

## The Best Botanical Gardens in the World

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**Abstract:** The article reveals the features of botanical gardens and their importance in the modern world. An analysis of such gardens and parks in different countries was carried out. In the article, the examples of botanical gardens and parks with the most interesting architectural and compositional solutions as well as architects and artists are the creators of botanical gardens are given.

**Keywords:** botanical garden, landscape design, art, beauty, spirituality, nature, ecology, fountains, ponds, flowers, trees.

### Introduction

Botanical gardens are more than just beautiful landscapes; they are vital hubs for scientific research, conservation, and education. These gardens showcase a wide variety of plants, from rare and endangered species to ornamental and medicinal plants, fostering a deeper understanding of ecology and the natural world. Around the globe, botanical gardens serve as sanctuaries where both local and international plant species are preserved, studied, and displayed. This article explores the significance of botanical gardens, highlighting some of the most renowned gardens worldwide, and examines how their unique architectural designs and environmental contributions continue to inspire and educate visitors. Through an analysis of notable gardens such as the Royal Botanic Gardens at Kew, the Singapore Botanic Gardens, and the Kyoto Botanical Garden, we see how these spaces blend art, nature, and sustainability in creating living masterpieces.

What can make a garden truly magnificent? Thus, Luis Barragan (1902-1988), one of the most influential Mexican architects of the 20th century, believed that a garden should have poetry and mystery with a sense of serenity and joy. L. Barragan was the second architect to receive the Pritzker Prize (1980). The architect's mansion in Mexico City (1947) is a World Heritage Site. "Architects should design gardens that will be used in the same way as the houses they build; they should develop a sense of beauty and taste, awaken interest in fine art and other spiritual values" (Portal BERLOGOS - international portal about design and architecture). L. Barragan believed that the garden should have many fountains and ponds, large areas of greenery - all this is "emotional architecture", this was the opinion of the master himself. Cool fountains, shaded courtyards and brightly painted walls are the principle of the Mexican architect [5].



### Arch. Luis Barragan. Mansion in Mexico City

Botanical gardens are oases in which botany, research activities and a number of related sciences are the cultural heritage of not only one country, but the entire planet as a whole. Thanks to botanical gardens, not only scientific works are popularized, but people also begin to treat nature responsibly, a person learns to contemplate the world, and not just consume the benefits of civilization. All the large and beautiful botanical gardens of the world have their own unique flavor, have historical value, and different compositions. Spending time on such living monuments of Science and enjoying the true beauty of nature is an obligatory point in the life goals of a passionate traveler.

The beauty of a botanical garden. What should it be? Either it is the beauty of "wild" nature, evoking feelings of the power of Nature, or its extreme vulnerability. Or it is a beauty demonstrating the fellowship of man-the Creator and Nature-the Creator.

A botanical garden is not a "natural" object, since a person actively participates in its creation and development in order to create a garden with a specific purpose: to attract the attention of society and people to it. Any botanical garden is, first of all, a purely natural object that is created with specific purposes, such as collecting plants (medicinal, decorative, fruit, agricultural, rare and endangered, etc.) and also to familiarize the population of the city, country with them, education in the field of ecology in the broadest sense of the word, nursery and selection, creation of model biocenoses, etc. Moreover, in a botanical garden, work is carried out that simply cannot be carried out in any other truly natural objects, such as, for example, the same natural monuments or national parks [7].

The purpose of botanical gardens to demonstrate plant collections is, first of all, to show and acquaint the population with the great diversity of the plant world, its interrelations with other components of the biosphere as a whole, with human society. But not only acquainting, they should educate people to live in partnership with Nature, to understand the fragility of the world around us, to educate them to be able to live in this constantly developing and extremely responsive to the slightest interference world, i.e. we are talking about educating an ecological culture. Which is becoming even more important against the backdrop of the ever-developing global ecological crisis.



