

Conveying conservation information in an interactive way

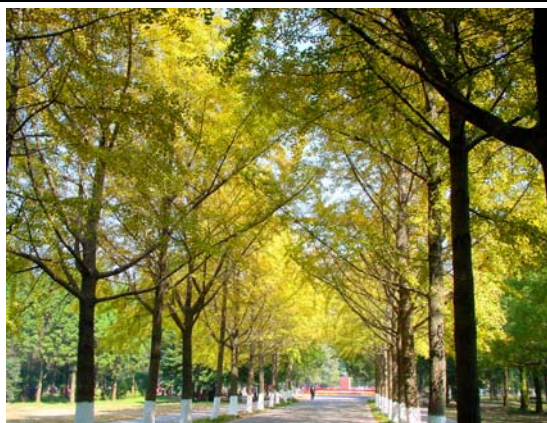
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Abstract

Botanic gardens are important centres for education. Nanjing Botanic Garden (NBG), the first national botanic garden in China, has put an emphasis on environmental education since the late 1990s. In recent years, the garden has been trying to use more interactive methods to convey its conservation message to the public. The programme “Searching for Green Treasure in NBG”, held in 2006, is introduced in details in this paper.

Brief introduction of NBG and its education programme



Main road in the garden, lined with Ginkgo

It is known to all that botanical gardens are important centres for education, and botanical gardens have an obvious and vital role to play in conserving plants (Willison 1994). Children and adults can gain knowledge about plants, biodiversity conservation and the environment when they are enjoying botanical gardens.

Nanjing Botanical Garden Mem. Sun Yat-Sen (NBG), set up in 1929, is the first national botanical garden in China (pic1). Located inside the Zhongshan National Scenic Area in the eastern suburb of Nanjing, the garden enjoys a mild climate, abundant plant species and picturesque scenery. It offers comprehensive

functions including research, education, and display. As a plant research centre on central and northern subtropical regions in China, Nanjing Botanical Garden has a collection of over 3,000 species of live plants and about 700,000 sheets of herbarium specimens. It gracefully displays plant diversity in its unique garden landscape. It allows the general public to understand nature in an easily accessible environment.

The garden began its education program in the late 1970s. Ensuing that science is made more available to young people through education is of paramount importance to the garden. The Education Program provides its services to elementary schools, middle schools and universities (Li Mei etc 1992). Through much efforts, the garden now has become an education base of national, provincial and municipal level.

From the 1980s, more attention has been paid to environmental problems, and botanic gardens are highly regarded as an “ark” for plant protection. Education programmes in botanic gardens have put an emphasis on environmental education (He Shan-an etc 2002). Nanjing Botanical Garden is no exception. The environmental education programme of NBG aims to increase environmental knowledge and awareness and educate the public about the urgent need to conserve plants. Scientific guides, exhibitions, lectures, training courses, teaching materials have been provided. Games including competitions and special activities like

summer camps and plant adoptions have been organized. Dozens of popular science works and hundreds of articles have been published. All kinds of media, including website, have been fully used to communicate relevant information.

Case study: the programme of “Searching for Green Treasure in NBG”

In recent years, the garden has been trying to use more interactive methods to extend its conservation

information to the public. For example, a competition was organized when the website of NBG was opened to the public in August 2001. Students of several local middle schools were invited to write compositions and took a spot quiz, after they had “visited” the virtual garden on the website and the real garden. All participants behaved actively in the quiz, and wrote their compositions in vivid and imaginative ways. By stimulating participant’s initiative greatly, activities like “Searching for Rare and Endangered Plants in Nanjing City”, “Adoption and Maintenance of Rare and Endangered Plants in NBG” and volunteer programs, have not only been warmly welcome and highly evaluated by the participants, but also had great influence among citizens.



At the exhibition 'Let's protect plants together and bring out a better life'

One typical example we will introduce in details here is the program called “Searching for Green Treasure in NBG”. It included a series of activities such as an exhibition, plant searching, quiz and photographic competition, etc. The program was carried out from April to November 2006 in the garden.

The exhibition, entitled “Let's Protect Plants Together and Bring out A Better Life”, was held in collaboration with Botanical Garden Conservation International (BGCI) and funded by HSBC. Designed particularly for students aged 7 to 12, the exhibition included 15 panels, hundreds of living plants and dozens of exhibits. It illustrated the relationship between plants around us and ourselves. A related knowledge test was also organized to encourage children to read the panels and plant labels carefully. The exhibition was also held on the website of the garden with pictures of all 15 readable panels. Besides, 4000 leaflets including the text of panels, questions from the knowledge test and a questionnaire were sent to local primary schools and junior middle schools in case some of their students were not able to visit the exhibition in the garden. Over 50,000 people have visited the exhibition in different ways.

