



Taxonomic Resources Part 1 (Botanical Gardens)

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Introduction

- Taxonomy term was coined by A.P.de Candolle (1813)
- Taxonomic resources are authoritative taxonomic information on plants, animals and microorganisms that would be beneficial in identification, nomenclature and classification of organism.

Botanical Gardens

- A botanical garden is a repository of living plants, arranged and maintained on scientific basis and where collections are usually labelled or marked for identification.
- It has plants including ornamentals, cultivated, wild, medicinal, economically important or plants of special interest for a particular geographical region.
- Arboretum: A display garden that concentrates on woody plants (shrubs and trees).

History of Botanical Garden

- Originated in China and countries bordering Mediterranean.
- **Luca Ghini** established a botanic garden at Pisa, Italy in 1543.
- At first such Gardens were associated with the medical schools.
- Professors of medicine were mainly the botanists of the time.
- Gardens were meant for training of students as well as for growing plants to make medicines.

Role of Botanical Gardens

- **They are living repository of plants of the country and also of selected exotic flora.**
- **They are centres of conservation of plant resources.**
- **They are homes for rare and endemic species.**
- **They house germplasm collections of selected economic and medicinal plants and their wild progenitors.**
- **They are places for propagation of rare and threatened plants.**
- **They help in introduction of economic and commercially important plants.**
- **They generate awareness about the value of plants and educate the general public about the importance of plants.**
- **They provide aesthetically pleasing environment and thus play a major role in providing sound mental health.**
- **The botanical gardens with their living collections, seed banks, trained specialist and scientists are like an insurance policy which provides guarantee against the loss of species.**

Lloyd Botanical Garden, Darjeeling

- It was started as a branch of the Royal botanic garden, Kolkata on a 40 acre land donated by William Lloyd in 1878.
- A.G. Jeffrey was the first curator of the garden.
- Since 1910 Garden has become a major Institution of the distribution of seeds, bulbs and plants of temperate Himalayas to different parts of the world.
- The beautiful Alpine plants geranium (*Pelargonium*), composites, Rhododendrons, conifers as well as Rock Gardens, the conservatories, the herbaceous borders and the annual beds of flowering plants are some of the colourful features of the garden.
- The orchidarium contains over 12000 species of beautiful orchids.
- The coniferous section is rich with more than 45 species including Australian *Callitris*, deodars, silver fir (*Abies alba*), hemlock (*Tsuga*), Cycads, maiden hair tree (*Ginkgo biloba*).
- Herbarium has 30,000 common species of Eastern Himalayas and Rosary are its major attractions.

Botanical garden of F.R.I.,Dehradun

- Established in 1934.
- Has done a good job of introduction of large number of plants for developing forest wealth in India.
- Located in the foothills of Shivalik ranges and encompasses the scenic beauty and the natural charm of the Doon valley.
- The garden covers an area of 50 hectares of which 40 hectares has arboretum.
- Garden has richest collection of woody plants (2000 trees representing 1000 species) in Asia.
- There is also good collection of indoor plants in green houses, glass houses and conservatory.
- There is also especially rich collection of bamboos and gymnosperms.

Indian Botanical Garden, Kolkata

- It was earlier known as Royal botany Garden now called Acharya Jagdish Chandra Bose Indian botany garden.
- It is famous for its enormous collection of orchids, bamboos, palms and plants of the screwing pine genus (*Pandanus*).
- It is one of the greatest botanical gardens of the world and one of the first to be established in the tropics.
- The garden covers 273 acres of land on which about 1700 plant species are cultivated.
- It was founded in 1787 by East India Company.
- Lieutenant colonel Robert Kyd (1787-1793) was the first director.
- A major change in policy however was introduced by the botanist William Roxburgh after he became superintendent of the garden in 1793.
- The best known Landmark of Garden is its enormous Banyan Tree (*Ficus benghalensis*) that is more than 300m in circumference and thought to be more than 300 years old.
- The palm houses nursery, various interesting shrubs and trees, the Amazon Lilly (*Victoria amazonica*) add to beauty of garden.
- Important publications of the garden include the Annals of the royal botanical gardens Kolkata published since 1887.

National Botanical Garden, Lucknow

- **It is presently known as National Botanical Research Institute (NBRI) and is popularly known as Sikandar Bagh.**
- **This botanical garden was developed in its current form by Professor K.N. Kaul, its first director in 1946.**
- **The present Garden is spread over 75 acres of land on the south bank of river Gomti.**
- **The garden has Palms, Orchids and cactus houses.**
- **There is a hydroponicum where several varieties of vegetables, fruits and flowering plants are grown in water and gravel cultures.**
- **Beside this, Moss house, fernarium etc. add beauty to this botanical garden.**
- **It is very interesting place for researchers, scientists in plant taxonomy, scholars and students.**

Kew Garden, Kew, (UK)

- **It was earlier known as Royal botanic garden.**
- **It is located at Kew, site of a former Royal estate in southwest London.**
- **It started as the private Garden by Sir Henry Capel.**
- **The garden became famous under the management of Sir Joseph Banks (1772 -1819).**
- **Under the direction of Sir William Jackson Hooker (1841- 65) and his son J.D.Hooker became a Centre for scientific research and international exchange of plant specimens.**
- **Kew developed the plantation industry of rubber and still plays an important role in plant introduction and as a quarantine station.**
- **New green houses including a large Palm house and temperate house and economic Museum were setup.**
- **Kew is famous for spreading plants such as the rubber tree, pineapple, banana, tea, coffee, cacao and other plants to several parts of the world.**
- **Kew Garden contains some 33,400 taxa of living plants and herbarium of approximately 7 million dry specimens representing 98% of the world's plant genera and Library of some 130000 volumes in addition to archived materials, periodicals, prints and drawings.**
- **It has alpine house, palm house and tree top walk.**
- **J.D.Hooker in association with George Bentham, published the world famous Genera Plantarum (1862-1883) in 3 volumes which is still considered as the finest account of the families and genera of seed bearing plants.**

References:

- B.Sc. Semester III Botany by Singh, Pande and Jain
- B.Sc. Semester III Botany by B.P.Pande
- B.Sc. Semester III Botany - Krishna Publication