### **United Kingdom. Royal Botanic Gardens, Kew**

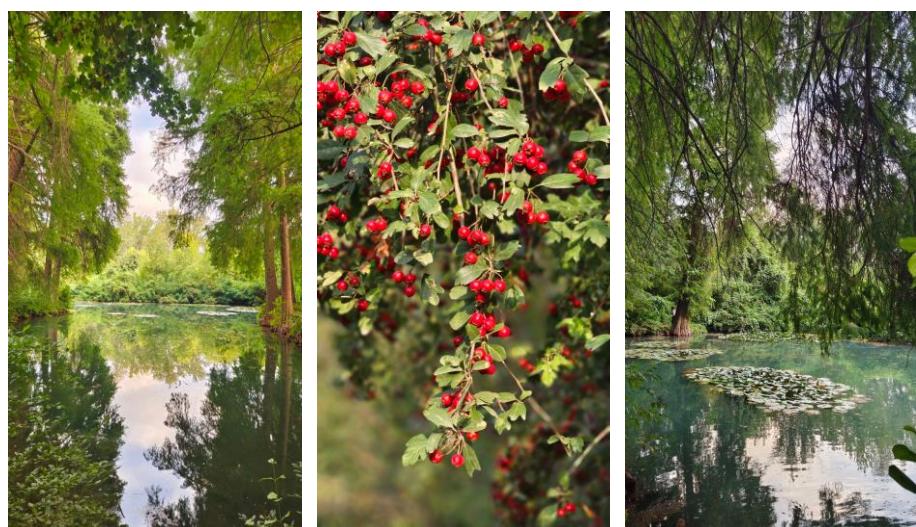
A botanical garden is an area where collections of living plants from different parts of the world and with different climatic zones that do not grow in the country itself are grown, studied and displayed for scientific research, educational and training purposes.



### **Botanical Garden of Curitiba, Brazil**

A modern botanical garden is an urban specially protected natural green area, on the basis of the environment of which the managing organization creates landscape gardens and contains fixed collections of living plants, as well as preserved plant specimens that contain functional units of heredity that are of actual or great value for the purpose of scientific research, education, public demonstrations in order to preserve biodiversity, sustainable development, tourism and recreational activities, production of services and commercial products based on plants to improve human well-being[7].

Botanical gardens have auxiliary departments or institutions - greenhouses, herbariums, libraries of botanical literature, nurseries, excursion and educational departments, zoo-botanical gardens or zoos.



**Tashkent Botanical Garden**

The Tashkent Botanical Garden named after Academician F.N. Rusanov is a structural subdivision of the Institute of Botany of the Academy of Sciences of Uzbekistan. The modern territory of the garden is 65 hectares. According to the general director of the Scientific and Practical Center "Botany" of the Academy of Sciences of Uzbekistan Bobokul Tukhtayev, the Tashkent Botanical Garden is the second largest in the CIS.

The Tashkent Botanical Garden is located in the Yunusabad district, on the border with the Mirzo-Ulugbek district. The territory has an approximately triangular shape and is bordered in the north by Bogishamol Street, in the west - by the territory of the Tashkent Zoo, in the south and southeast the border runs along the bank of the Salar Canal. In the northern part of the garden, near the entrance, the canal (ditch) Akkurgan flows. Due to its favorable location, water flows to the tree plantings by gravity. There are 5 lakes on the territory of the garden.

The only tropical garden to be listed as a UNESCO World Heritage Site, the Singapore Botanic Gardens have been voted Asia's best park attraction, winning several awards. The 160-year-old tropical garden is located in Singapore's Orchard Road shopping district. Considered one of the best botanical gardens in the world, it covers an area of over 100 hectares.

The garden is open daily from 5am to 12pm, making it the only botanical garden to have such entry times. There are over 1,200 species of orchids in bloom, a children's park, an evolution garden, a ginger garden, a tropical forest, and more.



**Singapore Botanic Gardens**

In 2001, the Eden Botanical Garden was created in the UK on the territory of a former clay quarry (Architect N. Grishow) [8]. The architect was inspired by soap bubbles, the shape of which he used to create domes, under one of which there is a huge tropical garden with unique plants. Nicholas Grimshaw's Botanical Garden is an example of how a person is deeply connected with the plant world. Not only unique forms were used here, but also materials. The domes themselves consist of steel frames, and a special fluoropolymer material is stretched over them, which was much lighter than glass and transparent, letting in sunlight well, which was important for the plants of the botanical garden. This design of the Eden Garden is considered the lightest in the world from other similar materials. [5].



**Arch. N.Grimshaw. Great Britain. The Garden of Eden.**

Gardens in Japan were created a long time ago and have a rich and long history, they are real works of art, harmony and are very beautiful.



