

## Case Study

# The Florida Botanical Gardens: from Vision to Reality

*Judy Yates, Ed.D.*

*Director, Pinellas County Cooperative Extension Service*

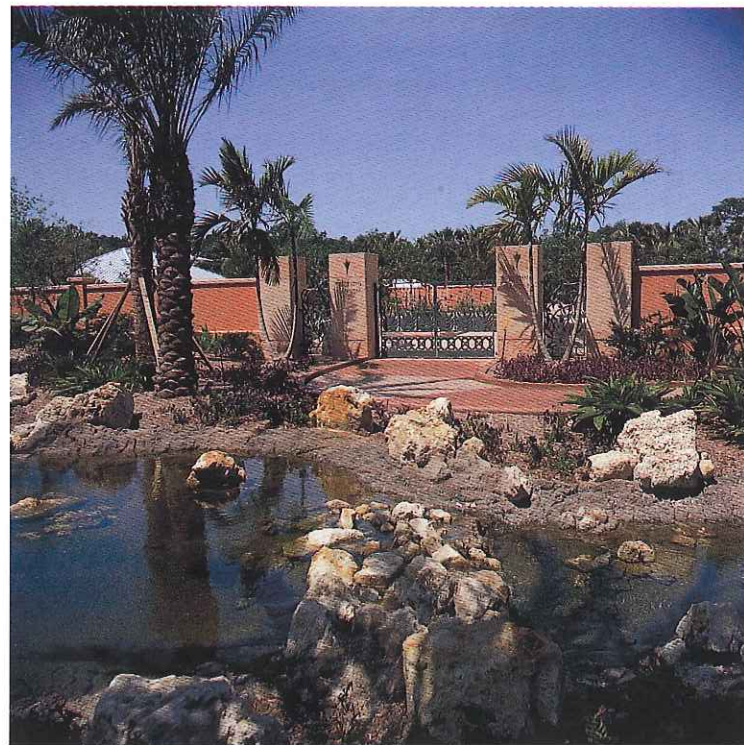
*David W. Larsen, ASLA*

*Project Manager, PBS&J*

Just west of Tampa, Florida, between the Gulf of Mexico and Tampa Bay, lie Florida's newest botanical gardens. The vision of Pinellas County leaders and county cooperative extension staff, The Florida Botanical Gardens at Pinewood Cultural Park enhance a 182-acre campus that brings together art, history, and the environment. Flora, fauna, and natural resources are showcased in a way that inspires visitors to practice responsible, environmentally sustainable techniques. But this world-class attraction did not begin with such lofty goals; it evolved as a result of public support and the creative use of county lands.

### **Project Background and Timeline**

In 1991, Pinellas County's Cooperative Extension Service (CES) resided on a modest 10-acre tract in Largo, Florida. The CES had existed in partnership with the University of Florida for many years and had developed a successful program of horticultural and community services. So when the CES proposed the creation of a new outdoor learning center to better serve residents, County Commissioners supported the effort, allocating \$1 million and 13 additional acres adjacent to Heritage



View across Tropical Garden to Wedding Garden entrance

Village, a 21-acre, open-air historical village and museum funded by the Commission.

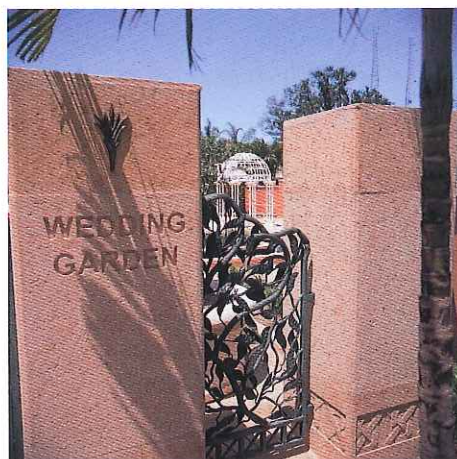
Before much progress had been made on clearing the acreage, The Florida Gulf Coast Art Center expressed interest in building a new, 45,000-square-foot museum expansion facility in the area. Along with this development, a new concept was

born: we would create a "cultural park" that would link botanical gardens with the art center and Heritage Village.

