by the unusual vertical rim of three to six inches around the edge of each pad, and by the fact that their giant, sweet-smelling flowers bloom only at night (McLaren

1908).

With the Victoria Regia drawing world-wide attention to the cultivation of water lilies, some of the smaller, less showy types also began gaining in popularity. The first successful water lily hybrids were created by Eduard Ortgies in the early 1850s. However, it was through the concentrated efforts of Frenchman Joseph Bory Latour-Marliac that many of the most famous early hybrid lily varieties came into being (Planchon 1853; Perry 1938: 39). Latour-Marliac introduced his first hybrid, Nymphaea 'Marliacea Chromatella', to the Royal Botanic Gardens at Kew, England in 1887. In 1889, his hybrids were awarded a first prize at the Universal Exhibition in Paris, and more than 100 of today's hybrid water lilies are attributed to his work (Knotts 2009; Hayward 1893). As rather artfully described by Perry:

"Marliac was a wizard with the water-lily; he crossed and re-crossed the species and varieties at his command, so that it hardly seemed possible he could know them himself, and the parentage of many became an enigma. He kept his methods secret, and to all intents and purposes they have passed away with him, but he has bequeathed to the world a race of hybrids which will for ever make his name famous, and earn the gratitude of all garden lovers." (Perry 1938: 39)

The tone of awe in this passage betrays some of the challenge and complexity of hybridizing lilies. Involving the pollination of one flower with another, in the 1920s and 30s this process required a great deal of persistence and pure luck. According to Perry: "The hybridisation of water-lilies is generally so much fruitless labour, and the results far from encouraging. Out of 159 recorded crosses we made in 1927, only one pod set seed, and the offspring was…not as good as many of the existing varieties" (Perry 1938: 40). Written from the perspective of the 1930s, this account emphasizes the unique and remarkable nature of the hybridizing efforts made by both W.B. Shaw and his daughter.

Building a Water Garden in Kenilworth

According to some of the more detailed accounts of the gardens' history, Walter B. Shaw first began "playing in the water," as he phrased it, around 1888 (L. 1908; Cawood, n.d.). In a gesture that spoke to the nostalgia he felt for the landscapes of his youth, Shaw sent back to his native Maine for twelve hardy American white water lilies (Nymphaea odorata) (L. 1908). In the words of his daughter, L. Helen Fowler: "These he planted in a twenty-foot disused ice pond (see Figure 7). The lilies grew so rapidly that they crowded the little pond. Next year he had bulbs to give away to the neighbors" (Cawood n.d.). By another account, Shaw dug this first pond himself, using a shovel and a hoe to excavate and fill a pool of about fifteen square feet (L. 1908). However, considering the presence of a natural spring beneath the vicinity of this original pond, it seems much more likely that he used an old ice pond for his first lilies. Still, Shaw did go on to dig a number of additional pools to augment his backyard hobby, and these might be the ones referenced in the 1908 account. As later recounted by The Washington Post, the first water lilies

"…grew fairly well, and mornings and evenings he continued to work. He developed the

puddle to a pool, and enlarged the pool to a pond, and one year he took an account of stock and learned that his lily pond had brought him as great an income as his position" (L. 1908)

Indeed, Shaw's lilies thrived in their new home, and "soon the flowers were so abundant that the amateur grower had more than he could give away" (Dacy 1926). When he began exploring the possibility of officially marketing them, he encountered a high level of interest from local florists. He first began selling his water lilies on a larger, commercial basis in 1889, and that year grossed a total of $33 in profits (Sadler 1939). Before long, his annual profits were up to $125, and Shaw found that his hobby had become more profitable than his job at the U.S. Treasury. In 1902, he left the clerkship to devote all of his time to the cultivation and sale of water lilies (L. 1908). In response to the rising demand for lotus plants and flowers, Shaw expanded his business the very next year, and for the first time began devoting special attention to lotus cultivation (L. 1908).

As fate would have it, W.B. Shaw was not the only man of that name who was busy exploring his interest in aquatic blooms. The general mystery surrounding the earliest years of the Shaw Aquatic Gardens is in fact increased by the existence of another water garden with a very similar name, at that time. In a strange twist of serendipity, Henry Shaw established "Shaw's Garden" in St. Louis, Missouri in 1859. In 1899, Henry Shaw's business took on a whole new scale when he founded the Missouri Botanical Gardens (The Gardeners Chronicle, December 19, 1906; William Tricker, Inc. 2010). His successor as horticulturalist at the St. Louis gardens was George H. Pring. Along with Latour-Marliac, Pring continues to hold the title of one of the world's most successful developers of water lily hybrids, and many of his lilies were sold by the Shaw Aquatic Gardens in Kenilworth.

Meanwhile, Walter B. Shaw was not the only Washingtonian busy pursuing an interest in water lilies around the turn of the century. As early as 1894, Mrs. Cleveland herself looked out the windows of the White House onto "a large circular pond, stone-curbed, in which the most beautiful varieties of lilies from all over the world [were] growing" (Bache 1894). The existing documentation gives little indication of the source for these presidential water lilies, which continued to grace the White House grounds for many years afterwards (Bisset 1907: 1). However, considering the close proximity of the Shaw Water Gardens, which by that point had been growing and selling lilies for at least five years, it is highly probable that at least some of the plants found in the White House gardens came from across the Anacostia.

Other government sites in Washington were growing aquatic plants at this time, as well. According to the same article:

"Other fountain basins in the White House grounds are utilized for water-gardening, on a small, but artistic, scale. This branch of horticulture is extensively carried on in the parks of Washington. It was first attempted here 14 years ago, by Henry Pfister, then, as now, in charge of the gardens of the executive mansion. The earliest trial was made in the stone-curbed pond, already referred to, south of the president's dwelling. At nearly the same time Dr. Hessel began experiments with hardy water-lilies in the ponds used for propagating carp and other fishes near the Washington Monument." (Bache 1894)

In later years, the ponds at the White House, the Washington Monument Grounds, and elsewhere were all supplied with lilies from Kenilworth Aquatic Gardens (The Washington Star, July 23, 1944). Although this was likely the case in the 1890s as well, further research is required in order to determine the exact source of the first presidential water lilies. Given the close proximity of the U.S. Treasury Building to the White House and its adjacent gardens, it is probable that the executive mansion ponds had some sort of relationship to those at Kenilworth. If he did not supply the original bulbs himself, Shaw would at least have been acquainted with the White House lily collection, and may even have had a view of them from his office window.

By 1903, the official White House landscape gardener, George H. Brown, and the First Lady, Mrs. Roosevelt, were undertaking further plans to expand the White House water gardens.

"Water gardens are a new fad, such a thing being entirely unknown up to within the last few years. Until recently it was not realized that water spaces were susceptible of being transformed into patches of exquisite bloom, with dozens of varieties of native and exotic lilies of various colors, gorgeous lotuses, and other flowering plants. But aquatic floriculture has already been developed to a high point, and the White House fountains are even now beginning to make a brave show of water lilies, while it is intended by next year to grow the wonderful Victoria Regia in the great basin to the south of the executive mansion…In the so-called white lot, to the south of the White House, which is properly a part of the executive grounds, are half-a-dozen extensive and beautiful ponds, most suitable for the purposes of the water gardener. Seeds of every known kind of water lily, from all parts of the world—white, blue, pink, yellow, and red—have been obtained and planted in the muddy bottom. By September, the whole area, several acres in extent, will be covered with floating 'pads' and exquisite blossoms." (St. Albans Daily Messenger, September 25, 1903)

With the White House setting an example, the popularity of water gardens reached new heights. As illustrated by surviving publicity photos of young ladies at the Shaw Aquatic Gardens, water lilies were frequently the object of romantic notions of rare beauty, exoticism, and the female sex (Figure 9). One 1911 article poetically points out that their very name—Nymphaea—evokes the "dreaming, drifting nymph" (Washington Star, September 17, 1911). The word "nymph" itself comes from the Greek word for bride, and can mean either a beautiful maiden of nature or, simply, a young woman (Oxford University Press 1971: 276). This connotation of water lilies was widely romanticized, as one 1897 article in The Washington Times demonstrates. Dramatically entitled "To Die Among the Lilies," it recounts how a Miss Richards, described as "one of the fallen, wandered out into the Agricultural Grounds in the Mall and tried to drown herself and end her sorrows in one of the lily ponds. Rose Richards was not long ago a beautiful young girl…" (The Washington Times, September 17, 1897).

The subtle mystery of the water lily, whose bright flowers rise out of dark and murky aquatic depths, gave rise to other imaginative notions as well. On the other side of the Atlantic the opera, "Water Lily," by Frederic H. Cowen, debuted at the 1893 Norwich Festival in England. The production was based on William Wordsworth's 1835 poem, "The Egyptian Maid: Or, the Romance of the Water Lily" and featured the adventures of an enchantress, the sorcerer

Merlin, an Egyptian Princess, Sir Galahad, and a young and hapless lily maid (New York Times, November 19, 1893; Garrett 2004). Indeed, the association of women with water lilies, and lotus in particular, dates back to Egyptian times. As aquatic gardens became more popular in the final decade of the nineteenth and early twentieth centuries, this alluring theme was repeatedly emphasized.

Back in the United States, a comedy show called "Simple Simon Simple" was produced in Philadelphia, and in the autumn of 1905 came to Washington, DC. Using a New York Times cartoon character named Simon as its protagonist, the play follows his adventures from his mother's home to the local circus, with one central scene unfolding at a water garden. An article in The Washington Star summarized, thus:

"The next scene is the 'frog pond by moonlight,' and is said to be a marvel of the scenic artist's art, showing, as it does, the lily pond with its rippling water, waving flags and stately cat-tails. Mose is discovered waiting at the trysting place for Dinah, his lady love. Their tete-a-tete is rudely interrupted by Simon, who, dressed as a huge frog, scares the little pickaninnies nearly out of their wits." (The Washington Star, September 18, 1905)

The article goes on to describe a musical scene led by a chorus of girls "whose faces are eventually discovered in the center of each lily pad" (The Washington Star, September 18, 1905).

Part of the appeal of water gardens was not only their romantic and mysterious air, but their accessibility to the public. As the 1900s got under way, the hardiness and beauty of the water lily was repeatedly lauded, even as its secrets were made more accessible to the average citizen. The very title of one of the first books on the subject, by William Tricker, illustrates the instructive nature of this movement: "The Water Garden: Embracing the Construction of Ponds, Adapting Natural Streams, Planting, Hybridizing, Seed Saving, Propagation, Building an Aquatic House, Wintering, Correct Designing and Planting of Banks and Margins, Together with Cultural Directions for All Ornamental Aquatics" (Tricker 1897). Although not included in the original 1884 edition, the culture of water lilies and other aquatics subsequently made an appearance in Peter Henderson's 1915 work, "Gardening for Pleasure," which strives to explain gardening of all kinds in layman's terms (Henderson 1884; Henderson 1915). Meanwhile, two key instructional books devoted entirely to the topic of water gardening were published in 1907: Peter Bisset's "The Book of Water Gardening," and "Water-Lilies and How to Grow Them" by Conard and Hus (Bisset 1907; Conard and Hus 1907). In addition to recording techniques for the cultivation of aquatic plants, Bisset in particular goes into some detail regarding the selection and grouping of species "required in the making of a water garden and its surroundings" (Bisset 1907: 1). Moreover, judging from the frequency, detail, and size of the illustrations in each of these books, their authors fully recognized the rare beauty and romantic allure of aquatic gardens.

A fellow resident of the District of Columbia, Peter Bisset was a naturalized Scottish immigrant and horticulturalist who moved to the capital with his family in the mid-1890s. As horticulturalist for the Hubbard estate near Rock Creek Park known as Twin Oaks, Bisset was

developing his knowledge of water gardening into a book around the same time that Walter B. Shaw was building his own aquatic gardening enterprise (Fox 1997). Indeed, the two men probably knew each other and may have shared concepts, techniques and theories related to their common interest. Bisset later worked for the U.S. Department of Agriculture (National Park Service 1940). The Shaw Aquatic Gardens cultivated and sold several tropical hybrids developed by Bisset, including the Nymphaea 'Bisseti,' the Nymphaea dentata magnifica, and the Nymphaea 'O'Marana' (W.B. Shaw Aquatic Gardens 1930: 12). In the opening pages of his book, Bisset explains the unique appeal of growing aquatic plants. From Washington, D.C., he writes:

"Our park superintendents now fully recognize the attraction which the water lily pond possesses for the general public, and are catering to this admirable popular taste by the installation of water gardens in these breathing spots of the people. But it is not alone to the gardens of the wealthy, nor to the public parks, that the cultivation of water lilies is confined. These plants are grown and admired by hundreds throughout the land to whom the art of gardening in its every phase forcibly appeals—a taste that is ever increasing with the growth of our population and which, above all others, reflects the refined character of our people. And it is a branch of gardening that comes well within the limits of the purse of the masses, the necessary first outlay for the full enjoyment of water lily cultivation being practically nominal." (Bisset 1907: 10)

Particularly in view of Bisset's ideas about sharing water gardening with "the masses," it seems highly probable that he approved of Shaw's efforts to cultivate, market and sell aquatic plants in the nearby Kenilworth neighborhood.

The Shaw Aquatic Gardens

The theme of water gardening for the common man or woman was reinforced by the overwhelming success of Walter B. Shaw, Helen Fowler and others like them in the cultivation of water lilies. The Shaw Aquatic Gardens' ongoing relationship with the capital's public parks, as well as their commercial prowess in selling bulbs, seeds, and blooms helped to bring the plants into the hearts and yards of everyday Americans. Fowler in particular would act upon this goal, in later years, when she became a frequent speaker on aquatic gardens throughout the District of Columbia.

Still, the development of an aquatic gardens whose size and scale matched that of Shaw's was no small feat. In these early years of growth and success, the aquatic gardens were a hidden gem in the bustling capital city. As recounted by The Washington Post, "while thousands have passed it while traversing the old Anacostia road they have never seen the ponds, which are cut off from the road by trees" (L. 1908). This passage also implies that the land east of the ponds was fairly wooded at this time, and thus protected the house and associated buildings from the busy road. The resulting effect was similar to what can be experienced upon entering the gardens today: the impression of a kind of voyage as the visitor passed from busy streets to the calm quiet of another world.

"Once on the grounds, the sight amazes the visitor. The ponds, some of which are nearly an acre in area, are square, and sharply built dikes separate one from the other. Over the sluggish waters flit the whirring dragon fly, while the bee drones his way from the heart of the pink Nymphea lotus to the equally well filled heart of the brilliantly crimson George Huster lily." (L. 1908)

In order to maintain the health of his growing farm, sometime in the late 1800s Shaw developed an irrigation system to circulate fresh water from the Anacostia River throughout the ponds. The 1907 book, "Water-Lilies and How to Grow Them," offers a general description of how this system might have been laid out: "Lacking a spring, water may be drawn by a pipe or sluiceway from any near-by stream. The sluice will of course be so arranged by gates or by position of intake, as to avoid the flooding of the pond in case of freshets" (Conard and Hus 1907: 14). Indeed, the protection of the ponds from the Anacostia's tidal flooding must have been one of Shaw's primary concerns when he first began building a network of pools. A strong current or serious flood could easily destroy his tender crop of lilies and other water plants, inundating the ponds with mud and breaking down the dikes separating them (Conard and Hus 1907: 14). In response, Shaw set to work designing a drainage and irrigation system to help maintain his ponds. In addition to building stable dikes between each pond, he installed a network of galvanized iron pipes connecting each new pool to ebb and flow of the nearby Anacostia River (Doug Rowley, Personal communication, January 25, 2010).

This method of irrigation not only helped protect Shaw's delicate plants, but kept the local frog and turtle populations at bay. This dual purpose was particularly important, since the ponds were described in 1908 as "swarming" with "thousands" of turtles and green frogs (L. 1908). The same article recounts:

"[Shaw] learned how to plant the young lilies in water cages so that the turtles would not destroy the roots; how to dike up the edges of the ponds so that the water would not escape, and he studied the question of growing the Cabomba virdifolia [Cabomba caroliniana], or aquarium plant, for which there is a constant and increasing demand. Each year some improvement was added. One pond was not enough, and others were added until there are nine at the present time. All have been piped so that they may be fed from springs and so that when it is deemed necessary the inflow can be shut off and the ponds drained for cleaning or for the destruction of turtles and frogs." (L. 1908)

It is unclear to what "springs" this article refers, exactly. With the exception of the original three ponds, whose water is supplied by a natural spring, the main water source for the pools has always been the Anacostia River (Doug Rowley, Personal communication, January 25, 2010). As explained in 1960: "Mr. Bayne…wanted to know how the ponds were filled. [Park superintendent] Mr. Souder showed him the water gates from the adjacent Anacostia, the east branch of the Potomac. When the water is high, because of the tide, wind or freshets, they tap what they need" (Kennedy 1960). Conversely, when the tide went back out the same force of gravity allowed the ponds to be drained of any unwanted water, for cleaning or other purposes.

Aside from the engineering and design necessary to maintain healthy ponds, the landscape

Shaw created for his gardens was intentionally left in as natural a state as possible. Unlike the wetlands along the river to the west, this area remained entirely untouched by the dredging and reshaping efforts of the U.S. Corps of Engineers. Indeed, the gardens have been credited with helping save the adjacent Kenilworth Marsh, since work along the river purposely avoided disturbing the channel leading into the gardens from the river. This channel and the associated marsh were crucial in not only regularly refreshing the pools with water, but maintaining water quality by flushing them out (Palmer Reporting Service 1982: 9). The farm also apparently had a rule "that every living thing which is not harmful shall be allowed to live" (The Washington Post, July 17, 1921). Although this led to some serious issues with the booming turtle and frog populations, it also allowed for a more natural, wooded landscape aesthetic. As recounted by one circa 1930s newspaper article, "where practicable the native trees, shrubs, grasses and plants have been retained. The weeping willows outdroop those on the Speedway along the bank of the Potomac river" (Cawood n.d.). According to an earlier source, Shaw actually planted a number of these willows himself, sometime before 1908. The Washington Post poetically recounted the scenery, thus:

"Over the edges of the sullen pools, weeping willows hang nearly to the brink, giving a grateful shade not only to the visitor, but casting protecting shadows to the tender buds of some of the younger plants. These weeping willows were planted some years ago by the owner of the farm, who set out sprouts and nurtured them so carefully that they have all grown to splendid proportions." (L. 1908)

The Landscape Design of the Shaw Aquatic Gardens

It is unclear whether the native, natural plantings described in 1908 were purely an inclination of Shaw's, to leave the remnants of the original woodland standing as it was found, or if he may have planted some of them there upon outside advice. Either way, this type of landscape was in keeping with the times, as early water gardening books recommend maintaining at least some pond-side vegetation. According to Perry:

"Whilst too many trees and shrubs close to the water edge are not to be desired, owing to the shade which they cast, and to the unhealthy conditions set up by their falling and decaying leaves, it sometimes happens that natural woodland is already present in the garden, or that a screen of trees is required to block out an undesirable view. Perhaps, in an exposed position they may be suitable as a windbreak, or again, the garden owner may love trees and want them simply for their own sake." (Perry 1938: 5)

Other books even venture to advise the planting of specific species along pond edges. In his chapter on the "Treatment of Margins," Tricker advocates "circuitous walks" leading to specific viewpoints along the margins of the pools that were complemented by groups of plants including "clumps of cat-tails" and other native and hardy flowers, ferns and orchids (Tricker 1897: 30). Among others, he mentions hibiscus, ornamental grasses and bamboo, and a variety of aquatic species that would "appear as in their native haunts if planted in the water garden" (Tricker 1897: 30). Undoubtedly aware of these landscaping trends, Shaw may have used them as inspiration while shaping his own gardens in the late nineteenth and early twentieth century.

The winding, shaded paths that weave their way between the ponds certainly adhere to the principles of a more natural style of landscaping. Along the outer edge of the gardens, a broader path or lane provided access to the perimeter. This route connected with another small country lane in the southeast corner of the site that ran past Shaw's old tenant house and the associated barn built sometime afterward. From there the lane ran south to connect with Douglas Street, then nothing more than a country road. Limited public access to the site was gained either by this lane or via a small cul-de-sac where Douglas Street ended just south of the ponds' southeast corner. Some idea of this original circulation arrangement can be gleaned from an aerial photograph taken after a spring flood years later, in 1936 (Figure 10; Historic Aerial Photographs, Record Group 328, No. 960, National Archives and Records Administration).

Learning largely from experience, Shaw worked constantly to develop, improve and expand his water gardens. In 1907 he grossed an approximate $1,200 an acre from his ponds, and that same year the Waldorf-Astoria of New York City bought 70,000 Egyptian lotus from him at a price of 2 cents each (The Washington Times, December 6, 1908; L. 1908). His business continued to grow over the succeeding years. In 1908, he had nine ponds spread over four acres and housing 40 different types of lilies, fifteen of which were night-blooming varieties. His collection included Nymphea pulcherima, the George Huster lily (Nymphaea 'George Huster'), Nymphea dentata, Japanese lotus (Nelumbium Shiroman), Nymphea omarana, the Frank Trelease (Nymphaea 'Frank Trelease'), Nymphaea rubra rosea, Nymphaea devoniensis, Nymphaea 'Jubilee', and Victoria regia (Victoria amazonica). In the largest ponds grew a "well-nigh impenetrable hedge" of lotus confined by a wire mesh to prevent its invasion into the neighboring lily species (L. 1908). Generally square in shape, each of his individual ponds was planted with various and carefully selected types of lilies. One pond was devoted entirely to the giant pads and brief nocturnal blooms of the Victoria regia, and another to 500 plants of the African Nymphea dentata (L. 1908). Two other entire pools were devoted to the cultivation of the aquatic plant, Cabomba virdifolia, or what is commonly known today as fanwort (Cabomba caroliniana). This plant absorbs impurities from the water while oxygenating it, and was a popular choice for aquariums in the days before mechanized filters. The following account of the business was given in 1908:

"Almost weekly large consignments are sent to New York, Boston, Philadelphia, and even as far as Chicago. The water farmer, stepping into the little punt which is to be found on every pond, goes through the rows of growing cabomba and cuts the supply needed to fill the orders. It is taken to the house and tightly wrapped in thin sheets of lead. These lead covered packages are in turn wrapped carefully in waxed paper and the parcel is placed in an ordinary market basket and shipped. It will stand a week's travel, and when taken from its leaden casket and placed in water will at once regain its rich greenish hue and take up its work of sanitation." (L. 1908)

By comparison, the lilies were prepared for shipment in tubes or white pine boxes (L. 1908). In addition to Cabomba caroliniana, Shaw was cultivating and selling thousands of Japanese carp and paradise fish in 1908, and, by 1911, goldfish as well (The Washington Star, September 17, 1911). The fish served the dual purpose of providing some additional income and consuming

the mosquito larvae that treated the ponds as their nursery. Although their sale appears to have been later discontinued, as they are not listed in the gardens' 1930 catalog, fish continued to play a role in the gardens through the 1930s (L. 1908; W.B. Shaw Aquatic Gardens 1930). In a short introductory section covering guidelines on how to grow and shape an aquatic garden, the 1930 catalog briefly states: "In any pool, large or small, a few fish are a necessary addition to eradicate the larvae of the mosquito" (W.B. Shaw Aquatic Gardens 1930: 3).

The Hybrid Water lilies of W.B. Shaw

Thanks in part to his extensive travels and efforts to acquire bulbs from abroad, Shaw was already growing a variety of exotic plants in his gardens by 1908. These included the Egyptian and Japanese lotus, the notorious Victoria Regia, a so-called Nymphaea dentata that was reportedly brought from Sierra Leone, the Nymphaea omarana from Ireland, Nymphaea rubra rosea from East India, and Nymphaea devoniensis and jubilee from England (L. 1908). The Shaw Aquatic Gardens were moreover the first to cultivate and sell several different lily varieties in the United States, including the following varieties, sold in Shaw's 1914 catalog: Nymphaea 'George Huster,' sent from England before 1908 (L. 1908); Nymphaea 'Gladstoniana,' also known 'Gladstonia' or the Irish Loch Lily, from Ireland (The Washington Post, January 31, 1957; The Washington Times, April 8, 1937); and Nymphaea 'Gloriosa,' from France (W.B. Shaw Aquatic Gardens 1914). Yet, some of the most remarkable plants to be found in Shaw's gardens were the hybrid varieties that he himself created.

Walter B. Shaw began experimenting with crossing various water lilies as early as the 1880s, and soon became a true pioneer in the art. He worked mostly on creating hardy lily hybrids, or those bred from plants native to cooler climates, perhaps in part because the blooms of these plants stay open during the daytime (Slocum 2005: 77). Through careful and persistent experimentation, Shaw developed a number of new hybrid water lily varieties (see Appendix B of the Supplemental Information Chapter for a full list of all water lilies known to have originated at the Shaw Aquatic Gardens). Some of the lilies developed by him and, later, his daughter became among the most popular hybrids in the world. By 1907, two lilies of Shaw's creation appeared in Bisset's book on water gardening, alongside a number of other natural varieties and Letour Marliac hybrids (Bisset 1907: 60). Shaw named one of his first hybrid lilies, developed sometime in the 1890s, the Nymphaea odorata 'Luciana,' in honor of his wife (L. 1908). Peter Bisset documented this lily in 1907, thus:

"A large number of hybrids and chance seedlings from Nymphaea odorata are now in cultivation. The best of these are Nymphaea odorata 'Luciana,' a variety of great beauty and vigorous growth; the flowers measure from three to six inches across, and are of a beautiful rosy-pink color." (Bisset 1907: 49-50)

An illustration a few pages later captures the Luciana, which is also mentioned in the Conard and Hus book published the same year (Bisset 1907: 57; Conard and Hus 1907: 93). Bisset includes an illustration of another one of the lilies developed by Shaw, the Nymphaea odorata 'W.B. Shaw,' named for him by his wife (L. 1908; W.B. Shaw Aquatic Gardens 1932: 10). "Nymphaea odorata 'W.B. Shaw' is a seedling from the beautiful Nymphaea odorata

'Caroliniana.' The plant flowers as freely as that well known variety. The [rose-flesh] color of the flower is much deeper and brighter than that of the parent; it is a very desirable lily" (Bisset 1907: 50-51). Shaw likely developed this lily sometime in the 1890s. In 1938 it was incorrectly identified by Perry as the 'Wm. B. Shaw' (Perry 1938: 53).

Bisset lists both the Luciana and the W.B. Shaw among the "Best Hardy Water Lilies" (Bisset 1907: 60). These varieties could also apparently be depended upon to bear seed; a fairly unusual trait in a hybrid (Bisset 1907: 131). In a 2005 book on water lilies, the Luciana (also known as Pink Beauty) is still noted as "one of the most popular pink hardies in the United States" (Slocum 2005: 195).

In 1900, Shaw introduced Nymphaea odorata 'Helen Fowler,' a variety named after his daughter (University of Connecticut 2004). This flower was mentioned by Perry as "perhaps the finest of [all hardy lilies]. The blooms may reach 9 in. across and are of a perfect, deep rose shade" (Perry 1938: 52).

Even after he was no longer active as manager of the gardens, Shaw continued to work on his treasured lilies. In 1913, he developed Nymphaea 'Eugenia de Land' (also occasionally known as 'Eugenie de Land'), a large, star-shaped pink flower with extremely pointed petals that was named for a local Washington artist (Cawood n.d.; National Park Service 1940). Another variety developed at the gardens was the Nymphaea 'Izetta Jewel,' which either Shaw or Fowler named after a local celebrity (W.B. Shaw Aquatic Gardens 1921: 9). An actress and, later, politician, Mrs. Izetta Jewell Brown "was a frequent visitor to the lily ponds when she was playing with a stock company at Poli's Theater in Washington," sometime before 1916 (Cawood n.d.; Effland 1990: 103-14). She continued to place orders to the gardens for her lily namesake well into the 1930s (The Mayflower's Log, August 1936).

As his knowledge of water gardening and the process of hybridizing grew over the years, Shaw participated in a number of floral events both in and beyond DC. In May of 1905 he was one of the guests attending the Annual Boardwalk Floral Parade in Atlantic City, New Jersey (The Washington Post, May 7, 1905). In 1913, his lily, 'Eugenia de Land,' was awarded the silver medal for the best new lily by the Newport Horticultural Society. One catalog from Glendale, California gave this lily the highest praise in 1931:

"This grand variety belongs to the N. odorata group and is unequaled by any other by the same genus. Flowers extra large of true N. odorata type, floating petals long and lanceolate; color an exquisite shade of deep rose-pink of iridescent hues, with yellow stamens. Vigorous and free flowering in a natural planting." (Sherlock Water Gardens Catalog 1931: 5)

The success of not only Shaw's lilies, but the gardens themselves was thus well-established by the early twentieth century. Profits from the enterprise were reported in 1908 to be as high as $1,000 an acre per year (L. 1908). As a succession of ponds gradually spread across the landscape, Shaw transformed this edge of the soggy, malarial marsh into a beautiful expanse of nine tranquil ponds alive with the colorful, fragrant blooms of countless water lilies and lotus. Peaceful green walks between the pools were shaded by the sweeping, graceful forms of

weeping willows and other hardwoods, beckoning customers to take a closer look at the aquatic wonders on either side. Almost by accident, Shaw's gardens had become one of the first sites devoted entirely to the cultivation and sale of aquatic plants in the United States. Though still only four acres in 1908 and probably only slightly larger in 1912, it was already recognized as unique to the nation (L. 1908).

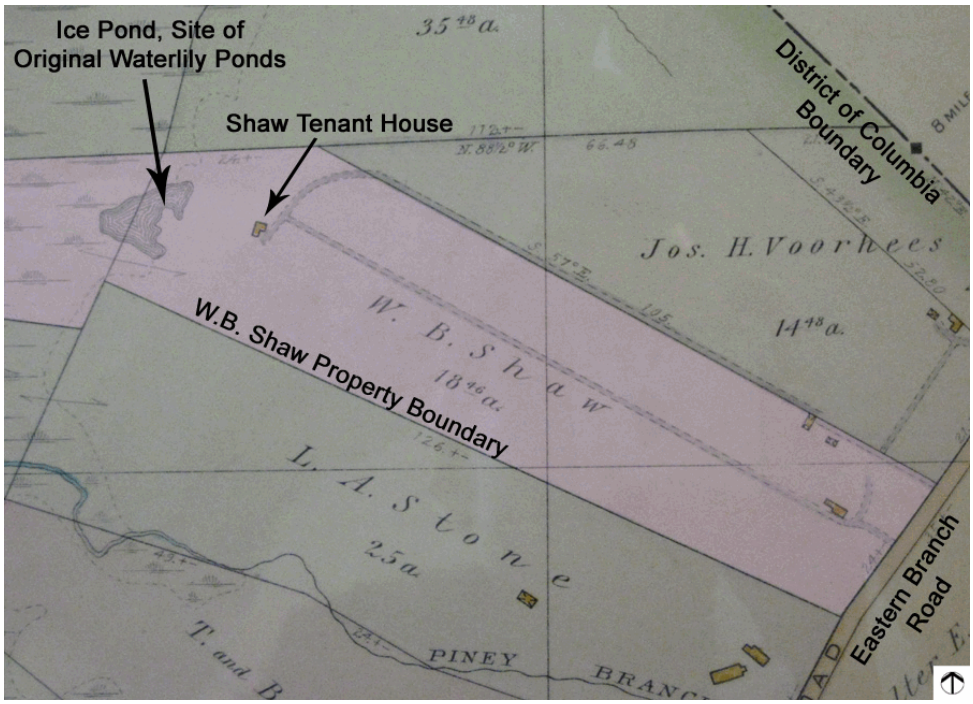

Figure 7. Detail of an annotated 1894 Hopkins Real Estate Plat Book map, showing the early layout of the W.B. Shaw property and surroundings (Hopkins 1894, Plate 29).

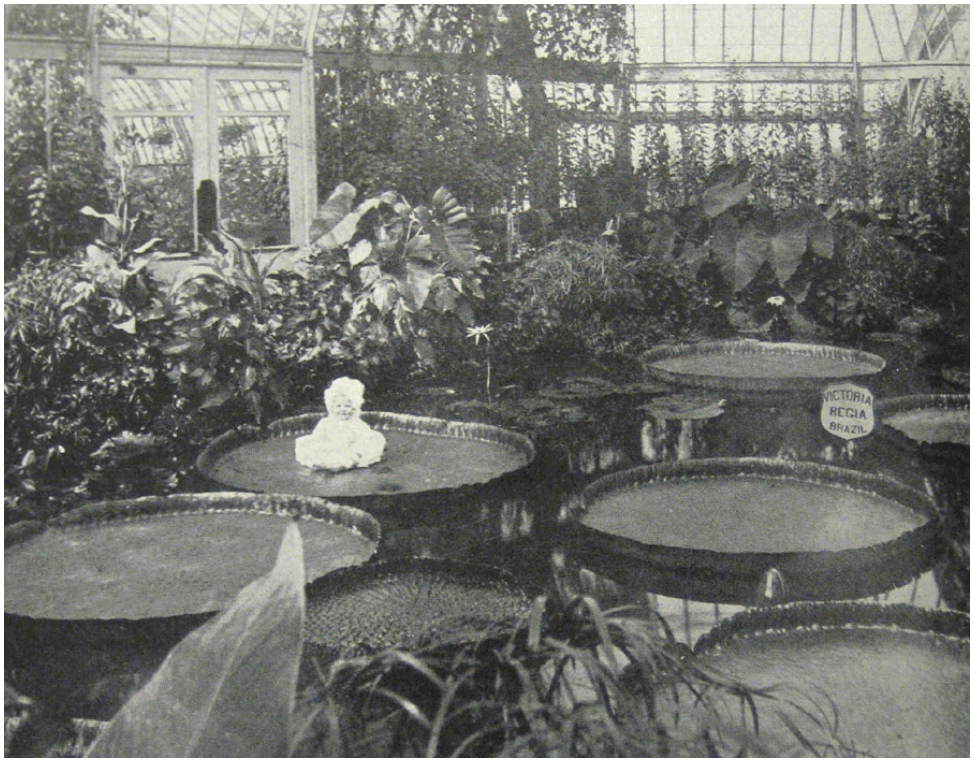

Figure 8. A typical historic photograph of a child sitting on a leaf of the celebrated Victoria Regia at Schenley Park in Pittsburgh, Pennsylvania (Bisset 1907: 116).

Figure 9. Photograph of two young women in a pool of the Shaw Aquatic Gardens with Victoria Regia in the foreground and willow trees behind, circa 1925 to 1930 (Buckingham c. 1925-30, CHS 10455.19, MS 710, Historical Society of Washington, DC).

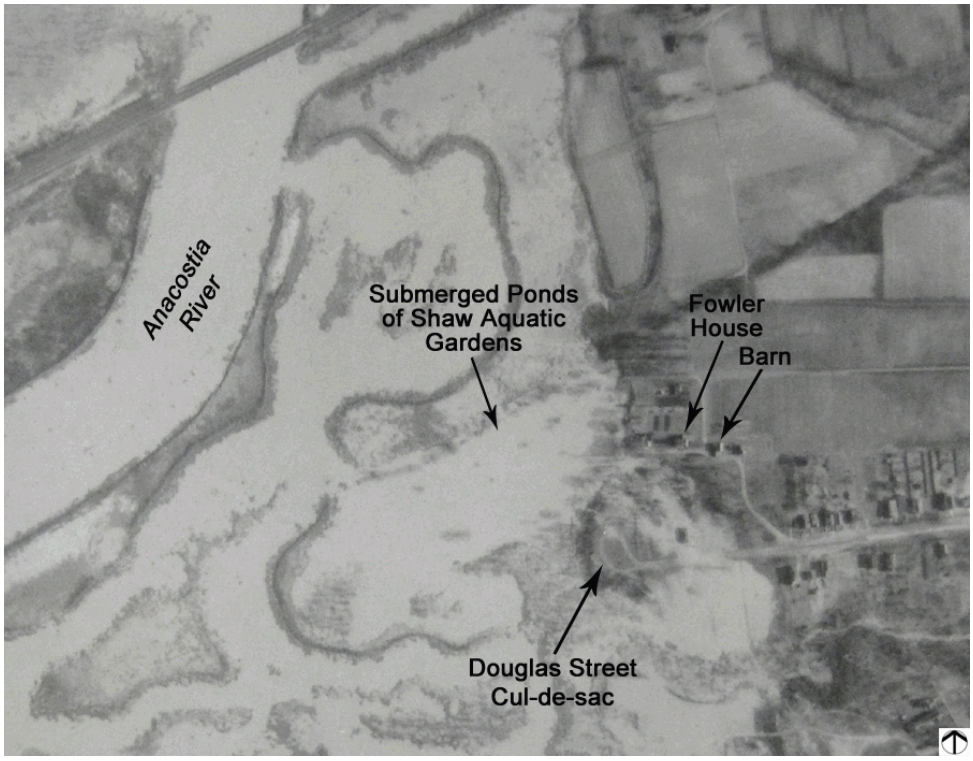

Figure 10. Annotated aerial photograph of the Shaw Aquatic Gardens, 1936 (Historic Aerial Photographs, RG 328, No. 960, National Archives and Records Administration). Note the display ponds and nearby 1912-13 structures, east of the flooded ponds.

