

Lisbon Botanic Garden

U LISBOA | UNIVERSIDADE DE LISBOA | MUSEU NACIONAL DE HISTÓRIA NATURAL E DA CIÊNCIA

OPENING HOURS

- Every day except Christmas and January 1st holidays
- October to March - 10am to 5pm
- April to September - 9am to 8pm
- Last admission: half an hour before the Garden closing

MUSEUM BOTANIC GARDEN TICKET

More information at:
www.museus.ulisboa.pt

CONTACTS

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www.museus.ulisboa.pt

geral@museus.ulisboa.pt

Coordenadas: 38.717755° N, -9.149855° W

GETTING HERE

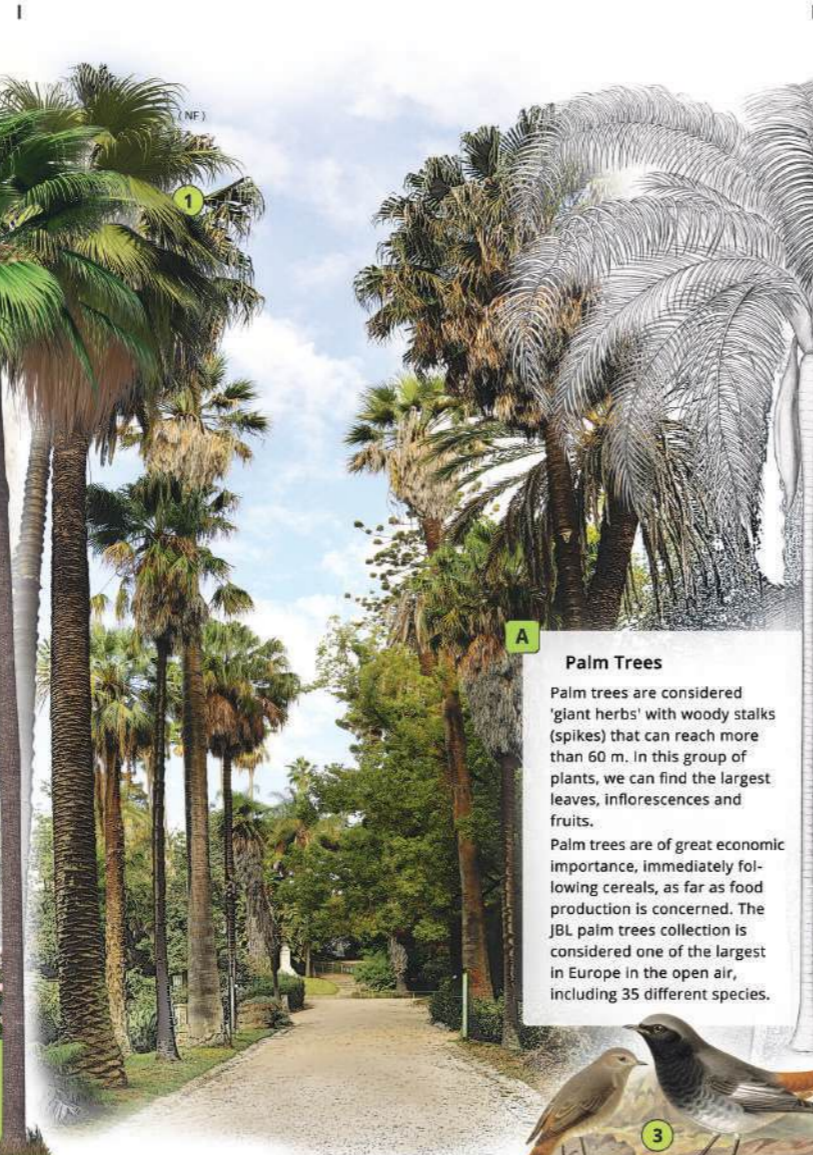
Subway: Yellow Line – Rato station

Bus: **758 e 773** (stop at: Rua da Escola Politécnica)
706, 709, 713, 774, 720, 727 e 738 (stop at: Largo do Rato)

Tram: 24E



- In this space of science and history, we appreciate that visitors:
- do not enter the flower beds and do not harvest plants or its parts;
 - do not climb trees or throw balls;
 - do not damage equipments or disturb the Garden's activities and visits.



A Palm Trees

Palm trees are considered 'giant herbs' with woody stalks (spikes) that can reach more than 60 m. In this group of plants, we can find the largest leaves, inflorescences and fruits. Palm trees are of great economic importance, immediately following cereals, as far as food production is concerned. The JBL palm trees collection is considered one of the largest in Europe in the open air, including 35 different species.