Over the next few years, enthusiasm for the botanical learning center grew, as did the size of the site. The County assigned 90 more acres of its lands to the project. Sixty acres of conservation land also were added, purchased by the county with assis-



tance from Florida's Preservation 2000 Trust Fund. Before long, the plan expanded the learning center into a botanical garden. To help fund the project, the County Commission allocated money from the local Penny for Pinellas sales tax, which



Columns and scrolled gate hint at the formal elegance of the 1-acre Wedding Garden inside.

was approved by voters in the early 1990s and extended in 1997.

Finally, in 1998, the plans took root as the county broke ground on the first phase of The Florida Botanical Gardens at Pinewood Cultural Park. On December 2, 2000, the park opened to the public. Within just a few months of operation, the garden's visitors' log sported the names of guests from as far away as Japan, and more than 500 people had shown their support by becoming paying members of the Friends of The Florida Botanical Gardens. Today, the CES and local residents couldn't be prouder.

### **Foundation for Success: Consensus and Market Research**

Critical to the success of this project has been the careful attention given by CES to consensus building, public opinion, and market research. Groups of potential garden users, staff horticulturists, and plant societies participated in intense, one- and two-hour interviews to help define a vision for the garden. The garden vision, goals and objectives, and program were expanded based on information received in public involvement efforts.

Market analysis and research (including an evaluation of existing U.S. botanical gardens) helped determine the economic viability of having a world-class botanical



The Topiary Garden features geometrically sculptured plants.

garden in Pinellas County, and provided direction regarding its physical requirements. Numerous focus groups contributed valuable information that helped the gardens attract international and national visitors as well as local residents. An advisory group helped ensure that the gardens would fit into the area's larger convention and tourist objectives, and a public relations specialist developed an image for the facility.

As a result of these efforts, the CES was able to garner the ongoing financial and public support necessary to bring this complex project to fruition.

### **The Master Plan**

With a vision established and garden programming underway, the master plan began to take shape. As part of the planning process, an extensive on-site analysis was conducted to determine opportunities and constraints.

The county's gardens consultant, PBS&J, then worked with CES and staff horticulturists to develop three distinct conceptual master plans and garden programming. After the plans were presented to county staff, a consensus master plan was established to provide a road map to future gardens. The master plan also included preliminary order-of-magnitude costs to gauge the potential costs and to promote growth and support of the gardens within Pinellas County. Based on the accepted master plan, PBS&J presented a program and master plan report outlining the vision that had been developed for each individual garden.

### **Site Challenges**

Next, a preliminary engineering study was conducted to document implementation strategies for the plan. The site presented numerous challenges. Foremost was the potential for flooding; most of the property is located in a drainage basin within a 100-year flood plain. Occasional flooding would disrupt the gardens' daily operations and affect the viability of the plants.

To address this problem, the garden design team turned to one of the site's assets: McKay Creek. Many years ago, McKay Creek had been straightened into a waterway that resembled a ditch more than a creek. Today, the creek has been restored to wind along a natural, meandering path, with sloping sides and native vegetation. Not only is the creek better able to accommodate higher volumes of water, it is more aesthetically pleasing and provides a setting that is more appropriate for the gardens. Fill also helped to raise garden elevations above the 100-year flood plain and summer high water table.

And there were other challenges. The jurisdictional wetlands identified on the site had to be preserved, enhanced, and maintained. Invasive, exotic vegetation—including the prolific Brazilian pepper, air potato, camphor, and Japanese climbing



The restoration of McKay Creek will help prevent flooding and provide an attractive natural area.

fern—had to be removed. And in 1996, in the midst of garden planning, a bald eagle nested on the site, requiring modifications to the design in accordance with federal laws for the protection of this endangered species.