1912 to 1938 AD

FOWLER MANAGEMENT OF THE AQUATIC GARDENS

Expansion and Commercialization of Shaw Aquatic Gardens

Capitalizing off of the growth and potential of his new business, Shaw took out a loan in 1912 and "commercialized" his lilies (Cawood n.d.). As later recounted by his daughter, "that summer we began to ship big orders of lilies to out-of-town markets. In August all debts were paid and a new automobile bought and paid for…I created quite a stir peddling pond lilies in a gas wagon" (Cawood n.d.). Since Fowler herself was the driver of the lily truck, she became the first woman in Washington, DC to hold a commercial truck drivers' license (National Park Service 1996).

As part of his business expansion that same year, Shaw and Fowler had a small, two-story board and batten building constructed, to serve as the sales building (now known as the Administration Building; see Figure 1). Here lilies, roots and aquatic plants were packaged and prepared for shipment around the country. In 1913, they went on to build two steam-heated greenhouses on either side of the sales building. The northern and more extensive one of these

was later interpreted as two structures (now known as Hothouses 1 and 2), because it incorporates two separate clusters of tanks under a single roof. The southern structure was a more simple, double row of tanks covered by one roof (now known as Hothouse 3). These buildings provided a place to nurture tender new water lily transplants and house the more fragile tropical varieties during the cold winter months (Dillon 1976: 2).

A survey map of the Shaw property from 1913 depicts a group of three buildings on the northwest end of the property, near the edge of the marsh (Baist 1913: Plate 13). A lightly sketched square close by was probably intended as an outline of the aquatic gardens themselves, which sit immediately on the edge of the wetlands. Since the survey for this map pre-dated the construction of the two Shaw greenhouses in 1913, the 1912 Shaw Sales Building (now known as the Administration Building) is the westernmost structure depicted. The other two buildings, which run parallel to Douglas Street, likely represent the old tenant house, which served as Helen Fowler's home for many years, and an associated barn. This house can be seen in an undated photograph of the building area looking east, probably taken sometime in the 1950s (Figure 11). Both of these buildings were demolished shortly after Helen Fowler's death in 1957 (Kenilworth Aquatic Gardens aerial photograph 1960, NPS National Capital Region GIS). In the same photo, the southern greenhouse (now known as Hothouse 3) is partially obscured behind a tree to the right of the entrance lane. The slightest hint of a barn can be seen in the background, in addition to the open doors of a small shed built sometime after 1912.

The installation of a collection of concrete display ponds probably took place around this time or shortly afterwards, during a distinct period of commercial growth in the 1910s. Among these were three large concrete pools (now known as Display Pools 1, 2, and 3) to the east of the Shaw Sales Building and the northern greenhouse (now known as Hothouses 1 and 2). Several smaller concrete pools were also built along the lane east of the main ponds and to the south of the southern greenhouse (now known as Hothouse 3). One of these was featured in the 1932 Shaw Aquatic Gardens catalog, in a short section on pond construction. The pond pictured (today's Display Pool A) is well populated with water lilies and wildrice (Fowler 1932: 4). The role of these pools in nurturing young aquatic plants, and in particular tropical lilies, played a crucial role in expanding the gardens' ability to produce and market a wide variety of plants. As temperatures warmed, groups of young lilies spent a brief time here after their winter in the greenhouse, adjusting to the outdoor climate and conditions before they were moved into the main ponds. The same process takes place today, and plays a key role in helping the gardens to successfully grow tropical varieties (Doug Rowley, Personal communication, January 25, 2010). At the very latest, all three large, rectangular display ponds to the east of the northern greenhouse and the old Shaw Sales Building were installed by 1927, as depicted in an aerial from that year (Figure 12). The several smaller ponds in the vicinity of the building complex were most in place by the 1930s. A photograph of one of these (the pool currently known as Display Pool A) appears in the 1932 Shaw Aquatic Gardens catalog (Fowler 1932: 4).

Although Helen Fowler had originally lived nearby with her husband and son, sometime in the 1910s she relocated to live in the old tenant house next to the gardens. In 1910 the Fowlers' only son, Marian (or Marion) M. Fowler, was fourteen years old and attending the local school (United States Census Bureau 1910). However, he died tragically of disease soon afterward;

and in a double tragedy, Fowler's husband also died sometime before 1920 (Lapp 2006: 5; United States Census Bureau 1920: 5B). Helen Fowler's proximity to her parents and brother Charles, who was also living nearby, at this difficult time likely helped her to cope with her loss, as did her work on the lily farm (Lapp 2006: 6).

Meanwhile, Shaw's advancing age had likely begun to compromise his ability to handle the rapidly growing aquatics business. At her father's request, Helen Fowler took over the business in 1912 (Dacy 1926). Although further research is needed, it appears that Shaw may have been partially retired even before this point. A piece of stationary found in the files of the Historical Society of Washington, DC bears the date 191_ and reads "W.B. Shaw, Grower of Water Lilies and other Aquatic Plants, Kenilworth, Washington, D.C." In the top left hand corner, above the title, "Manager," the name "Jacob Iseli" has been crossed out in pen and replaced with the signature, "L. Helen Fowler" (MS 710, Historical Society of Washington, DC archives). How long Mr. Iseli may have been in charge of the gardens is as yet unknown, as no mention is made of him in other documentation of the property. It is known, however, that Fowler assumed management of the gardens in 1912, allowing her father to officially retire (Dacy 1926).

L. Helen Fowler and the Shaw Aquatic Gardens

Lucy Shaw died on March 5, 1921, and Walter B. Shaw followed soon after, on December 30 of the same year. Both were buried in Arlington National Cemetery out of recognition for his military service during the Civil War (National Cemetery Administration 2009). Fortunately for the gardens, however, Shaw's life work would live on and continue to grow through his daughter, L. Helen Fowler. Mrs. Fowler and her brother, Charles M. Shaw, became the new owners of the farm upon their father's death in 1921.

Having assisted her father since childhood and cultivated an interest in aquatic gardening ever since, Fowler was well-suited to assuming full responsibility for the Shaw enterprise in 1912. From that point forward, her knowledge and experience in water gardening grew, not only as a result of ongoing study and exploration, but through communications with other experts in the industry and the Department of Agriculture (Dacy 1926).

As early as 1915, Fowler appeared as a judge at the fourth annual rose exhibition of the Brookland Rose Society of DC, along with a number of professional horticulturalists from the Botanical Gardens, Department of Agriculture, and White House Gardens (The Washington Post, May 21, 1915). Fowler later served as a judge for a myriad of events, including the Brookland Brotherhood Flower, Fruit and Vegetable Exhibition of 1916, (The Washington Post, October 3, 1916). In 1916 she was the corresponding secretary for the Washington Aquarium Association, and in 1926 was on the executive committee of the National Plant, Flower and Fruit guild (The Washington Post, January 21, 1916; The Washington Post, April 25, 1926). In 1927 and 1928, she served on the exhibition committee of the American Horticultural Society (The Washington Post, May 29, 1927; The Washington Post, May 22, 1928).

Fowler involved herself in other community events as well, by offering a near constant

succession of local talks related to aquatic gardens and water lilies. For example, at a dinner hosted by the Arts Club in 1920, she gave an illustrated presentation entitled "The Water Lily, the Queen of the Flowers." During her talk she "explained the varieties of water lilies" and "said that it was possible for every one having a pool of water or a fountain on their place to raise pond lilies" (The Washington Post, July 9, 1920). For the Washington Soroptimists, an international women's organization, she hosted a picnic luncheon and flower show at the Aquatic Gardens during the summer of 1925 (Wilson 1925). In 1926 she gave a lecture to the nature class and garden club of the Occupational Therapy Department of Washington's tuberculosis hospital on Fourteenth Street (The Washington Post, May 24, 1926). She continued to offer both public and private lectures into the 1930s, presenting to a number of different organizations including the Chevy Chase District of Columbia Garden Club, the Community Garden Club, the Arlington County Garden Club, and the Bethesda Community Garden Club (The Washington Post, March 20, 1929; March 15, 1931; August 6, 1933; September 23, 1934; September 30, 1934; May 19, 1935).

Thus, in 1937 Helen Fowler, a 62-year old widow and water lily expert, was the sole manager of the farm and supervisor of seven male employees who helped care for and harvest the various plants sold by the gardens (Figure 13). Each day at noon she made herself available to buyers, to show them around the pools and recommend particular plants (The Washington Times, April 8, 1937). An additional and unique draw to the water gardens was provided by Fowler's paintings, which she began creating in earnest at the age of 55, or around 1930. According to an account by The Christian Science Monitor, she was first inspired to draw water lilies during a trip to South America. Visiting the Isle of Gaspare, near Trinidad, with some other natural scientists, Fowler was intrigued by the local plants and decided to sketch them. Friends encouraged her to enhance the pictures with color, and soon she had her own set of water colors (Orr 1938).

"From that moment forward, she never ceased painting flowers. She found that it was helpful to customers to see a painting in full color of some certain variety of plant they contemplated purchasing, but which perhaps was not in bloom at the time they were buying." (Orr 1938)

In addition to lecturing and painting, she created wedding bouquets and decorated churches with colorful lily and lotus blooms (The Washington Times, April 8, 1937). One section of the old barn to the east of her house became a studio where she hung her paintings, while another was used to house her various flower arrangements. As described in 1938, these were "made with aquatic flowers and foliage, flat bowls of lilies and bubble bowls, and a great Chinese blue vase which last week contained pink lotus, wild rice and cattails, an unforgettable picture" (Pozer 1938).

The prestige of Fowler's position at the time, as a woman and a successful business owner, was quite unusual. A certain note of pride can be heard in one line from The Washington Post, written by a fellow woman professional: "Presiding over the whole establishment—ponds, pools, greenhouses, studio—is a woman, Mrs. Helen L. Fowler [sic.]" (Warren 1935). In other cases, this rarity had the effect of producing confusion. For example, a 1934 article mentions "Mr. Shaw, proprietor of this interesting park" (Shosteck 1934). In fact, this probably referred

to Fowler's brother and co-owner of the land, Mr. Charles Shaw, rather than his sister, who was the true business owner. Indicative of the times, the reporter seems to have jumped to the conclusion that the gardens were owned by a man. At the same time, however, Helen Fowler herself appears to have intentionally hid behind her father's name, at times. As described in a 1937 article: "Only in Washington is she known as Mrs. Helen Fowler because all her business is carried on under the name of W.B. Shaw. Even the sign leading to the lily pools on her Kenilworth farm carries that name" (The Washington Times, April 8, 1937). The literature of the time also seems to have overlooked Fowler almost completely. For instance, looking up one of Fowler's hybrids, Nymphaea 'Radiance,' in Frances Perry's popular water gardening produces the citation of "Shaw, 1930" for the introduction date and identity of its creator, even though W.B. Shaw had by that point been dead for nine years (W.B. Shaw Aquatic Gardens 1930; Perry 1938: 55).

Still, Fowler's role as a woman and a well-known Washington business owner was recognized by local women's organizations, and she spoke frequently to a number of these groups around the city, including the Soroptimists, the Y.W.C.A., the Women's Club of Lyon Village, and the Women's Improvement Club of Silver Spring (Wilson 1925; The Washington Post, November 13, 1932; March 10, 1935; May 26, 1935).

Much of Helen Fowler's interest in speaking to the public focused on the accessibility of water gardening as a recreational and artistic pursuit. In a 1926 interview with the Dearborn Independent, she said: "Water lilies are the easiest of all flowers to raise…All they require are unobstructed sunlight, plenty of water and a rich soil such as [one] often obtains at the bottom of sluggish streams due to the decomposition of leaves, grasses and weeds" (Dacy 1926). At a typical talk in 1932, Fowler spoke at the Y.W.C.A. on "Making and Caring for Small Water Gardens" (The Washington Post, November 13, 1932). As the industrious yet peaceful pastime that saved Mrs. Fowler from her own acute mid-life sorrows, it is probable that for her, the influence of aquatic gardening extended far beyond the ponds themselves. "I love them as I would my own children," she said in 1937; and indeed, her devotion to the lilies and the gardens that housed them reinforces this statement (The Washington Times, April 8, 1937).

The Shaw Aquatic Gardens catalog that was launched in 1932 followed a new layout and style that reflects not only Mrs. Fowler's strong interest in sharing water lilies with the public, but her determination to meet the demands of an increasingly competitive market. In contrast to the modest, simple aesthetic of earlier years, the 1932 catalog has a different look that advertises both Fowler and her gardens. The opening pages feature the line, "Water Gardening: The Fascinating New Recreation for Every One Who Has a Plot of Ground" and a photograph of Fowler with some of her lilies, in a boat on one of the ponds (W.B. Shaw Aquatic Gardens 1932: 1). In a personal message to her readers, Fowler writes: "I want you to know that I am ready and willing to give my customers unlimited consultation service, as well as the best of strong, healthy, vigorous plants, my many years of experience produce" (W.B. Shaw Aquatic Gardens 1932: 1). A reading on "The Fundamentals of Water Lily Culture" follows, along with the range of plants available at the gardens with color illustrations of Fowler's paintings. The catalog concludes with a collection of quotes from "success letters" sent in by correspondents who started their own gardens under Fowler's guidance, and an invitation to "Plan now to bring

romance into your garden" (W.B. Shaw Aquatic Gardens 1932: 24-5). Clearly, Fowler's entrepreneurial vision was broadening the goals and scope of the gardens, as she worked hard to keep up with the times.

One of the primary ways in which she achieved this purpose was by constantly working to expand and diversify the collection of aquatic plants, and particularly water lilies, available at the Shaw Aquatic Gardens. In part due to her unfailing devotion to the business and the plants themselves, these efforts were highly successful. By the early 1930s, her catalog boasted: "The W.B. Shaw Aquatic Gardens are the largest in the country and have over nine acres in propagation ponds and the largest stock and variety of water lilies and sub-aquatics in America" (W.B. Shaw Aquatic Gardens 1932: 3). A comparison with some of the competition helps to put Fowler's efforts in perspective, and provide some idea of the commercial climate at the time. Another site devoted entirely to aquatic plants in 1931 was the Sherlock Water Gardens of Glendale, California. In their catalog from that year, Sherlock advertised 30 different types of water lilies and one lotus, versus the 55 varieties of water lily and five types of lotus for sale in the Shaw Aquatic Gardens catalog of 1931 (Sherlock Water Gardens 1931; W.B. Shaw Aquatic Gardens 1931). Around the same time Smiley's Water Gardens also emerged, a site owned by Earle Smiley in Seward, Nebraska. In a personal note at the beginning of his 1934 catalog, Smiley boasts of having increased the size of his gardens so as to "handle most any order regardless of size…Mine is undoubtedly Midwest's most famous water garden and I receive many letters each year from satisfied customers" (Smiley's Water Gardens 1934: 1). Smiley's Water Gardens specialized in hardy water lilies, of which they sold 31 different types. By comparison, the Shaw Aquatic Gardens catalog from that year included 58 varieties of water lily, ranging from hardy to tropical plants of both day and night blooming types, and five kinds of lotus (W.B. Shaw Aquatic Gardens 1934).

The task of keeping a step ahead of the competition and maintaining a diverse collection of plant varieties was one in which Fowler took a personal interest. Like her father before her, she enthusiastically traveled the world to collect lilies and roots from Egypt, Africa, France, England, Ireland, and elsewhere. Fowler's grand-niece, Ruth Shaw Watts, remembered her great aunt as an enthusiastic voyager of the world, and remarked that during the holidays Helen was "usually traveling abroad. You know she traveled quite often to Europe and South America and all over, so we did not get to see her as often as would be normal for somebody" (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). Fowler's travels were not only frequent but carefully planned, as suggested by two letters of introduction from this era. One of these, undated, was written by Gilbert Haugen of the House of Representatives' Committee on Agriculture. After mentioning her planned travels to South America "in the interest of plants," Haugen goes on to say: "Mrs. Fowler is the manager of some of the most unique, extensive and interesting gardens in this country. Any courtesy extended to her will be greatly appreciated and worthily bestowed" (Gilber N. Haugen, n.d.). Another similar letter, dated 1921, was penned by Frederick Coville, botanist and curator of the U.S. National Herbarium. In anticipation of Mrs. Fowler's travels to the West Indies and northern South America, Coville asks that directors of botanical gardens there offer her the same degree of courtesy she has shown visitors to her own aquatic gardens in D.C. (Frederick V. Coville, July 6, 1921).

Meanwhile, from the little farm in Kenilworth thousands of rare lilies were shipped out around the world every day. During the blooming season in 1936, more than three thousand flowers were leaving the farm each day, bound for New York, Boston, Chicago, and even as far away as Siam. The lilies were carefully chosen, picked, and washed, then packaged into boxes made and patented especially for Shaw Aquatic Gardens. Still buds at this stage, the lilies were cushioned with moss and closed up for shipment (The Mayflower's Log, August 1936). If properly cared for once out of the box, the resulting blooms could last as an ornament for up to seven days (Dacy 1926; Conard and Hus 1907: 17).

The gardens were also marketing a range of other aquatic plants around this time. By 1926 Fowler was advertising some of the more popular species in the back of her catalog. These included arrowhead (Sagittaria latifolia), cattail (Typha sp.), waterpoppy (Hydrocleys nymphoides), parrot's feather (Myriophyllum aquaticum), water hyacinth (Eichhornia crassipes), wildrice, true forget-me-not (Myosotis scorpioides), lizard's tail (Saururus cernuus), and pickerelweed (Pontederia cordata) (Fowler 1926: 15). Fowler broadened the gardens' focus still further in 1927, when the catalog included a total of 31 new iris varieties kept and sold at the gardens. After praising the value of the iris as a "companion to our water lilies," she included a list of thirty different types of iris available for sale (Fowler 1927: 17). The full list appears in the vegetation section of the Landscape Characteristics chapter, below, and in Appendix C of the Supplemental Information Chapter. Envisioning the presence of these various aquatic species along pond fringes and bordering the marsh area to the west thus helps to convey some idea of the historic landscape. They are also a clearly established presence in historic photographs (Figure 14). Although many of these plants had likely been present in the gardens for years and even decades, the new focus on their marketing reflects the commercial development of the site.

On the whole, the appearance of the aquatic gardens seems to have changed little over the course of Helen Fowler's ownership. She continued to live in the small tenant house down by the ponds while her nephew, Charles' son, lived nearby, in the old farm house at 1530 Kenilworth Avenue where she was raised (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). In a reflection of their use, the ongoing commercial operation of the ponds meant that their general configuration and size remained fairly constant. As evidenced by a 1927 aerial photograph, the average scale of the main ponds was larger than it is now, but their arrangement into larger pools with smaller groupings to the west and south was somewhat similar to their appearance today (see Figure 12). The site clearly remained under development at this time, however, since some ponds still had yet to be built. As illustrated, today's Ponds 29, 30, and 36 had not yet been installed in 1927. However, four of the ponds on the southwest corner of the gardens were present by this year, correlating roughly with current Ponds 39, 42, 43, and 44.

Though barely visible in the 1927 image, the buildings that stood at the site during this period are clearly depicted in an off-season photograph from March of 1936, following the so-called Great Flood of 1936. Though not clearly visible here, a small metal garage for Fowler's lily truck stood near the other garden buildings at this time. Permitted in 1916 to L. Helen Fowler, this structure was made of sheet metal, stood eight feet tall, and cost 125 dollars to construct

(Building Permit 2377, Lot 184/9, Washingtoniana Room, District of Columbia Public Library). Another small shed may have been added to the property only a couple of years later. In March of 1938, Fowler received a permit to build a single-frame wooden shed for the "storage of garden tools" and measuring eight by sixteen feet. This shed was apparently to be erected with the help of the Potomac Garden Club, and may have stood somewhere in the vicinity of the barn (Building Permit 210946, Lot 184/9, Washingtoniana Room, District of Columbia Public Library).

The historic site captured by Figure 10 illustrates not only the buildings maintained by Fowler at the time, but also the topography of the entire aquatic gardens. The severity of the 1936 flood, pictured here, demonstrates both the vulnerability of the ponds and the intelligent positioning of the building complex on the relatively high ground to the east (see Figure 10; Historic Aerial Photographs, Record Group 328, No. 960, National Archives and Records Administration). In large part thanks to the carefully planned location of the buildings in the topography of the site, the ponds and the Shaw business were able to recover from this event.

Likewise, the slow development of the Kenilworth area has helped to minimize flood damage over the years. As illustrated by the same 1936 aerial photograph, much of the surrounding landscape remained characterized by open farmland and woodlots well into the 1930s and 1940s (see Figure 10). A few months after the 1936 flood, The Mayflower's Log gave an account of how to reach the gardens that conveys some idea of the largely undeveloped nature of the nearby properties, at the time:

"…you drive down a street which turns into a road after a bit, turn up another road and there you are. At first glance, you'd say it was the country, distant and remote from the Big City. Birds are singing in green, leafy trees; the sound of locusts fills the air with a steady hum; a dog is lazily sleeping in the sun; a breeze brings the croak of a frog from a nearby pond to a pleasant small house. But go beyond the house: then you come smack into business again. Here, business assumes the form of a rustic, log-covered office, busy with people…" (The Mayflower's Log, August 1936)

The writer's distinction between a "street" and a "road" is somewhat unclear, but may have implied reduced development and inferior paving, or lack thereof, along the road. The "pleasant small house" described above was the home of Helen Fowler until her death in 1957, and was demolished soon thereafter (The Mayflower's Log, August 1936; Kenilworth Aquatic Gardens aerial photograph 1960, NPS National Capital Region GIS).

In addition to their unusual and renowned productivity, the informal yet pristine landscape design of the ponds made them uniquely attractive, even to the inhabitants of the White House. President and Mrs. Woodrow Wilson, Mrs. Warren G. Harding, and Mrs. Calvin Coolidge were all frequent visitors, and were among the gardens' supporters (The Washington Star, March 7, 1937; The Washington Post, January 31, 1957). Thanks to their interest in the ponds, Helen Fowler came to count these famous personalities among her friends. According to one account:

"Woodrow Wilson made frequent trips to the gardens, going there to sit beneath a willow oak only a short while before he died. 'I don't remember that he said a word on his last visit,' Mrs. Fowler said. 'He was very ill. But he smiled when I handed him some lilies." (Sadler 1939)

As remembered by Ruth Shaw Watts, the gardens were also always open to local children, particularly for ice skating in the winter. In 2004, she recounted:

"Come winter we were given ice skates, and we skated on the ponds. And I can remember, before I went to school, most days that the ponds were frozen over, I'd take an alarm clock and set it and put it on the bank and go down there and ice skate until time to get ready for school. When the alarm went off I'd pick up my alarm clock, go up home and get ready for school." (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004)

Thus, although relatively few formal tours of the gardens were organized during the years of ownership by Shaw and Fowler, there is little doubt that the ponds were used informally for recreational as well as educational purposes, beyond the talks and tours offered by Fowler personally. In speaking of the gardens, Watts further related how "it was just a nice place to go, nice and quiet. And, we took good care of the ponds. We loved the ponds. That's where we had a lot of our get togethers" (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004).

The Hybrid Water lilies of L. Helen Fowler

Throughout Fowler's ownership of the Shaw Aquatic Gardens, one of their greatest attractions continued to be the variety and unique character of lilies found there. Between 1921 and 1935, twenty-two additional water lily varieties and one new lotus were advertised in the garden catalog (W.B. Shaw Aquatic Gardens 1921; W.B. Shaw Aquatic Gardens 1926; W.B. Shaw Aquatic Gardens 1928; W.B. Shaw Aquatic Gardens 1929; W.B. Shaw Aquatic Gardens 1930; W.B. Shaw Aquatic Gardens 1931; W.B. Shaw Aquatic Gardens 1935). This expansion was made possible not only by Fowler's travels abroad to collect foreign varieties, but by her own horticultural efforts. Following the example set by her father, she developed a number of new hybrid lily varieties, some of which proved even more popular than those created by Shaw (see Appendix B of the Supplemental Information Chapter for a full list of all water lilies known to have originated at the Shaw Aquatic Gardens).

One of the best known lilies created by Helen Fowler was the hardy lily Nymphaea 'Rose Arey,' which she named after a cousin of hers (Warren 1935; National Park Service 1940). Created in 1913 and occasionally mistaken as 'Rosary' in its early years, this flower's deep, rich pink color, large size and high degree of symmetry have made it a well-loved lily for almost a century (The Mayflower's Log, August 1936; Cawood n.d.; William Tricker, Inc. 2010). In full bloom, its petals were said to reach a full eight inches across. It was awarded the silver medal for best new lily by the New York Horticultural Society in 1921, and received the Award of Merit from the Royal Horticulture Society (Cawood n.d.; William Tricker, Inc. 2010). Another one of Fowler's most successful hybrids was the Nymphaea 'Pink Opal,' a coral-pink, waxy flower that makes excellent cut blooms (Perry 1938: 54). Indeed, one article boasted that the blossom of the Pink Opal "lasts longer after being cut than any other water lily" (Warren

1935). Introduced in 1915, this lily's luminescent center served as inspiration for its name (Cawood n.d.).

Both the Pink Opal and the Rose Arey came highly recommended for medium size or large pools by one 1931 water gardening book, and were similarly praised in other literature of the same era (Ramsey and Lawrence 1931: 56). Their popularity has continued into the present day. As recently as 2005, the blooms of the Pink Opal were described as "fine cut flowers" (Slocum 2005: 189). Of the Rose Arey, the same author offers still higher praise, stating that "this is one of the most beautiful lilies known" (Slocum 2005: 202).

Fowler developed and introduced a number of other water lily hybrids, as well. One of her earlier lilies was Nymphaea 'Suffragette,' a large, "dazzling white" lily with blooms 6 to 8 inches across that was first sold in the Shaw catalog of 1914 (W.B. Shaw Aquatic Gardens 1914). In 1921 she introduced Nymphaea 'Loose,' a plant with a large, white bloom that was named after a local Washington florist (National Park Service 1940; W.B. Shaw Aquatic Gardens 1921). Nymphaea 'Evangeline,' at times mistaken as 'Angeline,' was a free-blooming lily with a flesh-colored, star-shaped blossom, developed by Fowler around 1924 and introduced in the W.B. Shaw Aquatic Gardens catalog of 1928 (Perry 1938: 46; Cawood n.d.; W.B. Shaw Aquatic Gardens 1928: 8). It was named after Henry Wadsworth Longfellow's epic poem of the same name, which features a heroine of the beleaguered Acadians of Louisiana and Nova Scotia (National Park Service 1940). In 1930 she introduced Nymphaea 'Radiance,' a plant with iridescent pink flowers that deepen in color towards the center of the bloom (Perry 1938: 55; W.B. Shaw Aquatic Gardens 1930). Nymphaea 'Margie' was named for Mrs. Fowler's niece, and introduced around the same time (Cawood n.d.). Fowler also developed Nymphaea 'Ruth Gover' (once mistaken as "Ruth Gober"), a pale blue lily named for a woman she employed for over 25 years who was "an authority on water lilies and lotus" (National Park Service 1940; Baitz 1947). In 1927 Helen Fowler introduced Nymphaea 'Dawn,' a dazzling white day-blooming lily with pink-tinted sepals (W.B. Shaw Aquatic Gardens 1927), followed by a night-blooming hybrid with a red blossom in 1935 named Nymphaea 'Dusk' (Warren 1935). The rose-pink, day-blooming hardy double lily Nymphaea 'Souvenir' was created in 1935 by garden employee Fred Wagner, who was then working as garden supervisor. After twenty years working for Helen Fowler, the devoted sixty-year-old had spent five years carefully breeding this new lily, according to the Post (The Washington Post, July 1, 1935). This accomplishment was undoubtedly achieved with close guidance from Helen Fowler. Indeed, a different source credits the hybrid entirely to her, instead of Wagner (Warren 1935). Fowler apparently named the lily "in memory" of Wagner (National Park Service 1940).

A little-known water lily called Nymphaea 'Kenilworth Comet' was also developed by Helen Fowler sometime in the late 1930s. A tropical night blooming variety with a deep red flower, this lily was described as a "recent addition" to the gardens in 1940 (National Park Service 1940). Since it is left unmentioned by most of the historic sources and only appears in documents created by the National Park Service, further research is required to pinpoint the history of this hybrid (Kenilworth Aquatic Gardens Plant Species List, n.d., National Park Service, Kenilworth Aquatic Gardens files, National Capital Parks - East; Rummel et al. 1981: 231).

Many of Helen Fowler's hybrid lily creations have been immortalized in her paintings, which graced the cover and inner pages of the Shaw catalog throughout the late 1920s and 1930s. By 1938, many visitors who came to the farm seeking lilies were leaving with not only an armful of bulbs, flowers or roots, but a Fowler painting as well. A notice published in the Washington Post promised a personal tour by Fowler of both the gardens and the "Barn Gallery," which included "pastel pictures of water lilies and portraits by Mrs. Fowler" (The Washington Post, June 12, 1938). Her work was requested for exhibition and sale by department stores, and was also included in various shows around Washington (Orr 1938). For instance, special exhibitions of her pastels were given at the Picture Gallery of the Georgetown Marionette Studios in 1940, and again at the George Washington University Library in 1948 (The Washington Post, November 10, 1940; The Washington Post, November 21, 1948).

In addition to painting and producing a variety of hybrids, Helen Fowler proved herself exceptionally capable in the administration and management of the aquatic gardens. In 1921 the farm was producing 75 different varieties of water lilies, as well as a number of other aquatic plants and even pitcher plants (The Washington Post, July 17, 1921). Though not available for sale, the famous Victoria Regia was still grown in the gardens for display purposes. Hundreds of visitors from around the country and the world were welcomed to the farm each Sunday, when "two young men" and sometimes Helen Fowler herself were available to answer questions about the ponds (The Washington Post, July 17, 1921). For locals, the gardens "served to introduce something new – the picnic breakfast – as the early morning is the best time to view the blooms and Washingtonians take breakfast along and eat it while enjoying the beauties of the flowers" (The Washington Post, July 17, 1921).

By 1926, Helen Fowler was selling from 3,000 to 5,000 lilies daily from the farm, in addition to thousands of roots and roughly 3,000 other aquarium plants a week (Dacy 1926). Construction of new ponds had ceased by the 1930s, the final three pools in the gardens' southwest corner having probably been built in the late 1920s. Throughout the 1920s and 30s, the site attracted as many as 6,000 visitors each weekend day that they were open to visitors (National Park Service 2009). Between 1922 and 1927 the ponds generated a profit of almost $61,000, as calculated by Helen Fowler in 1928 (Memorandum from L. Helen Fowler, 1928). By 1935, the Shaw Aquatic Gardens had grown to encompass 42 pools spread over nine acres, and in 1938 they were cited as containing some 500,000 plants in all (Warren 1935; The Washington Star, September 14, 1938).

Despite their growth, descriptions of the gardens from the 1930s reveal how little the landscape seems to have changed over time. As recounted in 1935, seventy-five varieties of pink, purple, blue, white and yellow lilies floated in pools "separated by shrub-filled little footpaths, surrounded by wind-rustling weeping willows" (The Washington Post, July 1, 1935). As reflected in a 1940 map of the site, around this time a number of trees stood in clusters around Display Pools 1, 2 and 3, and Fowler's home. Several sizeable trees also apparently stood along the lane west of the building complex, where they likely helped to screen the structures from the ponds. These included a large willow, a Nordman fir (Adies nordmanniana), and an exceptionally old willow oak (Quercus phellos) that remained standing at the site through

around 1984 (National Park Service 1940; Doug Rowley, Personal communication, February 3, 2010). To the west, many of the ponds contained several different types of water lilies, lotus and a variety of aquatic plants, and often a wooden boat for their collection. The rounded, sweeping shapes of the willows were the only interruption to the open views of sky and tranquil pools (see Figure 14). As romantically depicted by one admiring reporter in 1938:

"The ponds are separated by dikes with grassy paths, shaded by large trees making a picture of satisfying beauty. Acres of blooms reach away in all directions, the surface of the water almost entirely covered with foliage and blossoms of white, pink, rose, crimson and blue. There are great plantings of lotus from many lands, as well as the yellow which is among the most beautiful of all our native plants. Water birds have found this place to their liking and great white and grey cranes stand at the water's edge or fly lazily from pond to pond." (Pozer 1938)

Yet, in part due to their great success and notoriety as a site containing "more water lilies and sub-aquatic plants than any other one spot in America," the gardens' future was increasingly uncertain (Warren 1935). Their heightened public appeal, unique character and desirable location in the nation's capital combined to refocus attention on the vision of a new public park devoted to aquatics.

A Struggle for the Lily Ponds

Even as Shaw's water lily business thrived, the government's plans for public spaces in the city were gradually materializing. After years of fitful funding and inconsistent commitment to action, the reclamation project for the Anacostia River flats was reenergized by new legislation in 1918. This new law established Anacostia Park and was enacted by Congress on August 31. It also provided for the continuation of development along the river. Stretching from the mouth of the Anacostia north to the edge of the District, all land reclaimed in this area was designated to become a part of the new Anacostia Park, whose concept in many ways resembled the East and West Potomac Parks already created along the Potomac River. Although this new legislation represented a crucial step toward the creation of Anacostia Park, the full extent of the project would still not be completed until 1959 (Stanley W. McClure to Chief of Division of Interpretation and Visitor Services, July 14, 1965, Kenilworth Aquatic Gardens files, National Capital Parks - East). Even then, it would never achieve the same status as East and West Potomac Parks (Thomas 1963: 1).

By 1919, Helen Fowler was already aware of the government's intentions for the riverside. In a letter sent from her lawyer on the subject, he informs her that "the Attorney General claims that the United States has an absolute right, paramount to all other rights, to all of the marsh lands. This, notwithstanding the fact that such lands have been and are now assessed to private individuals" (George H. MacDonald to L. Helen Fowler, September 6, 1919). MacDonald goes on to detail the government's plans to pay private owners only for the land above what had been defined as the "High Water Line," or the area naturally covered at high tide. For the aquatic gardens property, the portion of land outside of this area was fairly small, as illustrated by subsequent land transfer order maps (Figure 15; NPS Land Transfer Order

No. 767, National Capital Region files). However, MacDonald reassures Fowler that the U.S. Army Corps of Engineers (COE) does not anticipate the extension of the project into the Kenilworth area for another five years at least, although condemnation proceedings were expected to begin soon (George H. MacDonald to L. Helen Fowler, September 6, 1919). The suspension of the project for several more years was confirmed by a second visit to the COE, paid by Mr. MacDonald two months later (George H. MacDonald to L. Helen Fowler, November 1, 1919).

Nonetheless, by 1924 the Shaw Aquatic Gardens were being targeted as a prime opportunity for the newly-created Anacostia Park. Both the theme and location of the gardens was ideal to help facilitate public enjoyment of the riverside, and the Kenilworth Citizen's Association even ventured to approach the Shaws to inquire about a transfer. As described by one article, "in 1924 the garden owners were persuaded to permit the citizens of the community to attempt to have these ponds made public property" (The Washington Star, March 7, 1937). Among those supporting this idea was Mrs. Calvin Coolidge, who often visited the gardens (The Washington Star, March 7, 1937). Despite the relatively slow, complicated and controversial process of acquiring properties along the river for filling purposes, the lily ponds were directly involved in negotiations with the government by 1928. In May of that year, the government submitted a draft license to Helen Fowler, outlining a proposed quitclaim agreement for the property (United States Government memorandum to Helen Fowler, May 22, 1928). By June, the condemnation petition for the land had been filed by the government, and Fowler's lawyer was urging her to accept an amended agreement for continued use of the land with a license to 80 percent of its production profits (Morten Q. MacDonald to L. Helen Fowler, June 12, 1928).

As described by Fowler herself, in later years:

"Major Brehon B. Somervell…sent a lieutenant over one day with a lease for me to sign. The lease gave me continued possession of the property for the next 10 years and then it was to be surrendered to the Government without payment. I went to see my lawyers. They told me there was nothing to do but sign it, but I refused." (The Washington Star, April 30, 1951)

Not only did Fowler refuse, but in 1929 she and her brother, Charles Shaw, filed a lawsuit. According to the existing legislation, all lands located below the high water mark were to become government property for purposes of improving navigation along the Anacostia River. However, as recounted in an article entitled "Water Lily Pond Saved by Decree," Justice Jennings Bailey of the District Supreme Court sheltered the ponds from this law by granting an injunction ensuring that 22 acres, including the aquatic gardens land and a site across the river, would be exempted from reclamation (The Washington Star, May 4, 1929). In effect, according to testimony given by the foreman of the Shaw Aquatic Gardens himself, water lilies cannot live in tidal waters. The location of the lily ponds above the High Water Line was thus established, and the gardens remained in private ownership; effectively saving them from the ambitious reclamation plans of the COE (The Washington Star, April 30, 1951).