### **Kyoto Botanical Garden**

In 1924, a garden was created in Japan, quite young by Japanese standards, in which about 12,000 species of plants grow. In the Kyoto Botanical Garden, not only traditional oriental flowers and plants such as irises, peonies, bamboos and lotuses grow, but also European-style flowers [2].

Unusual botanical gardens are located in the Netherlands (Holland). One of these gardens, Keukenhof, is unique in that it is open to visitors only in the spring, when bulbous plants and flowers bloom. In the botanical garden, you can see many varieties of tulips, daffodils, crocuses, hyacinths, for which thousands of tourists come here every year. The garden was founded in 1857. In Holland, a flower parade is held annually, shows with dances and music are arranged here, which are attended by tourists from all over the world [4,5].



### **Keukenhof Botanical Garden**

In Singapore, in the very center of the metropolis, there is a futuristic botanical garden - a paradise that looks more like a fantasy park. In this garden you can see not only unusual trees and plants of unusual shapes, there are many bridges, elaborate structures and supertrees. To create such beauty, a frame was prepared in which ferns and tropical flowers were planted. The Singapore Botanical Garden is the only tropical garden in the world recognized by UNESCO as a World Heritage Site in 2015.

The garden with a century and a half of history was created back in 1822 by the founder of modern Singapore and naturalist Stamford Raffles to conduct experimental agronomic work. In 1859, a botanical garden was laid out here. And already in 2012, the original colonial tropical botanical garden was transformed into a first-class modern futuristic botanical garden. And now in this botanical garden with several greenhouses, you can get acquainted with the most diverse representatives of flora in the world. Now the botanical garden, occupying 74 hectares of area, is one of the main tourist attractions of Singapore [5].



**Futuristic Gardens of Singapore**



**Gardens of Singapore**

The history of botanical gardens dates back to ancient times. The park landscape of a botanical garden is formed in accordance with the laws of landscape architecture, natural conditions and biological properties of plants. Dendrological parks and botanical gardens are specially protected natural areas that are created to form special collections of plants in order to preserve the flora and its diversity. Currently, there are more than 2,200 botanical gardens in 153 countries around the world, the number of collections in which varies from hundreds to tens of thousands of taxa (a group of organisms). Today, many landscape architects, scientists and other scientists recognize that in modern conditions, ecology is not just a science, but a vital issue of human security. [3]. The Botanical Garden is an interconnected concept: “beauty”, “goodness”, “culture.

### **Methodology**

This study employs a qualitative approach to explore the significance of botanical gardens worldwide. It involves a comprehensive analysis of selected botanical gardens, focusing on their architectural design, plant collections, ecological contributions, and educational roles. The research is based on both primary and secondary data, including site visits, interviews with landscape architects and botanists, and a review of scholarly literature on landscape architecture and environmental conservation. Additionally, comparative analysis is used to examine the unique features and innovations of botanical gardens across different regions and cultures. The methodology aims to understand how these gardens integrate scientific research with public engagement and sustainability, contributing to global biodiversity preservation and environmental awareness.

### **Results and Discussion**

The analysis reveals that botanical gardens globally serve not only as places of beauty but also as critical centers for scientific research and conservation. Gardens such as the Royal Botanic Gardens at Kew and the Singapore Botanic Gardens demonstrate the integration of cutting-edge architecture with sustainable practices, showcasing diverse plant species and fostering public education on ecological issues. The Kyoto Botanical Garden and Keukenhof in the Netherlands highlight the importance of cultural heritage and seasonal beauty, attracting millions of visitors each year.

These gardens not only contribute to the preservation of plant diversity but also play a vital role in environmental education, raising awareness about the fragility of ecosystems. Moreover, the innovative designs of gardens like the Eden Project and futuristic gardens in Singapore demonstrate how architecture can enhance the experience of nature, blending human creativity with natural beauty.

In conclusion, botanical gardens are invaluable assets in promoting environmental stewardship and ecological literacy, providing a platform for scientific research while offering serene spaces for public reflection and enjoyment.

## Conclusion

Botanical gardens are essential spaces that combine scientific research, environmental education, and cultural heritage. Through their diverse plant collections and innovative designs, these gardens not only preserve biodiversity but also inspire a deeper connection between humans and nature. As global ecological challenges grow, botanical gardens play a crucial role in fostering ecological awareness and sustainability, making them invaluable assets for both scientific progress and public engagement.

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