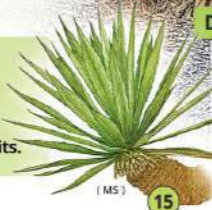
Dragon tree, drago (*Dracaena draco*)

Endemic plant in the Macaronesian region - archipelagos of the Azores, Madeira, Canary Islands and Cape Verde. Dichotomous branching occurs after each flowering and it has thick spear-shaped leaves which clusters at the end of the branches. Very slow growing, it can reach hundreds of years. The reddish-colored resin, known as "dragon's-blood", has been used for centuries in the dyeing and varnishing of wood. Species listed as "Vulnerable" on the IUCN red list (International Union for Conservation of Nature).



D Xerophytes

Plants that developed adaptive characteristics to prevent water loss, surviving dryness through different structural adaptations: presence of succulent stems and leaves with water storage capacity; leaves that may have thorns or thorny leaves to reduce water loss through perspiration; woody stems and hard leaves coated with wax or hair that facilitate the reflection of solar radiation, avoiding water loss; long roots that allow deep water uptake (woody plants and trees).



- 1 — Mexican fan palm (*Washingtonia robusta*)
- 2 — Queen palm (*Syagrus romanzoffiana*)
- 3 — Black redstart (*Phoenicurus ochruros*)
- 4 — Deodar cedar (*Cedrus deodara*)
- 5 — Rose-ringed parakeet (*Psittacula krameri*)
- 6 — Great tit (*Parus major*)
- 7 — European robin (*Erithacus rubecula*)
- 8 — Blackbird (*Turdus merula*)
- 9 — Jay (*Garrulus glandarius*)
- 10 — House sparrow (*Passer domesticus*)
- 11 — Mallard (*Anas platyrhynchos*)
- 12 — Dragon tree or drago (*Dracaena draco*)
- 13 — Royal tree (*Chrysophyllum imperiale*)
- 14 — Swiss cheese plant (*Monstera deliciosa*)
- 15 — Caribbean agave (*Agave angustifolia*)
- 16 — Indian fig opuntia (*Opuntia ficus-indica*)
- 17 — Peruvian apple cactus (*Cereus repandus*)



B Amphitheatre

The Arboretum's Amphitheatre was inaugurated in 2018. It provides visitors a space for contemplation and quietness in the heart of the Garden. It is also used for scientific, artistic and cultural activities, particularly in summer.



Birds in the Lisbon Botanic Garden

Countless native and introduced birds look for shelter and food in the Lisbon Botanic Garden. Among the most frequent resident or visiting species are: the Blackbird (*Turdus merula*), the Black redstart (*Phoenicurus ochruros*), the House sparrow (*Passer domesticus*), the Jay (*Garrulus glandarius*), the Great tit (*Parus major*), the Robin (*Erithacus rubecula*), the Nuthatch (*Sitta europaea*), the Mallard (*Anas platyrhynchos*), the Yellow-legged gull (*Larus michahellis*), the Rose-ringed parakeet (*Psittacula krameri*) and the Blue-crowned parakeet (*Aratinga acuticaudata*), among others depending on the season.



C Astronomical Observatory

The Astronomical Observatory was concluded in 1875 to support teaching at the Lisbon Polytechnic School. Reconstructed in 1898, it comprises three buildings: the main building (recently restored), with the 'meridian room', three domes and a classroom; a smaller wooden structure used to calibrate instruments; and a third building in the past used for teaching. The Observatory has a collection of c. 100 historical scientific instruments.



Royal tree (*Chrysophyllum imperiale*)

Native to the Atlantic forest ecoregion of south America, the Royal tree is threatened with extinction due to the destruction of its habitat, with some specimens preserved in botanical gardens. It can reach 20 m in height, the leaves are large, thick and bright, the flowers small and yellowish and the fruits very tasty. The wood is very hard and was used in naval construction. As it is known, the plant of this Garden was offered by D. Pedro II of Brazil to the Count of Ficalho (1st Director of the Botanic Garden) and only fruited once, giving rise to a single fruit with fertile seeds.

CREDITS

Texts — Raquel Barata / MUHNAC
Illustration — Archibald Thorburn (AT); Carl Marius et al. (CM); Gabriela Xavier (GX); John Keulemans (JK); Maria Santos (MS); Nuno Farinha (NF); Rita Cortês de Matos (RM)
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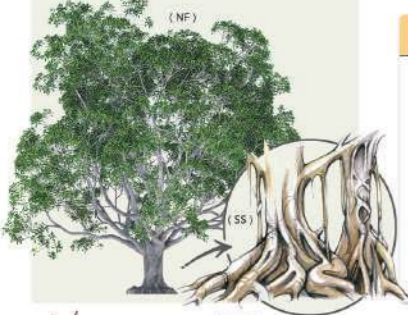
E Lower Pond

The lower pond dates back to the origins of the Botanic Garden, although it has been requilified several times. The last restoration happened recently, and the pond was re-inaugurated in 2018.