Still, Justice Bailey's injunction proved to be only a temporary solution, as plans for Anacostia Park continued to advance in the years that followed. A 1931 article on the subject reports:

"The United States Government, if present plans are completed, will soon take over the pools and incorporate them in a 1,700-acre park, which is being constructed in Anacostia and Kenilworth, enlarge the pools and make the whole area a beauty spot to be enjoyed by residents of that section much as Potomac and Rock Creek Parks have been developed." (The Washington Post, February 15, 1931)

Fowler and her brother would soon be forced to sell the gardens to the government under threat of condemnation, the article continues, and mentions that already the owners of more than 1,300 acres along the river had reached an "amicable agreement with Uncle Sam's agents" (The Washington Post, February 15, 1931). The ambitious plans for the new park included: "in addition to the lily pools and grassy lawns, recreational grounds of all kinds, with baseball diamonds, swimming pools, football gridirons and tennis courts sprinkled all over the huge development" (The Washington Post, February 15, 1931).

Further discussion and negotiation with the government around this time is evident in some surviving notes and letters from Helen Fowler. On January 22, 1931 she made comments on a draft agreement for the sale of her land that would have required the government to uphold three conditions: allow the Shaw Aquatic Gardens business to continue without limits or disturbances; reserve for Fowler and her staff the right to limit and control visitors and trespassers; and refrain from interfering in any way with access to the pools or the care and growth of the plants (Memorandum from L. Helen Fowler, January 22, 1931). The nature of these terms reveals Fowler's clear and continued commitment to not only the land but the water lily business, hinting at some of the reasons why more than five more years would pass before an agreement could be reached.

In 1933, Congress again authorized a plan to fill in the marsh and swamp areas along the Anacostia in the name of controlling malaria-bearing mosquitoes. That same year, the administration of the parks in the capital was transferred to the National Park Service (Thomas 1963: 1). Still, Helen Fowler tenaciously held on to the Shaw Aquatic Gardens despite the controversy. Various factions developed as people took sides on the issue, and in March of 1937 the Kenilworth Citizens' Association officially voted "to ask the Government to purchase the water gardens for a public park and a show place for the Nation's Capital" (The Washington Star, March 7, 1937).

Government Purchase of the Shaw Aquatic Gardens

With public and political pressure weighing in against her, Helen Fowler finally agreed to a sale of the gardens in 1938. On December 19 of that year, the U.S. Army Corps of Engineers purchased 8.158 acres of the marsh, a tract known as Parcel 179/2, and .369 acres of adjoining land belonging to Parcel 184/9, from Charles M. Shaw, his wife Alberta P. Shaw, and L. Helen Fowler for $50,000 (District of Columbia Land Records, Liber 7300, folio 69). This sum was only made possible through a $15,000 appropriation by Congress, authorized under the District Appropriation Act passed specifically with the purpose of buying this unique site (The Washington Star, September 14, 1938; The Washington Star, February 11, 1938). The sale

included all “roots and plantings in the lily ponds, the land and the equipment and improvements at these gardens,” and the strong hope that the ponds remain fully accessible to the public, with their function intact (Unsigned letter to Walter D. Luplow from L. Helen Fowler, July 6, 1938). At the same time, Fowler planned to donate a strip of land along the present-day Quarles Street to the National Capital Park and Planning Commission, for the purpose of creating a new Anacostia Avenue (Unsigned letter to Walter D. Luplow from L. Helen Fowler, July 6, 1938).

The property transferred to the government that year was considerably changed from what Walter B. Shaw had acquired from his father-in-law back in 1879. Whereas only one or two farm structures had then stood along Anacostia Road, by 1938 a small cluster of buildings and associated concrete display ponds were located down a dirt lane to the west, on the edge of the marsh. A full 42 pools covered the property’s nine acres, which were estimated to contain some 500,000 plants in all (Warren 1935; The Washington Star, September 14, 1938). Thus, the creation of ponds and cultivation of water lilies had changed the adjoining landscape considerably, though the types of marsh and land-growing vegetation appears to have remained fairly constant. Willows, cattails, wildrice, and the occasional hardwood marked the pond edges in much the same way that they had lined the marsh for centuries. The pools themselves were irrigated and periodically drained using sluice gates that passed through the dikes between them, while a network of paths running along the tops of these dividers provided access to each pond. On the whole, the intensive use of this edge of wetland for a commercial nursery was thus accomplished with relatively little effect to the surrounding environment. Indeed, it soon became one of the last remaining wooded areas in the entire neighborhood, thus preserving a piece of the historic landscape in a manner unparalleled throughout the entire city.

Figure 11. Looking east circa 1950s, from the path between current Ponds 4 and 5 to the Administration Building and Hothouse 3, with Helen Fowler's house behind and the barn barely visible beyond (Kenilworth Aquatic Gardens files, NACE).

Figure 12. Aerial photograph of the Shaw Aquatic Gardens, 1927 (Historic Aerial Photographs, RG 328, No. 960, NARA). Note the rural character of the adjacent property and relatively undisturbed marsh.

Figure 13. Helen Fowler posing with her workers on one of the pond paths, circa 1910 to 1930 (CHS 10455.06, MS 710, Historical Society of Washington, DC).

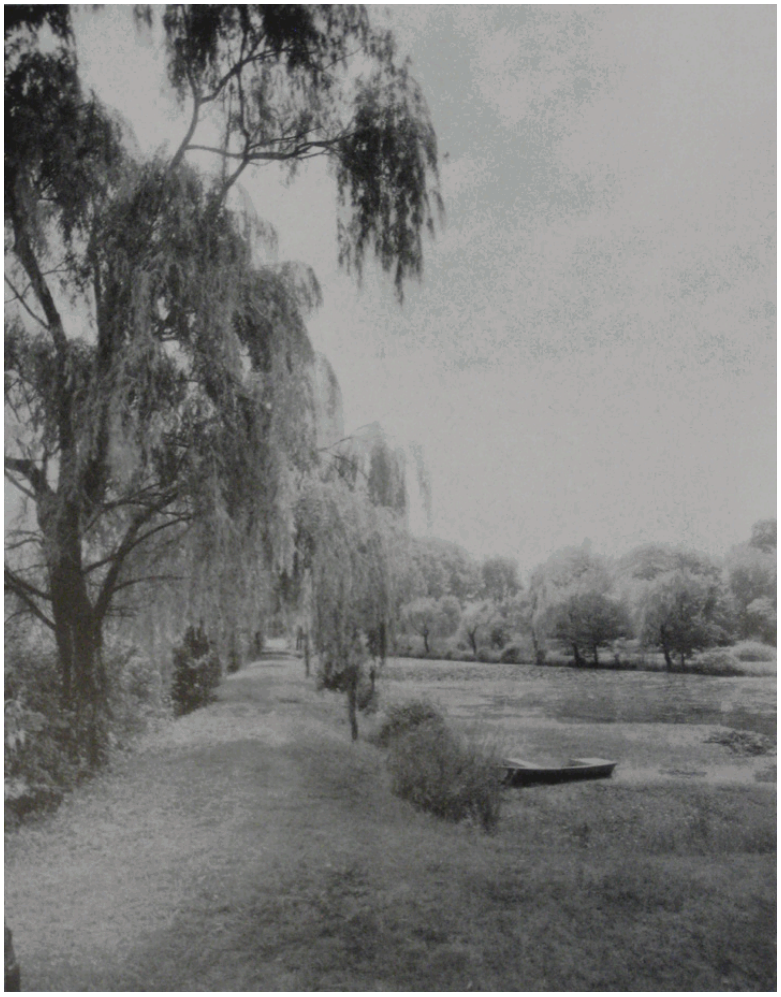

Figure 14. An illustration from the 1929 Shaw Aquatic Gardens catalog shows the open character and historic vegetation of the ponds (Fowler 1929: 19). The photograph was probably taken looking southeast, along the path between current Ponds 18 and 19.

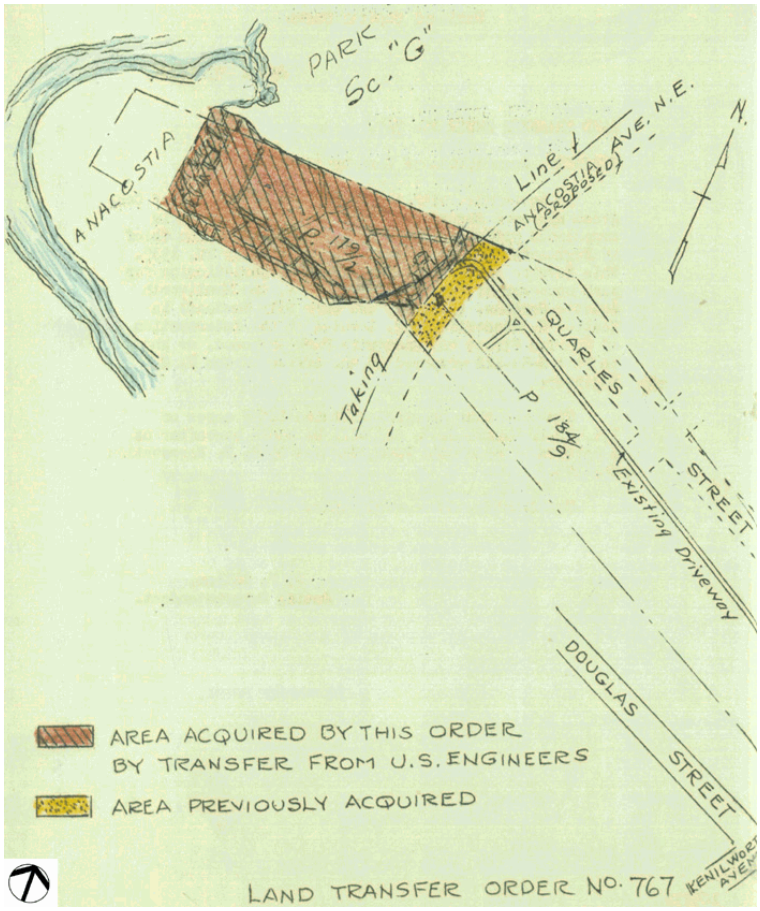

Figure 15. Map illustrating the land transferred to the NPS from the U.S. Army Corps of Engineers in 1938 (Page 2, NPS Land Transfer Order No. 767, NCR files). Note the "Taking Line" approximating the high water mark and the proposed nearby streets.

1938 to 1957 AD

EARLY NATIONAL PARK SERVICE OWNERSHIP

Acquisition of the Aquatic Gardens

Largely due to the COE's lack of real interest and ability to properly care for the lily ponds, their purchase of the gardens in 1938 was merely a temporary measure. Thus, on March 6, 1939 the National Park Service assumed jurisdiction of the newly-dubbed Kenilworth Aquatic Gardens from the U.S. Army Corps of Engineers. This transfer involved only a part of the property originally acquired from Helen Fowler, or 8.527 acres known as Parcel 179/2. Following this date the land became a portion of Anacostia Park, Section G, U.S. Reservation Number 343. In accordance with a letter from the Office of the Chief of Engineers, written on February 10, 1939, the property was transferred to the NPS by the U.S. Engineers of the War Department, who had bought it from Lucy Helen Shaw Fowler for $50,000 in 1938 (NPS Land

Transfer Order No. 767, National Capital Region files; Gillen 1940: 1).

At the time, this property was restricted to the aquatic gardens and did not include the collection of support structures to the east. Just west of these buildings, the old driveway turned a corner to lead south along the edge of the ponds. A higher level of access to the site was first conceived in 1941, when the construction of Anacostia Avenue was proposed as a north-south road directly to the east. This proposal never materialized, but by 1942 Quarles Street, N.E. provided a second point of access to the site, extending west to terminate in a dead end north of the building complex and east of the gardens (see Figure 15; NPS Land Transfer Order No. 767, National Capital Region files; Gillen 1940: 2; NPS Land Transfer Order No. 1269, National Capital Region files; Gartside 1942: 2). The land to the east of the ponds, including the associated structures, was not acquired by the National Park Service until December 2, 1942. This parcel was "improved by two 1-story, frame and stucco buildings, and three 2-story, frame and stucco buildings, and one pool, portions of 2 pools and one shed" (NPS Land Transfer Order No. 1269, National Capital Region files; Gartside 1942: 1).

Meanwhile, the National Park Service acquired the properties south and east of the gardens in quick succession. This included the following: several lots to the south on March 1, 1941 (NPS Land Transfer Order No.s 984 and 985, National Capital Region files; Gartside 1941), June 26, 1941 (NPS Land Transfer Order No. 1053, National Capital Region files; Gartside 1941), and August 18, 1942 (NPS Land Transfer Order No. 1244, National Capital Region files; Gartside 1942); and one to the east on December 17, 1942 (NPS Land Transfer Order No. 1276, National Capital Region files; Gartside 1942). Thus, by the end of 1942 all of the land contained within the current study boundary for Kenilworth Aquatic Gardens had come under the jurisdiction of the National Park Service (NPS Land Transfer Order No. 1276, National Capital Region files; Gartside 1942: 2).

For many, transfer of the gardens to the government heightened hopes of a new and popular public recreation site. As stated in one article:

"Acquisition of the ponds gives the Capital park system a garden which draws thousands of visitors annually during the June blooming season, when there are 500,000 plants producing colored blossoms. Development of the area will make it a show place rivaling the Tidal Basin cherry blossoms." (The Washington Post, September 15, 1938)

Another 1940 article on the unusual new park was published under the headline, "Cherry Blossoms Have A Rival," and touted the gardens as "an addition to the beautification of the capital" that was then in vogue (Ullman 1940). Clearly, expectations for the government's new acquisition were optimistic.

Kenilworth Aquatic Gardens

However, ownership of the aquatic gardens by the National Park Service also brought the era of large-scale commercial water lily farming in Kenilworth to an end. Helen Fowler remained living in the little house by the ponds, which she now rented from the government, and served

as an aquatic plants authority and occasional tour guide (The Washington Post, June 13, 1939). The old barn next to the house continued to function as her painting studio, a hobby to which she devoted an increasing amount of time as she grew older (The Washington Star, April 30, 1951). She also continued to instruct others on the cultivation and care of water lilies, offering the "Fundamentals of Water Lily Culture" to garden visitors as well as local garden clubs (Pozer 1938). One of the downstairs rooms of Fowler's home became a smaller painting studio where she hung her paintings for exhibition and sale, while another room she used for the display of flower arrangements and other aquatic plants (Pozer 1938). In later years, her house actually became a feature of the regular weekend garden tours, which took place at 9:30 am, 11 am and 1:30 pm on Saturday and Sunday (The Washington Star, August 21, 1950). By 1947, the site was receiving an estimated 5,000 to 6,000 visitors per week during the peak blooming season in June, July, and August; similar numbers to what they had received in a single weekend in the 1920s and 1930s (National Park Service 2009).

Meanwhile, though they no longer supplied lilies for sale in mass quantities, the gardens continued to function as a supplier of roots and bulbs for local parks, including pools at Meridian Hill Park, Rawlins Park, the fountain at Chevy Chase Circle, the White House grounds, and the Lincoln Memorial Rainbow Pool. One of the earliest accounts of this process was written up in the Washington Star:

"Four displays of day and night blooming water lilies now are reaching full bloom and afford an extraordinarily colorful display...The displays are located at Chevy Chase Fountain, the lower pool of Meridian Hill Park, Rawlins Park, and the small Lincoln Memorial Reflecting Pool [also known as the Rainbow Pool]. The plants used in the displays were selected from the hundreds of varieties in the Kenilworth Gardens, where thousands of blooms may now be seen by visitors." (The Washington Star, July 23, 1944)

Built in 1933, the Chevy Chase Fountain's construction plans did not include aquatic plants and apparently contained vegetation for a comparatively short period of time; probably only briefly in the 1940s (Shiflet and Joseph 2005: 30). By comparison, intended plantings of water lilies at Meridian Hill Park appeared in the original plans for that park. As depicted in one of the approved 1935 designs, a total of 25 plants including the hardy lilies Nymphaea Marliacea chromatella, Nymphaea odorata, and Nymphaea Marliacea rosea, and the tropical variety Nymphaea pennsylvania, were to be arranged in the large upper and lower pools of the park (Architrave p.c. 2001: 120). All of these species were sold by the Shaw Aquatic Gardens in the 1930s (Fowler 1935). The Washington Star's mention of the ongoing maintenance of water lilies in the lower pool in 1944 demonstrates how at least part of the original plans was implemented afterwards, while floating lily pads can still be seen in a 1963 photograph of the same pool (The Washington Star, July 23, 1944; Architrave p.c. 2001: 138). Indeed, Kenilworth Aquatic Gardens continued to stock a number of local pools in later years, including both the Lincoln Memorial Rainbow Pool and the pool "near the pansy bed and carillon in the Ellipse area" outside the White House (Rosson 1954; The Washington Star, March 18, 1956). The annual planting of the Lincoln Memorial Rainbow Pool with water lilies and other aquatic plants ceased in 1968 (Joseph and Wheelock 1999: 65).

Other horticultural activities continued at the ponds, although on a diminished scale compared to earlier years. Park scientists proudly displayed the water lilies to the public each summer, leading tours and even holding small lily sales: "For the first time since the Department of the Interior took over the gardens five years ago, regular sale of blossoms of some 175 varieties of water lilies will begin today at the Kenilworth Aquatic Gardens" (The Washington Post, July 25, 1943). The proceeds from the surplus blooms that were sold at these sales went toward the maintenance of the gardens (Baitz 1947).

The success of these sales was augmented by the growing popularity of water gardening in America, which apparently took off sometime during the 1940s. An account by one 1951 article states:

"Traveling through the country we are more and more impressed with the number of small lakes and ponds which are appearing in all sections—on farms and estates and as an attraction for new subdivisions. They seem to appear almost overnight. Many are strictly utilitarian but many are being beautified with aquatic plants or some type of waterside planting. Water gardening is particularly interesting to persons living in [the District of Columbia] area." (Pozer 1951)

Still, despite its success and unfortunately for local water lily enthusiasts, the National Park Service apparently discontinued the annual lily sale at Kenilworth during the subsequent decade.

The size and horticultural diversity of the gardens meanwhile appears to have remained fairly constant. The same article from 1943 cites 42 different pools (The Washington Post, July 25, 1943). In 1947, 35 different pools contained a total of 80 to 100 varieties of water lily and five types of lotus (Baitz 1947; The Washington Star, July 23, 1947). Although this number was a drop from the 1943 figure and the 40 pools apparently present in 1944, the discrepancy may also be due to an inaccuracy of newspaper reporting, or a difference in the way that ponds were counted (The Washington Star, May 28, 1944).

On the whole, the layout of the aquatic gardens seems to have changed only marginally in the years following their transfer to park ownership. As one 1947 article describes: "Weeping willows overhang the walks and park benches are strategically placed under their graceful fronts to offer shelter from the midsummer sun" (Baitz 1947). Both the willows and the benches were well remembered in later years by Fowler's grand-niece, Ruth Shaw Watts. Describing her memories of the ponds in the 1930s and 40s, she said:

"They had a lot of weeping willow trees there, and they had cement benches under these weeping willow trees, and we'd go down there and sit and hear the birds sing and, [it] just was a quiet place to go. [I] even took a book sometimes and would get in, [and] read a book while we were down there enjoying the quiet." (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004)

It is unclear when, exactly, the cement benches were added to this landscape. However, they

were likely one of the changes made by the National Park Service upon assuming ownership. Whereas a commercial lily farm had no need for such features, they were an essential element for a park dedicated to public visitation, reflection, and use. By 1944, the concrete seating described by Shaw Watts had been either supplemented or replaced by the so-called Washington bench, a heavy wooden bench that quickly became a classic feature of local park sites (Figure 16a; Photograph 322-P, August 10, 1944, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center).

The gardens apparently continued to have two separated entrances during this period. One of these, located to the south of the old Shaw Sales Building, appears to have led directly west from Kenilworth Avenue. Described in 1941 as a "woodsy lane," it passed to the south of Fowler's barn studio and home before leading between Display Pool 3 and the southern greenhouse (now known as Hothouse 3) (This Week in the Nation's Capital, June 8, 1941). The road ended at the corner of the Shaw Sales Building, where it met up with the road leading around the ponds (National Park Service 1940). In the northeast corner of the ponds, another road branched off to the east from this lane and circled back around the building complex to meet up once again with the so-called "woodsy lane" just west of the barn (Figure 16b). As illustrated in a 1940 map of the site, to the south a second entrance from the main parking area fed into the pond-side lane from the Douglas Street cul-de-sac (Figure 17; National Park Service 1940).

In a much publicized and unusual event, Mrs. Ruth Gover, a former employee of Fowler's who cared for the aquatic gardens under park ownership, helped coax an ancient lotus into bloom in 1952. As written up in one newspaper: "The blooming flower is from one of two lotus seeds found in Southern Manchuria early in 1951. Until late last year the seeds were thought to have been 50,000 years old. A carbon test at the University of Chicago, however, took 49,000 years off their lives" (The Washington Star, June 30, 1952). This event suggests that, to a limited extent, the park was continuing to seek out new lily seeds and bulbs from abroad. Although the circumstances of their discovery requires further research, the seeds were found "sandwiched between peat and loess dust in an ancient lake bed near Manchuria's Pu-lan-tien" (The Washington Post, July 12, 1953). National Capital Parks plant pathologist Horace V. Wester then had to file through the hard outer shell in order to get them to germinate in 1951 (The Washington Post, July 12, 1953).

Pond Development

By 1953, a shift in the arrangement of both ponds and lilies had taken place. That year the aquatic gardens apparently had 80 varieties of water lilies and nine types of lotus growing in a total of 49 ponds (The Washington Post, July 12, 1953). This change in the number of ponds was due to the addition of two new pools in the southwest corner of the gardens. Now known as Ponds 40 and 41, these were built during the winter of 1952 (Rowe 1952, photograph 1573-F, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). Expansion of the site was probably linked in some way to the ancient lotus cultivation and the park's corresponding expectation of future growth. The raised number of pools may also have been due to the division of one of the larger pools into current Ponds 19 and 20, which historic

maps and aerials indicate were created sometime between 1950 and 1958 (National Park Service 1940; August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958).

Considerable time and effort was meanwhile being devoted to the nurturing of tropical lilies at the gardens. A 1956 article recounts the lengthy and delicate process of caring for the seeds and bulbs of these various lilies, which required transfer between pots and storage in warm greenhouses over the winter months. The boxes of enriched soil that eventually housed the lilies when they were installed in the ponds were packed down tight with manure, compost, and top loam to keep the nutrients from washing away (The Washington Star, March 18, 1956). The appearance of the gardens was another concern confronted by its managers. The estimated 1,500 visitors or more per week during the months of July, August and September was lower than similar estimates for previous years, and may have given rise to anxiety about the continuing appeal of the ponds (Rosson 1954). The same article recounts the following story:

"When the Aquatic Gardens were inundated by high water during the hurricane season of last year the water level rose considerably. The lilies lengthened their stems accordingly. Then, after about 10 days when the water had receded to normal, the unnecessarily long stems snarled the pool and became unsightly." (The Washington Star, March 18, 1956)

Other changes in attitude were evident around this time, as well. Although she was undoubtedly biased, according to one article, "Mrs. Fowler suspects more than muskrats with at least one variety of lilies. 'The Siberian water lilies—I don't think we have a single one left since the Government took over,' she whispered" (The Washington Post, July 12, 1953).

Indeed, judging from newspaper articles and other literary materials of the period, the public focus on the gardens underwent a subtle shift during the late 1940s and early 1950s. Whereas reports from earlier years celebrated the variety of lilies and number of pools, people writing about the site in the 1950s gave equal attention to its wildlife and educational opportunities. Perhaps in response to the rapid development and urbanization of the surrounding city, the gardens became more of a natural wonder than a horticultural one. For instance, a National Park Service pamphlet dating from 1952 draws attention to the three different types of habitat, as well as the broad range of aquatic plants, animals, birds and amphibians who make the marsh their home. The document devotes only a brief paragraph to the water lily (H. 1952).

Taking a similar approach, the Records of the Columbia Historical Society of Washington, D.C. noted the site's "exotic water flowers" only briefly on July 29, 1953. Instead, most of the paragraph on the gardens is devoted to the various native plants, animals, and birds to be found there. The call to visitors that concludes the passage was to be echoed in newspaper articles for decades afterwards: "Irene S. Gochenour, Naturalist Division, National Capital Parks, urges that Washingtonians revisit this idealistic garden spot so near the turmoil of the city, yet so refreshing in its realistic orientation" (Holmes and Heine 1959: 392).

Thus, the sundry wildlife that had only a few decades before been purged from the site in the

name of providing a better habitat for the water lilies were now praised as something to spot on a casual visit to the gardens. An article from the same era recounts the following, in an effort to advertise the site to visitors:

"In addition to the lilies, numbers of water plants native to the area abound in the ponds, especially fanwort, cattail, wild-rice, parrotfeather, waterweed [Elodea canadensis], watervelvet, and watermeal. Because of the nature of the area, aquatic animals find it a haven. Frogs, turtles, snakes, crayfish, and mosquito fish can be found in abundance in these garden waters. Muskrats also are common here. People interested in bird observation, and there are many, find Kenilworth an ideal spot. The graceful blue heron, egrets, kingfishers, and other water birds frequent the flower-studded pools." (Gochenour 1953)

The records of the Columbia Historical Society also laud the wildlife at the site, again calling out both crayfish and muskrats, who had in earlier years been regarded as pests. They add that "the ospray [sic.] and bald eagle are occasional visitors to this locality always frequented by wild ducks and other water-fowl" (Holmes and Heine 1959: 391). Regular walks and organized tours conducted by the National Park Service helped the visiting public appreciate these garden attractions (Gochenour 1953; Rosson 1954).

A heightened attention to the visitor experience was further evident in the park's introduction of the mosquito fish to the pools, in 1952. Originally introduced by the Health Department of Washington, these fish were added to the ponds in an effort to control the mosquito population during the long, hot Washington summers. They had a difficult first winter due to unusually low temperatures, but quickly established themselves the following year and have boasted a booming population ever since (H. 1952).

Meanwhile, an Emil A. Press photograph from July of 1959 confirms the replacement of the old cement benches described by Ruth Shaw Watts with the so-called Washington bench, by this time (Press 1959, PR 0238A, Historical Society of Washington, D.C.; Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). A portable but heavy, rustic-style wooden seat, the Washington bench was commonly used throughout District parks beginning in the 1930s. One or more of these apparently provided seating at the edge of the Kenilworth ponds in the late 1950s.

Plans for Kenilworth Neighborhood and Marsh

Following the government's acquisition of the Anacostia flats north of Benning Road for Anacostia Park in the 1930s, plans for Kenilworth Marsh began to advance. During the 1940s, this area was drained and partially filled with dredged materials from the river bottom. A meandering river trail was constructed from the aquatic gardens out to the banks of the Anacostia, at the water's edge of the emergent park . However, original intentions to fully convert the wetlands to solid ground were never realized. For years afterwards, the Kenilworth Marsh adjacent to the aquatic gardens was "only lifeless mud," in many ways unsuitable for use by humans and wildlife alike (D'Vera 1993: D1).

Although by 1955 the Audubon Society had already begun actively raising awareness regarding the value of wetlands, action to save the disappearing and increasingly polluted marsh was torturously slow. A quote from The Washington Post explains:

"The Anacostia marshes were famous throughout the East 50 years ago for their superb rail [or marsh bird] hunting. Most of the marsh has long since disappeared with the city's growth, and even the residual wild-rice marsh near Kenilworth lily gardens is doomed. Erosion from bare lands up the valley, largely in real estate developments, has caused such heavy siltation that the wild rice is drying out." (Barnes 1955).

Indeed, preservation of the Anacostia wetlands would remain a struggle for a number of years to come, in part because of the negative image that still clung to them. Negative references to the Kenilworth Landfill in the 1950s are reminiscent of how the Anacostia flats were viewed at the turn of the century. Utilized as an open burning landfill since 1942, this operation monopolized a large portion of the future Kenilworth Park during these years (Palmer Reporting Service 1982: 7). One 1956 article reported on plans for a new incinerator whose opening would "enable shutting down the unsightly, nuisance-causing open dump at the Kenilworth Landfill" (Washington Post, September 4, 1956).

As for the neighborhood bordering this apparent eyesore, it had meanwhile been undergoing dramatic change. One of the early signs of this shift was the government's construction, by 1940, of a 286-family "Negro" development on Benning Road, part of the effort to relocate inhabitants of the "alley slums" of downtown DC (Green 1962: 396-7). Indicative of the type of racial tension ripping through the entire city, a 1947 article relates how the Kenilworth Citizens' Association was calling for an investigation by the Real Estate Licensing Board, in response to claims that properties in the Kenilworth area had been "sold to colored people in violation of covenants" (The Washington Star, December 2, 1947). By the summer of 1949 the situation had only worsened. That June, integration of the Anacostia public swimming pool sparked raced riots in the park (Spears and Lee 2002).

Down by the aquatic gardens, the government used the late 1940s to build a large public housing development of apartments and single family homes intended for the use of war veterans. This expansive complex effectively isolated the pools and associated farm buildings on the edge of an increasingly urban landscape. The ongoing development of this neighborhood is evident in a 1950 aerial photograph of the area, which also shows the growing contrast between the gardens and their surroundings (Figure 18; August 21, 1950, photograph 1338-B, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). The same image also captures the billowing smoke from the nearby Kenilworth Landfill, illustrating some of the environmental factors influencing the garden landscape at the time.

As an accompaniment to a collection of photographs he took of this area between 1948 and 1952, John P. Wymer wrote a short description of the Kenilworth neighborhood at this time. According to Wymer, the area east of the Anacostia River was "the most rapidly growing section of the city...[and] almost exclusively residential" between 1948 and 1950, but still had "much vacant land" remaining (John P. Wymer Photographic Collection, Area 8, 1948-1952,

Historical Society of Washington, DC). Wymer went on to describe the vicinity of Kenilworth as a mainly African American residential section with "poorly planned" and "poorly paved roads…Most of the western half of this area is uninhabited, much of it lying in the undeveloped northern section of Anacostia Park. The Kenilworth Aquatic Gardens occupy the extreme northern part of the area" (John P. Wymer Photographic Collection, Area 8, 1948-1952, Historical Society of Washington, DC).

Discussion regarding the development of this area sparked new local controversy in 1952, when the relatively quiet Kenilworth neighborhood bordering the aquatic gardens was chosen as the site for a new construction project by the National Capital Housing Authority. The proposal for this project included the construction of 422 low-income homes on one of its tracts of land adjoining the aquatic gardens, on a parcel that became known as "the Lily Ponds site" (Washington Post, December 30, 1952; Eastland Gardens Civic Association, n.d.). The war veteran's housing that currently occupied this area, it was argued, was nearly empty and in need of revitalization. Plans for the permanent low-cost housing project featured a complex of two- or three-story duplex apartments arranged around garden courts. The remainder of the former war housing site was to be turned over to the National Capital Planning Commission for use in the new parkway along Kenilworth Avenue (or DC Highway 295) as well as street extensions (Eastland Gardens Civic Association, n.d.).

At the public hearing on the Lily Ponds development project, the local community of largely African American residents expressed concerns about the displacement of large numbers of lower-income African Americans from southwest DC into their neighborhood. Dr. Reginald G. James of the Capital View Civic Association argued that "Lily Ponds is just part of the general scheme to move undesirable Southwest residents to the far Northeast" (Washington Post, December 30, 1952). However, concerns also arose about the alternative plans to return this tract of land to Anacostia Park. Local grocer Sidney Klavans worried that converting the site back to park land would turn it into an "idle field of weeds where murders could be committed" (Washington Post, December 30, 1952). The grocer added that since the evacuation of the existing veterans' housing units, his business had dropped by forty to fifty percent (Washington Post, December 30, 1952).

The Lily Ponds project was never realized as originally planned. However, later that decade the same site was adapted and used for construction of a housing development known as Kenilworth Courts (East Washington Life, June 2006: 44). Particularly following the integration of public schools throughout the country in response to the Supreme Court ruling of 1954, the departure of whites from the neighborhood continued. Whereas white residents had represented 82 percent of this area in 1950, by 1967 this portion of the population only comprised 37 percent of the total (Spears and Lee 2002).

Among other things, the death of Helen Fowler in 1957, at the age of 82, signified the end of an era for the aquatic gardens (The Washington Post, January 31, 1957). Some 45 years had passed since she had taken on the responsibility of managing the gardens founded by her father. She died of a heart condition at her home on the property, only steps away from the lily ponds she loved so much (The Washington Post, January 31, 1957).

Since Fowler's sale of the aquatic gardens to the federal government in 1938, gradual but steady change had come to the landscape, in both its use and its appearance. The old farm buildings, paths, and filtered views across the open ponds had remained relatively unaltered, with their sweeping willows, upright hardwoods, and colorful aquatic plants still intact. Still, four more ponds had been built to the south of the main pools, at the west end of the gardens, and the original focus on water lily variety had waned. To the north of the old driveway, Quarles Street provided a new vehicle access route to the site. Wooden and concrete benches now marked the winding paths between pools, and the water swarmed with mosquito fish, rather than the goldfish, carp and paradise fish of earlier years. The myriad of water lilies, once the primary focus and pride of the gardens, were now competing for interest value with the "pond creatures" and other wildlife that flocked to the site in the face of increasing development in the capital city (H. 1952). Though they still served as a sanctuary and wilderness area for visitors and local residents, changes to the surrounding neighborhood had also begun to influence the gardens' use. The concept behind the site's use and management had shifted, and with it the landscape itself had changed. Particularly in the park's redirection toward a focus on water plants, birds and other wildlife, a new approach was devised to appeal to the next generation of visitors. Helen Fowler's death compounded this shift, effectively ushering in a new era for the gardens.

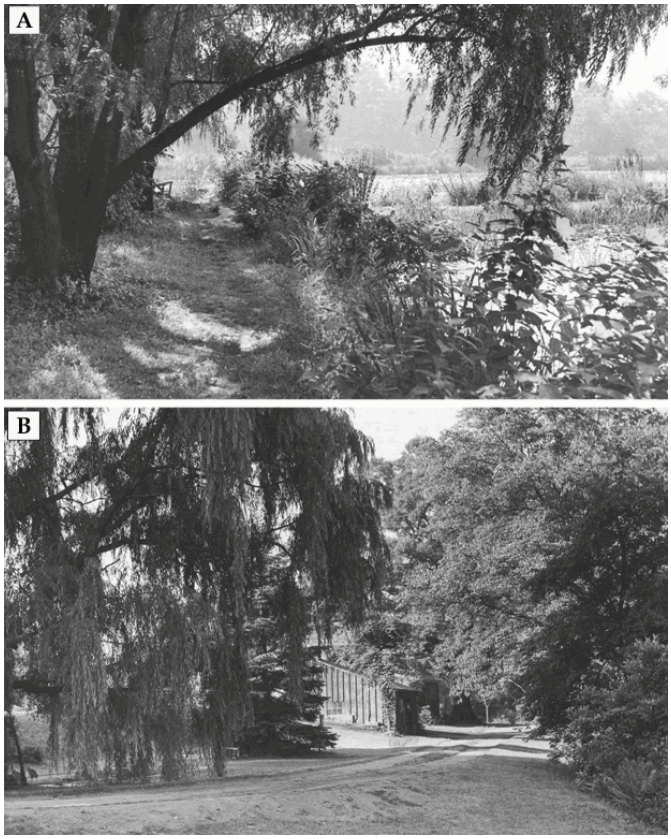

Figure 16. (a) An August 10, 1944 photograph shows a pond path with willows and a Washington bench (322-P, NPS MRCE); (b) Looking southeast along the lane to Hothouse 1 and the old Shaw Sales Building, July 14, 1940 (NPS MRCE).

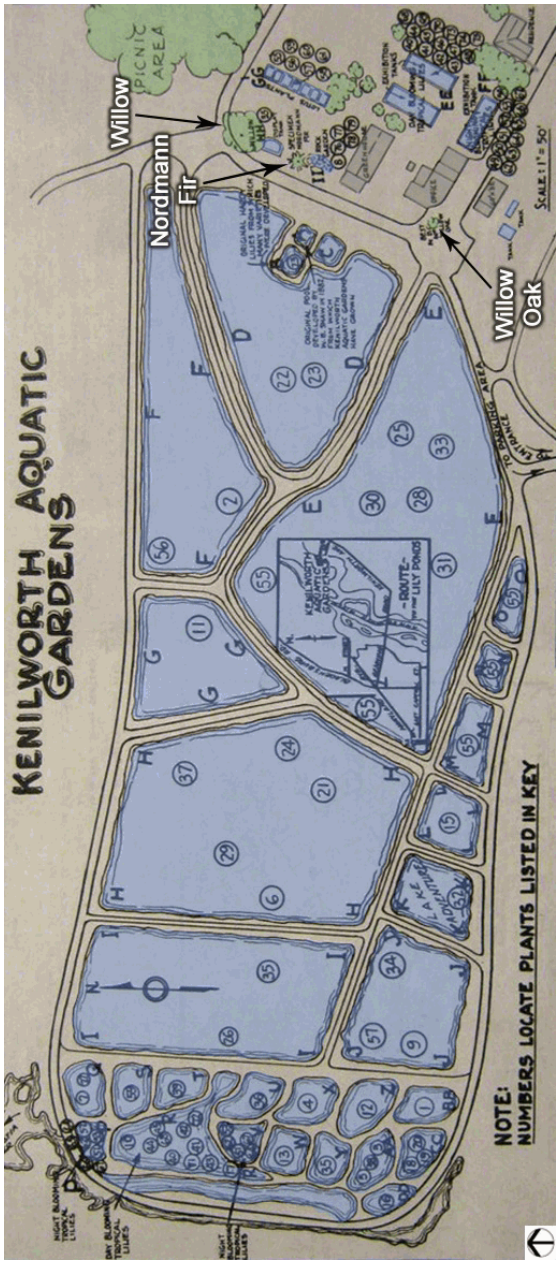

Figure 17. An annotated map of the park shortly after transfer to the National Park Service (National Park Service 1940). Note the omission of the three ponds in the southwest corner, and the layout of the building complex.