Another special activity of the program entitled “Searching for Green Treasure through Plant Map” was held from October to the end of November. A specially designed leaflet included a location map of 50 selected plants grown in the garden, simple but key information about these plants and 10 relevant questions. Each of the 50 plants had a label with basic information including scientific name, common name, function, protection level as well as a typical picture. With the leaflet and the labels, visitors could manage to find these selected plants in the garden and answer 10 questions in the leaflet. Visitors who wanted to take part in the activity could get leaflets by showing their entrance tickets in our visitor center near the garden’s main entrance. Every person who gave right answers to at least 6 questions could get one or two potted plants (*Aucuba japonica* var. *variegata* or *Forsythia viridissima*) as a souvenir. Besides, young participants aged 5-12 could also get one piece of BGCI poster with colorful plant design picture.

According to our estimate, approximately 3,000 visitors took part in the searching activity in 2 months. We were really touched that most people both young and old were so enthusiastic about the program. Some people spent a whole day even two days just to look around the garden to find right answers to the 10 questions. On the first day, we held a competition between two groups of people. The group who found earlier the 20 required plants in the garden would win. Our staff and media people were surprised that both groups fulfilled this time-consuming task much quicker than we expected, because they came to the garden in advance to be well prepared! All participants had great fun from this plant searching activity (pic2, 3).



Participants on 'Search for a green treasure'

A photographic competition was another highlight of the program. More than one hundred people participated in the competition. They were required to photo several plants within the 50 species and send us their pictures by email. Each winner received one annual ticket allowing them to visit the garden for free for the next year, and their photo was displayed on the garden's website. Participants were just cheerful about the result.

There is a specialized garden for rare and endangered plants in NBG. It occupies an area of 7 hectares with 81 rare and endangered plants of national level inside but it is rarely visited due to its remote location. Some of these

species are scattered in other places of the garden. In order to get conservation message across, it's important to make these protected plants accessible to the public. So we selected 50 plants in the central area of the garden, which could be easily accessed. Among them 20 are rare and endangered plants of national level, such as *Davidia involucrate* (dove tree, pic4), *Metasequoia glyptostroboides*, *Ginkgo biloba* (maiden hair tree), *Calycanthus chinensis*, *Liriodendron chinense* (tulip tree), *Eucommia ulmoides*, *Pseudolarix kaempferi* (golden larch), *Sinojackia xylocarpa* (balance weight tree), *Platycerium wallichii* (stag-horn's fern), *Magnolia zenii* (Zen magnolia), *Ormosia hosie*, *Rosa odorata*, *Rosa rugosa* (wild rose), etc. Some of these plants are really attractive. For instance, the flower of dove tree with two bracts looks like the wings of a flying dove. *Sinojackia xylocarpa* is only distributed narrowly around Nanjing, and its fruit resembles a balance weight.

The rest of the 50 plants also have special characteristics that can attract visitors. For example, *Nepenthes hybrida* (pitcher plant) is one of the most popular insect-eating plants and its fantastic shape can always attract children's attention. *Acer palmatum* is the most beautiful maple species in the garden. *Victoria amazonica* (giant Amazon waterlily), the biggest aquatic plant has huge plate-like leaves. *Lithops pseudotruncatella* looks just like a lovely pebble. *Stapelia grandiflora* can attract flies as its pollinators. *Dioscorea zingiberensis* has been the most important plant specie from the garden, since the comprehensive study on *Disocorea* resources in China has given great contributions to the production of hormone drugs and birth control of the country. *Aloe vera* (aloe) is very popular nowadays in large cities as medicinal and cosmetic material as well as a pollution-resistant indoor plant. *Euphorbia tirucalliget* gets its Chinese name 'bachelor tree', from its bare trunk and leaf-free branch. It is a promising bio-energy plant as its sap contains high levels of hydrocarbon.



Davidia involucrate, the dove tree. A protected plant of first national level in China

The “Searching for Green Treasure in NBG” program achieved great success without doubt. The series of activities aroused visitor’s curiosity and encouraged them to observe and discover the uniqueness, beauty and secret of plants, to cultivate a love and respect for them and to create a sense of biodiversity protection.

The success of the program was also attributed to the media involvement. Besides the special report and

column in the garden’s website, two major local media, Jinling Evening News and the Channel 18 of Nanjing TV Station, reported the program from the beginning to the end with wide coverage. The Channel 18 interviewed specialists of the garden for several times and broadcast the special program during the Golden 7-day National Day Vacation.

About 20% of all higher plants in China are under the threat of extinction. Over 120 botanical gardens in China are working towards plant conservation. Botanic gardens in China receive more than 10,000,000 visitors each year, and with beautiful environment, abundant plant species and professional staff, they can do so much to convey conservation information to the public. We always need to explore more effective ways to fulfil this task.

References

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