pected under these conditions however, when compared with potable irriation results.

Dwarf hybrid azaleas are sensitive to reclaimed water from coastal regions of Central Florida, even when a drip application system is used which avoids all contact between above ground parts of the plant and the irrigant. The delicate, shallow root system of these plants is highly susceptible to desiccation and is sensitive to high chloride levels in the soil water. Culture methods for these plants are discussed by Ingram and Midcap (2). Reclaimed water is not recommended for use as an irrigant for these plants.

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LEU GARDENS: PAST, PRESENT AND FUTURE

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Abstract. **After its inception in 1961, and the initial 10 year capital improvement program, the 56 acre city-owned Harry P. Leu Botanical Gardens in Orlando went through a long period of physical decline and lack of direction. In 1979, the governing board of trustees produced a study whose aim was to reverse the decline and put the gardens on a solid botanical foundation. The hiring of the present professional staff was completed in 1986, and their work of defining the role of the gardens, and creating the various mechanisms to help them achieve this goal began. Future work centers on raising the necessary funds to construct a multi-purpose building, as well as mapping, documenting and augmenting existing collections, especially the important collection of camellias. Future plans also include developing curriculum-based programs for the school system, providing popular education in botany and horticulture for the many new residents moving into the area, conducting research in the areas of cold damage and frost protection, and conserving not only camellia species and cultivars, but native herbaceous plants with horticultural potential as well.**

Interest in botanical gardens and arboreta is undergoing a world-wide resurgence. New facilities are being built, while moribund institutions are being given new life. Leu Botanical Gardens falls into the second category, and the details of how it is accomplishing its renaissance may be instructive to similar institutions.

Leu Botanical Gardens (LBG) was created from a private estate that had belonged to four different influential Central Florida families. In 1961, the last private owners, Mr. & Mrs. Harry P. Leu gave 47 acres and their house to the City of Orlando to be maintained forever as a botanical garden and natural flora park. The enabling Deed of Trust also specified that the garden, although a division of the City of Orlando, was to be governed via a separate Board of Trustees that was given broad and comprehensive control. Mr. Leu left no endowment, but stipulated that the City, in accepting his gift, pledge itself to maintain the gardens at a level similar to that enjoyed under his ownership.

Following transfer of the property, a landscape design was chosen and the City embarked on a ten-year program of capital improvements that installed most of the Gardens' important physical features. In 1968, an additional 8.8 acres was deeded to the Gardens for a nominal sum.

After all this activity, the Gardens entered into a period of relative neglect during which time the level of maintenance deteriorated, and the modest efforts at record-keeping fell into disuse. The Gardens came to be perceived as merely an urban park.

In 1979, the trustees and other individuals who realized that being called a botanic garden created certain responsibilities for an institution, commissioned a study to determine what needed to be done to put the Gardens on a solid footing as a bona-fide botanical garden. The study resulted in the creation of a Master Program, that called for a return to higher standards of maintenance, the addition to the staff of a professional horticulturist, and the implementation of a membership program, with supporting activities such as classes and publication of a newsletter. Sporadic efforts at developing a membership base, classes and a newsletter were almost immediately begun.

In 1982, a botanist with experience in developing and administering non-profit educational institutions was hired. Special events to increase visibility and raise funds were begun. As a result of a Museum Assessment Program I grant (MAP I) from the Institute of Museum Services, a study of the physical plant, staffing, security, financial condition, and mission of the gardens was made. The most serious flaw pinpointed by the study was rectified in 1985, when the City was persuaded to create altogether new positions for the grounds staff. All new grounds staff, mostly with degrees, were hired, and a new position, that of Education Coordinator, was also filled. Also in 1985, the two-story wood-frame Florida house opened full-time as Leu House Museum.

The new professional staff had to create an identity and focus for the gardens, and create the mechanisms for achieving targeted goals. Among the questions faced were: what would constitute the gardens' collections? Who would be its audience and from what area would they be drawn? What programs would be created and sustained? How would they increase community support? And what would be the short, medium and long-term goals of the institution?

Determining what would be the gardens' collections was made relatively easy by several factors, including the fact that camellias—most of them at least fifty years old—were growing nearly everywhere in the garden. An orchid collection, the result of several gifts over the years, was also present, as were several smaller, yet significant collections of aroids, bromeliads, cycads, ferns, gingers, legumes and palms. A small native plant garden was being maintained by the local native plant society, and there was also a formal rose garden. Realizing early on that it would not be possible to grow even one of all the ornamental plants growing in Central Florida, decisions on what else to add were predicated on what other Florida botanical gardens are doing, and on what has the most value, or potential value, to the most users in the area the gardens serve. LBG has recently added a 1/2 acre Xerophyte Garden, featuring plants native to the Old World deserts, New World deserts, and the Mediterranean basin; a Vine Display Area, and a Native Florida Wetlands Garden. Flowering annuals and perennials are used to provide interest.

