

## MORE THAN A TREE GROWS IN BROOKLYN

### Introduction

It was not too much of a surprise, though something of a disappointment, to get the results of an impromptu audience survey at the congress. Most public gardens represented had only one or two educators on their staff and these had other responsibilities besides education. Education is the *raison d'être* for non-profit public gardens in the United States. We have a responsibility to be advocates of the public's perspective, champions for universal accessibility and sticklers for superb quality of service and information. The congress, this book, *Roots* (the botanic gardens education newsletter), and other such commendable efforts of educators to know and support each other keep us energized and ready to carry out our important missions. Perhaps our role has never been so important as it is now, when agents of change are so desperately needed in our society.

Our approach at the Brooklyn Botanic Garden, since its educational programmes began in 1914, has been to focus on the general public as our audience and in particular on children. With a metropolitan population of some nine million, this is not hard to do. The challenge is to serve our audience well and with continuity, regardless of the economic climate and available resources.

Institutional commitment to education is essential for success and this means adequate facilities and personnel resources dedicated to educational programmes. When there is such commitment, it usually leads to a continuity of staff. Two of my predecessors, Ellen Eddy Shaw and Frances Miner, for example, between them directed the educational activities in Brooklyn for 60 years. In recent years another essential ingredient has been a volunteer corps and this of course requires commitment for recruiting, training and overseeing.

There are two tenets of the public garden education profession that I want to mention in passing, that one doesn't necessarily learn in school but are absolutely essential to success in our field. Firstly, as educators we often find ourselves in the role of advocate for the public viewpoint. We want people to feel welcome at our gardens and to feel that they can obtain a meaningful experience while visiting. Unfortunately, this is not necessarily the viewpoint or focus of other staff, administration or board

members. If we believe we can have any impact whatsoever on the future, everyone at the institution must help to make children feel wanted and invited. It is part of your job to convince others. We cannot just let this happen by chance!

Secondly, it is essential that we give people the opportunity to have their own direct experiences with plants. We need to facilitate this experience not obstruct it (unless, of course, it is damaging to valuable specimens). After all, our collections are what set us part from other kinds of educational institutions. We have "the real thing" to offer. It has been said that the collections are the heart of a museum and that education is the soul or spirit. Visitors can carry the aesthetic experience with them for a lifetime. I recently met a woman who had once visited Brooklyn Botanic Garden, 65 years before. She remembered the experience clearly and believed that it had sparked a lifelong interest in gardening.

Becoming familiar with what each other is doing in education is important, however I do not believe in one perfect system. If one visits many public gardens, it is immediately apparent how very different each one is from the others: We each have different strengths, audiences, perspectives, resources and ideas. We can borrow from one another, but we still need to maintain the creativity that makes our own programmes unique. Given that caveat, I will go on to describe Brooklyn's educational assets and approaches.

### **General background**

Brooklyn Botanic Garden is a private, non-profit corporation with an annual budget of \$8 million. It is located on city-owned land and housed in a city-owned building. The City of New York provides approximately 1/3 of our budget. The rest is earned income from membership fees, plant and gift shop sales, programme fees, rental fees and contributions from corporations, foundations and New York State. We have 750,000 visitors annually.

It is the aim of the Brooklyn Botanic Garden to inspire and inform the public so that people will be aware of the significance and value of plants and may learn to protect and preserve them, together with their environment.

The Garden boundaries have changed very little since they were first laid out on wasteland in 1910. They now encompass 52 acres. It is the third oldest botanic garden in the United States. The original laboratory building, completed in 1917, is currently used as an administration building, and will soon undergo its first restoration. It is adorned by a magnificent and mature *Magnolia* collection.

The central Systematic Collection is surrounded by theme and specialty gardens such as; the Fragrance Garden, the Shakespeare Garden, the Herb Garden, the Rose Garden, Daffodil Hill, the Local Flora Section, the Cherry Esplanade, Cherry Walk and arguably the finest Japanese Garden in the West and one of the oldest, having been built in 1914.

### **Steinhardt Conservatory**

Our most recent addition is the \$25 million Steinhardt Conservatory, opened in May of 1988, which makes it possible to provide learning



*School children still come to the Brooklyn Botanic Garden in large numbers as they did in 1915. The Conservatory pictured here has been renovated into a Spicial Events Center for catered functions that provide income to the Garden.*

experiences for people of all ages, at all levels, in all seasons. Plant specimens are displayed in naturalistic environments that simulate a range of plant habitats from around the world. The remarkable "Trail of Evolution" traces the origin of plant life from four billion years ago to the present day. Living plants, real and replicated fossils of plants and animals exemplify many of the pieces of the evolution puzzle.