Figure 18. An August 21, 1950 aerial photograph looking southeast over the Anacostia River to Kenilworth Aquatic Gardens and the neighborhoods beyond (1338-B, NPS MRCE).

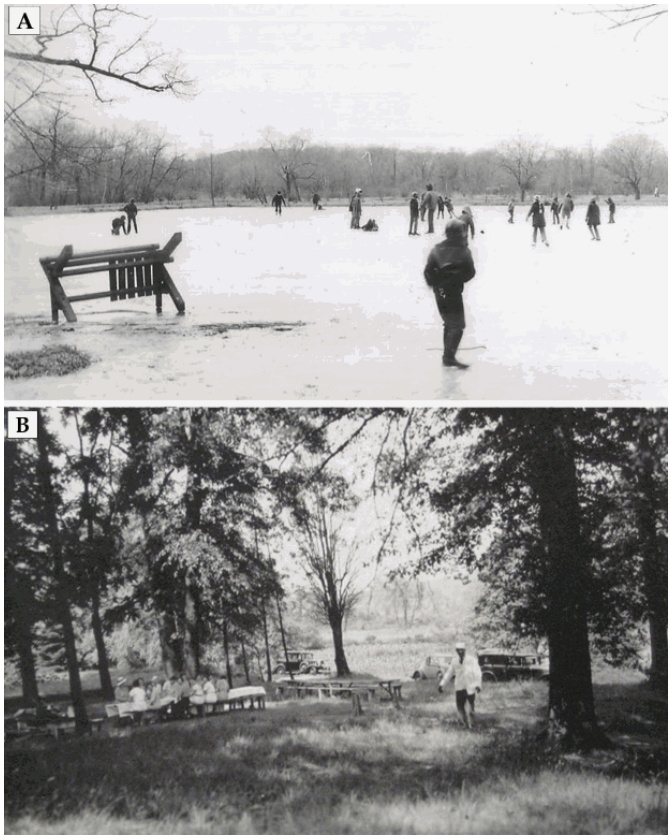

Figure 19. (a) Scene at the gardens on February 3, 1971, possibly looking north across today's Pond 5 (11021-46Y, NPS MRCE); (b) Looking northwest to the edge of the ponds, at a picnic c. 1925-30 (CHS 10455.08, MS 710, Historical Society of DC).

1957 to 2010 AD

THE KENILWORTH AQUATIC GARDENS OF TODAY

Linking the Marsh, Aquatic Gardens, and Kenilworth

Shortly after the passing of Helen Fowler in the winter of 1957, her old farm house, barn and an associated shed were torn down. Judging from the absence of these structures and what appears to be disturbed ground in their place, shown in a 1960 aerial photograph, this removal may have taken place in late 1959 or early 1960 (Kenilworth Aquatic Gardens aerial photograph 1960, NPS National Capital Region GIS). Also visible in this image are two new greenhouses, built since 1957 to the northeast of the gardens building complex. These buildings were reconstructed and connected into a single building between 1963 and 1968. Outfitted with plastic covering and new exterior walls around the old stanchions, this structure is now known as the main greenhouse. Both before and after they were united, these buildings provided important indoor storage space for plants from Kenilworth Aquatic Gardens as well as other parks in the National Capital Region (Letter from James Lindsay to NACE Acting

Superintendent, August 12, 1977, Kenilworth Aquatic Gardens files, National Capital Parks - East).

During these years, alterations were made out in the ponds as well. The pool currently known as Pond 38 was added to the southwest corner of the gardens between 1960 and 1963 (NCP 7002, National Park Service 1958; National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1960 and 1963). More importantly, the overall layout and appearance of the central ponds underwent a substantial shift between 1963 and 1968, when one of the larger ponds was divided in five smaller ponds (or what are known today as Ponds 10, 12, 15, 16 and 17) (National Park Service GIS 1963 and 1968).

Another change that took place between 1963 and 1968 was the conversion of the old Douglas Street cul-de-sac into an open field and the construction of a new visitor parking area northeast of the gardens. Despite these alterations to the circulation around the site, circulation patterns within the gardens remained relatively stable throughout this period. The lane leading west to the ponds from Douglas Street continued to be maintained for use by park vehicles, as did the driveway that once led north between Helen Fowler's house and barn and now provided access to the new greenhouses. Still, due to the construction of a new public parking lot, the old public entrance to the site had to be revised. In 1960, the old entrance was described by one visitor in the following words: "We arrived in the parking area and walked along a concrete causeway two feet wide into the gardens" (Kennedy 1960). With the Douglas Street cul-de-sac now gone, the road leading south around the ponds from the building complex linked directly to the lane around the gardens' perimeter (Kenilworth Aquatic Gardens aerial photographs 1957 and 1968, NPS National Capital Region GIS).

The continued development of the surrounding neighborhood likely played a role in these changes to site access. By 1957 the old war veterans housing that had stood adjacent to the gardens since the late 1940s was torn down. In 1959 the Kenilworth Courts housing development was built over much of the same ground, with the exception of a piece of land in the northwest corner of the old development, directly northeast of the gardens (Kenilworth Aquatic Gardens aerial photograph 1960, NPS National Capital Region GIS; East Washington Life, June 2006: 44). A section of Anacostia Avenue stretched northeast from Douglas Street and formed the border of the new housing development, leaving a tract of open land to the west of here that soon became the site of a new National Park Service installation (East Washington Life, June 2006: 44). In the spring of 1963, two new greenhouses were built about a quarter mile to the northeast of the aquatic gardens, outside of the cultural landscapes inventory study boundary (Shupp 1963, Greenhouse construction photographs, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). In subsequent years these two 150-foot-long structures were used to cultivate plants for use by the White House. Consequently, their development and use was largely unrelated to the aquatic gardens.

New development was meanwhile taking place to the east and south of the park, as well. Much like Kenilworth Courts, the purpose and evolution of these complexes followed the patterns of change in the Kenilworth neighborhood, which was now majority African American, and the District of Columbia as a whole. One of the earliest developments was Eastland

Gardens, a residential neighborhood founded to the southeast of the aquatic gardens in 1935. In 1946 came Mayfair Mansions, an elite housing complex constructed on the site of the old Benning Race Track that operated south of Watts Branch in the late nineteenth and early twentieth centuries (Lapp 2006: 4). It catered to upwardly-mobile African American professionals who couldn't find housing downtown due to racial discrimination, and before the 1960s exercised a policy of no more than one child per apartment. When the area's wealthier residents soon began relocating across the District line to Prince Georges County, Maryland, Paradise Manor went up immediately next to Mayfair Mansions in 1967, answering the heightened demand for affordable housing (Lategola 1996: 9; Palmer Reporting Service 1982b: 7).

Meanwhile, Kenilworth Avenue increasingly bustled with traffic and trucks, as described in several 1967 articles; and along with the urban population, pollution grew (Collins 1967; McKelway 1967). Beginning in 1962, the National Park Service revisited the idea of reclaiming the Anacostia flats. Yet the resulting designs for a park along the Anacostia River were still modeled upon the early COE concept, and called for the elimination of marshes, swamps, and lakes (L.K. Thomas to Assistant Regional Director, February 14, 1963, Kenilworth Aquatic Gardens files, National Capital Parks - East). Indeed, efforts by the Corps of Engineers to reclaim the flats were still ongoing, having never truly ceased following their enthusiastic launch in the early twentieth century. After reporting that the project was 89 percent complete in 1941, the COE had ceased work on the river during World War II, then scaled back its operations over the succeeding decades. Although a number of seawall improvements and some levee construction took place during the 1950s, the water control system for the two lakes was never completed, allowing these features to eventually fill in with drifting silt from the river (Jones 1996: 4-5). Thus, when the final completion of this project came under consideration in the early 1960s, perspectives on the marsh had shifted.

In view of the inconsistency between reclamation plans and what he viewed as the National Park Service's responsibility in providing stewardship of the land, Park Naturalist L.K. Thomas, Jr., wrote a memo in 1963 that argues enthusiastically for the preservation of the remaining Kenilworth wetlands. In his own words:

"There are several desirable features at Kenilworth and some of them are unique to that area. The swamps and small cattail marshes are the only vestiges left in the District of a habitat that was once extensive along the Anacostia River. They are the only Coastal Plain wetlands of any significance in the District." (L.K. Thomas to Assistant Regional Director, February 14, 1963, Kenilworth Aquatic Gardens files, National Capital Parks - East)

Thomas goes on to address the status of the marshlands on both sides of the Anacostia River in the vicinity of Kenilworth Aquatic Gardens, emphasizing their value with the mention of nearby Roosevelt Island's disappearing wetlands. In particular he addresses how the natural setting of this area is highly important to not only local wildlife but to the ongoing health of the gardens themselves:

"When the crowds come to the Aquatic Gardens, the animals, particularly birds, retire to the

more inaccessible parts of the habitat and in this case this is primarily across the river. One area complements or supplements the other. Without either one, it is highly probable that certain birds would find one small area entirely insufficient for nesting, feeding, and escape." (L.K. Thomas to Assistant Regional Director, February 14, 1963, Kenilworth Aquatic Gardens files, National Capital Parks - East)

Thus, Thomas concludes that the rare island and wetland habitats represented in the Kenilworth wetlands are a valuable asset that the National Park Service should feel obligated to preserve. Subsequent to the voicing of these concerns, the Director of the National Capital Planning Commission made a special request for a study of the situation at Kenilworth Marsh. The resulting document was entitled "Preliminary Master Plan Comments" and completed by the National Park Service in April, 1964. Anxiety regarding the future development of the 250 acres of wetlands, in particular, appears to have driven the creation of this document. Among other things, it stated:

"We are convinced that the preservation of this area is vitally important. We are concerned that even a limited further reduction of this environment will disrupt the stability of its ecology and for this reason there must be no further filling of the area…labeled 'Biological Reserve' on the enclosed plan." (National Park Service 1964)

A document containing Preliminary Master Plan Comments further mentions the intention of improving the aquatic gardens in "all aspects," pending the necessary funding. One change that took place during this period, sometime between 1963 and 1968, is likely related to these plans. At this time, the National Park Service divided two of the large historic ponds into seven smaller pools (current ponds 10, 12, 15, 16, 17, 19, and 20), ostensibly in order to increase visitor access to the lilies and other aquatic plants. However, by the summer of 1965 no progress had been made on this part of the project (Kenilworth Aquatic Gardens aerial photographs 1963 and 1968, NPS National Capital Region GIS). Meanwhile, increasing anxiety about the preservation of the marsh was prompting calls for the completion of a comprehensive Master Plan for the Kenilworth Aquatic Gardens and surrounding wetlands (Stanley W. McClure to Chief of Division of Interpretation and Visitor Services, July 14, 1965, Kenilworth Aquatic Gardens files, National Capital Parks - East).

Concerns about the Kenilworth dump and pollution of the river meanwhile continued to cause trouble for the neighborhood. Under lease to the city by the federal government, this site was used for open burning throughout the 1960s. A 1963 article explains:

"There used to be plenty of low-lying swampy tracts needing to be filled in and ash waste was a perfect filler. But as the population has zoomed, these places have been filled until only one dump, a 26-acre tract near Kenilworth avenue, ne. is left, and [deputy superintendent of the District Division of Sanitation] Roeder says it will be full within a year." (Benchley 1963)

Despite these predictions of imminent demise and years of complaints from local residents, almost a decade passed before the landfill finally closed. As recounted in 1967: "Citizen groups have vigorously opposed the open burning at Kenilworth and last week Maryland officials

called on the federal government to assist the District in finding a way to stop the open burning and the pollution debris" (Conconi 1967). The deteriorated condition of both the Anacostia River and the Kenilworth area in 1968 were outlined by a Washington Post article, in the following words:

"Straw used to mop oil that was polluting the Anacostia River was later burned at the Kenilworth dump, a major source of air pollution for Metropolitan Washington. The straw was used by the Interior Department's Federal Water Pollution Control Board and the Army Corps of Engineers last Friday to clean up 4,000 gallons of oil that had been dumped in the river." (Washington Post, January 24, 1968)

Attention to water pollution at this time was particularly poignant, in view of the 1965 Water Quality Act and the increasing momentum of the environmental movement (Jones 1996: 6). After a child was fatally burned at the site in 1968, the practice of open burning at Kenilworth Park finally ceased; but it continued to receive an estimated 600 truck-loads of refuse a day. It became a sanitary landfill until 1972, when it closed for good (Palmer Reporting Service 1982a: 7-8). That same year, passage of the Federal Water Pollution Control Act, also known as the Clean Water Act, further helped raise awareness of pollution on the nation's waterways (Jones 1996: 6).

Following the closure of the dump, the National Park Service compiled a Master Plan for Anacostia Park that laid out designs for the further development of the park, including improvements to the visitor experience (Palmer Reporting Service 1982a: 8). On March 25, 1972, Kenilworth Park was opened amid much fanfare. Among other things, the event included speeches, service dog demonstrations, tabling by local gardening organizations and kite-flying for children (Rottier 1972, Kenilworth Park opening photographs, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). Following its opening and into the 1980s the park featured five picnic pavilions, an exercise trail created in 1979, a rugby pitch, basketball and tennis courts, and the aquatic gardens. The primary activities were hiking, biking, and fishing, but concerns about safety and security still inhibited its use (Palmer Reporting Service 1982a: 9; Rummel et al. 1981: 177).

As for the aquatic gardens, nature walks and other recreational activities continued to draw visitors, particularly from the increasingly urban communities around the site. Winter skating, in particular, was a popular activity among adults and children alike. For example, in 1962 the "Aquatic Gardens rink" was "open for skating daily up to midnight. Park officials will keep the ice illuminated with flood lights after sundown" (The Washington Star, December 15, 1962). The same article also featured a number of photographs depicting various winter skating fashions, for those heading out into the cold. The Aquatic Gardens rink was listed alongside another popular capital city skating location of the time, the Reflecting Pool at the Lincoln Memorial. Unfortunately, the ice on the Chesapeake & Ohio canal was apparently not yet considered thick enough for skating (The Washington Star, December 15, 1962). Skating at the ponds continued at least through 1971, when the event was captured by a series of NPS photographs (Figure 19; February 3, 1971, ice skating at Kenilworth Gardens photographs, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center).

During the summer months, children came to the gardens to explore but also as members of classroom fieldtrips. The regular nature walks led by park rangers helped attract a constant flow of curious visitors, even when the lilies were not in bloom. Some local children went on to become influential rangers at the park, such as Walter McDowney. As a youth, McDowney used the gardens as his own personal classroom, learning about the wonders of the natural world from experience. Eventually he got a summer job there, and soon afterwards was hired by the National Park Service as a permanent employee. McDowney was honored by his employer in 1985, when he received an award for the best park interpreter in the National Park system (East Washington Life, June 2006: 45).

Still, during the 1970s and early 80s the condition of Kenilworth Park and Aquatic Gardens came to mirror the somewhat troubled state of the surrounding city, and was regarded as a potentially dangerous place. In the words of one local resident at the time: "In the D.C. area, the parks are used less and less frequently by the residents now…People are afraid of being molested or of having their cars vandalized" (Oman 1980).

In a tragic and haunting report from March 13, 1974, the aquatic gardens were linked to the death of a local teenager.

"The partly decomposed body of a 16-year-old mentally retarded youth, reported missing from his Fairmont Heights home since February 9, was found Monday night floating in the Aquatic Gardens of the Anacostia River. A man walking his dog in the Kenilworth section of Northeast Washington near the river spotted the body about 5:30 p.m. and called police…" (The Washington Post, March 13, 1974)

In addition to crime, contemporaneous reports of neglect did little to improve the site's public image. In a letter to The Washington Post editor that year, one visitor praised the gardens' beauty but went on to complain:

"Recently I visited the Gardens with an out-of-town visitor and was greatly dismayed to see the obvious neglect which has been given to this park. The overgrowth, stagnant water, and lack of maintenance have caused such deterioration that I fear The Washington Post could no longer recommend this as an attraction." (Centala 1974)

Despite these various issues, however, the park retained a certain visitor appeal during these years. A report from The Washington Post only a year later uses their deserted feel as an asset, contending that here was one of the few places in Washington where a moment of weekend peace could be found in a park. The article, entitled "Getting Away at Aquatic Gardens," recounts how "U.S. Park Service guides [at the gardens] say that it is rarely crowded. On a recent blue-sky Saturday, only one of the dozen picnic tables was in use" (Perdue 1975).

A 1977 article from the front page of the local DC section similarly praised the gardens as "one of the city's 'neglected' paradises" (Hodge 1977). Yet following a poetic description of the

Egyptian lotus and other blooms found there, Hodge delivers a harsh depiction of the park's real condition:

"Its entrance beside a public housing project, surrounded by a double-strand barbed wire fence and a treeless, weedy parking lot with broken lamps, the aquatic gardens has seen its staff and maintenance money dwindle over the past decades as the Park Service lavished attention and limited funds on Washington's popular downtown parks. Even the water lilies themselves, which used to be catalogued and identified by signs, now simply float in magnificent mass confusion in 14 acres of ponds, leaving the park's few visitors amazed at the water wonderland but none the wiser about what they've seen." (Hodge 1977)

The buildings associated with the site were in equally poor condition, judging from reports of the late 1970s and 1980s. A 1977 letter from Dr. James Lindsay, National Capital Region Chief Horticulturalist, recommends the actual demolition of the two original greenhouses at the site due to cracked and leaking tanks, rotten wood framing, and fiberglass panels lost to vandalism (Letter from James Lindsay to NACE Acting Superintendent, August 12, 1977, Kenilworth Aquatic Gardens files, National Capital Parks - East).

Indeed, vandalism was one of the primary maintenance concerns for both the buildings and the landscape. A 1975 memo from the gardens' Supervisory Horticulturalist Paul Souder elaborates:

"After 4 p.m. unauthorized persons finding the [aquatic gardens] unguarded take advantage of the opportunity to commit acts of vandalism and theft. No fence or gate or lock is able to keep them away from the buildings, and the secluded nature of the area makes the situation even worse." (Memorandum from Paul Souder to Chief of Maintenance, National Capital Parks – East, April 15, 1975, Kenilworth Aquatic Gardens files, National Capital Parks - East)

Souder goes on to point out that the shortage of staff at the gardens greatly aggravated this issue. Unfortunately, the situation did not improve with the succeeding years. In May of 1981, the National Capital Parks – East staff held a meeting to discuss "the sharp increase of crime at the Gardens such as burglary, larceny, vandalism, destruction of government property and destruction of wildlife" (Memorandum from Commander, East District to Commander, Anacostia Substation, June 8, 1981, Kenilworth Aquatic Gardens files, National Capital Parks - East). These events, which apparently peaked each spring, were being perpetrated by "roving groups of juveniles." To address this issue, the National Park Service resolved to improve police patrols, activate an alarm system in the main greenhouse, ensure proper closing of the park in the absence of staff, and increase community awareness of, commitment to, and involvement in, the gardens (Memorandum from Commander, East District to Commander, Anacostia Substation, June 8, 1981, Kenilworth Aquatic Gardens files, National Capital Parks - East).

Despite these efforts, a series of 1988 photographs illustrate the ongoing nature and severity of this issue. Seven years later, the greenhouses still show signs of deterioration including water-damaged concrete tanks, broken windows, and peeling paint (Kenilworth Aquatic

Gardens greenhouse photographs, 1988, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center).

Still, the gardens' fate was far from sealed. Well aware of the various issues confronted by the maintenance and operation of the site, the National Park Service was already working to resolve them. In addition to its plans to increase the gardens' full-time staff from six to eight, the annual maintenance budget was set to increase from $130,000 to $173,000 in 1977 (Hodge 1977). Staffing at the site, in particular, was one clear explanation for its general decline. The number of National Park Service staff assigned to maintain the gardens and associated buildings had been dropping consistently since 1939. According to one source, some 28 full-time employees worked at the gardens in the early years of NPS stewardship (Hodge 1977). In 1965, park files listed a total of ten permanent employees for the site; and by 1977 this number had dropped to five permanent and two temporary employees, to maintain and interpret the site for an estimated 33,000 annual visitors (Letter from James Lindsay to NACE Acting Superintendent, August 12, 1977, Kenilworth Aquatic Gardens files, National Capital Parks - East; Hodge 1977). At the gardens' height of operations, Helen Fowler had maintained at least seven employees; however, most of these men worked with her for a succession of years and in some cases became aquatic experts in their own right. For example, garden employee Fred Wagner was credited with the creation of his own hybrid, Nymphaea 'Souvenir,' in 1935 (The Washington Post, July 1, 1935).

Thus, the park's retention of long-time employees like Paul Souder and 1977 site manager Fred Lundy, who had begun as an employee of Helen Fowler's, was a great boon. Souder recalled his early years of work at the gardens, in the 1950s, and took credit for planting the gardens' six bald cyprus, which by 1977 measured over thirty feet high. Thanks in part to the hard work of Souder, Lundy, and others like them, the park had "at least preserved the lily ponds and marshes around them in relatively good condition and maintained much of the stock of tropical water lilies" it had inherited from L. Helen Fowler (Hodge 1977). Last but not least, the article also praised the wealth of wildlife at the gardens, including the ever-present ospreys, muskrat, heron, hummingbirds, wild rice and water snakes (Hodge 1977).

The National Park Service was also beginning to confront the ongoing issue of damages incurred from vandals. According to one 1977 report, vandalism dropped to zero that year thanks to a group of volunteer youth known as Keepers of the Park Service, or KOPS. Following the unusually high incidence of vandalism at the park in 1976, the NPS established this program to reconnect local youth with Kenilworth Park and Aquatic Gardens. A partnership with the McDonald's Corporation helped to support the initiative, which included beautification projects, field trips, basketball clinics, a bicycle safety course, and horseback, helicopter, and radio-car rides with park police. A total of 75 eight to thirteen year-old residents of Kenilworth, River Terrace, and D.C. Village participated in the new program (Stevens 1977).

The Junior Ranger Program was another great innovation of the late seventies, for both the park and the community. In 1979, at the urging of Kenilworth residents Rhuedine Davis and Gerlene Green, Walter McDowney, by now better known as "Ranger Mac," helped to start this

program for a group of 11 to 17 year olds recruited from families living in the nearby public housing projects, including Kenilworth Courts and Paradise Manor. These Junior Rangers spent "summer days and after-school hours as volunteers helping with tours, working on exhibits, clearing trails, looking after visitors' cars and learning about the park…" (Oman 1980). This program continues to bring inquisitive new faces into the gardens today, as boys and girls ages 10 to 14 help to ensure visitor safety, contribute to park maintenance, and provide a source of information at the gardens.

In addition to the Junior Rangers Program and KOPS, other interpretation initiatives were up and running by this time. A 1979 article advertises an art workshop, where a local artist would "give tips on sketching and painting the gardens" (Tarnapol 1979; Stevens 1977). There was also a photography contest, a summer event that still takes place annually today (Tarnapol 1979). For many local youth, the gardens continued to be a pivotal place of both learning and escape (Gaines 1997).

Historic Recognition and Renewed Gardens Management

The Kenilworth Aquatic Gardens were added to the National Register of Historic Places in 1978, and recognized as "the most beautiful and expansive collection of exotic water-lilies and sub-aquatic plants in the United States (Stevens 1978). The fifty-five different types of water lily and five lotus types grown at the park in 1979, though meager compared to earlier years, was not only recognized as a rarity, but continued to decline in later years (Rummel et al. 1981: 231). In 1990, at one of their lowest points, the aquatic gardens contained a mere three varieties of hardy water lilies, thirteen tropical lilies, and three lotus types (Letter from Kenilworth Aquatic Gardens Plan Committee to Superintendent of National Capital Parks – East, 1990).

Nonetheless, the gardens continued to provide lilies to public parks throughout the capital in the late 1970s and 1980s, including the fountain between the Jefferson Memorial and the 14th Street Bridge, several fountains around the Department of the Interior building at 19th and C Streets northwest, and the display pond at the NPS National Capital Region headquarters at Hains Point (Hodge 1977). Indeed, the philosophy for the small lakes and ponds of the local parks underwent a shift during this period, as management refocused on creating viable ecosystems. Fish, underwater grasses, lilies and zooplankton were among the items introduced to ponds around the city in an effort to encourage the creation of a more self-sustaining habitat that could save both money and time. At Constitution Gardens, underwater planting boxes brought from Kenilworth Aquatic Gardens were installed to aid in the buildup of silt, while bass, bluegills, gambusia fish, and turtles were also introduced after the model of the aquatic gardens. Sludge dredged from the ponds at Kenilworth was also used to coat the bottom of Constitution Gardens, a practice that continued with moderate success through the 1990s (Fanning 2008: 52-3).

Meanwhile, by the 1980s a kind of partnership between Kenilworth and the nearby Lilypons Water Gardens of Adamstown, Maryland had developed, as both information and lilies flowed freely between the two organizations. For some years, a shortage of exotic and surplus of

hardy lilies at Lilypons prompted an ongoing exchange with Kenilworth, which had a relative surplus of exotics and shortage of hardies (Thomas 2004: 2). As recounted by Charles Thomas, grandson of the founder of Lilypons, for "the first ten years or so" of the annual Water lily Festival at Kenilworth, the Maryland establishment took part by offering lectures and displays (Charles B. Thomas, Personal communication, November 18, 2009).

The "Information Base for a Development Concept Plan" for Kenilworth Park and Aquatic Gardens, researched and written in 1981, helped to provide the basis for further planning at the site. The report also provides an account of some of the maintenance issues and practices at the time, including the raking of pondweed (Potamogeton crispus) and duckweed (Lemna sp.) from the ponds, and the addition of a black nigrosine dye to the pond water in order to reduce weed growth (Rummel et al. 1981: 92). At this time, the site had a total of about 75 different varieties of water lily, including several types of lotus, and some 40 species of pond and marginal plants. Among these were the native species goldenclub (Orontium aquaticum), cardinalflower (Lobelia cardinalis), waterprimrose (Primula sp.) and turtlehead (Chelone sp.), as well as the exotics: yellow-blossomed waterpoppy, umbrella-plant (possibly Maesopsis sp.), elephantear (Opuntia tuna), water hyacinth, pampas grass (Cortaderia araucana), and bamboo (Bambusa sp.). On the pond edges grew arrowhead, arum (Arum sp.), pickerelweed, wild rice, cattails, water iris, buttonbush (Cephalanthus sp.), rose mallow (Hibiscus sp.), and purple loosestrife (Lythrum salicaria). Overhanging trees among the ponds included willow oak, river birch, willow, red maple, elm, ash, sweet gum (Liquidambar styraciflua), black gum (Nyssa sylvatica), sweetbay magnolia (Magnolia virginiana), and sycamore (Rummel et al. 1981).

The National Park Service subsequently used this information base to contemplate a bigger, better visitor experience at the gardens. By the early 1980s, the volume of visitors had dropped substantially. In 1981 it numbered 65,000, a measly total when compared to the 500,000 plus people who visited the National Arboretum just across the river that same year. The National Park Service's plan to remedy this situation, as laid out in 1982, was to build "an extensive boardwalk and small boat dock in the marshes at the Aquatic Gardens," to be used for a public ferry between the National Arboretum and the Kenilworth site (Hodge 1982). A 146-page environmental assessment proposed "a boardwalk trail and observation platforms in the marshes surrounding the gardens' 11 acres of lily ponds," the estimated cost of which was $520,000 (Hodge 1982). An extensive rugby field complex was also suggested for the nearby Kenilworth Park recreation area, including a covered grandstand and changing rooms. However, due largely to financial limitations, almost twenty years would pass before any part of these recommendations was implemented.

As pointed out by a Washington Post article: "The Aquatic Gardens' somewhat seedy condition and isolated location and its entrance at the end of neighborhood streets in a public housing project apparently have contributed to the low attendance and vandalism" (Hodge 1982). The park hoped to remedy this situation with revisions to site access, either through use of a new ferry or other entrance changes. Contiguous fencing all around the gardens was also planned in order to improve security. A public hearing in March provided an opportunity for community members to weigh in on the proposal and specific project alternatives. It met with a largely positive response, while this forum also served as a place for community members to voice

other concerns about the perceived decline of the gardens over the years (Palmer Reporting Service 1982a; Palmer Reporting Service 1982b).

Ethan Brent, a great, great grandson of W.B. Shaw, expressed concern about the fact that all four alternatives included provisions for widening the dikes between the ponds in order to provide better access for maintenance vehicles. As he points out, the historic character and "intimacy" of the park drew upon the scale and relative width of these paths (Palmer Reporting Service 1982b: 26). A letter sent to the park superintendent also expressed concerns about the impact the proposed river use and development would have on Kenilworth Marsh. District resident Pamela E. Blackshear felt strongly that "the influx of tourists by way of car and boat would only lead to the degradation of this site" (Letter from Pamela E. Blackshear to NACE Superintendent, March 9, 1982, Kenilworth Aquatic Gardens files, National Capital Parks - East).

An illustrated 1984 Development Concept Plan pamphlet for Kenilworth Park and Aquatic Gardens helped to publicize the alterations the National Park Service ultimately planned for the site. In addition to the river ferry, a new Aquatic Studies Center and parking lot were planned for south of the gardens, with a network of access trails leading north to the historic building complex. The picnic area next to the ponds was also expected to be relocated to a location closer to Kenilworth Courts, while additional lighting, building alarms, and fencing along the property's edge were to be installed for enhanced security (National Park Service 1984).

Despite extensive planning efforts, various financial and other constraints ultimately limited the ways in which the National Park Service was able to implement the changes under consideration in the early 1980s. Thus, the once popular concept of an Anacostia ferry between the National Arboretum and the Kenilworth Aquatic Gardens was never realized. However, the discussion of improvements for the gardens did not end, as a 1989 draft proposal for pond rehabilitation clearly demonstrates (Letter from NACE Natural Resources Management Specialist to NACE Divisions of Maintenance and Recreation, January 10, 1989, Kenilworth Aquatic Gardens files, National Capital Parks - East).

Another crucial change that took place in 1989 was the reconstruction and expansion of the old Shaw Sales Building or Administration Building, also known at the time as the Office. Originally a small board-and-batten, two-story structure with a gable roof, it had three one-story, shed-like wings that extended to the southeast, southwest, and northeast. This structure contained the public restrooms and was also used as the interpretive center for visitors (Rummel et al. 1981: 49). In 1989, after years of vandalism and neglect, the Administration Building was targeted for rehabilitation. In what was called an "adaptive reconstruction," the structure was outfitted with additional modern features and facilities in order to better provide for visitor comfort and safety (Statement for Management, Kenilworth Park and Aquatic Gardens, NPS c. 1990, Kenilworth Aquatic Gardens files, National Capital Parks - East). This development included the construction of public restrooms in an addition to the north of the old Shaw Sales Building, in between it and the neighboring greenhouse to the north, or Hothouse 2, as well as a small shed entryway and ramp on the Administration Building's south side to provide full accessibility to the visitor center and restrooms. The

windows of the structure were also renovated at this time (Memorandum from Consuella Jay, National Capital Parks – East to Chief of Division of Programming and Budget, May 24, 1989, Kenilworth Aquatic Gardens files, National Capital Parks - East). These additions not only met with a series of accessibility recommendations made back in 1983, but improved the site's suitability for greater volumes of visitors (Division of Special Programs and Populations 1983: 14-15).

Meanwhile, broader plans for development of the gardens were underway. An extensive preliminary draft of a Kenilworth Aquatic Gardens Pond Management Plan, drawn up in July, 1990, outlines both the state of the ponds at the time and the plans envisioned for their future use. The successful dredging of two of the ponds (Ponds 9 and 10) in 1984 had paved the way for additional projects of the same kind (Doug Rowley, Personal communication, February 3, 2010; National Park Service 1990). These efforts would help to restore biodiversity, reduce maintenance, and improve visual quality at the ponds. The pond management plan therefore called for the restoration, through dredging, of Ponds 4, 5, 11, 14, 15, 17, 18, 19, 20 and 39. Existing issues in some of these ponds included: the undesired existence of parrot's feather in Pond 3; an excess of iris in Pond 3 and cattails in Pond 4; overcrowding of the native hardy water lily (Nymphaea odorata) and its hybrids (in Ponds 4, 5, 11, 14, 15, 17, 18, 19 and 20); and the buildup of sediment and other runoff from Pond 5, which borders the road. Although it was marked for removal from Pond 3, Parrot's feather was to remain in Pond 2. Unwanted vegetation in the ponds is another problem raised by the draft report, and the testing of aquatic herbicides as a control measure is discussed (National Park Service 1990).

Other 1990 plans for the gardens included the continuation of existing practices and planting plans for the ponds, such as the use of Pond 29 for cultivating the prickly lily (Euryale ferox), Pond 30 for the Victoria water lily (Victoria amazonica), Pond 31 for the hardy lily, W.B. Shaw (Nymphaea odorata 'W.B. Shaw'), and Ponds 7, 8, 12, 13, 38, 39, 41, 42, 43, and 44 for lotus (Nelumbo sp.). The absence of the native North American lotus (Nymphaea lutea) from Pond 39 and Helen Fowler lily (Nymphaea odorata 'Helen Fowler') from Pond 33 were also remarked upon in the report. The park planned to reintroduce these species exclusively to these ponds, as their presence in the gardens had been documented historically. Meanwhile, the presence in Pond 6 of an "excellent stand" of East Indian lotus (Nelumbo nucifera) is mentioned, along with some Rose Arey (Nymphaea 'Rose Arey'), which was developed at the gardens by Helen Fowler (National Park Service 1990).

The draft report addresses two display pools located near the Administration Building. One of these was probably the long row of small concrete ponds visible to the northeast of the northern greenhouse (now known as Hothouses 1 and 2) in the 1940 map of the site (see Figure 17). The pool was filled in 1990 and was afterwards used as a flower bed. The plan targets this bed, which was located next to the employee parking lot, for a return to its historic use as an aquatic display pool; however, this goal was apparently never realized. The other pool (probably today's Display Pool A), situated just north of the northern greenhouse, was in poor condition at the time the draft report was written and had been outfitted with a PVC liner as a control measure. The 1990 plan recommends that this pool be re-poured for continued use as a display pond for bog plants (National Park Service 1990).

Overall, the preliminary draft pond management plan indicates that deferred maintenance was one of the main issues facing the gardens in 1990. In addition to the more detailed pond management strategies outlined above, it also called for an increase in pond maintenance staff and the purchase of more equipment to properly care for the gardens (National Park Service 1990).

The effects of prolonged maintenance deferral at the site is illustrated by the story of a certain large willow oak that used to stand off the southwest corner of the Administration Building. This oak was described in 1983 as "one of the oldest and largest (if not the oldest and largest) willow oak in the [DC] metropolitan area" (Letter from James Sherald and James Lindsay to National Capital Parks – East Superintendent, December 28, 1983, Kenilworth Aquatic Gardens files, National Capital Parks - East). After assessing the health and condition of the tree, the Tree Advisory Committee advised the superintendent to trim certain limbs and cable the remaining ones, conduct crown maintenance that January, and scarify the underlying soil in order to minimize the effects of soil compaction and provide additional oxygen to the tree roots (Letter from James Sherald and James Lindsay to National Capital Parks – East Superintendent, December 28, 1983, Kenilworth Aquatic Gardens files, National Capital Parks - East). It is unlikely that these recommendations were ever carried out, since the National Park Service took the tree down soon afterwards (Doug Rowley, Personal communication, February 3, 2010).

Kenilworth Park and Aquatic Gardens Today

By 1993, the Anacostia River boasted the title of "the nation's dirtiest urban waterway," and was identified by the national conservation group, American Rivers, as "the most endangered urban waterway in the United States" (D'Vera 1993: D1). The sole advantage attached to this reputation was that it finally attracted the national attention and activism necessary to positively impact the river and associated wetlands. A defined plan for restoring the marsh had finally been initiated only a few years before, in 1989, when the newly-formed Metropolitan Washington Council of Governments (COG) and the District of Columbia Department of Public Works joined forces to remedy the situation (Waterline, Fall 1989). According to a publication of COG, the deplorable condition of these wetlands was not only due to the long-term misuse and neglect that had characterized the twentieth century. According to the COG marsh ecology consultant, the original dredging of the upper Anacostia by the Army Corps of Engineers actually altered the tidal variation throughout this part of the river. Thus, even though the Kenilworth Marsh itself was never dredged, it was nonetheless greatly affected by the nearby dredging activities. In particular, the reduction of wetland acreage to absorb the flow of water from the river meant that tidal fluctuation in Kenilworth Marsh increased, and what was once a lush wetland environment had by 1989 become ninety percent "mud flats" (Waterline, Fall 1989). In order to remedy this situation, COG contracted the private environmental consulting firm Biohabitats to produce the necessary marsh ecology background and services to support a project to restore Kenilworth Marsh.