## Consultant Coordination

After years of planning, adjustments to meet changing conditions, and expansion of the original concept, Pinellas County leaders became anxious to see results. In 1997, an aggressive design and construction schedule was set. To help make the complex transition from master plan to detailed design and construction, Pinellas County assigned design team leader and garden landscape architect PBS&J to coordinate the activities of 13 consultants and the construction manager. This ensured that common elements such as walls, pathways, elevations, and plants were compatible and maintained the established vision for the gardens. This coordination kept the project on schedule and allowed us to meet our design expectations.

## First Blooms

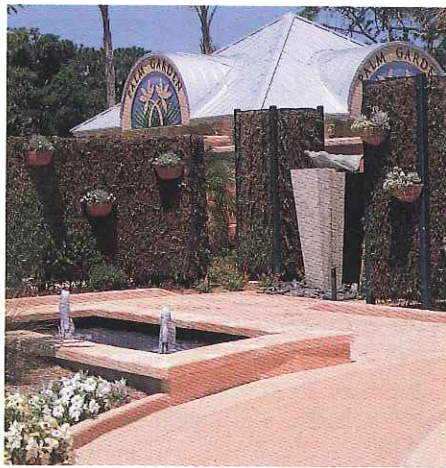
The relocation of the Gulf Coast Museum of Art to Pinewood Cultural Park provided the first opportunity for gardens at The Florida Botanical Gardens. The gardens' master plan and program were modified to allow the gardens to envelop the museum and promote cross-utilization of both facilities. This culminated in the design of the park's first gardens: the Ground Cover Garden, Daylily Garden, Bromeliad Garden, Reception Sculpture Garden, and Entrance Garden.

Once again, collaboration played a key role in the development of these gardens; museum personnel, garden staff, and county officials, and others all worked together. The Bromeliad Society also participated in the creation of the Bromeliad Garden.

The Sculpture Garden maintains existing pine flatwood canopy and understory vegetation as a backdrop for the outdoor art. Two courtyard sculpture gardens were designed for both outdoor sculpture exhibition and museum entertainment; minimalist plantings with strong geometric lines highlight the sculpture and add definition to the garden.

## Heart of the Gardens

The heart of The Florida Botanical Gardens is the East Side Gardens, which will include the Tropical Garden, Wedding Garden, Topiary Garden, Jazz Garden, Rose Garden, Cottage Garden, and Palm Garden. Because The Florida Botanical Gardens were conceived as a center for



**Bold plants highlight the contemporary Jazz Garden.**

botanical learning for residents of Pinellas County, the plantings for these gardens were selected from a broad plant list that emphasizes sustainability within the Central Florida Zone.



Each of the East Side Gardens is distinctive in design and style, with themes ranging from abstract informality to axial



geometric formality. As visitors stroll through the site, they find each garden to be like a separate room, private and intimate, with its own design character, mood, and educational experience. As of 2001, the Tropical, Wedding, Topiary, Jazz, Rose, Cottage, and a portion of the Palm Garden have been constructed.




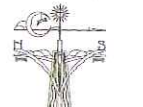
*A taste of the tropics.* The Tropical Garden is a study in color and texture, with a small courtyard similar to one that might be found in a home landscape in the tropics. The entry is a metal archway and columns with broken tile mosaics illustrating The Florida Botanical Gardens' bromeliad logo. Visitors follow a pathway that meanders through dense tropical vegetation. The diverse plantings offer surprises, intimacy, and discovery around every bend.


Although the garden is reminiscent of a tropical jungle, its lush plantings can survive an occasional freeze with the use of water and walls that have been strategically placed to moderate temperature. Eventually, oaks will provide a shady canopy, but the current plantings tolerate part shade to

**Deneen Powell Atelier, Inc.**



**DESIGN IS A PROCESS THAT EVOLVES FROM SHARED VISION AND PASSION; A CONCEPT THAT FORMS IN THE HEART AND MIND, BUT WHICH FINDS ITS FINAL FORM THROUGH SWEAT AND PERSEVERANCE.**

DESIGN SPEAKS TO PEOPLE. IT BRINGS WITH IT THE THOUGHTS AND EMOTIONS OF ITS CREATORS AND MOVES PEOPLE LIKE NO OTHER FORM OF COMMUNICATION CAN.