Other important plant environments can be experienced in the Aquatic House, the Desert Pavilion, Tropical Pavilion and the Warm Temperate Pavilion. Interpretative signs focus on aspects of plants that people relate to readily. Each of the pavilions' display maps indicates the geography of the appropriate climatic regions.

A portion of BBG's outstanding collection of over 750 bonsai plants, some ancient, are on display in the Japanese style Bonsai Museum.

The original Palm House has been turned into a Special Events Center where catered functions are held. Fine food and a beautiful atmosphere attract clients who add substantially to the treasury for the important work of the Garden. A building originally made for plants has been turned into a building for people and for our very basic necessity for food.

### **Children's Garden**

In the Children's Garden, about 250 youngsters a year learn about the ultimate source of food by growing their own vegetables, herbs and flowers. Children work in pairs in 4 foot by 15 foot plots in the one-acre garden. There are two sessions, spring and summer. Waist-high raised beds are used in programmes with disabled groups.

Children have three indoor classes before they are ready to plant on Planting Day in late April. The Planting Day parade is led by the smallest child being pushed in a wheelbarrow by the eldest child, and the other children marching with their groups from the Administration Building to the Children's Garden.

Teenagers dig and raise their beds in the same spaces where octogenarians learned to garden 75 years ago. The high schoolers compete to see how high they can raise their beds. The junior high age



*Perhaps the most excited child on Planting Day is the one selected to ride in the wheelbarrow, arriving as the first child in the Children's Garden each spring.*

group compete to find the most and the biggest worms and the young ones work every bit as hard as the older kids. When the garden beds are nice and smooth, children mark their rows with labels and check their plans, just as they have practiced. After planting seeds and transplants, the children love to water. From start to finish, Planting Day is a five-hour affair.

Weeding is inevitably a big part of gardening. It is not popular with all kids but the rewards are worth it. Seeing the look on a child's face as she

discovers a bright red radish is certainly reward enough for the staff! Children weigh their produce and record the tonnage produced by the garden. Lessons about composting and recycling are a natural part of weeding, harvesting and mulching.

In 1922, children shared their harvest with war orphans. These days children often contribute excess produce to shelters for the homeless. Children take part in nature study, cooking and crafts classes in the summer. They also go on a trip to the city-wide harvest fair in August and take a field trip to a nature preserve or historic site outside of the city. Junior Instructors are teenagers over 14 years of age who assist instructors during gardening sessions, make sure tools are properly cleaned, edit the Children's Garden newsletter, plan and care for specialty gardens, trim hedges, or do any number of other tasks. They are paid \$250 for 13 sessions. Most of them have been in the Children's Garden for many years as participants and consider it a great honour to become a "J.I." It is a real job experience for them, including the interview and selection process.

We have youngsters visit the gardens from all the various cultural backgrounds one might expect of a longtime port of entry for immigration. Being located in such a diverse community, this provides the Garden with an opportunity to encourage and perhaps improve the possibility that more Black and Hispanic youngsters will enter the science professions, something on which the US does not have a very good track record.

In the summertime, college interns from all over the US supplement our staff. Lately we've invited volunteers to help as well. It all culminates in a fall Harvest Fair of games, square dancing and activities for the whole family. The fair gives children a public forum for their summer's labours, their vegetables being displayed, with prizes for the best.

In 1989, the Children's Garden celebrated its 75th anniversary. Alumni returned and shared their memories and told how their experiences had affected the rest of their lives. The oldest alumna recalled the first year of the Garden. Frances Miner, who taught for 43 years, returned to be honoured. The young gardeners interviewed the alumni in an oral history project and a public exhibit celebrated the history of the children's gardening movement.

Also in 1989, we turned our successful experiences gardening with children into a video kit titled, "Get Ready, Get Set, Grow!" It has been widely acclaimed as an inspiration and a practical guide.

### **School programmes**

Some 90,000 school children visit the Garden each year. Of that number, the Education Department has direct contact with about 20,000 through workshops and tours. Our latest programmes which began in 1989 include a Discovery Center and a Junior Flower Show. The Discovery Center features a life-sized oak tree and the many animals that depend on it, discovery boxes with games and plant artifacts, and other interactive exhibits including microscopes. The Junior Flower Show is an opportunity for school children to show off their horticultural

accomplishments to the whole world; it is judged by a team of experts and every child receives acknowledgement for their accomplishments. One student remarked that a ribbon he won was the only good thing that had happened to him in all of his years in school.