Following additional studies and the appropriation of funds by Congress, the Kenilworth Marsh

Project finally began in 1992. Expected to both enhance the water quality of the Anacostia River and improve the health and aesthetic of the local wildlife habitat, the project used dredging materials from the Army Corps of Engineers to improve the National Park Service lands around the Kenilworth Aquatic Gardens. For a total cost of about $2.1 million, it increased the Anacostia basin's wetlands acreage by a full fifty percent and restored much of the native vegetation to the area, including wildrice, pickerelweed, and arrowhead. The 32-acre restored Kenilworth Marsh was dedicated on September 21, 1993 (D'Vera 1993: D2; Jones 1996: 10-11). With time, this renewed habitat also drew and helped foster native wildlife in the marsh, including the long-billed marsh wren, swamp sparrow, and willow flycatcher (Syphax 1996).

Between 2000 and 2002, a network of boardwalk paths with interpretive display boards was built from the southwest corner of the aquatic gardens out into Kenilworth Marsh (National Park Service photographs 2000, Kenilworth Aquatic Gardens files, National Capital Parks - East; Doug Rowley, Personal communication, January 25, 2010). Since then, visitors have been able to branch out from the more formal landscape of the gardens to enjoy the natural wetlands beyond. From the security of these raised walks the public can appreciate the marsh, whose water level fluctuates by roughly three feet twice daily (Spears and Lee 2002).

A number of other projects have taken place at the gardens over the past decade. These include the replacement of the 184-foot sewer line feeding the restrooms on site in 2001 (PMIS 77900); soil and groundwater sampling for human health risks along the edge of the Anacostia River (PMIS 65385); and trail rehabilitation and stabilization work, removal of exotic invasive plant species, and planting and maintenance work conducted in collaboration with the Student Conservation Association in 2009 (PMIS 154684). One project, initiated in 2008 but still pending, promises to engage visitors in the landscape more meaningfully through art. The Kenilworth Aquatic Gardens Artist-in-the-Park program will offer artistic instruction and encourage the creation of artwork in the park, thus helping the public better appreciate the cultural and natural resources of the site (PMIS 144427).

Today, Kenilworth Aquatic Gardens have been called an "offbeat urban oasis" that "provides a fresh opportunity" for studying wildlife, even in the winter months (Washington Times, January 20, 2008). Particularly during the summer months, they continue to enchant visitors with their calm and unusual beauty, and are especially popular among painters, bird-watchers, and other seekers of wildlife. In addition to the exciting assortment of water lilies, lotus, and other native and non-native aquatic plant species, visitors are treated to rare urban sightings of turtle, beaver, bald eagle, blue heron, hawk, osprey, egret, duck, and goose.

A recently-founded partner organization known as the Friends of Kenilworth Aquatic Gardens helps to generate support for the site, in addition to organizing and publicizing various park projects and other events (Friends of Kenilworth Aquatic Gardens 2010). Along with local church groups, the Friends also provide volunteers that help supplement park staff in maintaining the gardens, and participate in weekend work days. Projects are regularly organized for Earth Day, Public Lands Day, and the annual orientation of University of Maryland first-year students (Doug Rowley, Personal communication, January 25, 2010).

The park has also served as a venue for the celebration of Women's History Month, through a look at the life and accomplishments of L. Helen Shaw Fowler (National Park Service 1996, Kenilworth Aquatic Gardens files, National Capital Parks - East). The Water lily Festival, also known in the past as Founder's Day, is held on the third Saturday of July each year, and includes special events such as garden walks, puppet shows, talks and a guest speaker. Originally begun around 1985, its name was recently changed to the Annual Asian Cultural and Lily Festival, due to the support and involvement of a variety of Asian heritage groups from the Washington, DC area and beyond (National Park Service 2006, Kenilworth Aquatic Gardens files, National Capital Parks – East; Friends of Kenilworth Aquatic Gardens 2010).

Still, over the years the contents of the ponds themselves has changed. Likely due to its popular appeal, there is considerably more lotus today than there was historically. Over the past ten years, controlling the wealth of cattails and iris along the pond edges has been an ongoing task for the garden management team. Other natural resource concerns include the tunneling of muskrats through the pond dikes, and turtles and crayfish eating away at the lily stalks and roots. Construction of internal wire fencing in the dikes in 2007 has prevented much of the destruction previously wrought by muskrats in the gardens; however, the ongoing prevalence of beavers still results in damage to both pond dikes and aquatic plants. The upkeep of historic trees has been another challenge, as they naturally age and pond edges erode. A number of trees growing in the gardens have partially fallen into the adjacent ponds, while two large, Shaw-era hemlocks (Tsuga sp.) that used to stand near Display Ponds 1 and 2 fell and were removed between 2000 and 2001 (Doug Rowley, Personal communication, February 3, 2010).

The gardens have also had their share of issues with invasive and non-native species. Though it represents one of the plants historically present in the gardens, parrot's feather is among these. Others include purple loosestrife (Lythrum salicaria), poison ivy (Toxicodendron radicans), common reed (Phragmites australis), bamboo, Japanese honeysuckle (Lonicera japonica), and porcelainberry (Ampelopsis brevipedunculata), as well as the submerged fanwort, waterthyme (Hydrilla verticillata), Canadian waterweed (Elodea canadensis), and curly pondweed (Potamogeton crispus). In 2006 the northern snakehead fish, an import from Asia, suddenly appeared in the ponds in massive, hungry numbers. A few adults and more than 500 baby snakeheads were found to have eaten "almost every other fish in the water" late that spring (Fahrenthold 2006). The source of the fish was a matter of some debate, with D.C. officials speculating that this population may have begun with the dumping of several original fish directly into the aquatic gardens. However, another possibility is that these fish may have represented an adventurous offshoot of a larger and growing population in the nearby Potomac River, since these bodies of water connect by way of the Anacostia River (Fahrenthold 2006).

Plans for the near future of the gardens include greenhouse roof and plumbing projects, as well as a trail project in nearby Kenilworth Park. Over the past ten years, a concerted effort has been made to curb what had become a kind of monoculture, or massive overgrowth, of cattail in the ponds. Since then, crucial progress has been made in this respect. However, vegetation issues related to both overgrowth and deterioration have been an ongoing concern and

increasing priority. Likewise, continued deterioration of the three original Hothouse structures, and in particular their non-historic and poorly maintained roofs, has been a primary concern for park managers over the past six to seven years (Doug Rowley, Personal communication, January 25, 2010).

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

INTRODUCTION

This section provides an evaluation of the physical integrity of the cultural landscape at Kenilworth Aquatic Gardens by comparing the landscape characteristics and features present during the period of significance (1882-1938) with current conditions. Landscape characteristics are the tangible and intangible aspects of a cultural landscape which express its historic character and integrity, and which allow visitors to understand the history of a site. Each characteristic or feature is classified as either a contributing or non-contributing element of the site's overall historic significance.

Landscape characteristics are classified as contributing if they were present during the property's period of significance, and non-contributing if they were not present during that period. Non-contributing features may in some cases be considered "compatible," if they are determined to fit within the physical context of the historic period and match the character of contributing elements in a way that is sensitive to the construction techniques, organizational methods, or design strategies of the historic period. Features designated as "incompatible" are those that are not harmonious with the quality of the cultural landscape, and whose existence can lessen the historic character of the property.

This section also includes an evaluation of the property's integrity in accordance with National Register criteria. The National Register recognizes seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Several or all of these aspects must be present for a site to retain historic integrity. To be listed on the National Register, a property must not only be shown to have significance under one of the four criteria, but also should be demonstrated to retain integrity to the period of significance.

HISTORIC SIGNIFICANCE

Landscape Characteristics and Features

Contributing landscape characteristics identified for Kenilworth Aquatic Gardens are topography, natural systems and features, circulation, constructed water features, views and vistas, spatial organization, buildings and structures, vegetation, land use, and small-scale features.

The topography of the Kenilworth Aquatic Gardens cultural landscape has remained almost entirely unaltered since the site was known as the Shaw Aquatic Gardens. Originally part of the level, marshy flood plain east of the Anacostia River, the land now occupied by the gardens is still below the tidal mark, and is periodically subject to flooding. The location of the buildings at the east end of the site, on slightly higher ground, further illustrates the continued importance of elevation. Thus, today's mostly flat expanse of terrain broken by pools achieves the same effect that it did during the historic period of significance.

By the time the federal government assumed ownership of the property in 1938, all natural systems and features of the site had been transformed into constructed water features. However, the original, natural features that existed here are credited with providing the environment and water necessary to develop a successful water garden. Using a small tributary of the Anacostia River, Walter Shaw carefully shaped this landscape into a network of ponds to house his water lilies and other aquatic plants. Although the river itself is outside the study boundary and the natural features that once connected the gardens to the river are now gone, the crucial surviving link between them accounts for the continued existence of Kenilworth Aquatic Gardens.

Circulation patterns at Kenilworth Aquatic Gardens have remained largely unaltered since 1938. A single grassy lane still circles the perimeter of the pools. Although slightly more narrow and more numerous than they were historically, pond paths supported by dikes continue to cut through the landscape at the same, fairly geometric angles they had in Shaw's time. The driveway that used to cut between Helen Fowler's house and barn, and served as the primary private access to the site, is now a maintenance road leading through a gate to the main greenhouse just outside the study boundary. Still, certain changes to the external layout of roads around the site created a shift in the use of various paths and lanes within the site. For instance, the lane that used to run between the old Shaw Sales Building and southern greenhouse (now known as Hothouse 3) is now a grassy foot path. In the southwest corner of the gardens, the perimeter road continues straight south over the study boundary, to skirt the edge of a group of non-historic ponds before narrowing into the boardwalk path. As a result, the circulation patterns at the site retain a high level of integrity to the historic period of significance.

The constructed water features of the gardens have undergone only minimal change since the historic period of significance. Although the pool size has in some cases shrunk, both ponds and drainage features retain their original construction type and, for the most part, layout and scale. One of the primary exceptions to this rule has been the installation of new drainage pipes through the dikes, to replace the submerged historic ones. This step was largely made necessary by increased silting of the ponds, which were dredged much less frequently after 1938. However, the location of the new pipes follows the same pattern as their predecessors, and each pond is still fed and drained by the original ditches installed along the garden perimeter. The constructed water features of the site therefore retain a high level of integrity to the historic period of significance.

The views and vistas of Kenilworth Aquatic Gardens have changed only minimally since the early twentieth century. Depending on the season, pools of open water or blooming lilies of all colors stretch across the landscape, separated by raised paths and hardwood trees. Framing the site on north and south sides were the original woodlands maintained as woodlots during the previous centuries. Views to the west revealed the natural marsh vegetation just beyond the gardens' edge, and looking east from the pools the building complex could barely be seen through a screening of trees. Although the type of the vegetation has changed in places and a few modifications have been made to the ponds, views across the site have thus remained largely unchanged, and the focus is still on the aquatic pools and their contents, as distinct from the surrounding wetlands and woods. Thus, the views and vistas of Kenilworth Aquatic Gardens retain a high level of integrity to the historic period of significance.

The spatial organization of the gardens has changed in a few small ways since the historic period of significance. A flat network of pools dotted with trees still stretches west from a building complex east of the water's edge. Walking west through the gardens, a collection of larger pools gives way to an expanse of smaller ones at the western end. However, since acquisition by the government two of the larger pools have been divided into seven smaller ones, while the building complex has undergone several changes. Additions to the old Shaw Sales Building have cramped its original relationship to the three neighboring hothouses, while the removal of Helen Fowler's old house, barn and shed modified the overall arrangement of the building complex and its former position framing Display Pools 1, 2 and 3. As a result, these changes have altered the overall layout of the site, and the spatial organization of the gardens retains a moderate level of historic integrity.

Since the early twentieth century, the types and variety of vegetation at Kenilworth Aquatic Gardens have played a crucial role in site development. Not only did the gardens gain profit from the variety of aquatic plants grown in the ponds, but the various trees growing along the dikes between the pools provided shelter, shade, and additional aesthetic appeal, as they continue to do today. The general feel of a natural wetland environment was further enhanced by the variety of aquatic plants growing along the pond edges, another feature that survives. Still, the types and variety of plants at the gardens have shifted since 1938, as deferred maintenance has afforded nature greater reign in the landscape design. Consequently, the vegetation of the site retains only a moderate level of integrity.

Land use at the Kenilworth Aquatic Gardens of today is considerably different from what it was at the old Shaw Aquatic Gardens. Whereas the gardens began as a hobby, they quickly developed into a full-scale commercial enterprise, and became one of the earliest and best known businesses in aquatic plants. This is also the place where Fowler lived, and where she and her father developed a number of new water lily hybrids, some of which went on to become some of the most popular varieties in water gardening. Although no longer used for hybridizing or as a residential site, many of the landscape features that supported these operations still remain. Today the gardens continue to be a place for recreation and leisure, continuing a tradition that began with their local use throughout the historic period of significance. As a result, the use of the gardens retains a moderate level of historic integrity.

The number and configuration of buildings and structures at Kenilworth Aquatic Gardens have changed somewhat since the historic period of significance. The old tenant house, barn, and shed that were present through the end of the 1930s were demolished following the death of Helen Fowler in 1957. Since then, additions and modifications have been made to the Administration Building, while some small alterations have been made to the three historic greenhouses structures. Although the size and layout of the greenhouse structures has remained the same, the close proximity of the current restrooms to today's Hothouse 2 does not reflect the more open, farmyard type landscape of the early twentieth century. Consequently, the gardens' buildings and structures on the whole retain a low level of integrity to the historic period of significance.

In part due to their commercial purpose, the Shaw Aquatic Gardens had relatively few small-scale

features. A few concrete or wooden benches provided some convenience for the weekend visitor, while during the summer months many of the ponds contained wooden boats for access to the aquatic plants. However, all of these original features have since disappeared, and as the landscape has developed towards its new purpose as a public garden a number of new features have been added to improve visitor comfort. Trash receptacles, street lamps, new benches and picnic tables are just a few examples. Wire fencing has also been added around the base of many of the trees, in order to help prevent destruction by the local beaver population. Although many of these small-scale features are compatible with the historic character of the site, as new additions to the landscape they lack integrity to the historic period of significance.

The Seven Aspects of Integrity

1. Location – The physical location of Kenilworth Aquatic Gardens has remained unchanged since Walter B. Shaw planted his first few water lilies in the early 1880s. However, as Shaw and his daughter gradually expanded their aquatics business out into the marsh in the years that followed, the size of the site progressively grew. The outer boundary of both the ponds, to the west, and the building complex, to the east, continued to stretch up until the late 1920s, when the final few pools in the southwest corner of the gardens were completed. Since then, despite dramatic change to the adjacent neighborhood of Kenilworth and some changes around the edges of the current study boundary, the shape and position of the gardens' core cultural landscape has remained unchanged. Thus, the location of the site retains a high level of integrity to the historic period of significance.

2. Materials – Many of the materials historically used at Kenilworth Aquatic Gardens are still extant. The majority of the three Hothouses, as well as the two-story section of the Administration Building, contain their original components. The concrete foundations for the five surviving display pools are the same ones that were first installed by Shaw to house his tropical lily and lotus varieties. The underground, galvanized iron drainage pipes that cut through the dikes in the gardens are also original to the landscape, although most of these are currently buried in pond silt accumulated over the intervening decades. Lastly, the water in the ponds itself is still taken from the Anacostia River, as it has been since the gardens were created. As a result, the remaining materials in this cultural landscape retain a moderate level of integrity, and remain an important part of its historic character.

3. Design – Little is known of the exact design that Shaw originally laid out for his aquatic gardens. However, the value he placed on retaining a natural landscape with a variety of water lilies, lotus, and other aquatic plants was clear throughout both his ownership and that of his daughter. Today, the site remains largely intact, and continues to perpetuate many of the same design elements that played such a fundamental role in the historic gardens. These include drainage features such as underground pipes and ditches, a range of different ponds containing a variety of aquatic plants, and ample access to and circulation among these pools. In addition, the gardens still contain a building complex and a number of associated display pools that fundamentally support the maintenance of the aquatic plants that fill the ponds. One of the primary exceptions to this rule is the additional division of some of the larger ponds that took place in the 1960s. Still, the design of Kenilworth Aquatic Gardens retains a high level of integrity to the historic period of significance.

4. Setting – The setting in which Kenilworth Aquatic Gardens are situated has changed in several ways since 1938. First, although the woodlands and marsh surrounding the gardens on three sides have remained largely unaltered, many of the historic trees that used to mark the site are no longer extant. Another important shift in the setting took place with the removal of Helen Fowler's old house, associated barn, and shed. The adjacent areas to the north and east, including a greenhouse complex, parking lot, and housing complex, are also dramatically more developed than they were during the historic period of significance. Still, the orientation, circulation and views through the gardens have remained consistent since the government's acquisition of the site. In addition, many of the informally-arranged aquatic and wetland vegetation, and some of the trees, that mark the pools today are the same types as existed historically. Consequently, the historic setting for the gardens has largely remained intact, and retains a moderate level of integrity.

5. Workmanship – Much of the original workmanship used in the construction of the landscape at Kenilworth Aquatic Gardens still survives today, in some form. For instance, although the edges of the pools have suffered from erosion in more recent years, the general shape and size of most of them accurately conveys their historic appearance. Although the height and material type has changed, the system of underground drainage pipes with levers that control water flow to and from the ponds also represents a piece of the original site workmanship. The lane around the perimeter of the gardens is still a grassy track, while the pond paths cut at fairly geometric angles through the landscape, facilitating both pedestrian access to and enjoyment of the pools. The style and construction of the three Hothouses, display pools, and the two-story portion of the Administration Building also preserve important parts of the gardens' original craftsmanship. The workmanship of this cultural landscape therefore retains a high level of integrity to the historic period of significance.

6. Feeling – The feeling achieved by Kenilworth Aquatic Gardens today is similar to what it would have been during the historic period of significance. The number and arrangement of pools has changed slightly over the years, but the visitor entering the gardens finds the same kind of peace that was sought here by President Woodrow Wilson in the early 1920s. Partially shaded pond paths cut through a network of pools whose surface is dotted during the summer months with lily pads and blooms. The undisturbed water captures a smooth reflection of the sky and overhanging hardwood trees, broken only occasionally by the frightened flight of a water bird, frog or turtle. The only lingering reminders of the city just outside are the occasional honk of a horn and the continuous whirr of traffic along Route 50 to the north. Perhaps most changed in visiting the site today is the process of gaining access to the site. Instead of walking up to the ponds along a country lane from Douglas Street, visitors now pass through a layer of chain link fence and park in a designated lot to the north before walking down into the site via a gravel walk northeast of the gardens. Still, once inside the visitor can still enjoy the views across the ponds, stroll along the display pools east of the sales building or wander through the foot paths leading among the main ponds. The continued maintenance of a variety of hardy and tropical water lilies, as well as lotus, in the gardens preserves the site's distinctive purpose, while the removal of overgrown cattails (Typha L.) and iris (Iris L.) from the pond edges has helped begin to return the ponds to their original appearance. Thus, the feeling of Kenilworth Aquatic Gardens retains a moderate level of integrity to the historic period of significance.

7. Association – Founded by a Civil War veteran from Maine, Kenilworth Aquatic Gardens began as the Shaw Aquatic Gardens. Under the direction of Walter B. Shaw and L. Helen Fowler, two well-known aquatic horticulturalists of their day, these gardens grew and developed into a nationally-recognized enterprise. Some of the best-known and arguably most beautiful water lily hybrids were created here by Fowler herself, while during their commercial operation the gardens themselves had one of the broadest collections of water lily types in the country. Over the years, the site was also frequented by a succession of presidents and their wives, including President and Mrs. Woodrow Wilson, Mrs. Warren G. Harding, and Mrs. Calvin Coolidge. Although the gardens' association with Shaw and Fowler has remained relatively intact thanks to interpretation efforts, their connection to famous and rare water lily hybrids has faded. Hindered by a small staff and years of near neglect, the process of reclaiming the identities of many water lily types in the ponds remains a challenge. Despite being open to the public seven days a week rather than just on Sundays, it is no longer a presidential destination. As a result, the association of Kenilworth Aquatic Gardens retains a moderate level of integrity to the historic period of significance.

CONCLUSIONS

This CLI finds that the Kenilworth Aquatic Gardens cultural landscape retains a high level of integrity for its period of significance, 1882 to 1938. Since that time, the cultural landscape has been minimally altered, but those changes that have taken place are for the most part reversible, and therefore do not present a genuine threat to the site's overall integrity. The original intent of the site's design can be recaptured through dedicated maintenance, dike stabilization, replanting of trees, and some plant removal. Despite their general decline as a horticultural site over the past fifty years, the gardens therefore endure as a unique natural and cultural resource whose historic value demands their preservation.

Landscape Characteristic:

Topography

Historic Conditions

Before the arrival of Europeans, when the area that later became the District of Columbia was inhabited by the tribes of the Nacotchtank kingdom, the vicinity of the future Kenilworth Aquatic Gardens was a broad, flat expanse of riverside swamplands.

Walter B. Shaw began planting his first water lilies down by the Anacostia River around 1882. When drastic change came to this area with the U.S. Army Corps of Engineers Anacostia River project of the late nineteenth and early twentieth centuries, the new Shaw Aquatic Gardens site and adjacent wetlands were left virtually untouched thanks to its owners' efforts.

Shaw's use of an existing ice pond to plant his first few lilies indicates the wetland character of the landscape before he arrived. His expansion upon this aquatic theme therefore worked to take advantage of the landscape's own natural characteristics. He used the force of gravity from the Anacostia River to draw and drain water to and from the ponds, and constructed the

associated buildings on the higher ground to the east so as to avoid unnecessary damage from severe flood events. Thus, maintaining the relatively flat character of the landscape, and its position adjacent to the tidal mark, was essential to the continued operation of the water gardens.

Existing Conditions

Within Kenilworth Park today, the edge of the Anacostia River is characterized by alluvial gravel, sand, silt and clay mixed with areas of artificial fill made up primarily of material dredged from the river in earlier periods (Rummel et al. 1981: 57). Over the years, retention of the original topography of the site remained a matter of necessity, since the very process of maintaining the ponds relied upon regular access to water flowing to and from the nearby Anacostia River (Doug Rowley, Personal communication, January 25, 2010). The broad, level expanse of ponds and slightly higher ground of the building complex remains virtually unchanged from the way they appeared in 1938. As a result, the topography at Kenilworth Aquatic Gardens retains a high level of integrity, and contributes to the historic character of the cultural landscape.

Character-defining Features:

Feature: Anacostia flood plain

Feature Identification Number: 141076

Type of Feature Contribution: Contributing

Feature: Raised ground in the vicinity of the building complex

Feature Identification Number: 141078

Type of Feature Contribution: Contributing

Natural Systems and Features

Historic Conditions

Starting in the early 1880s, Walter B. Shaw began utilizing a small, abandoned ice pond down on the edge of the Anacostia River wetlands to grow a few water lilies from his native Maine. His original few ponds soon developed into a network fed directly from the wetlands and small tributaries of the Anacostia that extended east to his property. With the help of this crucial natural feature, Shaw was able to develop the surrounding landscape into a network of ponds to support his growing business in aquatic plants. Water for the ponds came from the river, where it returned during the periodic cleaning and draining of the ponds.

Existing Conditions

Today, the original layout of ponds next to the Anacostia wetlands and small tributaries leading from the river still remains, and the gardens continue to rely upon the maintenance of this vital

connection. The water used throughout the main ponds comes from the Anacostia River via the adjacent marsh, as it did historically. More recently, the wetlands bordering the property have also come to serve as a crucial filtration system for the Anacostia's polluted waters. The Anacostia River itself is outside the study boundary for the current inventory and therefore cannot be identified as a contributing landscape feature; however, its location nearby, and the existence of a natural pond down by the river in the 1880s, together account for the initial development, success and survival of the Kenilworth Aquatic Gardens cultural landscape.

Circulation

Historic Conditions

The Shaw Aquatic Gardens' historic circulation patterns closely reflect the site's primary use as a private business in aquatic plants. Public access to the site was not a high priority, whereas stable and consistent access to the pools and their contents was paramount.

POND PATHS

As Walter B. Shaw increasingly expanded his enterprise in the late nineteenth and early twentieth century, the borders of each pool were marked both by dikes and the paths they supported. These pond paths were crucial not only for their purpose in creating divisions between pools, but for the access they provided to the ponds themselves. Boats used to collect the lilies were tied here, while wheel barrows and other garden equipment regularly rolled down their shaded, grassy avenues into the heart of the gardens.

The layout of these paths was historically very similar to what it is today, skirting the larger pools for most of the gardens and then looping around the cluster of smaller pools at the gardens' west end. Their width, as estimated from historic photographs, ranged around six feet or more, in accordance with the needs of frequent use by historic garden machinery (see Figure 14). Although little documentation survives regarding the types of transport that were used to bring water lilies and lotus to and from the gardens, these probably included wheel barrows and other types of carts pulled by hand. The key role played by the paths in accessing the pools thus ensured their careful maintenance and thorough use. After Shaw and Fowler acquired a truck for the gardens around 1912, this vehicle also probably served to collect and deposit materials from the dirt lane around the ponds' outer edge.

ROADS AND FOOT PATHS

A 1927 aerial illustrates access to the aquatic gardens as it existed throughout much of the early twentieth century (see Figure 12). A road around the entire outside of the pools formed a continuous rectangle and linked with the country lane south of Helen Fowler's house. A foot path branching out from the northeast corner of this rectangle ran up to the edge of the adjacent war veterans housing development, while another lane split from the same corner and led east before turning south, past the barn, and merging with the same road that lay south of Helen Fowler's house. This last section is now the main greenhouse access road.

Further south, Douglas Street ended in a cul-de-sac near the southeast corner of the ponds, and a small road led north from here to connect with the lane around the perimeter of the gardens and up to the building complex. Some idea of what this corner looked like during the historic period can be gleaned from a late 1920s photograph looking northwest toward the gardens, probably from the north edge of the cul-de-sac (Figure 19b; 1925 to 1930 Picnic in Shaw's Water Gardens, CHS 10455.08, Kenilworth Aquatic Gardens files, Historical Society of Washington, DC). Several cars can be seen lined up along the lane as it rounds the southeast corner of the gardens, while a defined foot path leads west through the trees, from the cul-de-sac and into the site. The circulation patterns in this area are also illustrated in a 1940 map (see Figure 17).

Existing Conditions

Circulation routes at Kenilworth Aquatic Gardens today remain largely the same as they were during the historic period of significance, with some small alterations that reflect the site's changing focus.

POND PATHS

The paths that cut their way through the ponds today are in most cases almost exactly laid out in their historic pattern. Still, a comparison of contemporary maps and aerials with historic ones clearly delineates several exceptions to this rule (Figure 20; see Figures 1 and 17). Specifically, the addition of new pools (Ponds 40 and 41) in the southwest corner of the gardens in 1952 created several new paths between today's Ponds 39, 42, 43 and 44 (see Figure 1; Rowe 1952, photograph 1573-F, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). With the division of the two large pools in the 1950s and 1960s, the paths leading between Ponds 10, 12, 15, 16, and 17, and between Ponds 19 and 20 were created (National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1963 and 1968; August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958). As more recent additions to the landscape, the paths dividing these ponds do not have integrity to the period of significance, and therefore do not contribute to the historic character of the landscape. However, their scale, function and construction are consistent with the rest of the gardens, making them compatible with the overall historic character of the site.

The width of pond paths has also narrowed somewhat since the 1920s, a change that reflects the shift in focus and declining maintenance of the gardens since the late 1950s. Most pond paths today are around 3 to 5 feet wide, and as a result are less stable than they were historically. Nonetheless, the paths at the site today retain a high level of integrity overall, and contribute to the historic character of the cultural landscape.

ROADS AND FOOT PATHS

Sometime probably in the 1960s, circulation to the south and east of the aquatic gardens underwent substantial change. To the east of the site, Anacostia Avenue began to emerge between 1957 and 1960, stretching north and east from Douglas Street past the gardens (National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1957 and 1960). By 1968, the historic cul-de-sac that had originally provided access to the site near the southeast corner of the ponds had been replaced by open park land. Douglas Street now reached a dead end at Anacostia Avenue, while a parking area built off the same road to the northeast now served as the gardens' public entrance. A small foot path led from this lot down to the northeastern corner of the gardens, much as it does today (National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1968; National Park Service 1980).

Despite this shift in circulation patterns and site access, the layout of roads within the aquatic gardens remained relatively stable. The lane leading west to the ponds from Douglas Street continued to be maintained for use by park vehicles, and was still regularly used as a road up until the 1989 Administration Building additions partially obstructed it. Likewise, the driveway that had formerly run north between Helen Fowler's house and the barn was soon after adapted into a service road for the use of park staff. Today it is used to access the main greenhouse north of here, which was built between 1957 and 1960 and sits just outside the study boundary. Still, since the cul-de-sac is now gone, the road leading south from the building complex along the southeast edge of the ponds no longer links to Douglas Street. Instead, it connects directly to the lane around the gardens' perimeter (National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1957 and 1968). A picnic area now occupies the space directly southeast of the ponds, in a wooded clearing outside of the study boundary.

Today, the country lane that once passed by Helen Fowler's home has become a foot path that leads east from the gardens to meet up with the gravel access road to the main greenhouse. North of the building complex, another foot path leads out of the site boundary to the parking area, as it has since this lot was built in the 1960s. A third foot path was used to access the old war veterans housing from the ponds during the 1950s. This route has since become a service road connecting the road around the ponds with the parking area (see Figure 1; Rowe, August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center). Since the original construction of the main greenhouse structures, a small road and employee parking area was built just north of the gardens building complex, off the northeast corner of the ponds (see Figure 1).

As a result, the roads of Kenilworth Aquatic Gardens have retained a high level of integrity, and contribute to the historic character of the site.

Character-defining Features:

Feature: All pond paths except those identified below as non-contributing landscape features

Feature Identification Number: 141080

Type of Feature Contribution: Contributing

Feature: Dirt lane around the entire perimeter of the ponds

Feature Identification Number: 141082

Type of Feature Contribution: Contributing

Feature: Lane (or service road) leading from Anacostia Avenue to main greenhouse, past the former site of Helen Fowler's house

Feature Identification Number: 141084

Type of Feature Contribution: Contributing

Feature: Access leading east from the ponds and cutting between the Administration Building and Hothouse 3, just south of the Fowler house site

Feature Identification Number: 141086

Type of Feature Contribution: Contributing

Feature: Pond paths leading between Ponds 10, 12, 15, 16, and 17

Feature Identification Number: 141088

Type of Feature Contribution: Non Contributing

Feature: Pond paths leading between Ponds 19 and 20

Feature Identification Number: 141090

Type of Feature Contribution: Non Contributing

Feature: Pond paths leading between Ponds 38 and 39

Feature Identification Number: 141092

Type of Feature Contribution: Non Contributing

Feature: Pond paths leading around Ponds 40 and 41

Feature Identification Number: 141094

Type of Feature Contribution: Non Contributing

Landscape Characteristic Graphics:

Figure 20. Aerial photograph of Kenilworth Aquatic Gardens in 2008 (NPS National Capital Region GIS 2008).

Constructed Water Features

Historic Conditions

The constructed water features of Shaw Aquatic Gardens can be categorized into two different types: ponds and drainage features. Although each of these is addressed separately below, together they utilized the Anacostia River's natural tidal flow to provide an hospitable environment for W.B. Shaw's aquatic plants.

PONDS

Walter B. Shaw's original three water lily ponds of the early 1880s were naturally fed by an underground spring. In the years that followed, he expanded the number of ponds and worked westward into the marsh. The dikes between each new tier of ponds were carefully constructed to support farm machinery, and contained underground drainage pipes linking each pond to a drainage outlet onto the marsh (see below for further description).

Although expansion of the pools had almost reached its full extent by the late 1920s, new ponds were still under construction during the late 1920s. An aerial photograph from 1927 reveals the completion of the gardens only up to a certain point; current Ponds 29, 30, and 36 do not yet exist, although Pond 36 may have been under construction (see Figure 12). These last three pools were probably completed sometime in the succeeding years, and were in place by 1935, when the site was described as 42 ponds spread over nine acres (Warren 1935).

On the whole, the historic ponds were large in size, as represented by today's historic and intact

Ponds 4, 5, and 6. According to one 1908 report, "the ponds, some of which are nearly an acre in area, are square, and sharply built dikes separate one from the other" (L. 1908). These big, neatly constructed ponds allowed ample space for Shaw's lotus and hardy lilies, while the smaller, more tightly packed pools at the gardens' western and southern edges were ideal for the more carefully tended tropical varieties.

DRAINAGE FEATURES

In the late 1800s, as he gradually built up his number of ponds, Shaw developed a network of underground drainage pipes and outlet channels. Careful manipulation of the various pipes allowed him to control the flow of water to and from the pools using the natural, tidal ebb and flow of the Anacostia River. Around the exterior of the ponds, just outside the lane around their outer edge, he maintained a long drainage ditch that linked directly to the open marsh at the gardens' west end (see Figure 12). Onto these ditches opened a succession of underground pipes that cut through the adjacent dikes and into the neighboring ponds.

This carefully designed drainage system not only allowed total control of the intake and outtake of water from the ponds, but they helped protect the fragile aquatic plants from the river's natural and unpredictable water level variations, or what Conard and Hus referred to as "freshets" in 1907 (Conard and Hus 1907: 14). Particularly as Shaw's business grew and eventually became his primary source of income, protecting his crop from currents and floods was a crucial concern. The construction of stable dikes and underlying pipes helped to minimize this risk, and also had the added benefit of aiding the control of troublesome frog and turtle populations (L. 1908). Crafted from galvanized iron, the underground pipes opened onto each pond and were equipped with a lever that could be opened or closed, according to need (Doug Rowley, Personal communication, January 25, 2010). Thus, the force of gravity allowed the ponds to be drained when the tide went out and left dry for the purposes of cleaning and maintenance, then filled again when the river rose once more.

Existing Conditions

The drainage and ponds of the aquatic gardens today remain in many ways similar to what they were historically, although several important changes have taken place.

PONDS

The great majority of the ponds at Kenilworth Aquatic Gardens today are the same as they were historically. The most outstanding exception to this rule are Ponds 10, 12, 15, 16, 17, 19, and 20. Sometime between 1950 and 1958, one of the large pools of the gardens was divided to form today's Ponds 19 and 20, while Ponds 10, 12, 15, 16, and 17 were created from a single larger pond between 1963 and 1968 (August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958; National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens

1963 and 1968). The earlier ponds built by Shaw and Fowler were considerably larger than what currently exist.

Additional construction and division of the smaller ponds in the southwest corner of the gardens also took place in the early 1950s, as the original four pools became today's Ponds 39, 40, 41, 42, 43 and 44 (see Figure 1; Rowe 1952, photograph 1573-F, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958). Pond 38 was added to the west end of these pools sometime between 1960 and 1963 (NCP 7002, National Park Service 1958; National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1960 and 1963).

Although today's Ponds 10, 12, 15, 16, 17, 19, 20, and 39, 40, 41, 42, 43 and 44 did not exist in their current form before 1938, the presence of earlier ponds in the same location gives them a level of continuity with the historic landscape. As a result, these ponds contribute to the historic character of the gardens, but retain only minimal historic integrity.

Meanwhile, many of the ponds have changed in depth and width, over time. Dredging has been infrequent, with one of the last documented efforts taking place in Pond 4 in 2002. While ongoing siltation has decreased their depth, the erosion of pond edges due to fallen trees, continued use, and limited maintenance has resulted in the narrowing of pond paths. More recently, damage to the dikes became accelerated by the tunneling of muskrats between ponds. Park staff responded by erecting a network of internal fencing in 2007 (Doug Rowley, Personal communication, February 3, 2010). These wire fences, which were built into the center of each dike and below the water level, effectively block muskrats without affecting the drainage or other functional and aesthetic aspects of the ponds. Beavers continue to wear paths over the dikes and between ponds, however, as well as through the aquatic vegetation.

Over all, both the ponds and dikes of Kenilworth Aquatic Gardens still retain a high level of integrity, and contribute to the historic character of the site.

DRAINAGE FEATURES

Due to the lack of regular pond dredging since the 1960s, ongoing siltation has buried the original galvanized iron pipes installed by Shaw. This necessitated the installation of a new set of underground, 4-inch polyvinyl chloride (PVC) pipes at a higher level than the historic ones. Installed between 2003 and 2006, these pipes now provide water circulation between the ponds. In several places, metal covers mark the presence of drainage outlets between ponds (Figure 21a; Doug Rowley, Personal communication, February 3, 2010). A small section of galvanized iron pipe, a probable remnant from the historic period of significance, is still visible in the southeast corner of Pond 4, whose layout is nearly identical to what it was during the early twentieth century (Figure 21b).

As part of the original drainage network, the buried galvanized iron pipes contribute to the

historic character of the cultural landscape. The more recent PVC pipes that had replaced these early features by 2006 do not contribute to the historic character. However, due to their function and general placement in correlation with the historic pipes, these features are compatible with the original design of the cultural landscape. Still, the visible PVC piping that emerges from the ground to the southeast and southwest of the Administration Building is not compatible with the historic character of the site.