**TEL. 619.294.9042  
FAX. 619.294.9028  
www.dpadesign.com**

**8989 RIO SAN DIEGO DR.  
SUITE 370  
SAN DIEGO, CA 92108**

**Master Planning, Landscape Architecture & Environmental Graphic Design**



full sun. Water cascades from a fountain that runs along the garden's east perimeter wall.

Contributing to the subtropical microclimate of the Tropical Garden are a stream and a pond that serves as both a water feature and retention pond. A pavilion in the garden can be used for social events, for demonstrations, as an outdoor classroom, and source of information about the Garden.

**Formal elegance.** Elegant, formal, and romantic, the 1-acre Wedding Garden provides a beautiful and memorable backdrop for weddings and special events. At the entrance, decorative gates are patterned after native plants. A welcome mat of polished stone displays Floating Hearts lilies. Windows on either side of the gate allow visitors to peek in at ceremonies in progress. Inside, the garden is a botanical showcase in axial geometric forms. Bold plant materials include species that echo the seasonal colors displayed in the Rose, Topiary, Cottage, and contemporary Jazz Gardens. Simulated coquina stone pavers throughout the Wedding Garden help to maintain the feel of native materials.

Wedding parties proceed to the Garden's ceremonial gazebo, passing through formal gardens and crossing a bridge over a water feature to symbolize the rite of passage. As many as 100 guests can sit on a central lawn panel, which symbolizes the heart and family. Ornate garden elements throughout the garden, including granite inlays and poetic quotes in paving, support the theme.

This formal garden also provides a wonderful environment for instruction on

**Mexican stone Bromeliad fountain in the Tropical Courtyard.**



## Mission of the Florida Botanical Gardens

*The Mission of The Florida Botanical Gardens at Pinewood Cultural Park is to "inspire and educate visitors by showcasing flora, fauna, and natural resources in surroundings that motivate the visitor to practice environmentally sustainable techniques."*

This mission is reinforced at every level of garden planning and design. The gardens are a model of conservation and sustainable practice through the application of green architecture principles, energy- and water-efficient Xeriscape techniques, climate-appropriate design, and alternative water sources for irrigation and water features. Invasive species of plants were removed in natural areas, and native plants and appropriate non-native ornamentals were used. Undisturbed areas are preserved; an on-site creek was restored to a natural, meandering course; native canopy was preserved to the extent possible, and buffers of wildlife-friendly habitat were planted in the transition zones between the gardens and natural areas.

A campus-like setting with structures and areas for demonstration and discussion supports the gardens' educational objectives. In addition, the gardens are built to accommodate computer technology that will allow visitors to utilize leading-edge resources and research information. Interactive, age-appropriate exhibits in the gardens and in the visitors' center, signage, and rotating gardens and exhibits also will enhance educational features.

trimming trees and shrubs and on how to create a manicured appearance in a garden.

**A showcase of palms.** In the Palm Garden, native, ornamental, and specimen palms are arranged to showcase their diversity and uniqueness. Sabal palm, date palm, Washington palm, pygmy date palm, Paurotis palm, and many others demonstrate the various landscape uses of palms in western Florida. A water feature keeps the area humid and moist, and helps protect plants from occasional winter freezes.

The Palm Garden displays palms in two distinct, themed settings: a tropical beach and a formal grid. The tropical beach offers informality, with clusters of palms planted in crushed shell and sand beach areas. Lawn furnishings, including colorful umbrella tables and chairs, allow visitors to relax while enjoying the palms' dynamic textures. The beach theme playfully recreates the tropical nature of many palms.