Concurrently with this effort, a system for accessioning and keeping permanent records for plants destined for the gardens was created, and both existing plants and new acquisitions are being accessioned as rapidly as possible. To date, about 4,000 specimens have been accessioned and permanently tagged.

Even though Leu Gardens was widely known to be a part of the City of Orlando, the staff realized that the Gardens could not fulfill its role unless it expanded its user-base, so an eight county area of East-Central Florida that enjoys essentially the same climate and plant palette has been targeted as the Gardens' area of influence. Membership recruitment efforts, and other services provided by the Gardens are made available to individuals and groups within the eight county area. At the present time, 6 of the 8 counties are being served.

Concurrently with these efforts, services to members and to the general public were expanded. A regular schedule of educational classes in botany, horticulture and related arts and crafts—about sixty different sessions—is consistently offered each year. The magazine has evolved from an amateurish and infrequently produced publication to a regularly published, 16 page quarterly magazine currently mailed to about 1,000 subscribers and members. And membership categories have been redefined, with yearly membership drives held. Membership is now in excess of 700. Membership benefits have been compared—favorably—with those offered by 21 other similar non-profits institutions.

Additional services include docent-led free tours of both Leu House Museum at regular hours daily, and the Gardens by prior arrangement. Leu Gardens provides speakers at no cost to any group requesting them, and an average of 40 such presentations a year are made. Children's tours have recently been added.

Because the City finds it increasingly difficult to justify spending tax dollars on anything other than basic operating costs, LBG has also had to look for ways to increase financial support from other sources. The ways which are proving to be most successful include increasing the membership base and instituting an annual appeal to encourage further giving by the members; by increasing attendance, which is being accomplished by using advertising and offering more programs; by merchandising much more aggressively the books and gifts offered for sale in the Visitor's Center; by applying for grants; and most importantly, by forging creative partnerships with business. These partnerships include soliciting cash sponsorships of various garden programs, and also obtaining in-kind goods and services.

The Gardens' progress has necessitated some administrative changes. In 1988, the number of trustees was increased from 5 to nine, and a new position, that of Executive Director, was created and filled with a professional with both museum and developmental expertise.

As the Gardens progressed, its goals gradually came into focus: the Gardens' role is to become the hub of horticultural activity in East-Central Florida. It will maintain well-managed and purposeful displays of plants, a botanical library (one of only 52 in the entire U.S.), and an herbarium, yet to be established. The principal collection consists of the genus *Camellia*, which presently comprises more than 2,000 specimens, principally cultivars of *C. japonica* and *C. sasanqua*, but also including representatives of more than 20 other species. The collection is being augmented with plantings of related taxa, such as *Eurya* spp., *Franklinia alatamaha*, *Gordonia* spp., and *Stewartia* spp.

The Gardens also seek to share botanical and local historical knowledge with individuals and institutions via tours, classes, exhibits and shows, through print, audio and visual media, and by means of liaisons with other educational and cultural entities throughout the world. The Gardens will accomplish this with the help of volunteers, members, and interested citizens.

The most immediate future plan is the expansion of the rose garden. More than $120,000 in cash, and an additional $25,000 in goods and in-kind services has been raised to expand this formal area into the largest rose garden south of Atlanta. Roses of all types will be displayed here, as will other ornamental members of the family *Rosaceae*.

Additional future plans include the construction of a wildlife observatory on our lake shore, the implementation of curriculum-based programs for area schools, increased research efforts, the creation of a student-intern program in partnership with area colleges.

The most important long-range project is the design and funding for a proposed multi-purpose building which will address the most serious obstacle to Leu Gardens' mission: its lack of physical plant. The proposed building will include adequate administrative space, a 200 seat auditorium, exhibit space, volunteer areas, a library capable of holding 10,000 volumes, herbarium space, a laboratory, and a fully equipped kitchen. The facility will allow room for all activities and programs planned for the next 20 years.

Leu Gardens' hopes that the realization of all these goals will enable it to become accredited by the American Association of Museums—an honor currently enjoyed by only 12 botanical gardens in the country.