Character-defining Features:

Feature: All current ponds

Feature Identification Number: 141096

Type of Feature Contribution: Contributing

Feature: Presence of ponds and dikes throughout the gardens

Feature Identification Number: 141759

Type of Feature Contribution: Contributing

Feature: Galvanized iron pipes

Feature Identification Number: 141100

Type of Feature Contribution: Contributing

Feature: All dikes except those identified below as non-contributing landscape features

Feature Identification Number: 141102

Type of Feature Contribution: Contributing

Feature: 4-inch PVC pipes

Feature Identification Number: 141156

Type of Feature Contribution: Non Contributing

Feature: Dikes between Ponds 10, 12, 15, 16, and 17

Feature Identification Number: 141158

Type of Feature Contribution: Non Contributing

Feature: Dikes between Ponds 19 and 20

Feature Identification Number: 141160

Type of Feature Contribution: Non Contributing

Feature: Dikes between Ponds 38 and 39

Feature Identification Number: 141162

Type of Feature Contribution: Non Contributing

Feature: Dikes around Ponds 40 and 41

Feature Identification Number: 141164

Type of Feature Contribution: Non Contributing

Landscape Characteristic Graphics:

Figure 21. (a) Looking west from the path between Ponds 19 and 20; (b) Looking northwest across Pond 4 (NCR CLP 2009 and 2010).

Views and Vistas

Historic Conditions

The early views and vistas of Shaw Aquatic Gardens were characterized by an expanse of water broken into separate ponds by straight, grassy dikes (Figures 22a and 22b). Sheltering this landscape on its north and south sides was a natural landscape of marsh and fringing woodlands, while the more open marsh could be seen in many views looking west, in the distance beyond the gardens' western edge (see Figure 12). Looking east from the gardens, the building complex was occasionally visible through a screen of willow oak, weeping willow and other hardwoods.

Scattered trees, whose shade fell on the water as well as the paths between the pools, further divided views across the landscape and obscured the more distant corners of the gardens (see Figure 14). The lower views were also partially blocked by a selection of the taller aquatic plants that lined the pond edges, including cattails, wild rice, iris and arrowhead.

In addition, the appearance of the ponds changed dramatically according to the season. During the winter, the eyes could stretch over a fairly flat vista of pools broken only by the trunks and bare branches of the trees. In contrast, over the summer months different ponds immediately stood out to the observer, depending on what was growing in them. For example the Egyptian Lotus (Nelumbium nucifera), described as "the favorite lotus" in 1935, has giant pink flowers, enormous leaves and frequently grows to a height of six feet (Warren 1935). Any pond with this type of lotus would therefore have blocked all but the more distant views of trees and the woods beyond. Indeed, one pool growing with this type of lotus was actually referred to as a "mammoth hedge" in 1908 (L. 1908). Still, interspersed among these pools of giant lotus were other ponds filled with a variety of shapes, sizes, colors, and heights of water lilies and other lotus types. Thus, views in this landscape took on a dynamic, ever-changing quality typical of natural wetland environments and other more vernacular settings.

Existing Conditions

The views and vistas that greet the public at Kenilworth Aquatic Gardens today have in some ways changed from what the typical visitor would have enjoyed during the historic period of significance. Although certain views, such as those across the surviving historic ponds, have remained unaltered in some respects, the creation of a number of smaller ponds from larger ones has over the years decreased the long-range vistas typical of the early twentieth century landscape (Figures 23a and 23b). On the whole, terrestrial and aquatic vegetation has also been allowed to grow more freely among the ponds since 1938. In particular, various shrubs, cattail and lotus tend to create a more thickly vegetated effect than what existed in the early twentieth century. Thus, in comparing contemporary views with those of the historic period, particularly in the summer months, there are considerably less open, far-reaching vistas across the ponds today. Looking out over the ponds in any direction, one is greeted with a higher concentration of greenery than the historic photographs from the 1920s and 1930s seem to indicate (see Figure 14).

In addition, the late twentieth-century addition of an employee parking area just off site and west of the main greenhouse is inconsistent with the historic character of this portion of the gardens (see Figure 3b). This lot can clearly be seen in the backdrop of views looking north across Display Pools 1, 2, and 3, and also from the main entrance path and lane leading around the east end of the ponds. It does not reflect the historic character of the cultural landscape. Still, upon entering the site from the main entrance, even before the ponds can clearly be seen, this parking area is one of the first things encountered by the visitor.

Nonetheless, these changes are relatively minor when considering the enduring presence of many historic views throughout the site. For instance, looking out over the gardens from the northwest corner, an expanse of flat, tranquil pools spotted with lilies and lotus of various kinds can still be seen. In the distance, the ponds are overhung and occasionally obscured by the branches and trunks of sheltering trees (see cover image). Amidst reflections beneath the dappled shade, the upright stalks of various aquatic plants screen the edges of many ponds. Although the forest to north and south is today comprised of a more dense woodland than it was historically, trees still frame the ponds to the north, west, and south (see Figure 21a). Looking through the gardens toward the edge of the ponds at any angle, the scattered marsh vegetation visible in the distance is similar to what would have met the eye in 1938. Meanwhile, views east still reveal glimpses of the lane and adjacent building complex, which is slightly larger than it was historically but remains partially screened by trees.

Consequently, the current views and vistas of Kenilworth Aquatic Gardens retain a high level of integrity, and contribute to the historic character of the cultural landscape.

Character-defining Features:

Feature: Views almost entirely obscured by hedges of lotus during the summer months

Feature Identification Number: 141172

Type of Feature Contribution: Contributing

Feature: Views looking north and south with woodlands in the distance

Feature Identification Number: 141188

Type of Feature Contribution: Contributing

Feature: Views looking west with wetlands in the distance

Feature Identification Number: 141192

Type of Feature Contribution: Contributing

Feature: Views looking across Ponds 10, 12, 15, 16, and 17

Feature Identification Number: 141178

Type of Feature Contribution: Non Contributing

Feature: Views looking across Ponds 19 and 20

Feature Identification Number: 141182

Type of Feature Contribution: Non Contributing

Feature: Views looking across Ponds 38 and 39

Feature Identification Number: 141186

Type of Feature Contribution: Non Contributing

Feature: Views looking across Ponds 40 and 41

Feature Identification Number: 141190

Type of Feature Contribution: Non Contributing

Feature: Views of the employee parking area north of the building complex

Feature Identification Number: 141200

Type of Feature Contribution: Non Contributing

Landscape Characteristic Graphics:

Figure 22. (a) Looking south as Helen Fowler collects lilies from Pond 4 around 1929 (Fowler 1929: 18); (b) Girls collect lilies from the corner of an unidentified pond around 1932 (Fowler 1932: 3). Note the hardwood trees in the background.

Figure 23. (a) Looking east along the road around the perimeter of the ponds, across edge of Ponds 29, 21 and 18; (b) Looking northeast across Pond 15 (NCR CLP 2009).

Spatial Organization

Historic Conditions

Around 1882, or about the time when Walter B. Shaw first began planting water lilies down in an abandoned Anacostia ice pond, the site of Kenilworth Aquatic Gardens was characterized by an open, agrarian landscape. Apart from a few farm houses, agricultural fields and a number of woodlots down by the river's edge, this area had remained largely undeveloped since the Civil War (see Figure 6).

However, with the construction of new bridges and growth of the nearby capital, the neighborhood, or "suburb" of Kenilworth was soon born (Scott 2005: 121-24; Suburban Citizen, September 7, 1901). Meanwhile, Shaw built a small house just east of his first ponds, to provide better access to the marsh and his favorite hobby. In the succeeding years he dug additional pools and built a cluster of associated structures, and the emergent gardens began to assume a more designed layout that reflected their purpose. A network of mostly large ponds, with a few

smaller ones at the western end of the gardens, developed with small footpaths built on dikes between them. Along these dikes, shade was provided by the occasional tree. The arching crowns of each graceful, billowing willow or upright hardwood broke the open vistas across the pools and even reappeared almost underfoot, reflected in the water's peaceful surface. Vegetation also helped to partially obscure the neighboring building complex, whose collection of one- and two-story structures supported the maintenance and commercial operation of the gardens. The relative size and distinctive appeal of the adjacent pools made this cluster of six buildings into a mere side-note, or point of departure, for the primary, outdoor focus of the site.

A separate space was created by the concrete display pools grouped around the building complex, which were probably installed before 1927, or sometime in the 1910s (see Figure 12). The flat, open character of this area, enclosed on three sides by two buildings and a country lane, created a residential yard whose landscape design focused on water lilies, rather than flowerbeds (see Figure 10). In addition, the nearby barn, several sheds and a scattering of trees in this area contributed to the kind of dense and varied spatial organization typical of a home site.

Existing Conditions

Today, the overall spatial organization of Kenilworth Aquatic Gardens remains much as it was before 1938. In the 1950s and 1960s, the National Park Service divided two of the originally larger ponds into seven smaller pools (creating current Ponds 10, 12, 15, 16, 17, 19, and 20). This development responded to the new visitor and interpretive focus of the site, but compromised the historic layout of the gardens (August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958; National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1963 and 1968). Although the great majority of the ponds remained the same size and shape that they had been historically, the fragmentation of these two large historic ponds changed the original arrangement and relationship of the ponds to the landscape (see Figures 1 and 17). Likewise, the early 1950s division of the ponds in the southwest corner of the gardens from four into six pools, and the addition of Pond 38 before 1963, altered the layout of this portion of the gardens (August 21, 1950, photograph 1338-A, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; NCP 7002, National Park Service 1958; National Park Service, National Capital Region GIS, Kenilworth Aquatic Gardens 1960 and 1963).

Other changes made by the National Park Service have modified the spatial organization of the site's eastern end, as well. For example, the multiple additions that were made to the Administration Building in 1989 gave the building complex a much more cramped layout. Most importantly, following Helen Fowler's death in the late 1950s her old home and associated barn and sheds were demolished, leaving a large open space to the east of the current building complex. Thus, the structures and historic trees that used to clearly identify this area as a residential site are now gone, and the historic driveway south of the Administration Building has

become an empty, grassy lane. The removal of these structures also meant that the concrete pools east of the current building complex no longer fit into a yard, but instead formed a cluster that now marked the edge of the gardens.

Consequently, the spatial organization of the Kenilworth Aquatic Gardens cultural landscape retains a moderate level of integrity, and still contributes to the historic character of the site.

Character-defining Features:

Feature: Arrangement of all ponds except those identified below as non-contributing groups

Feature Identification Number: 141216

Type of Feature Contribution: Contributing

Feature: Arrangement of three concrete pools east of the hothouses and Administration Building

Feature Identification Number: 141218

Type of Feature Contribution: Contributing

Feature: Arrangement of two smaller concrete pools along the road east of the gardens

Feature Identification Number: 141220

Type of Feature Contribution: Contributing

Feature: Building complex, including the 2-story core of the Administration Building and three Hothouses

Feature Identification Number: 141222

Type of Feature Contribution: Contributing

Feature: Arrangement of Ponds 10, 12, 15, 16, 17, 19, and 20

Feature Identification Number: 141224

Type of Feature Contribution: Non Contributing

Feature: Arrangement of Ponds 38, 39, 40, 41, 42, 43, and 44

Feature Identification Number: 141226

Type of Feature Contribution: Non Contributing

Vegetation

Historic Conditions

The vicinity of Kenilworth Aquatic Gardens has long been characterized by the oak-hickory

forest and bog vegetation that naturally grows there. Species typical of the flatlands were sweet gum (Liquidambar styraciflua), oak (Quercus sp.), hickory (Carya sp.), among others, while in the stream valleys stood sycamore (Platanus sp.), willow (Salix sp.), and birch (Betula sp.) (Gutheim and Lee 2006: 16). The edge of the Anacostia River, in particular, was marked by river birch (Betula nigra), black willow (Salix nigra), elm (Ulmus sp.), and hickory, in addition to red maple (Acer rubrum), swamp holly (Ilex sp.), and wildrice (Zizania aquatica) (Lawrence Halprin & Associates 1970; Maryland State Archives, S 1203-887, Patent Certificate 816, April 16, 1764).

As the land came under cultivation during the late 19th and early 20th centuries, oak-hickory woodlots were maintained among acres of agricultural fields (see Figure 6). In contrast, within the old Shaw Aquatic Gardens itself and in the adjoining marsh along the Anacostia River, the natural vegetation was characterized in 1918 as typical of the pine barren habitat. More specifically, native plants identified as present in the general Kenilworth neighborhood at this time include: southern bog clubmoss (Lycopodiella appressa), sugarcane plumegrass (Saccharum giganteum), panicgrass (Panicum longifolium), nutrush (Scleria triglomerata and Scleria torreyana), bog rush (Juncus biflorus), and Maryland meadowbeauty (Rhexia mariana). Other species typical of the District of Columbia "bogs" and their vicinity at this time were swamp azalea (Rhododendron viscosum), sheep laurel (Kalmia angustifolia), highbush blueberry (Vaccinium corymbosum), red milkweed (Asclepias rubra), swamp sunflower (Helianthus angustifolius), pitch pine (Pinus rigida), matting rosette grass (Dichanthelium meridionale), pine barren flatsedge (Cyperus retrorsus), brown beaksedge (Rhynchospora fusca), goldenclub (Orontium aquaticum), sevenangle pipewort (Eriocaulon aquaticum), spring lady's tresses (Spiranthes vernalis), blackjack oak (Quercus marilandica), watershield (Brasenia schreberi), thymeleaf pinweed (Lechea minor), Illinois pinweed (Lechea racemulosa), and downy goldenrod (Solidago puberula) (McAtee 1918: 82-86).

A variety of hardwoods and other trees typical of the swamp habitat were present at the gardens during the historic period of significance. These included bald cypress (Taxodium distichum), weeping willow (Salix sepulcralis), willow oak (Quercus phellos) (L.L.L. 1908; Sadler 1939; Letter from James Sherald and James Lindsay to National Capital Parks – East Superintendent, December 28, 1983, Kenilworth Aquatic Gardens files, National Capital Parks - East). A number of these trees were native species left by Shaw when he built the ponds, while others were planted specifically by him as a way to enhance the natural feel of the landscape.

Three trees that were present at the site throughout much, if not all, of the historic period of significance are identified by a 1940 map of the gardens (see Figure 17). Located along the road just west of the building complex, these consisted of a willow, a Nordman fir (Adies nordmanniana), and a large willow oak that survived until about 1984 (Doug Rowley, Personal communication, January 25, 2010). Indeed, judging from the historic trees that survive or have recently been removed from the vicinity of the building complex, it appears that Shaw and Fowler planted a number of ornamentals and evergreens in this area. In 1997, an old white fir

(Abies concolor) that once stood just north of Display Pool B was struck by lightning and had to be removed. Two large, historic hemlock trees (Tsuga sp.) that once stood near Display Pools 1 and 2 fell and were removed between 2000 and 2001 (Doug Rowley, Personal communication, February 3, 2010).

The weeping willow, in particular, was a prominent feature of the historic landscape. It is frequently mentioned in historic descriptions of the gardens, and appears prominently in many of the early twentieth-century photographs of the ponds (see Figures 9, 12 and 14; Cawood n.d.; The Washington Post, July 1, 1935; Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). Although some of these trees may have been naturally present in the marsh, Shaw apparently planted a number of them when he was first developing the aquatic gardens in the 1880s, a point confirmed by the trees' careful alignment and spacing along the edges of the ponds (L. 1908).

As the prime attraction of the site throughout its history, the water lilies and lotus grown in the gardens covered a broad range of types in every color, shape, and size. Those that appear in the Shaw Aquatic Gardens catalogs from the early 20th century include the following water lilies: Nymphaea 'Pringelii,' Nymphaea 'Suffragette,' Nymphaea 'Seignoureti,' Nymphaea 'Marliacea carnea,' Nymphaea 'Marliacea punctata,' Nymphaea odorata sulphurea, Nymphaea odorata sulphurea grandiflora, Nymphaea odorata exquisita, Nymphaea tuberosa carnea, Nymphaea 'Laydekeri rosea,' Nymphaea 'Laydekeri purpurata,' Nymphaea 'Laydekeri lilacea,' Nymphaea candidissima, Nymphaea pygmaea, Nymphaea Zanzibariensis, Nymphaea Zanzibariensis rosea, Nymphaea 'Izetta Jewell,' Nymphaea 'Pennsylvania,' Nymphaea pulcherrima, Nymphaea 'Mrs. Woodrow Wilson,' Nymphaea 'Panama-Pacific,' Nymphaea dentata 'Improved,' Nymphaea 'August Koch,' Nymphaea Zanzibariensis azurea, Nymphaea coerula, Nymphaea 'Lucida,' Nymphaea 'Mrs. Edward Whitaker,' Nymphaea alba, Nymphaea 'Arethusa,' Nymphaea 'Attraction,' Nymphaea 'Bisseti,' Nymphaea 'Dawn,' Nymphaea 'dentata magnifica,' Nymphaea 'Devoniensis,' Nymphaea 'Escarboucle,' Nymphaea 'Evangeline,' Nymphaea 'Gladstoniana,' Nymphaea 'Gloriosa,' Nymphaea 'Helen Fowler,' Nymphaea 'James Brydon,' Nymphaea 'Kewensis,' Nymphaea 'Loose,' Nymphaea 'Marliacea albida,' Nymphaea 'Marliacea chromatella,' Nymphaea 'Marliacea rosea,' Nymphaea 'Mary Exquisita,' Nymphaea Mexicana, Nymphaea 'Mrs. Richmond,' Nymphaea odorata, Nymphaea odorata 'Eugenia DeLand,' Nymphaea 'odorata gigantea,' Nymphaea odorata 'Luciana,' Nymphaea odorata rosea, Nymphaea odorata 'W.B. Shaw,' Nymphaea 'O' Marana,' Nymphaea 'Pink Opal,' Nymphaea 'Paul Hariot,' Nymphaea 'Radiance,' Nymphaea 'Robinsoni,' Nymphaea 'Rose Arey,' Nymphaea 'rubra rosea,' Nymphaea 'Sioux,' Nymphaea 'Somptuosa,' Nymphaea 'tuberosa maxima,' Nymphaea 'tuberosa Richardsoni,' Nymphaea 'tuberosa rose,' Nymphaea 'William Falconer' (Fowler 1930).

Lilies introduced and kept in the gardens in the 1930s also included the Nymphaea 'Souvenir,' Nymphaea 'Dusk,' Nymphaea 'Ruth Gover,' and Nymphaea 'Margie,' Nymphaea 'Comanche,' Nymphaea 'Conqueror,' Nymphaea 'Vera Louise,' Nymphaea 'Mrs. George Pring,' Nymphaea 'General Pershing,' Nymphaea 'Gonnere,' Nymphaea 'Sunrise,' Nymphaea

'Neptune,' and Nymphaea 'Solfaterre' (Fowler 1931; Fowler 1932; The Washington Post, July 1, 1935; Warren 1935; Baitz 1947; National Park Service 1940; Cawood n.d.). Many of these varieties were developed by Helen Fowler herself. Some of the other lilies present in the gardens were not for sale in the catalog, but were clearly present in the landscape at the time. One of the most showy and highly praised among these was the Victoria water lily (Victoria amazonica).

Historic photographs indicate that in some cases a single pond could have more than four different varieties of water lily and lotus, growing side by side (see Figure 9). The overlap of species in this way was in part due to the large size of the ponds, which provided enough space for not only a larger number, but a great variety, of plants. This arrangement would also have impressed the eye more strikingly with the diversity of blooms and leaf types.

Beginning around 1903, Walter B. Shaw first began paying closer attention to the cultivation of lotus, in addition to water lilies (L. 1908). Lotus varieties that he and his daughter kept and cultivated at the gardens during the years that followed include: sacred or Egyptian lotus (Nelumbo nucifera), Shiroman lotus (Nelumbo nucifera Alba Plena), Nelumbium album grandiflorum, Nelumbium kermesinum, Nelumbium roseum semiplenum, Pekinensis rubra lotus (Nelumbo pekinensis rubra), Pekinensis rubra plena lotus (Nelumbo pekinensis rubra plena), American lotus (Nelumbo lutea), and the alba striata lotus (Nelumbo nucifera alba striata) (Fowler 1921; Fowler 1930; Fowler 1931; Warren 1935).

A list of the water lilies known to have originated at Shaw Aquatic Gardens appears in Appendix B of the Supplemental Information Chapter; while a comprehensive list of all the plants sold by the gardens during the historic period of significance, complete with their origination dates and creators, appears in Appendix C of the Supplemental Information Chapter. In general, the larger ponds in the east and central sections of the gardens were used historically to cultivate the hardy water lilies and lotus whose growth required less monitoring and more room. By contrast, the more closely packed, smaller ponds on the western and southern edges of the gardens were used in the cultivation and careful tending of the tropical water lily varieties.

Meanwhile, along pond edges throughout the site grew a range of other aquatic plants that seems to have expanded over time. As early as 1908, two ponds were being used for the cultivation and sale of fanwort, or cabomba (Cabomba caroliniana) (L. 1908). Among the plants growing in the gardens from 1926 onwards were the following: broadleaf arrowhead (Sagittaria latifolia), cattail (Typha sp.), waterpoppy (Hydrocleys nymphoides), parrot's feather (Myriophyllum aquaticum), water hyacinth (Eichhornia crassipes), wildrice (Zizania aquatica), true forget-me-not (Myosotis scorpioides), lizard's tail (Saururus cernuus), and pickerelweed (Pontederia cordata) (Fowler 1930: 17). By 1931 the gardens were also cultivating a number of "Supplies for Fish and Aquariums," including: Canadian waterweed (Elodea canadensis), water primrose (Ludwigia sp.), American eelgrass (Vallisneria americana), arrowhead (Sagittaria sinensis), and coon's tail (Ceratophyllum demersum) (Fowler 1931: 23).

Both Shaw and Fowler also grew a variety of iris in the gardens. As Fowler wrote in 1927, "Of all the flowers that we grow in our gardens, the iris seems to lend itself most gracefully as a companion to our water lilies. So I am listing a few of the better iris that I have for sale, hoping that every one who tries them will have the same thrill that I have experienced in growing mine" (Fowler 1927). The scope of these plants ranges from yellow to orange, purple, pink and white. The particular iris types listed for sale that year include: Iris 'Archeveque,' Iris 'Arnols,' Iris 'Albert Victor,' Iris 'Eldorado,' Iris 'Florentina alba,' Iris 'Fairy,' Iris flavescens, Iris 'Golden Bounet,' Iris 'Isolene,' Iris 'Kharput,' Iris 'Kochii,' Iris 'Lohengrin,' Iris 'Mme. Newbronner,' Iris 'Mme. Cherau,' Iris 'Neglecta,' Iris 'Niebelungen,' Iris 'Princess Victoria Louise,' Iris 'Purple King,' Iris 'Rubella,' Iris 'Rose Unique,' Iris 'Rhein nixe,' Iris 'Wyomissing,' Iris 'Arlington,' Iris 'Ballerine,' Iris 'Cecile Minturn,' Iris 'Lent A. Williamson,' Iris versicolor, Iris pseudacorus, Iris Orientalis, and Iris pumila (Fowler 1927: 17).

Although little remains to document the vegetation around the building complex during the historic period of significance,

Existing Conditions

The vegetation at Kenilworth Aquatic Gardens has changed in several important ways since the historic period of significance. Although there are still a number of hardwoods present in the gardens, the bald cypress, willow oak, and particularly the weeping willows that grew there historically are no longer an outstanding feature of the landscape.

Over time, many of the historic trees have deteriorated, fallen or been taken down due to safety concerns. These include the three illustrated in the 1940 map, only two of which were still standing by 1958 (Figure 24a; NCP 7002, National Park Service 1958). The old, giant willow oak that used to stand off the southwest corner of the Administration Building suffered from over-heavy limbs and compaction issues in the early 1980s, and was taken down sometime around 1984 (Figure 24b; Rowe, November 4, 1964, photograph 8917-D, Kenilworth Aquatic Gardens files, National Park Service Museum Resource Center; Letter from James Sherald and James Lindsay to National Capital Parks – East Superintendent, December 28, 1983, Kenilworth Aquatic Gardens files, National Capital Parks - East; Doug Rowley, Personal communication, February 3, 2010). A red maple was planted in its place. Ruth Shaw Watts apparently spoke of bald cypress trees that were planted by her great-aunt, Helen Fowler. One of these still stands in the northeast corner of the ponds, on the edge of Pond 4 (Doug Rowley, Personal communication, January 25, 2010).

In part due to the beaver issue but also as a product of age, almost all of the willows that stood in the gardens during the early twentieth century are now gone. Six weeping willows are currently present, only two of which may be historic. One of these recently fell into the east side of Pond 10, while the other stands in the southeast corner of Pond 15. The size and location of the second tree suggests that it may not have been present as far back as the 1930s.

Still, as possible elements of the 1930s landscape, both of these trees contribute to the historic character of the park. One other old willow is partially fallen but still living on the south edge of Pond 12, but due to its location on a dike created between 1963 and 1968, this tree must have been planted after the historic period of significance. The remaining three weeping willows in the gardens are located on the west edges of Pond 32 and 34, and on the southeast corner of Pond 14. Due to their smaller size these trees were probably not present during the early twentieth century, and therefore do not contribute to the historic character of the site. However, their presence on the edge of the ponds is highly compatible with the historic character of the cultural landscape.

A single, aged bald cypress stands on the southwest corner of Pond 5 and an old willow oak marks the eastern edge of Pond 20, two standing remnants of historic vegetation among the ponds. A slightly younger but still fairly old bald cypress marks the eastern edge of Pond 19, near the intersection with the path between Ponds 15 and 16. Another willow oak, aged and fallen but still living, grows out into the water on the southern edge of Pond 5. A few old, historic hardwoods also stand in the grove off the southeastern corner of the ponds. Immediately southwest of Pond 45 is a historic tulip poplar (Liriodendron tulipifera), while further to the south and west along the edge of Pond 5 stand two giant willow oaks. As likely remnants of the 1930s or earlier, these trees contribute to the historic character of the landscape.

A number of other hardwoods grow on the paths between the gardens. In many spots these trees are more closely spaced than they were historically, but their presence is nonetheless consistent with the historic character of the site. In particular, a high concentration of willow oak, bald cypress, red maple and river birch grow along pond edges. Some elm, ash, sweet gum (Liquidambar styraciflua), and black gum (Nyssa sylvatica) is also present among the ponds. In the northeast corner of the ponds, on the east side of the road and to the north of Hothouse 1, grows a large sweetbay magnolia (Magnolia virginiana). Although this tree is fairly large, the left edge of a 1940 photograph indicates that it probably did not exist in the 1930s, and may have replaced a willow that once stood in the same location (see Figure 16b).

Several of the trees near the building complex are either historic or consistent with what grew there historically. The two aged, flowering dogwoods (Cornus florida), a large holly and a cherry tree north of Hothouse 1 are all likely remnants of the early twentieth-century landscape, as are a second cherry tree and an old white mulberry (Morus alba) that stand just east of the service road and east of Display Pool C, respectively. These trees contribute to the historic character of the site. Meanwhile, four Chinese elms (Ulmus parvifolia) also growing in this area are not historic, since they occupy the same space where Helen Fowler's house once stood. These trees therefore do not contribute to the historic character of the landscape.

Although a number of water lilies and lotus plants still grow in the gardens, their variety and scope has been considerably reduced since 1938. At one of their lowest points, in 1990, the aquatic gardens contained a mere three varieties of hardy water lilies, thirteen tropical lilies, and

three lotus types (Letter from Kenilworth Aquatic Gardens Plan Committee to Superintendent of National Capital Parks – East, 1990). Today that number has increased incrementally, but continues to lag far behind the 75 different types present in the 1920s and 1930s (The Washington Post, July 17, 1921; The Washington Post, July 1, 1935). The most recent report of a range this broad appeared in the 1981 "Information Base for a Development Concept Plan," and in view of the measly nineteen total lily and lotus varieties mentioned in 1990, may be inaccurate (Rummel et al. 1981). Native wildlife have also contributed to the decline in the health and variety of the aquatic plants, in some cases inflicting devastation on certain types of water lily that they appear to favor (Doug Rowley, Personal communication, January 25, 2010).

Still, in other ways the vegetation of the gardens has remained largely the same. A variety of aquatic plants continue to grow in the ponds, including cattail (Typha angustifolia and Typha latifolia), arrowhead, waterpoppy, water hyacinth, wildrice, true forget-me-not, lizard's tail, iris, pickerelweed and the highly invasive parrot's feather. Also present are umbrella-plant (possibly Maesopsis sp.), arum (Arum sp.), elephantear pricklypear (Opuntia tuna), pampas grass (Cortaderia araucana), buttonbush (Cephalanthus sp.), rose mallow (Hibiscus sp.), and the invasives, purple loosestrife (Lythrum salicaria), poison ivy (Toxicodendron radicans), common reed (Phragmites australis), bamboo (Bambusa sp.), Japanese honeysuckle (Lonicera japonica), and porcelainberry (Ampelopsis brevipedunculata). Poison ivy, in particular, is highly prevalent. Other terrestrial and aquatic plants present in today's gardens include the native species goldenclub (Orontium aquaticum), cardinalflower (Lobelia cardinalis), waterprimrose (Primula sp.), and turtlehead (Chelone sp.), and the invasives, fanwort, waterthyme (Hydrilla verticillata), Canadian waterweed (Elodea canadensis), and curly pondweed (Potamogeton crispus).

Over all, the growth of both terrestrial and aquatic vegetation among the ponds has increased substantially since the historic period of significance. Moreover, instead of having the more ordered, well-spaced look that it had during the early twentieth century, vegetation along pond edges today seems to be more concentrated and even crowded. Still, as representative features of the historic landscape, the surviving varieties of water lily, lotus and other aquatic plants, as well as the remaining early twentieth-century trees in the vicinity of the building complex, retain a high level of integrity and contribute to the historic character of Kenilworth Aquatic Gardens.

More recent park management has focused on bringing a variety of land plants into the landscape of the gardens, in addition to aquatics, particularly in the planted areas north of the building complex. These include a range of natives, some cannas and even banana trees. Although some of these species, and particularly the exotic types, are relatively recent introductions to the site and therefore do not contribute to its historic character, they are still compatible with the overall landscape design of the aquatic gardens.

Character-defining Features:

Feature: Aged weeping willows on pond edges, including the east side of Pond 10 and the southeast corner of Pond 15

Feature Identification Number: 141761

Type of Feature Contribution: Contributing

Feature: Willow oaks

Feature Identification Number: 141230

Type of Feature Contribution: Contributing

Feature: Some bald cypress

Feature Identification Number: 141232

Type of Feature Contribution: Contributing

Feature: All aquatic water lily, lotus, and other plant varieties listed in the Shaw Aquatic Gardens catalog (see Appendix C)

Feature Identification Number: 141234

Type of Feature Contribution: Contributing

Feature: Holly tree immediately north of Hothouse 1

Feature Identification Number: 141236

Type of Feature Contribution: Contributing

Feature: Cherry tree immediately north of Hothouse 1

Feature Identification Number: 141238

Type of Feature Contribution: Contributing

Feature: Cherry tree on the east edge of the study boundary, just west of the service road

Feature Identification Number: 141240

Type of Feature Contribution: Contributing

Feature: Two flowering dogwood trees immediately north of Hothouse 1

Feature Identification Number: 141242

Type of Feature Contribution: Contributing

Feature: White mulberry east of Display Pool C

Feature Identification Number: 141244

Type of Feature Contribution: Contributing

Feature: Tulip poplar south of Pond 45

Feature Identification Number: 141248

Type of Feature Contribution: Contributing

Feature: Two willow oaks on southeast edge of Pond 5

Feature Identification Number: 141258

Type of Feature Contribution: Contributing

Feature: Large bald cypress near the southwest corner of Pond 5

Feature Identification Number: 141260

Type of Feature Contribution: Contributing

Feature: Exotic land species growing in plant beds north of the building complex

Feature Identification Number: 141262

Type of Feature Contribution: Non Contributing

Feature: Old willow oak on east edge of Pond 20

Feature Identification Number: 141763

Type of Feature Contribution: Contributing

Feature: All non-native species not identified in the list of contributing vegetation

Feature Identification Number: 141264

Type of Feature Contribution: Non Contributing

Feature: Old, partially fallen willow oak on south edge of Pond 5

Feature Identification Number: 141765

Type of Feature Contribution: Contributing

Feature: Purple loosestrife and poison ivy

Feature Identification Number: 141266

Type of Feature Contribution: Non Contributing

Feature: Bald cypress on east edge of Pond 19

Feature Identification Number: 141767

Type of Feature Contribution: Contributing

Landscape Characteristic Graphics:

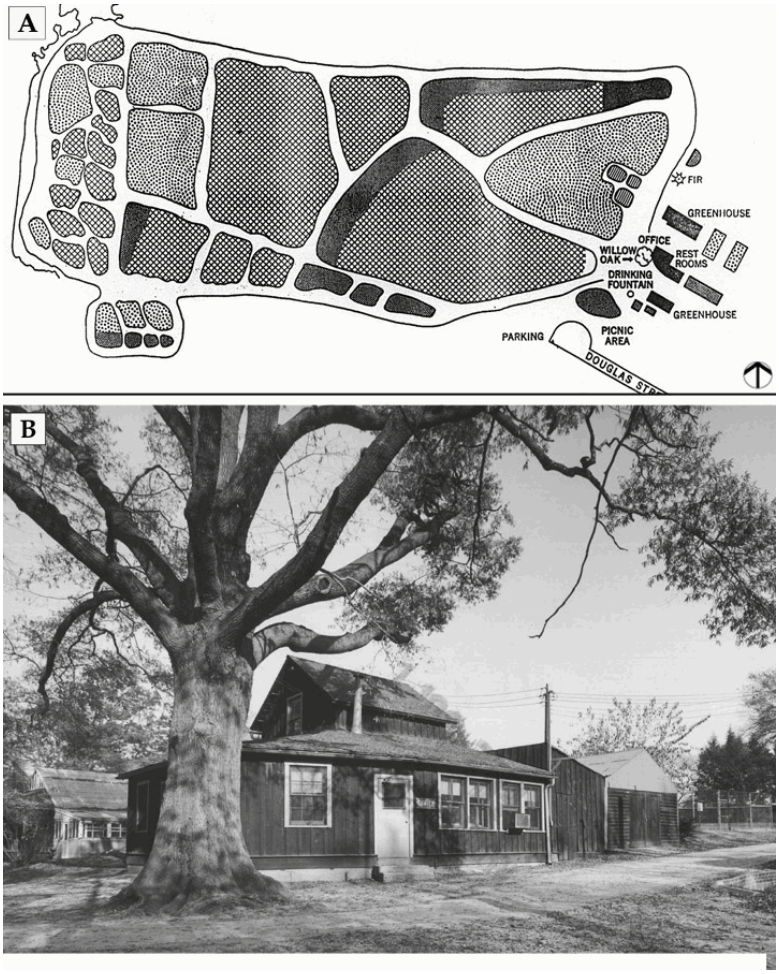

Figure 24. (a) A 1958 map of the gardens illustrates the changing landscape (NPC 7002, NPS 1958); (b) Looking north at the south side of the Administration Building and the old willow oak, in 1964 (8917-D, NPS MRCE).

Land Use

Historic Conditions

From the time that Walter B. Shaw first began planting water lilies down on the edge of the marsh through the 1930s, the Shaw Aquatic Gardens were a place of both work and recreation. Shaw did not at first conceive of cultivating lilies as a business venture, but rather enjoyed their presence as a beautiful addition to the landscape and a reminder of his youth in Maine (L. 1908). However, when these New England lilies flourished so well that he was prompted to start giving them away to neighbors and friends, he began to view the hobby in a new light (Dacy 1926). He officially began marketing the plants in 1889, and was soon acting as head of a successful aquatic enterprise. Intensive cultivation of fish, water lilies, lotus, and other aquatic plants was ongoing from 1912, when the old Shaw Sales Building was constructed, through 1938, when the property was transferred to the federal government and commercial

operation of the gardens ceased.

During this time, the site was utilized primarily for the cultivation, hybridization, and sale of aquatic plants and other products, but also as a residence for Helen Fowler. It was here that Walter B. Shaw, Helen Fowler, and their employees spent long years developing a range of new and beautiful water lily hybrids. Many of these varieties met with high praise and went on to become some of the most popular in the business, including Nymphaea odorata 'Luciana,' Nymphaea 'Rose Arey,' and Nymphaea 'Pink Opal.'

Although education was not one of Fowler's primary goals for the gardens themselves, some interpretation and instruction regarding water lilies and aquatic plants naturally occurred in the process of marketing her products. In addition to delivering lectures on aquatic gardening throughout the city, Fowler was available to buyers each afternoon in order to provide guidance and recommendations concerning particular plants (The Washington Times, April 8, 1937). Beginning with the 1927 Shaw Aquatic Gardens catalog, several pages were devoted to instruction on how to create a water lily pond (Fowler 1927). By 1932, this section of the catalog had grown to include not only information about creating pools, but how to select and care for plants. Among the headings for these first few pages of the catalog are: "Water Gardening: The Fascinating New Recreation for Every One Who Has a Plot of Ground;" "Enjoy Your Own Pool: Easy and Interesting to Build…Interesting to Own and Care For;" and Fowler's own article, entitled "Fundamentals of Water Lily Culture" (Fowler 1932).