The size of our school programmes is utterly dependent on our weekday Garden Guide force who supplement the



*The Children's Garden is an area of the botanic garden where children can have their own experiments and displays. Parents are invited only at Open House and Harvest Fair times.*

five instructional staff in Children's Education. The guides consist of volunteers who receive ten training sessions and continual refresher courses throughout the year. New instructional facilities include four large classrooms and three teaching greenhouses equipped with adjustable potting tables to accommodate children, adults and people in wheelchairs.

With over a million school children in New York City, our goal of having contact with every child at one point in their school career is a challenge indeed. One new method that we are exploring is an audience-participation auditorium programme. It will travel to the schools and serve up to 500 students at a time, being educational and entertaining but also profitable.

### **Project Green Reach**

Project Green Reach is a privately funded programme that brings hands-on classes to schools that are in the lowest income areas in Brooklyn. Teachers compete to be accepted into the programme and can be in it only one semester. The programme is so popular that we often have to turn away twice as many teachers as we can accept.

Teachers attend a workshop and select a curriculum tract for their class, based on several options; they receive one visit by a BBG instructor in their classroom, one visit to the Garden (in motor-coach paid by the programme) and assistance with a community project of their own making. Community projects carry the lessons beyond the school, such as the class that shared the plants they had propagated with residents of a nursing home.

Students that show special interest are nominated by their teachers and 15 are selected to be part of the Junior Botanists Summer Adventure programme. They take part in the children's garden and intensive botany classes and also take a trip to a different environment, such as a marsh or a seashore.

Parents become involved too. They are impressed by the quality of the programme and learn how to propagate plants themselves. They attend the graduation of the Junior Botanists at the end of the summer. This



year, the students sang "Dirt Made My Lunch" and did a rap number about "Roots, Stems and Leaves."

Junior Botanists return for a winter reunion to make holiday decorations and learn about conifers. One alumna brought the neighbourhood grandmother figure. Others bring parents, guardians, friends. Families that live blocks away that have never been to the Garden come to see it as a friendly place with people that they know and like.

### **Adult education and public programmes**

Adult courses center on horticulture more so than botany, although interest in botanical classes is increasing. Whenever we can and when it makes sense, classes and portions of classes are taught out in the collections, or using samples from the collections. Botanical art classes and bonsai workshops are very popular. We also offer nature hikes and tours of other gardens to our members and the public. Approximately 2,000 students attend these offerings.

Special events often have an ethnic focus, such as Sakura Matsuri, the Japanese Cherry Blossom Festival, which this year attracted 38,000 visitors in two days. A diverse roster of symposia, seminars, lectures, concerts, plays and exhibits are provided year-round attracting over 30,000 people annually.

A programme to support community gardeners in Brooklyn has been revived. Although many support agencies for community gardeners have developed in the 20 years since BBG created the first such programme in the area, the Garden is still the logical place for people to begin looking for information and assistance. So we have once again begun to serve in that capacity.

Despite huge budget cuts this year and the loss of many good staff members throughout the institution, education continues to figure large in the mission of the Brooklyn Botanic Garden and indeed, much can be done even with reduced resources. It is a challenge to justify our programmes in terms of dollars and ultimately it can only strengthen our position. After all much of what private funders seek to contribute to, happens in the educational arena.

## Conclusions

With respect to conservation education in public gardens on which the theme of this Congress is based, conservation is an ethic; it is instilled only by an understanding of the value of the threatened entities or communities. Zoos have worked hard to create wonderfully interactive programmes to teach conservation values and it is no surprise that there is a more natural sympathy for the plight of wild animals than for plants. As plants are the basis for all life and no life endures where plant habitats are demolished our scope is more basic and broader. Yet I believe the challenge for us at this point is to relate global issues to an urban child's experience. We get nowhere by preaching and insisting that it is the child's lot in life to repair the damage done by older generations.

Only when a person understands what she can do in her own life, in her family, her community, her government, does it really make any sense and go beyond "Tsk, tsk, isn't that a shame that we're losing the rain forests." What does it accomplish for a high school student to worry about endangered lemurs in Madagascar when he is eating fish out of the polluted East River? Our strongest position for acting as agents for change is in providing experiences that make people want to know more, care more, pay attention and get involved with conservation issues. We do this best by making it possible for people to fall in love with plants.

*Education and Information Services, Brooklyn Botanic Garden,  
Brooklyn, New York, USA*