A more formal planting presented in a unique geometric grid pattern will allow visitors to appreciate the palms' magnificence and grandeur. The diversity of palms will be accentuated in every grid square.

## Southern Shade

With red brick walkways, a gazebo, and wrought iron accents, the Shade Garden will be reminiscent of Southern residential garden spaces. This garden will highlight

the rich diversity of plants that prosper in shade. The native and ornamental understory trees and shrubs, ground covers, annuals, and perennials that will be used are suited to the shady areas of Pinellas County. A raised observation deck will allow visitors to look out over the garden. A small, bubbling fountain with seating nearby will invite visitors to take a minute to enjoy the soothing atmosphere of the Garden. Proper planting and irrigation techniques for shade will be demonstrated here.

## Pulling It All Together

Although each of the individual gardens is unique, common elements help to tie them together. Moving water is used throughout the gardens and helps to connect them. For example, the freeform, indigenous stone stream that meanders through the native tropical vegetation of the Tropical Garden transforms at a bridge crossing into a formal pool stream that runs through the Palm Garden. The Wedding Garden uses water and fountains to define the centralized gathering space for ceremonies. And the water feature in the Shade Garden will offer a subtle, ambient sound that brings a sensation of coolness and tranquility to the gardens.

Another unifying element is the Florida theme, expressed in the architecture and hardscape elements, such as paving, walls,





From the nearby Gulf Coast Museum of Art, the Bromeliad Garden (background) appears to be a framed landscape painting.

and furnishings. Buildings convey the image of Florida Cracker architecture, an indigenous Florida design style. Metal, painted wood, railings and high ceilings offer a glimpse of garden structure of a bygone era. Tabby shell—another tie to historic Florida—is present in many pathway areas. Pavement and hardscape colors were selected based on the rich tropical

tones of the Pinellas Suncoast: rich russet oranges, deep tropical blues, and warm sandy creams provide a delightful backdrop to the garden colors.

Signage was uniformly designed and integrated into the established theme. The Bromeliad logo appears on signs, columns, and other garden elements. Plant identification signage was designed to be easy to read yet integrated within the plant setting. In addition, all of the gardens have been constructed to allow the use of computer technology for education. Throughout the gardens, terminals will connect visitors to botanical research around the globe. Eventually, the technology will allow a visitor to identify plants, learn their specific growth characteristics, determine their availability at retail outlets, and find out how to care for them. That same technology will be accessible from home computers through a direct link to The Florida Botanical Gardens Web site.

### The Future of The Gardens

The future of The Florida Botanical Gardens will see the completion of the Palm

and Shade gardens, a new Botanical Learning Center, enhanced maintenance facilities, and home demonstration gardens. Fourteen additional gardens, included in the master plan, are part of the park's long-term objectives.

Large natural areas will help keep the gardens a green respite in the midst of the state's most densely populated county. Of the gardens' 150 acres, more than half have been designated as conservation lands and jurisdictional wetlands. A boardwalk through these native areas will encourage visitors to enjoy the local ecosystem and appreciate its rich diversity of plants.



*Judy Yates is director of the Pinellas County Cooperative Extension Service and the director of The Florida Botanical Gardens at Pinewood Cultural Park.*

*David W. Larsen, ASLA, is a landscape architect for PBS&J and served as project manager and lead garden landscape architect for The Florida Botanical Gardens.*



Water Garden in Virginia



The State Arboretum of Virginia, Boyce VA



The Marie Selby Botanic Garden, Sarasota FL

*"Gardens always mean something else..."*

Robert Harbison

BOTANIC GARDENS AND  
ARBORETA

PUBLIC PARKS

URBAN PLANNING

SUSAN NELSON • WARREN BYRD  
Landscape Architects

408 PARK STREET CHARLOTTESVILLE VA  
804.984.1358 FAX 804.984.4158  
<http://www.nelson-byrd.com>