Meanwhile, as early as 1908 the gardens were also drawing public attention as a unique and desirable weekend destination. For those more interested in wandering through the gardens than buying plants, Shaw and Fowler opened the property to the public each Sunday during the summer months, and to skaters in the winter. Visitors strolled down the tranquil paths, reclined on the benches, and admired the wealth and variety of colorful blooms (The Washington Post, July 17, 1921). This pastime proved so popular that by the 1920s and 30s the site was attracting some 6,000 recreational visitors each weekend (National Park Service 2009).

Existing Conditions

With the transfer of Shaw Aquatic Gardens to the federal government in 1938, both the name and the primary purpose of the site shifted. The new Kenilworth Aquatic Gardens were no longer a commercial operation, but were instead devoted entirely to the use and enjoyment of the visiting public. Shortly after the death of Helen Fowler in 1957, her house, barn and associated sheds were demolished, thus ending the site's long-standing residential use. In a reflection of these shifts in use, a series of alterations were made to the landscape in the succeeding decades. A number of new small-scale features and structure modifications were added in order to increase visitor comfort. At the same time, despite the original commitment of the National Park Service to botanical variety in the gardens the number of different water lily types declined considerably after 1938. Without a yearly catalog to market the variety of plants at the gardens, and in view of escalating financial pressure, the focus of park

management has shifted away from this aspect of the landscape.

Still, the Hothouses, display pools, and ponds continue to be used for the cultivation of aquatic plants, as they were historically. Although their primary historic purpose was not recreational or educational, the ongoing public enjoyment and interpretation of the gardens forms a link to the past, as generations of public visitors continue to share in the site's unique natural and horticultural wonders. New opportunities for use and engagement have emerged out of Junior Ranger Programs, classroom visits, and fieldtrips to the ponds, whose rich wildlife and vegetation are a true rarity in this urban, northeast corner of the nation's capital. As a result, the land use of Kenilworth Aquatic Gardens retains a moderate level of integrity, and contributes to the historic character of the cultural landscape.

Character-defining Features:

Feature: Recreational use of the gardens

Feature Identification Number: 141246

Type of Feature Contribution: Contributing

Feature: Horticultural use of the Hothouses

Feature Identification Number: 141250

Type of Feature Contribution: Contributing

Feature: Horticultural use of the ponds and display pools

Feature Identification Number: 141252

Type of Feature Contribution: Contributing

Feature: Educational use of the gardens

Feature Identification Number: 141254

Type of Feature Contribution: Contributing

Feature: Educational use of the Administration Building

Feature Identification Number: 141256

Type of Feature Contribution: Non Contributing

Buildings and Structures

Historic Conditions

TENANT HOUSE, BARN, AND SHEDS

Throughout the late 1800s, into the 1900s and up until the death of Helen Fowler in 1957, a small tenant house, associated barn and shed stood to the east of today's Administration

Building. These buildings were probably constructed by Walter B. Shaw sometime in the 1880s, and provided housing for his daughter throughout much of her life. The small, gable-roofed tenant house faced south onto a dirt lane, with a back door that opened up right onto the neighboring display pools (see Figure 11; Doug Rowley, Personal communication, January 25, 2010). Facing south onto the same lane, the shed stood just east of the Administration Building, and was probably used for storing various garden and aquatic equipment. To the east, the large, wooden frame barn faced west toward the ponds. This structure was used by Helen Fowler as a painting studio and exhibit space, in her later years (The Washington Star, April 30, 1951). Several sheds also stood on what is today the east end of the property, in the vicinity of the other buildings: one eight-foot-tall metal garage building permitted in 1916 and a wooden structure for gardening tools permitted in March of 1938 (Building Permits 2377 and 210946, Lot 184/9, Washingtoniana Room, District of Columbia Public Library).

ADMINISTRATION BUILDING

Originally known as the Shaw Sales Building, the Administration Building was one of the first structures erected on the property for the purpose of preparing water lilies for shipment and sale. A small board and batten structure, it was built in 1912, a date incised into the top step of the concrete stairs leading into it from the entrance door on the southwest side (see Figures 11 and 24b). In full, the inscription reads: “W.B. Shaw, 1912” (NPS NR 1978: 2).

HISTORIC GREENHOUSES

As part of the expansion of his commercial aquatic plants business, Walter B. Shaw and his daughter had two new greenhouses constructed to the east of the ponds in 1913. These buildings were outfitted with concrete tanks and glass roofs for maximum light, and were steam-heated (Dillon 1976: 2). Their construction played a crucial role in the growth and diversity of the gardens, since their presence allowed for the bulk over-wintering of tropical water lily varieties at the site for the first time. They also provided a place to nurture new transplants and hybrids judged too tender for immediate exposure to outdoor conditions.

CONCRETE DISPLAY POOLS

The concrete display pools at the site were installed shortly after Shaw’s expansion of his business in 1912, and the associated construction of the old Shaw Sales Building and three hothouses. In particular, the three large pools east of these buildings (now known as Display Pools 1, 2 and 3) were fundamental to the expansion of the water lily business. Along with the new hothouses, their presence allowed Shaw and Fowler to properly foster and care for the increasingly popular tropical varieties of aquatic plants. These pools are clearly visible in 1927 and 1936 aerials of the site (see Figures 10 and 12). The other, smaller concrete pools to the north, south, and west of the building complex probably date to the same period of growth, in the 1910s, but unfortunately cannot be seen in this aerial due to their small size and the adjacent

vegetation. As illustrated by the 1940 site map, there was a row of small ponds directly to the north, and two more larger pools along the lane to the west. The northern one of these lane-side pools (today's Display Pool A) was pictured in the 1932 Shaw Aquatic Gardens catalog (Fowler 1932: 4). To the south of the southern greenhouse (now known as Hothouse 3) stood two more small pools.

Existing Conditions

Following the property's transfer to the National Park Service in 1939, a series of alterations began on the buildings next to the lily ponds. Most of these changes were related to the process of adapting the structures for park-related uses such as administration, interpretation, and increased visitor comfort. What had previously been two of the primary buildings at the site, Helen Fowler's house and barn, were demolished along with the nearby shed soon after her death in 1957. This development physically removed the residential half of the historic building complex, effectively re-centering the focus of the site exclusively around the structures devoted to garden operations.

ADMINISTRATION BUILDING

As described by the National Register of Historic Places in 1977, the Administration Building that year had

"two shed-like wings extending out on three sides to the southeast, the southwest, and the northwest. The central, two-story portion contains public restrooms accessible from the northeast exterior side and is crowned by a simple gable roof. The building is painted brown with white trim." (NPS NR 1978: 2)

In 1989, after years of vandalism and neglect, this building was targeted for rehabilitation. In what was labeled an "adaptive reconstruction," the structure was outfitted with additional modern features and facilities in order to better provide for visitor comfort and safety (Statement for Management, Kenilworth Park and Aquatic Gardens, NPS c. 1990, National Capital Parks - East, Kenilworth Aquatic Gardens files). This development included the construction of public restrooms in an addition to the north of the old Sales Building, in between it and the neighboring greenhouse to the north.

Today, the Administration Building is a board and batten structure with a two-story central section and shed-like wings extending out from its southeast, southwest, north and east sides. The board-and-batten construction of the newer sections matches the style of the older structure and the neighboring historic greenhouses. The peaked roof of the original Shaw Sales Building still pokes up over the surrounding shed additions, but the layout and size of the structure has changed greatly since 1938, and its footprint is dramatically larger than it was then (Figure 25a; see Figure 1). Notwithstanding these alterations, the building still retains a hint of its original appearance from certain angles, and particularly from viewpoints among the main

ponds directly to the west. As a result, the Administration Building contributes to the historic character of the cultural landscape but retains only minimal integrity to the period of significance.

HISTORIC GREENHOUSES

In order to distinguish them from the more modern greenhouse to the northeast, the historic greenhouses of Kenilworth Aquatic Gardens are today known as Hothouse 1, Hothouse 2, and Hothouse 3, from north to south (see Figures 1 and 2). These buildings have suffered considerable deterioration since the historic period of significance. The original glass roofs were replaced with polycarbonate plates sometime in the 1960s (Doug Rowley, Personal communication, January 25, 2010). In 1977 National Capital Region Chief Horticulturalist Dr. James Lindsay found the condition of these buildings so deplorable that he actually recommended their demolition. The reasons he cited for this measure included cracked and leaking tanks, rotten wood framing, and the absence of a number of fiberglass panels due to vandalism (Letter from James Lindsay to NACE Acting Superintendent, August 12, 1977, National Capital Parks – East, Kenilworth Aquatic Gardens files). Although the National Park Service never actually acted on Lindsay's recommendations, any move to improve the structures was delayed by limited funds, staffing and other related issues. A series of 1988 photographs illustrate the continued deterioration of these buildings, showing water-damaged concrete tanks, broken windows, and peeling paint (Kenilworth Aquatic Gardens greenhouse photographs, 1988, National Park Service Museum Resource Center).

Since then, repairs and maintenance of the three Hothouses has been severely limited. However, in part due to their limited upkeep, they have undergone only minimal change over the years. Today Hothouse 2 is a shed addition to Hothouse 1, as it was historically, and together they still form the northern historic greenhouse. Hothouse 3, or the southern historic greenhouse, is a fully functional structure south of the Administration Building (see Figure 1). Both historic greenhouses are built into the side of a gently sloping hill, and all three hothouses have concrete walls, floors, and tanks. While hardy water lily varieties can be left outside throughout the winter, once the temperature drops to 60 degrees Fahrenheit or below, the gardens' tropical varieties must be brought in for the winter. Their tubers are stored here in wet sand, and thus saved from the winter frost. Once the seeds or tubers are potted and begin to grow, these lilies are placed in the concrete tanks that line the outer walls and run down the center of Hothouse 1. The roofs of these structures are now covered with translucent plastic, rather than glass (Rummel et al. 1981: 49; Doug Rowley, Personal communication, January 25, 2010).

The northern greenhouse is comprised of three sections: a storage area in the entryway opens into Hothouse 1, while Hothouse 2 is an attached, lower-level corridor of tanks to the south that has its own entry door. Though this structure is not actually accessible indoors from Hothouse 1, the buildings share the same roof. The entryway to Hothouse 1 is a one-story board-and-batten shed that houses the boiler for the building, in addition to supplies. The

southern greenhouse, or Hothouse 3, is made up of a single, narrow room whose interior walls are lined with concrete tanks. Its entryway is a board-and-batten shed that stores the boiler. This building and Hothouse 2 are where the slightly larger, 6-inch pots of lilies are kept once they begin to grow from tubers or seeds.

On the whole, few changes have been made to the three historic hothouses since the early 1930s. As a result, they retain a high level of integrity to the period of significance, and contribute to the historic character of the site.

CONCRETE DISPLAY POOLS

The three concrete display pools to the east of the Kenilworth Aquatic Gardens building complex (known as Display Pools 1, 2, and 3) have remained almost entirely unchanged since the 1920s. They continue to be used as a launch pad for new lilies coming out of the hothouses in the spring, and also as display pools for a variety of water lilies and lotus. Their accessibility to visitors is highly convenient for purposes of interpretation, and unlike out in the main ponds, plants are frequently labeled. As recounted by Gardener Supervisor Doug Rowley, this is one key way to keep track of different plants, and particularly water lily hybrids, because here they are more protected and easily monitored (Doug Rowley, Personal communication, January 25, 2010). Some of the edges along these pools are deteriorating due to years of aquatic use. Only Display Pool 2 has slate edges, whose poor repair suggests that they may be historic and original to the site. The concrete edges of Display Pools 1 and 3 is in fairly good condition, and may represent an alteration made to these ponds since the historic period of significance.

In addition to the two smaller display pools along the road east of the ponds (Pools A and B) and one to the south of Hothouse 3 (Pool C), a fourth pool north of Hothouse 1 was filled in and converted to a flower bed in 1990 (National Park Service 1990). Despite plans to return this pond to its historic use as an aquatic display pool, it remains a flower bed today. Display pool A and B, located west of Hothouse 1, were judged in poor condition in 1990 and were outfitted with PVC liners that same year. They are currently still used to showcase a number of bog plants (National Park Service 1990). The condition of the third extant small concrete pool (Pool C), which is located south of Hothouse 3, is currently being protected by a rubber liner as a temporary measure against leakage and further deterioration.

Consequently, the surviving concrete display pools at Kenilworth Aquatic Gardens retain an over all high level of integrity, and contribute to the historic character of the cultural landscape.

GARDEN SHED

A small, wooden garden shed is located about 50 yards directly east of the Administration Building, east of the service road. This shed is associated with the gardening activities in this area and nearby main greenhouse. It was built since the historic period of significance, and therefore does not contribute to the historic character of the site. However, since this area

historically served as Helen Fowler's yard and contained both a wooden barn and shed, the presence of a shed today is compatible with the historic use of the landscape (Kenilworth Aquatic Gardens aerial photograph 1960, NPS National Capital Region GIS).

Character-defining Features:

Feature: 2-story portion of the Administration Building

Feature Identification Number: 141268

Type of Feature Contribution: Contributing

Feature: Hothouse 1

Feature Identification Number: 141270

Type of Feature Contribution: Contributing

Feature: Hothouse 2

Feature Identification Number: 141272

Type of Feature Contribution: Contributing

Feature: Hothouse 3

Feature Identification Number: 141274

Type of Feature Contribution: Contributing

Feature: Display Pool 1

Feature Identification Number: 141276

Type of Feature Contribution: Contributing

Feature: Display Pool 2

Feature Identification Number: 141278

Type of Feature Contribution: Contributing

Feature: Display Pool 3

Feature Identification Number: 141280

Type of Feature Contribution: Contributing

Feature: Display Pool A

Feature Identification Number: 141282

Type of Feature Contribution: Contributing

Feature: Display Pool B

Feature Identification Number: 141284

Type of Feature Contribution: Contributing

Feature: Display Pool C

Feature Identification Number: 141286

Type of Feature Contribution: Contributing

Feature: Restroom addition on north side of Administration Building

Feature Identification Number: 141352

Type of Feature Contribution: Non Contributing

Feature: Ramp and shed additions on south side of Administration Building

Feature Identification Number: 141354

Type of Feature Contribution: Non Contributing

Feature: Shed addition on east side of Administration Building

Feature Identification Number: 141356

Type of Feature Contribution: Non Contributing

Feature: Stairs and porch additions on west side of Administration Building

Feature Identification Number: 141358

Type of Feature Contribution: Non Contributing

Feature: Wooden garden shed on east edge of site

Feature Identification Number: 141769

Type of Feature Contribution: Non Contributing

Landscape Characteristic Graphics:

Figure 25. (a) Looking east at Hothouses 1 and 2 and the Administration Building; (b) Looking southwest across the ponds, with tree fencing in foreground (NCR CLP 2010). Note silting in foreground, and erosion on the far edge of Pond 4.

Small Scale Features

Historic Conditions

Compared to the property's present appearance, the Shaw Aquatic Gardens had relatively few small-scale features. Those that were present in the landscape during the historic period of significance reflect the primary use of the site for commercial purposes, rather than public recreation.

BOATS

Historic accounts indicate that at the height of Shaw's business in lily cultivation, the aquatic gardens used a number of small boats. One 1908 article even states that a "little punt" was "to be found on every pond" (L. 1908). A number of historic photographs from the period of significance also depict boats along the edges of ponds. A particularly popular image seems to

have been that of graceful ladies reclining in these vessels, conjuring a romantic vision that strays somewhat from the boats' true purpose in harvesting and maintaining water lilies and lotus (see Figures 22a and 22b).

BENCHES AND PICNIC TABLES

According to Ruth Shaw Watts, great-granddaughter of Walter B. Shaw, "cement benches" provided seating under the trees at the aquatic gardens during the 1930s. Remembering back to her childhood in Kenilworth, Watts recounted how "we'd go down there and sit and hear the birds sing and [it] just was a quiet place to go. Even took a book sometimes and would…read a book while we were down there enjoying the quiet" (Ruth Shaw Watts, Interview with Joe Lapp, June 21, 2004). One of these benches apparently once sat under the trees along the lane west of the building complex, beside Ponds 1, 2 and 3.

A collection of picnic tables was also apparently present in the southeast corner of the gardens during the late 1920s (see Figure 19b).

SUBMERGED PLANT CONTAINERS

Although not evident to the naked eye, submerged pots for water lilies have long been a small-scale feature of the gardens. In the earliest years of pond development, Shaw learned "how to plant the young lilies in water cages so that the turtles would not destroy the roots" (L. 1908). This technique continued to be employed throughout the historic period.

A more detailed description of one type of box used by the gardens was offered by Helen Fowler, in 1938:

"In artificial pools the easiest way to plant is in a wooden box. This makes it easy to remove your lilies from the pool to transplant or fertilize. Make boxes about 2 feet square by 1 foot high. Fill with rich soil, properly fertilized, to within one inch of the top. Plant one lily in each. Fill the remainder with sand to prevent the soil from washing away and discoloring the water and the fish from digging around the roots." (Pozer 1938)

Given the nature of her example, Fowler most likely utilized this type of wooden box for the plants in the six concrete display pools located in the vicinity of the building complex.

FENCES

According to historic sources, wire fencing was used to contain lotus in at least one location in the gardens. As described by the Washington Post in 1908:

"On the big ponds of the aqueous farm the lotus forms a well-nigh impenetrable hedge about the banks. It grows with such rapidity and forces its way hither and yon with such strenuous

disregard for its neighbors that it has been found necessary to confine it behind the mesh-wire fences to prevent its driving the less aggressive lilies out of the ponds." (L. 1908)

No historic photographs or other descriptions of this fencing could be located in the course of research for the current inventory. However, the size and height of the lotus plants suggests that it may have been up to five feet high.

Existing Conditions

Kenilworth Aquatic Gardens has many more small-scale features today than it had historically. This is primarily due to the need of the National Park Service to meet the demands of the visiting public.

BOATS

A number of boats are still present and utilized at the gardens today. Although these are not the same style or wooden construction as their early twentieth-century counterparts, the presence of boats in the ponds is compatible with the historic character of the cultural landscape.

BENCHES AND PICNIC TABLES

Today, several benches of two different types are present for visitor convenience. The more common benches are plain, heavy wooden slabs with short armrests on either end. They do not appear within the network of paths leading through the gardens, but instead are dispersed along the outer edge of the dirt road that hugs the historic outline of the ponds, as well as next to the cement display pools to the east of the building complex (see Figure 1). One bench of a different type stands in the northwest corner of the gardens, looking out over the adjacent wetlands. Built of light wood, it has a lighter style than the other benches but retains a high level of simplicity.

A single picnic table with composite recycled wood slats and a metal frame stands outside the dirt road along the west edge of the ponds (see Figure 1). This feature is in the same style as other picnic tables throughout Kenilworth Park.

The benches and picnic tables present in today's gardens were added to the site after the historic period of significance, and therefore do not contribute to the landscape's historic character. Still, despite their newer style the presence of these features in the vicinity of the ponds is compatible with the historic character of the cultural landscape.

GRANITE PAVERS

The two wooden benches located east of Display Pool 2 each sit on a row of three granite

pavers. Five more similar pavers are located on the southwest corner of the employee parking area, in line with the east end of Hothouse 1.

Judging from their apparent age, close association with the use of the adjacent historic pool, and relevancy to Helen Fowler's use of this area as a yard outside her house, these pavers probably date to the historic period of significance and therefore contribute to the historic character of the landscape.

TRASH RECEPTACLES

The trash receptacles at the site are in the typical 1970s National Park Service style, and consist of brown metal cylinders with wooden supports and rounded covers. One or two trash receptacles are located near the benches at the west end of the site, but a few are also placed at strategic locations within the gardens (see Figure 1). As illustrated by an undated historic photograph from between 1938 and 1957, a different type of trash receptacle made from metal mesh was once used at the site (see Figure 11). However, these features do not appear to have existed during the historic period of significance. Not only are they absent from all historic photographs, but their installation probably would have been difficult to justify at that time, due to the limited public visitation policy. As a result, the present trash receptacles do not contribute to the historic character of the site.

SUBMERGED PLANT CONTAINERS

Since Shaw's early plantings of lilies in cages, submerged plant containers have continued to form a part of the gardens landscape. In 1956, the Washington Star recounted how "the boxes of enriched soil that eventually housed the lilies when they were installed in the ponds were packed down tight with manure, compost, and top loam to keep the nutrients from washing away" (The Washington Star, March 18, 1956). Park staff continues to employ similar methods today, although the containers themselves are not the same ones used historically. As a result, these features are compatible with the historic character of the cultural landscape, even though they do not contribute to it.

ABOVE-GROUND POTTED AND FLOATING PLANTS

A number of above-ground potted plants are present in the eastern end of the site, particularly around the west, or road side, of the buildings and next to the visitor parking lot. Several floating plant beds with submerged anchors have also been introduced to Pond 4 in the past year. These decorative features appear to have been installed by the park in the latter half of the twentieth century, and do not contribute to the historic character of the cultural landscape.

DRINKING FOUNTAINS

A single concrete drinking fountain, built in the classic park style of the 1930s, stands to the

south of the Visitor Center (IMG 4186 and 4187 from 8.25.09). In view of the presence of a second fountain of the same type just west of the visitor parking area (outside the study boundary), this feature may have been installed as late as the 1960s. The fountain is not original to the Shaw Aquatic Gardens landscape of the early twentieth century, and therefore does not contribute to the historic character of the site.

FLAGPOLES

A single flagpole stands directly east of the drinking fountain and west of Hothouse 3. This feature is not evident in surviving historic photographs, and was probably installed by the National Park Service sometime since the 1950s (see Figures 11 and 16). As a result, it does not contribute to the historic character of the landscape.

BRIDGES

One bridge is present in the gardens, serving to connect the two halves of the pond path cutting between Ponds 19 and 20. This bridge was installed sometime in the late 1900s or early 2000s, and spans a channel created by a beaver. Though it began as a mud path across the dike, it became worn down to such an extent that a sign was erected, warning visitors to "Watch Your Step, Beaver Crossing" (Stephen Syphax, Personal communication, May 4, 2010). As the channel became wider and deeper with increased beaver traffic, it became impassible and eventually flooded. A new bridge was built as a solution to the issue. As a recent addition to the site, this feature does not contribute to the historic character of the cultural landscape.

FENCES, GATES AND UTILITIES

A series of wire mesh fences with green wooden stakes have been erected around many of the trees at Kenilworth Aquatic Gardens, in order to safeguard these important cultural landscape features from destruction by local wildlife (Figure 25b). The fencing is concentrated primarily around the trees closest to the building complex, but is also present on many of the older trees out among the ponds. Although as a recent addition to the landscape these fences do not contribute to its historic character, the historic presence of wire fencing for the purpose of plant control makes them compatible.

Along the far eastern edge of the study boundary, a tall chain link fence separates the site from Anacostia Avenue and the adjacent neighborhood. Another chain link fence stands along a section of the boundary northeast of the building complex, dividing the display pool and yard area from the main greenhouse (not included in the study boundary) to the north. Until recently, visitors walked through a third chain link fence separating the park from the visitor parking area upon entering the site. Except for a few posts on either side of the main path into the gardens, this fence was removed in 2010.

Two wooden posts that probably once supported a gate mark the east end of the foot path

leading past the south edge of the Administration Building, at the point where it splits away from the service road.

A fire hydrant surrounded by three brown, metal poles is located east of the road and northwest of Hothouse 1. The cement mouth of a utilities feature, topped with a metal cover, emerges from the ground just east of the administration building and south of Display Pool 3. It is surrounded by four wooden posts. A section of metal pipe railing extends about ten feet to the west of Hothouse 3 and terminates in a tall, metal street lamp. Nearby, standing just west of the front entrance to the Administration Building, another street lamp provides additional light to this area at night.

Lastly, a line of wooden curbing follows the west edge of the lane circling the main ponds at their far east end, in the vicinity of the building complex.

As more recent additions to the landscape, none of these features contribute to the historic character of Kenilworth Aquatic Gardens.

INTERPRETIVE FEATURES

A single interpretive wayside is present on the north edge of the ponds, just outside the dirt lane around the gardens' perimeter. It explains the importance of the wetlands ecosystem, and was installed sometime over the past few decades.

A number of informational signs are spread throughout the site. The largest of these stands just east of the Administration Building and identifies it as the Visitor Center and Bookstore. Smaller directional signs on the northeast and southwest corners indicate the beginning of the river walk and the boardwalk, respectively. Wherever possible, small temporary signs are also placed in the cement display pools during the summer, to identify the different types of water lilies and lotus in bloom.

As late twentieth and early twenty-first century additions to the landscape, these features do not contribute to the historic character of Kenilworth Aquatic Gardens.

Character-defining Features:

Feature: Granite pavers east of Display Pool 2

Feature Identification Number: 141771

Type of Feature Contribution: Contributing

Feature: Water fountains

Feature Identification Number: 141304

Type of Feature Contribution: Non Contributing

Feature: Interpretive waysides

Feature Identification Number: 141306

Type of Feature Contribution: Non Contributing

Feature: Informational signs

Feature Identification Number: 141308

Type of Feature Contribution: Non Contributing

Feature: Directional signs

Feature Identification Number: 141310

Type of Feature Contribution: Non Contributing

Feature: Pond signs

Feature Identification Number: 141312

Type of Feature Contribution: Non Contributing

Feature: Tree fencing

Feature Identification Number: 141314

Type of Feature Contribution: Non Contributing

Feature: Trash receptacles

Feature Identification Number: 141316

Type of Feature Contribution: Non Contributing

Feature: Metal boats

Feature Identification Number: 141318

Type of Feature Contribution: Non Contributing

Feature: Benches

Feature Identification Number: 141320

Type of Feature Contribution: Non Contributing

Feature: Picnic tables

Feature Identification Number: 141322

Type of Feature Contribution: Non Contributing

Feature: Bridge between Ponds 19 and 20

Feature Identification Number: 141324

Type of Feature Contribution: Non Contributing

Feature: Submerged plant containers

Feature Identification Number: 141326

Type of Feature Contribution: Non Contributing

Feature: Potted and floating plants

Feature Identification Number: 141328

Type of Feature Contribution: Non Contributing

Feature: Metal pipe railing

Feature Identification Number: 141330

Type of Feature Contribution: Non Contributing

Feature: Street lamps

Feature Identification Number: 141332

Type of Feature Contribution: Non Contributing

Feature: Wire tree fencing

Feature Identification Number: 141334

Type of Feature Contribution: Non Contributing

Feature: Chain link fence

Feature Identification Number: 141336

Type of Feature Contribution: Non Contributing

Feature: Flagpole

Feature Identification Number: 141338

Type of Feature Contribution: Non Contributing

Feature: Fire hydrant and other utilities features

Feature Identification Number: 141773

Type of Feature Contribution: Non Contributing

Feature: Wooden posts at east end of foot path leading past the south side of the Administration Building

Feature Identification Number: 141775

Type of Feature Contribution: Non Contributing

Archeological Sites

Historic Conditions

The vicinity of what is today Kenilworth Aquatic Gardens has been both historically and prehistorically disposed to human occupation. With the nearby Anacostia River serving as both a source of food and of transport, this area has long been an ideal spot for settlement (Bedell et al. 2009: 33; Hume 1975: 11). During the late nineteenth and early twentieth centuries, avocational archeologists and relic hunters frequently walked the stream terraces and floodplain collecting prehistoric artifacts. These artifacts are currently stored in the collections of the Smithsonian Institution's National Museum of Natural History (Trocolli 2010).

With the growth of the aquatic gardens in the early twentieth century and the development of ponds and structures on the property, many of the pre-existing surface or near-surface archeological resources within the current study boundary were likely destroyed or damaged. Covering roughly eight acres, most of the ponds originally measured up to three feet in depth, while the remaining acreage was occupied largely by roads and structures, including Fowler's house, barn, sheds, administrative building, greenhouses, and display pools. Thus, as Shaw and Fowler shaped the landscape to support their commercial water lily operation, the subsurface integrity of the area was generally compromised.

Existing Conditions

To date, two formal archeological studies have been conducted within the boundaries of Kenilworth Aquatic Gardens. Both of these investigations involved testing of specific locations prior to planned construction (Hume 1975; Strutt 1988). The Hume reconnaissance survey of 1975 identified one site that was apparently located on the "east side of Kenilworth Aquatic Gardens, within the vegetable garden by greenhouse" (Hume 1975; Site GWU No. 3, officially designated as 51NE005 by the District of Columbia State Historic Preservation Office). No other references or documentation of a vegetable garden were found in the course of researching the current project. However, this site appears to have been in the vicinity of the building complex, east of Hothouses 1 and 2 and to the north of Display Pools 1 and 2 (Strutt 1988). Further research is necessary in order to support this conclusion and determine its exact location.

Hume wrote the following concerning the archeological deposit found here: "an Archaic component is present and there is the possibility of post-molds. Artifact density is high. The site appears to be a potentially rich Archaic/Woodland [site] and significant to the understanding of adaptive patterns in the early prehistoric period along the Anacostia" (Hume 1975). A Late Archaic period quartzite contracting-stem point and a Late Woodland period quartz triangular point were collected, along with 1 hammerstone, 1 quartzite biface fragment, 178 flakes, 21 cores, 2 chunks, and 2 retouched or bipolar split pebbles. More than a decade later, the 1988 investigative clearance testing conducted in Anacostia Park by Strutt did not identify any archeological resources within the boundaries of the aquatic gardens (Strutt 1988).

Due to the artificial construction of dikes throughout the site during the historic period of significance, archeological remains found near the surface today may have been decontextualized, and can offer relatively little information about the prehistory of the site. Still, deeper deposits may remain beneath the ponds, under fill, or under the nearby building complex. Though not yet identified or evaluated, these potential archeological sites remain valuable to the landscape and represent some of the last remaining undisturbed deposits along the Anacostia River (Trocolli 2010). Further research at the site, including archeological identification surveys and geoarcheological analysis, may determine the extent of this potential at some point in the future.

As a result, archeological sites at Kenilworth Aquatic Gardens retain a low level of integrity due to the widespread subsurface disturbances to the site during the historic period of significance. Nonetheless, they could contribute to the historic character of the site due to their relationship to historic and prehistoric land use.

Character-defining Features:

Feature: Potential archeological resources

Feature Identification Number: 141777

Type of Feature Contribution: Undetermined

Condition

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 06/28/2010

Condition Assessment Explanatory Narrative:

The condition of the Kenilworth Aquatic Gardens cultural landscape is currently determined to be fair. This assessment:

"indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the inventory unit to degrade to a poor condition." (National Park Service Cultural Landscapes Inventory Professional Procedures Guide 2009: 8-3)

This determination takes into account the cultural landscape condition, which includes the current condition of buildings and structures, natural systems and features, circulation, spatial organization, land use, cluster arrangement, topography, vegetation, views and vistas, constructed water features, and small-scale features at Kenilworth Aquatic Gardens. Thanks to continuing presence of many of the characteristics that originally composed this site, the historic landscape retains a high level of integrity. However, deferred maintenance and the deterioration of certain fundamental landscape features currently poses a threat to the site's sustainability. Ongoing maintenance, along with the removal of some plants and the selective cultivation and replanting of others, could help re-establish the intended design and association of the gardens. It is recommended that improving the condition of the landscape to facilitate sustainability become a priority, so that the historic significance and purpose of the ponds and associated buildings can be fully appreciated. To raise the condition of the site to "good," the park should address these maintenance and use issues:

- Take pond cores in order to indicate exact depth of silt, and institute a regular dredging schedule for the ponds in order to ensure their proper drainage.

- Maintain or increase monitoring and control of aquatic plant species in the ponds. Largely due to deferred maintenance over the years, the gardens have been and continue to be susceptible to plant monocultures, particularly of cattail, iris, and lotus. In places, the unchecked overgrowth of individual species has therefore disturbed the historic balance and variety of aquatic plants.

- Thin the number of trees growing along pond edges to better reflect the open views of the historic period, and ensure the root system stability of each retained tree.

- Maintain a mix of hardwood and willow trees, and minimize evergreens, along pond edges.

- Replace the roofs on the three historic Hothouses, which contribute to the historic character of the site but are in poor condition. Due to years of use and minimal maintenance, moisture now gathers in the tubing of the polycarbonate plates, reducing roof efficacy. The plumbing in all three structures also

needs repairs.

- Due to the historic layout of the Hothouse structures and internal wiring, only limited electric current is available to these buildings and the tanks they contain. As a result, use of these structures for the maintenance of aquatic species is inhibited. All three buildings should be upgraded to accommodate higher electrical capacity so that the tanks can be equipped with proper filtration systems.

- Exercise greater control over those types of local wildlife whose numbers and habitual activities damage the dikes and aquatic plants of the site such as beaver, crayfish, and turtle.

- Rehabilitate the historic slate edges of Display Pool 2 and the other historic display pools.

The Assessment Date refers to the date that the park superintendent concurred with the Condition Assessment.

Impacts

Type of Impact:	Deferred Maintenance
External or Internal:	Internal
Impact Description:	Decades of deferred maintenance have led to the deterioration of resources throughout the gardens, from buildings to trees, aquatic plant varieties, and pond dikes.
Type of Impact:	Structural Deterioration
External or Internal:	Internal
Impact Description:	All of the structures in the building complex suffer from varying levels of deterioration. In particular, the roofs of the historic Hothouses suffer from moisture damage and poor ability to transfer light from the outside. Cracks and insufficient filtration systems in the concrete tanks also effect their plumbing and functionality. The edges of the historic concrete display pools are also deteriorating, particularly the historic slate edges of Display Pool 2.
Type of Impact:	Pests/Diseases
External or Internal:	Internal
Impact Description:	The strong presence of wildlife at the gardens continues to impact the site's historic character. Muskrat, crayfish, northern snakehead fish, and beaver have hindered the ability of park staff to maintain the ponds, dikes, and vegetation, including both trees and aquatics. Particularly in the case of trees, the beavers pose

a serious threat to the historic integrity of the gardens. Turtles eat the water lilies, while muskrats and beavers aggravate erosion issues. The beaver also wear defined paths through the water lilies and lotus, creating aquatic highways that run straight through ponds and create a conspicuous break in the vegetation. A number of geese build their nests throughout the gardens each spring, and pose a particular threat to visitors walking on the dikes between ponds.

Type of Impact: Flooding

External or Internal: Internal

Impact Description: As evidenced by historic accounts and photographs, flooding has always had an impact on Kenilworth Aquatic Gardens. The twice-daily tidal fluctuation of the Anacostia River, which ranges to roughly a meter, has long been an essential component of the gardens' function, and provides for the control of water within the ponds. However, the site's direct connection to the river also means that any rise in river or sea level that is greater than average will effect the gardens. An increase as little as two feet from the average can inundate the gardens, threatening the dikes and the variety of aquatic plants.

Type of Impact: Vegetation/Invasive Plants

External or Internal: Internal

Impact Description: A number of invasive plants are present on the property, including parrot's feather (Myriophyllum aquaticum), purple loosestrife (Lythrum salicaria), poison ivy (Toxicodendron radicans), common reed (Phragmites australis), bamboo (Bambusa sp.), Japanese honeysuckle (Lonicera japonica), and porcelainberry (Ampelopsis brevipedunculata). Among the submerged invasives are fanwort (Cabomba caroliniana), waterthyme (Hydrilla verticillata), Canadian waterweed (Elodea canadensis), and curly pondweed (Potamogeton crispus). Although not officially classified as invasives, cattail and iris flourish here and create a monoculture along some pond edges. These species threaten to choke the historic vegetation growing at the site.

Type of Impact: Improper Drainage

External or Internal: Internal

Impact Description: Due to ongoing siltation issues, the ponds periodically suffer from improper drainage. The underground four-inch pipes leading

between the pools become clogged and inefficient, cutting ponds off from their source of fresh water and hindering the ability of park staff to drain, clean, and maintain them.

Type of Impact: Erosion

External or Internal: Internal

Impact Description: Due to the deterioration of trees and continued use, erosion along pond edges is an ongoing issue throughout the site. Increasing instability of these dikes poses a risk to both ponds and aquatic plants, as well as pedestrian safety.

Type of Impact: Pollution

External or Internal: Both Internal and External

Impact Description: Noise pollution from the nearby urban areas, railroads, and highways impact the historic character of the Kenilworth Aquatic Gardens cultural landscape. In particular, the sounds of consistent and heavy traffic along U.S. Route 50 / John Hanson Highway as well as the occasional Amtrak trains running across the railroad bridge immediately to the north carries easily over the marsh and can disturb the peaceful, nature-oriented environment of the gardens.

Type of Impact: Pollution

External or Internal: Both Internal and External

Impact Description: Water pollution and floating trash, some of which comes in from the nearby Anacostia River, also impact the historic landscape. The presence of oil, high turbidity and other polluting elements in the water of the ponds is a product of the nearby urban environment, the pollution of the Anacostia, and the fact that the adjacent marsh serves as a natural filtration system for the river. These conditions can be unhealthy for aquatic plants and wildlife alike.

Type of Impact: Vandalism/Theft/Arson

External or Internal: Internal

Impact Description: Although the rate of crime at the site has decreased over the past ten years, vandalism and theft are an ongoing issue at the gardens. A certain level of protection is provided by the non-historic chain link fence that encloses the gardens and their immediate surroundings. However, plants, buildings and other

features are constantly vulnerable to vandalism as well as theft.

Type of Impact: Adjacent Lands

External or Internal: External

Impact Description: The presence of an employee parking area directly adjacent to the gardens entrance is inconsistent with the historic layout and character of the site, and negatively impacts the cultural landscape.

Type of Impact: Planting Practices

External or Internal: Internal

Impact Description: Over the years, failure to replace historic vegetation in kind has resulted in the loss of the historic tree canopy of willows and bald cypress, as well as a number of water lily varieties. These changes have altered the views throughout the site.

Treatment

Treatment

Approved Treatment Document Explanatory Narrative:

The park currently has six rehabilitation, stabilization or preservation projects in PMIS that could work to improve the condition of the cultural landscape at Kenilworth Aquatic Gardens. Although these projects address aspects of the landscape and are currently under various stages of review and completion, PMIS files do not constitute approved landscape treatment documents.

A project called "Develop an Emergency Operation Plan for Kenilworth Aquatic Gardens" is currently being processed for the park as PMIS 109121. The PMIS project file was created on May 27, 2004, and the total project cost is listed at $17,250. It has been park-approved, and includes the completion of an emergency and disaster plan that would identify potential threats to the historic structures and museum collections at the site.

A project known as "Replace Entrance Fence at Kenilworth Aquatic Gardens" is currently being processed for the gardens as PMIS 144223. The PMIS project file was created on January 27, 2008, and the total project cost is listed as $490,000. It has been park-approved, and includes the replacement of the existing chain-link and barbed wire fence with four hundred linear feet of attractive and secure "iron look" ornamental aluminum fence and gates.

A project called "Enhance Kenilworth Aquatic Gardens Cultural Landscape and Anacostia Wetlands" is currently being processed for the site as PMIS 162812. The PMIS project file was created on January 22, 2010, and the total project cost is listed as $19,136. It has been region-reviewed, and includes the use of 12-week interns from the Student Conservation Association to maintain display ponds, pond paths and dikes, mitigate exotic invasive species, and help manage animal-related issues at the park.

A project known as "Repair Security Fencing at Kenilworth Aquatic Gardens" is currently being processed for the site as PMIS 143559. The PMIS project file was created on January 11, 2008, and the total project cost is listed as $71, 975. It has been region-reviewed, and includes repairs and replacement of damaged perimeter security fencing (chain-link, rails, and barbed wire) at the gardens.

A project called "Replace Roof on Office and Comfort Station at Kenilworth Aquatic Gardens" has been initiated for the park, and is listed as PMIS 154496. The PMIS project file was created on April 1, 2009, and the total project cost is listed as $85,165. It has been region-reviewed, and includes the replacement of the roof, gutters, gutter guards, sheathing, molding, fascia soft boards, and down spouts on the office and restrooms at the gardens.

A project known as "Dredging Heavily Silted Ponds at Kenilworth Aquatic Gardens" is currently being processed for the park as PMIS 158637. The PMIS project file was created on December 11, 2009, and the total project cost is listed as $233,830. It has been region-reviewed, and includes the dredging of the garden ponds in three phases, in order to allow the dredged materials to dry out between each phase. The dredged material will be removed to an average depth of thirty inches.

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Year of Publication:	1936
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Year of Publication:	1918
Citation Publisher:	Press of H.L. & J.B. McQueen, Inc., Washington, DC

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Year of Publication:	1989
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Citation Author:	National Archives and Records Administration (NARA)
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Citation Author:	National Cemetery Administration
Citation Title:	Nationwide Gravesite Locator
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Citation Title:	Kenilworth Aquatic Gardens Plant Species List
Citation Publisher:	U.S. Government Printing Office, Washington, DC
Citation Author:	National Park Service
Citation Title:	Kenilworth Aquatic Gardens Brochure, National Capital Parks, Washington
Year of Publication:	1940
Citation Publisher:	U.S. Government Printing Office, Washington, DC
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Year of Publication:	1958
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Citation Publisher: Unpublished pamphlet.

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Year of Publication:	2005
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Citation Author:	Snell, Charles V.
Citation Title:	A Brief History of the Anacostia Water Park and the W.B. Shaw, or Kenilworth, Aquatic Gardens, Washington, D.C.
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Citation Publisher:	National Park Service, Washington, DC
Citation Author:	Spears, Alan and Antoinette J. Lee
Citation Title:	Anacostia Park Brochure
Year of Publication:	2002
Citation Publisher:	U.S. Government Printing Office, Washington, DC
Citation Author:	St. Albans Daily Messenger
Citation Title:	The White House Grounds: Changes Undertaken Under Direction of Mrs. Roosevelt
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Year of Publication:	2009
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Citation Author:	Syphax, Stephen
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Citation Publisher:	The Washington Post, Washington, DC
Citation Author:	This Week in the Nation`s Capital
Citation Title:	Day by Day
Year of Publication:	1941
Citation Publisher:	This Week in the Nation`s Capital, Washington, DC

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Citation Author:	Thomas, Charles B.
Citation Title:	Charles B. Thomas email to Margaret Koogle
Year of Publication:	2009
Citation Publisher:	Correspondence
Citation Author:	Thomas, L.K., Jr.
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Citation Publisher:	Correspondence
Citation Author:	Toner, Joseph M.
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Year of Publication:	1874
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Year of Publication: 1881
Citation Publisher: U.S. Bureau of the Census, Washington, DC

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Year of Publication:	1900
Citation Publisher:	U.S. Bureau of the Census, Washington, DC
Citation Author:	United States Bureau of the Census
Citation Title:	Report, United States Bureau of the Census, 1910
Year of Publication:	1910
Citation Publisher:	U.S. Bureau of the Census, Washington, DC
Citation Author:	United States Bureau of the Census
Citation Title:	Report, United States Bureau of the Census, 1920
Year of Publication:	1920
Citation Publisher:	U.S. Bureau of the Census, Washington, DC
Citation Author:	United States Government
Citation Title:	Memorandum: Agreement for Sale and Quitclaim of Shaw Lily Pond Property Owned by Mrs. L. Helen Fowler et al., May 22, 1928
Year of Publication:	1928
Citation Publisher:	Correspondence
Citation Author:	University of Connecticut
Citation Title:	The George Safford Torrey Herbarium Register
Year of Publication:	2004
Citation Publisher:	http://bgbaseserver.eeb.uconn.edu/regsearch.html
Citation Author:	Unna, Warren
Citation Title:	Centuries-Old Seeds Bear Lotuses Again
Year of Publication:	1953
Citation Publisher:	The Washington Post, Washington, DC

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Citation Author:	Washington Post
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Citation Publisher:	The Washington Post, Washington, DC
Citation Author:	Washington Post
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Year of Publication:	1914
Citation Publisher:	The Washington Post, Washington, DC
Citation Author:	Washington Post
Citation Title:	Hold Annual Rose Show: Exhibitors Fill Brookland Masonic Temple with Flowers
Year of Publication:	1915
Citation Publisher:	The Washington Post, Washington, DC
Citation Author:	Washington Post
Citation Title:	Work on River Park: Col. Newcomer Reports Progress Along the Anacostia
Year of Publication:	1915
Citation Publisher:	The Washington Post, Washington, DC
Citation Author:	Washington Post
Citation Title:	Members to Study Aquatic Life
Year of Publication:	1916
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Exhibit Land`s Best Yield: Annual Flower, Fruit and Vegetable Show Begins Today at Brookland
Year of Publication:	1916
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Dinner at Arts Club
Year of Publication:	1920
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Water Lilies of Rare Beauty to Be Seen Here
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Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
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Year of Publication:	1926
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Today`s Happenings
Year of Publication:	1926
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Horticultural Show to Open Wednesday
Year of Publication:	1927
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
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Year of Publication:	1928
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Today`s Happenings
Year of Publication:	1929
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Garden Club Entertained at Chevy Chase: Several Entertainment Features of Week in Suburb
Year of Publication:	1931
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Twentieth Century
Year of Publication:	1932
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication:	1933
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication:	1934
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication:	1934
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication:	1935
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Bethesda Garden Club Plans Show: Community Group to Sponsor Exhibition on June 4
Year of Publication:	1935
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Meeting at Silver Spring
Year of Publication:	1935
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
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Year of Publication:	1935
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Shaw Lily Gardens Tour Scheduled Today
Year of Publication:	1938
Citation Publisher:	The Washington Post, Washington, DC

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Citation Title:	U.S. Buys Shaw Lily Ponds As Rival to Cherry Blossoms
Year of Publication:	1938
Citation Publisher:	The Washington Post, Washington, DC

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Citation Title:	Shaw Lily Gardens in Bloom Under Federal Auspices
Year of Publication:	1939
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Calendar of Art Exhibitions in Washington
Year of Publication:	1940
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Kenilworth Gardens Lily Sale Scheduled to Open Today
Year of Publication:	1943
Citation Publisher:	The Washington Post, Washington, DC

Citation Author:	Washington Post
Citation Title:	Hugo Inden Show at G.W. Library
Year of Publication:	1948
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication:	1952
Citation Publisher:	The Washington Post, Washington, DC

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Year of Publication: 1956
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Citation Title: Water Lily Lady Dead at 82
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Citation Publisher: The Washington Post, Washington, DC

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Citation Author:	Washington Star
Citation Title:	Display of Water Plants Opens at Kenilworth
Year of Publication:	1944
Citation Publisher:	The Washington Star, Washington, DC

Citation Author:	Washington Star
Citation Title:	Night-Blooming Lilies Now Near Full Flower
Year of Publication:	1944
Citation Publisher:	The Washington Star, Washington, DC

Citation Author:	Washington Star
Citation Title:	Water Lilies in Full Bloom in Pools Throughout D.C.
Year of Publication:	1947
Citation Publisher:	The Washington Star, Washington, DC

Citation Author:	Washington Star
Citation Title:	Probe of Property Sales in Kenilworth Urged
Year of Publication:	1947
Citation Publisher:	The Washington Star, Washington, DC

Citation Author:	Washington Star
Citation Title:	Kenilworth Lilies Draw Throngs
Year of Publication:	1950
Citation Publisher:	The Washington Star, Washington, DC

Citation Author:	Washington Star
Citation Title:	Internationally-Famous Lily Ponds Give Kenilworth Its Deserved Reputation
Year of Publication:	1951
Citation Publisher:	The Washington Star, Washington, DC

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Citation Title:	Aquatic Garden Workers Busy Potting Water Lilies
Year of Publication:	1956
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Citation Title:	Skaters Are Happy: Polar Bear Climate Lingers
Year of Publication:	1962
Citation Publisher:	The Washington Star, Washington, DC

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Year of Publication:	1897
Citation Publisher:	The Washington Times, Washington, DC

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Year of Publication:	1905
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Year of Publication: 2008
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Year of Publication: 1968
Citation Publisher: The Washington Times, Washington, DC

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Year of Publication: 1989
Citation Publisher: Metropolitan Washington Council of Governments, Washington, DC

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Year of Publication: 1925
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Supplemental Information

Title: Appendix A: Kenilworth Aquatic Gardens Chain of Title
(Including Parcels 184/9 and 179/2)

Description: 1942 – On December 2, parts of Parcels 184/80 (north of Quarles Street and west of Kenilworth Avenue) and 184/81 (south of Quarles Street and east of Anacostia Park, Section G) are bought by the National Park Service for $12,910 (Land Transfer Order No. 1269). Together they contain 113,271 square feet. District of Columbia Office of the Surveyor, Book 141, page 220.

1939 – On March 6, the National Park Service assumes jurisdiction of Parcel 179/2, including the aquatic gardens, in a transfer from the U.S. Corps of Engineers. The parcel measures 8.527 acres. NPS Land Transfer Order No. 767.

1938 – On December 19, the United States of America purchases 8.158 acres of the tract formerly known as "Fife Enlarged," or Parcel 179/2, and .369 acres of adjoining Parcel 184/9 from Charles M. Shaw, his wife Alberta P. Shaw, and L. Helen Fowler fee simple for $50,000. District of Columbia Land Records, Liber 7300, folio 69.

1879 – On May 26, Walter B. Shaw purchases 33 acres of land, or a portion of Parcel 179/2, from Lucy A. Miller and David Miller for the sum of $2,500. District of Columbia Land Records, Liber 915, folio 205.

1863 – On June 16, David Miller purchases 105.5 acres of land, or a portion of the tract "Fife Enlarged," from David Cole and his wife Lucy Cole for the sum of $6,000. District of Columbia Land Records, Liber N.C.T. 7, folio 42.

1854 – On May 24, David Cole purchases land including the future Kenilworth Aquatic Gardens from William V.H. Brown. District of Columbia Land Records, Liber J.A.S. 77, folio 362.

1848 – On February 12, William V.H. Brown purchases 105.5 acres of land, or a portion of the tract "Fife Enlarged" that includes the future Parcels 179/2 and 184/9, from John Holroyd, Executor of the deceased Thomas Gibson, at public auction for $1,688. District of Columbia Land Records, Liber N.C.T. 7, folio 42.

1840 – On January 28, Henry Naylor and his wife Susan convey their recently acquired 105.5 acres, a part of "Fife Enlarged," to Thomas Gibson for $10. District of Columbia Land Records, Liber W.B. 78, folio 39.

1840 – On January 25, Alexander McCormick, spouse of Eliza Beall Van Horn, conveys 105.5 acres of "Fife Enlarged," including the future Parcels 179/2 and 184/9, to Henry Naylor for $1,025 at public auction. District of Columbia Land Records, Liber W.B. 78, folio 35.

1832 – On December 7, Benjamin Bean sells part of "Fife Enlarged" to Alexander McCormick. District of Columbia Land Records, Liber W.B. 44, folios 29, 30, 31, 32.

1807 – Alethea Beall and husband Archibald Van Horn bequeath a 185-acre portion of "Fife Enlarged" to their son, William Thomas Beall, and his wife Eleanore. Archibald Van Horn, indenture August 29, 1807, Prince George's County, Maryland Records JRM #12, p. 340.

1796-1807 – Upon her death, Elizabeth Beall's estate, known as "Fife Enlarged," passes to her granddaughter, Alethea Beall, as laid out in Colonel Joshua Beall's will. Prince George's County Register of Wills, Col. Joshua Beall Will, probate February 17, 1796, Maryland State Archives, C 1326-4, Liber T 1, folio 376-78.

1796 – In his will of February 17, Colonel Joshua Beall, bequeaths "all my land that layes between the Beaverdam branch and the piney branch" on the Eastern Branch, or a tract also known as "Fife Enlarged," to his wife, Elizabeth Waring Beall. Prince George's County Register of Wills, Col. Joshua Beall Will, probate February 17, 1796, Maryland State Archives, C 1326-4, Liber T 1, folio 376-78.

1764 – On April 16, Captain Joshua Beall patents "Fife Enlarged," a 1,024 acre parcel containing the properties formerly known as "Fife" and "The Barrens." Maryland State Archives, S 1203-887, Patent Certificate 816.

1748 – On September 29, Joshua and Ninian Beall patent "Fife," a property of 940 acres that contains the tract formerly known as "The Barrens." Maryland State Archives, S 1203-886, Patent Certificate 815.

1740 – Upon his death in 1740, Captain Charles Beall wills to his son, Joshua Beall, "all my land between Pine Branch and Beaver Dam Branch" just south of the boundary between present-day Maryland and the District of Columbia, a tract that includes the former "Barrens." Maryland State Archives, Will of Charles Beall, probate November 27, 1740.

1717 – Upon his death in 1717, Ninian Beall wills to his son Charles "a thousand acres of land called Dunn Back, lying on the South side of great Choptank in a Creek called Wattses Creek," a parcel that included "The Barrens." Prince George's County Record of Wills, Ninian Beall, probate February 28, 1717, Liber 1, folio 92.

1687-1717 – Upon the death of John Beall in 1711, his property passes to the ownership of his father, Ninian (Gahn 1936: 37; Jourdan 1998: 134).

1687 – John Beall patents a property of 472 acres called "The Barrons," also known as "The Barrens" and "Barrans." Maryland State Archives, S 1596-455, Patent Record NS 2, p. 361; Maryland State Archives, S 1596-454, Patent Certificate 22, p.

239.

1686 – On April 18, John Beale (a.k.a. Beall) of Calvert County surveys "The Barrens," a parcel of 472 acres in Charles County. State of Maryland Land Records, Liber 25 folio 239.

Title: Appendix B: Water Lilies Developed at Shaw Aquatic Gardens, 1882-1938

Description: Chronologically listed below are the water lilies known to have been developed by Walter B. Shaw and L. Helen Fowler at Shaw Aquatic Gardens between 1882 and 1938. The name of the originator and approximate date of origination follow the name of each hybrid, in parentheses. Immediately below the name, each plant is also identified as either hardy or tropical. Hardy water lilies are those native to cooler climates that can therefore withstand colder temperatures, while tropical varieties are native to tropical or semi-tropical climates. In addition, hardy water lilies only bloom during the day time, whereas tropical species and cultivars can be either day or night blooming plants (Slocum 2005: 77).

NYMPHAEA ODORATA W.B. SHAW (W.B. Shaw, c. 1890s)
Hardy

Historic description:
"Flowers large, of a rich rose pink color and very fragrant. A strong grower and continuous bloomer" (W.B. Shaw Aquatic Gardens 1921: 6). "This variety is one of the best sellers. The flowers are large and a rich rose pink, very fragrant and are borne in great profusion. Originated in our water gardens by W.B. Shaw" (W.B. Shaw Aquatic Gardens 1932: 10). A lily named for Shaw by his wife (L. 1908).

N. ODORATA LUCIANA (W.B. Shaw, c. 1890s)
Hardy

Historic description:
"An exquisite variety. Flowers 4 to 5 inches across, of pure rose pink, with delightful fragrance" (W.B. Shaw Aquatic Gardens 1921: 6). A lily named by Shaw for his wife, Luciana Miller (L. 1908).

N. HELEN FOWLER (W.B. Shaw, 1900)
Hardy

Source for origination date: University of Connecticut 2004
Historic description:
"A new seedling with fragrant flowers 3 to 5 inches across, of a very deep pink color; a strong grower and a continuous bloomer. A desirable variety" (W.B. Shaw Aquatic

Gardens 1921: 7). Shaded "slightly lighter at the tips of the petals" (National Park Service 1940). "Developed by W.B. Shaw and certified by the New York Horticultural Society" (W.B. Shaw Aquatic Gardens 1932: 12). Named for L. Helen Shaw Fowler, daughter of W.B. Shaw (National Park Service 1940).

N. ODORATA EUGENIA DE LAND (W.B. Shaw, 1913)
Hardy

Source for origination date: Cawood n.d.
Historic description:
"Flowers 5 to 6 inches in diameter, star-shaped, with many petals of a deep rosy pink color; very fragrant. A vigorous grower and a desirable variety" (W.B. Shaw Aquatic Gardens 1921: 5). "Named for a Washington artist" (National Park Service 1940).

N. SUFFRAGETTE (L. Helen Fowler, 1914)
Hardy

Source for origination date: W.B. Shaw Aquatic Gardens 1914
Historic description:
"A pure dazzling white lily, of the largest size, 6 to 8 inches across. Extremely vigorous in growth, blooming very late in the season" (W.B. Shaw Aquatic Gardens 1921: 3).

N. PINK OPAL (L. Helen Fowler, 1915)
Hardy

Source for origination date: Cawood n.d.
Historic description:
"A new flower with exceptional form and coloring, being very deep pink, with an attractive rounded bud. Lasts longer after being cut than any other lily" (W.B. Shaw Aquatic Gardens 1921: 8). "Another L. Helen Fowler development" (W.B. Shaw Aquatic Gardens 1932: 10). This lily's luminescent center served as inspiration for its name (Cawood n.d.).

N. ROSE AREY (L. Helen Fowler, 1921)
Hardy

Source for origination date: The Mayflower's Log, August 1936
Historic description:
"A new lily of a brilliant coral pink color throughout. Flowers 5 to 6 inches across,

standing well out of the water. The petals are narrow and numerous, and curiously incurved, making it a very distinctive blossom. The stem is brown, the stamens golden yellow. It is a most prolific bloomer, flowering from May 15 to September 1" (W.B. Shaw Aquatic Gardens 1921: 3). "The edges of its narrow petals curve curiously inward giving an exceptional depth of color and tone" (National Park Service 1940). "We believe this is the finest hardy pink water lily in the world. It was awarded the silver medal by the New York Horticultural Society…Developed in our own water gardens by L. Helen Fowler" (W.B. Shaw Aquatic Gardens 1932: 13). "Named for a cousin of Mrs. Fowler" (National Park Service 1940).

N. LOOSE (L. Helen Fowler, 1921)
Hardy

Source for origination date: W.B. Shaw Aquatic Gardens 1921
Historic description:
"A beautiful large white lily, 5 to 7 inches across with a peculiarly delightful fragrance. Particularly desirable, as it is a free and continuous bloomer, the flowers opening earlier in the day than any other lily. One of the best of the whites" (W.B. Shaw Aquatic Gardens 1921). "Named after a Washington florist" (National Park Service 1940).

N. IZETTA JEWEL (W.B. Shaw / L. Helen Fowler, 1921)
Tropical

Source for origination date: W.B. Shaw Aquatic Gardens 1921
Historic description:
"A new hybrid of Gracilis, with rich blue flowers, retaining all the grace of its parent. The most floriferous of all the blues" (W.B. Shaw Aquatic Gardens 1921: 9).
"Named for the actress Izetta Jewell" (National Park Service 1940).

N. EVANGELINE (L. Helen Fowler, c. 1924)
Hardy

Historic description:
"A new Kenilworth production of much merit, similar in growth and habit to Eugenia De Land, but a freer bloomer. The blossoms are an exquisite pearly flesh color. We have had this plant in our garden for several years, and consider it eminently satisfactory" (W.B. Shaw Aquatic Gardens 1928: 8). "Originated by L. Helen Fowler…" (W.B. Shaw Aquatic Gardens 1932: 12). "Named for Longfellow's character of literary fame" (National Park Service 1940).

N. DAWN (L. Helen Fowler, 1927)
Hardy

Source for origination date: W.B. Shaw Aquatic Gardens 1927
Historic description:
"A dazzling white lily with sepals tinted pink. The flower is large with the exquisite fragrance of the wild odorata of the North. A very strong grower, consequently not suitable for tub culture" (W.B. Shaw Aquatic Gardens 1927: 8).

N. RADIANCE (L. Helen Fowler, 1930)
Hardy

Source for origination date: W.B. Shaw Aquatic Gardens 1930; Perry 1938: 55
Historic description:
"We are introducing this season a new hardy lily of exceptional merit. The color is well nigh indescribable but for lack of a better term, we might call it shell pink. The petals are more pointed than round and while they are really one color throughout—entirely without shading, yet a certain iridescence makes it seem as though the light shone through, deepening the shade near the center and suggesting the name "Radiance." The leaves are round, of a rich deep green, and not unduly large. The stamens are a beautiful golden yellow. It is a sturdy plant, not suitable for small quarters, but an excellent bloomer if given plenty of root room" (W.B. Shaw Aquatic Gardens 1930: 5).

N. DUSK (L. Helen Fowler, 1935)
Tropical

Source for origination date: Warren 1935
Historic description:
Night-blooming variety with a red blossom (Warren 1935).

N. SOUVENIR (L. Helen Fowler / Fred Wagner, 1935)
Hardy

Source for origination date: The Washington Post, July 1, 1935
Historic description:
Rose-pink, day-blooming double lily with a cup-shaped bloom held above the water (The Washington Post, July 1, 1935; Warren 1935; National Park Service 1940). "Named in memory of an attendant at the gardens who discovered the first seedling" (National Park Service 1940).

N. KENILWORTH COMET (L. Helen Fowler, 1930s)
Tropical

Source: National Park Service 1940
Historic description:
A tender night-blooming variety with a deep red flower (National Park Service 1940).

N. MARGIE (L. Helen Fowler, c. 1930s)
Hardy?

Source: Cawood n.d.
Historic description:
Lily named after Fowler's niece (Cawood n.d.)

N. RUTH GOVER (L. Helen Fowler, c. 1930s)
Tropical

Source: National Park Service 1940
Historic description:
A tender day-blooming variety with pale blue flowers. Named for a woman who worked at the gardens for 25 years and was "an authority on water lilies and lotus" (Baitz 1947; National Park Service 1940).

Title: Appendix C: Historic Plant Lists for Kenilworth Aquatic Gardens

Description: The following lists contain the water lilies, lotus, and other aquatic plants sold at the Kenilworth Aquatic Gardens before 1938, when it was known as the Shaw Aquatic Gardens. Their cumulative arrangement accounts for the 22 new types of water lily and one new lotus added to the garden catalog between 1921 and 1935. Over the years some plants come and go from the catalog, but were probably still present in the gardens. Refer to Appendix A for the additional lilies introduced by Walter B. Shaw or L. Helen Fowler that were also present at the gardens during the late nineteenth and early twentieth centuries.

Information was drawn from the available Shaw Aquatic Gardens catalogs, ranging from 1914 to 1935, and from newspaper articles. Plant names are listed as they appear in the historic sources, and may refer to contemporary plants of a different name. The list is organized alphabetically within plant type and catalog year, and all water lilies are of the hardy variety unless otherwise noted. Hybrid or species name is followed by the originator's name (if known) and the year it was introduced or first published (for source information, see the CLI text or refer to "The Official Checklist of Water Gardeners International," at http://www.victoria-adventure.org/water lilies/names/names_main.html, or the "Historic Iris Preservation Society" website, at http://www.hips-roots.com/). If no originator is listed, the date refers to that variety's

first mention in a published work. Any included quotations are taken from the Shaw Aquatic Gardens catalogs.

PRESENT IN 1914

Water Lilies

- Nymphaea 'Gladstoniana' (Richardson, 1897)
- Nymphaea 'Gloriosa' (Latour-Marliac, 1896)
- Nymphaea 'James Brydon' (Dreer, 1899)
- Nymphaea 'Suffragette' (Fowler, 1914)
- Nymphaea 'George Huster' (Night Blooming Tropical; Dreer, 1899)

Lotus (today classified as Nelumbo)

- Nelumbium album grandiflorum
- Nelumbium kermesinum ("the earliest variety, with flowers of a real rose color")

PRESENT IN 1921 (in addition to those present in 1914)

Water Lilies

- Nymphaea alba ("English", native to Europe; first documented in 1753)
- Nymphaea 'Arethusa' (Dreer, 1902)
- Nymphaea 'Attraction' ("new and rare"; Latour-Marliac, 1910)
- Nymphaea 'Bisseti' (Night Blooming Tropical; Bisset, 1907)
- Nymphaea 'candidissima' (also known as N. 'Alba candidissima'; 1901)
- Nymphaea capensis (Tropical; discovered 1800)
- Nymphaea 'coerulea' (Tropical; "the blue lotus of the Nile"; also known as N. 'coerula'
  or 'Stellata Coerulea'; 1907)
- Nymphaea dentata (Night Blooming Tropical, native to Sierra Leone; first documented
  in 1827)
- Nymphaea dentata 'Improved' (Tropical; 1921)
- Nymphaea 'dentata magnifica' (Night Blooming Tropical; Bisset, 1902)
- Nymphaea 'Devoniensis' (Night Blooming Tropical; Hook, 1851)
- Nymphaea 'Frank Trelease' (Night Blooming Tropical; Gurney, 1900)
- Nymphaea 'Helen Fowler' ("new seedling"; Shaw, 1900)
- Nymphaea 'Izetta Jewel' (Tropical; Shaw / Fowler, 1921)
- Nymphaea 'Laydekeri rosea' (Latour-Marliac, 1892)
- Nymphaea 'Laydekeri purpurata' (also known as N. 'Laydekeri pupurea'; Latour-Marliac, 1894)

- Nymphaea ‘Laydekeri lilacea’ (Latour-Marliac, c. 1893)
- Nymphaea ‘Loose’ (Fowler, 1921)
- Nymphaea ‘Marliacea albida’ (Latour-Marliac, c. 1880)
- Nymphaea ‘Marliacea carnea’ (Latour-Marliac, c. 1880)
- Nymphaea ‘Marliacea chromatella’ (Latour-Marliac, c. 1880)
- Nymphaea ‘Marliacea ignea’ (Latour-Marliac, c. 1893)
- Nymphaea ‘Marliacea punctata’ (also known as N. ‘Marliacea Rubra Punctata’; Latour-
  Marliac, 1889)
- Nymphaea ‘Marliacea rosea’ (Latour-Marliac, 1887)
- Nymphaea Mexicana (native to Mexico; first documented in 1832)
- Nymphaea ‘Mrs. Woodrow Wilson’ (Tropical; Tricker, 1914)
- Nymphaea ‘Mrs. C.W. Ward’ (Tropical; Tricker, 1905)
- Nymphaea odorata (native to North America; first documented in 1789)
- Nymphaea odorata ‘Eugenia DeLand’ (Shaw, 1913)
- Nymphaea ‘odorata exquisita’ (Latour-Marliac, c. 1880)
- Nymphaea odorata ‘Luciana’ (Shaw, c. 1890s)
- Nymphaea odorata ‘Mary Exquisita’ (also known as N. ‘Mary Exquisita’ or ‘Morning
  Glory’; 1907)
- Nymphaea odorata rosea (native to Cape Cod; first documented in 1814)
- Nymphaea odorata ‘sulphurea’ (Latour-Marliac, c. 1880)
- Nymphaea odorata ‘sulphurea grandiflora’ (Latour-Marliac, 1888)
- Nymphaea odorata ‘W.B. Shaw’ (Shaw, c. 1890s)
- Nymphaea ‘O’Marana’ (Night Blooming Tropical, also known as N. ‘Omarana’; Bisset,
  1894)
- Nymphaea ‘Panama-Pacific’ (Tropical; Tricker, 1914)
- Nymphaea ‘Pennsylvania’ (Tropical; Conard, 1901)
- Nymphaea Pink Opal (“new flower”; Fowler, 1915)
- Nymphaea ‘Pringelii’ (Pring?)
- Nymphaea ‘pulcherrima’ (Tropical; Tricker, 1905)
- Nymphaea pygmaea (first documented in 1811)
- Nymphaea ‘Robinsoni’ (Latour-Marliac, c. 1893)
- Nymphaea ‘Rose Arey’ (Fowler, 1921)
- Nymphaea ‘Seignoureti’ (Latour-Marliac, c. 1893)
- Nymphaea ‘tuberosa carnea’ (a “new variety”; 1921)
- Nymphaea ‘tuberosa Richardsoni’ (Richardson, 1894)
- Nymphaea ‘tuberosa maxima’ (Boivin, c. 1901)
- Nymphaea ‘tuberosa rubra’ (Sturtevant, 1901)
- Nymphaea rubra (Night Blooming Tropical; first documented 1808)
- Nymphaea rubra rosea (Night Blooming Tropical, native to East India, also known as
  N. pubescens; first documented in 1811)
- Nymphaea ‘William Doogue’ (Dreer, 1899)

- Nymphaea ‘William Falconer’ (also known as N. ‘Wm. Falconer’; Dreer, c. 1899)
- Nymphaea ‘William Stone’ (Tropical; Tricker, 1905)
- Nymphaea ‘Zanzibariensis’ (Tropical; native to Zanzibar; first documented in 1877)
- Nymphaea ‘Zanzibariensis azurea’ (Tropical; c. 1907)
- Nymphaea ‘Zanzibariensis rosea’ (Tropical; c. 1907)

Lotus (today classified as Nelumbo)

- Nelumbium luteum (native to North America, also known as American Lotus and known today as N. lutea; first documented in 1799)
- Nelumbium nuciferum ‘alba striatum’ (also known as N. ‘album striatum’ and known today as N. ‘alba striata’; 1907)
- Nelumbium Pekinensis rubrum (known today as N. ‘Pekinensis rubra’; 1907)
- Nelumbium Pekinensis rubrum plenum (known today as N. ‘Pekinensis rubra flore pleno’; 1907)
- Nelumbium ‘Shiroman’ (also known as N. nucifera ‘Alba Plena’; 1907)
- Nelumbium speciosum (native to Egypt, also known as Egyptian Lotus and known today as N. nucifera; first documented in 1799)

PRESENT IN 1926 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘August Koch’ (Tropical; Koch, 1922)
- Nymphaea ‘Escarboucle’ (Latour-Marliac, 1909)
- Nymphaea ‘Kewensis’ (Tropical; Watson, 1885)
- Nymphaea ‘Mrs. Richmond’ (Latour-Marliac, 1910)
- Nymphaea odorata gigantea (1897)

Other Aquatics

- Sagittaria Latifolia (known today as Sagittaria latifolia, or broadleaf arrowhead)
- Typha Latifolia (known today as Typha latifolia, or cattail)
- Limnocharis Humboldtii (known today as Hydrocleys nymphoides, or waterpoppy)
- Myriophyllum proserpina coides (known today as Myriophyllum aquaticum, or parrot feather watermilfoil)
- Eichornia crassipes major (known today as Eichhornia crassipes, or common water hyacinth)
- Zizania Aquatica (commonly known as annual wildrice)
- Myosotis palustris (known today as Myosotis scorpioides, or true forget-me-not)
- Saururus cernuus (commonly known as lizard’s tail)
- Pontederia Cordata (known today as Pontederia cordata, or pickerelweed)

PRESENT IN 1927 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘Dawn’ (Fowler, 1927)
- Nymphaea ‘Evangeline’ (Fowler, 1927)
- Nymphaea ‘James Brydon’ (Dreer, 1899)
- Nymphaea ‘Lucida’ (Latour-Marliac, 1894)
- Nymphaea ‘Paul Hariot’ (Latour-Marliac, 1905)
- Nymphaea ‘Sioux’ (Latour-Marliac, 1908)

Other Aquatics

- Iris ‘Albert Victor’
- Iris ‘Archeveque’
- Iris ‘Arlington’
- Iris ‘Arnols’
- Iris ‘Ballerine’ (Vilmorin, 1920)
- Iris ‘Cecile Minturn’ (also known as I. ‘Cecil Minturn’; Farr, 1922)
- Iris ‘Eldorado’ (Farr, 1913)
- Iris ‘Florentina alba’
- Iris ‘Fairy’
- Iris flavescens (commonly known as lemonyellow iris)
- Iris ‘Golden Bounet’
- Iris ‘Isolene’
- Iris ‘Kharput’
- Iris ‘Kochii’
- Iris ‘Lent A. Williamson’ (Williamson, 1918)
- Iris ‘Lohengrin’ (also known as I. ‘Prince Lohengrin’)
- Iris ‘Mme. Neubronner’ (also known as I. ‘Mrs. Neubronner’)
- Iris ‘Mme. Cherau’ (also known as I. ‘Mme. Chereau’; Lemon, 1844)
- Iris ‘Neglecta’
- Iris ‘Niebelungen’
- Iris ‘Orientalis’
- Iris ‘Princess Victoria Louise’
- Iris pseudocorus (commonly known as yellow water iris)
- Iris pumila (commonly known as dwarf iris)
- Iris ‘Purple King’
- Iris ‘Rhein nixe’
- Iris ‘Rose Unique’
- Iris ‘Rubella’
- Iris versicolor (commonly known as blue water iris)
- Iris ‘Wyomissing’ (Farr, 1909)

PRESENT IN 1929 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘Mrs. Edward Whitaker’ (Tropical; Pring, 1917)

PRESENT IN 1930 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘Radiance’ (Fowler, 1930)
- Nymphaea ‘Somptuosa’ (Latour-Marliac, 1908)

PRESENT IN 1931 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘Comanche’ (Latour-Marliac, 1908)
- Nymphaea ‘Conqueror’ (Latour-Marliac, 1910)
- Nymphaea ‘General Pershing’ (Tropical; Pring, 1917)
- Nymphaea ‘Mrs. George Pring’ (Tropical; Pring, 1922)
- Nymphaea ‘Vera Louise’ (Dreer, 1899)

Other Aquatics

- Caboniba viridifolia (correctly known as Cabomba viridifolia, and known today as Cabomba caroliniana, or fanwort)
- Anacharis canadensis gigantea (known today as Elodea canadensis, or Canadian waterweed)
- Ludwigia muleretti (also known as Ludwigia sp., or water primrose)
- Valiseneria spiralis (known today as Vallisneria americana, or American eelgrass)
- Sagataria siensis (known today as Sagittaria sinensis, or a type of arrowhead)
- Hornwert (known today as Ceratophyllum demersum, or coon’s tail)

PRESENT IN 1932 (in addition to those present in previous years)

Water Lilies

- Nymphaea ‘Gonnere’ (Latour-Marliac, 1914)
- Nymphaea ‘Neptune’ (Latour-Marliac, 1914)
- Nymphaea ‘Solfaterre’ (Latour-Marliac, 1906)

- Nymphaea ‘Sunrise’ (“new lily of much charm”; 1938)

Lotus (today classified as Nelumbo)

- Nelumbium roseum semiplenum (possibly the same as roseum plenum, known today as Nelumbo ‘Rosea Plena’, 1905)