Moreton Bay fig
(Ficus macrophylla)

Native from Australia, this fig tree can germinate on host trees, strangling them as their aerial roots grow and settle on the ground, forming secondary trunks that surround the thick, compact trunk. The tree is very water demanding, has a high growth rate and can reach over 60 m in height. The leaves are large, thick, bright dark green. Like any fig tree, it establishes obligatory mutualism with a species of wasp that ensures pollination, and there is no production of fertile figs in its absence.

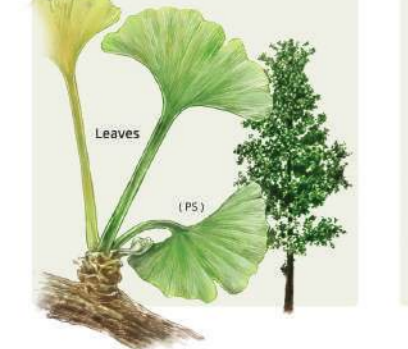


Southern magnolia
(Magnolia grandiflora)

The southern magnolia is a species with evergreen leaves, native from southeastern United States, widely cultivated in gardens and parks. Large tree with dense crown and bright and thick leaves, it produces large, very aromatic white flowers, about 25 cm in diameter. The fruits are arranged in a pine cone-like structure, and the seeds, red in color, hang by thin strands when ripe and are dispersed by birds and mammals. Some of the oldest fossils have flowers similar to those of the southern magnolia.

Ginkgo, Maidenhair tree
(Ginkgo biloba)

Ginkgo is considered a very resistant species, a living fossil (270 Ma), the sole representative of its order. The natural distribution is restricted to south-eastern China, being cultivated as ornamental and used medicinally due to vasodilator properties. Deciduous tree, with fan-shaped leaves with two lobes and dichotomous veins, known by their golden tone in the autumn. It is a dioecious species (male and female separated into different individuals) and females produce yellowish and globose seeds with intense scent of rancid butter to attract small mammalian dispersers.



Deodar cedar, Himalayan cedar
(Cedrus deodara)

Deodar cedar belongs to the cypress group and is native to the western Himalayan region. The trunk is straight, can reach up to 3 m in diameter and the branches are open, almost horizontal. Needle-shaped leaves are usually grouped into short lateral branches. The male and female cones are on the same individual. Currently grown as ornamental in gardens and parks, it is also a source of medicinal products and has been used as an anti-inflammatory and analgesic. The oil has insecticidal properties.



Cycadophytes and Encephalartos sp.

Encephalartos is an African genus belonging to the group of Cycadophytes, a group of living fossils (290 Ma) including species vulnerable or endangered, with distribution confined to some restricted areas of tropical and subtropical regions. They are dioecious plants (male and female separated into different individuals) and the reproductive structures are similar to cones or pine cones. Most species of this group are extinct and some species only exist in botanical gardens. JBL has an important and diverse collection of Cycadophytes.

ILLUSTRATIONS ARE NOT ALL AT THE SAME SCALE

Former Riding Hall

The former Riding Hall was built to support teaching of fencing and horse riding in the Royal College of the Nobles (1759-1837). It is the only 18th century building in the Museum campus. Construction was initiated in 1763 and its magnificent wooden ceiling is listed as a public interest building since 1978. The building had multiple uses through time and is presently used for exhibitions, concerts and other cultural initiatives.

Museum Main Building

The Lisbon Botanic Garden (JBL) was projected in the mid-19th century to support botany teaching and research at the Lisbon Polytechnic School (1837-1911). However, plant cultivation in this location for study and useful purposes dates at least to the Jesuit college of Cotovia (1609-1759) and the Royal College of the Nobles (1761-1837). Today, the Garden is part of the National Museum of Natural History and Science of the University of Lisbon.



Notable Species

- 1 — Moreton Bay fig (*Ficus macrophylla*)
- 2 — Southern magnolia (*Magnolia grandiflora*)
- 3 — Photinia (*Photinia nussia*)
- 4 — Forest gardenia (*Gardenia thunbergia*)
- 5 — Osage orange (*Maclura pomifera*)
- 6 — Chinese rice-paper plant (*Tetrapanax papyrifer*)
- 7 — Ginkgo (*Ginkgo biloba*)
- 8 — Deodar cedar (*Cedrus deodara*)
- 9 — Giant white bird of paradise (*Strelitzia nicotia*)
- 10 — Tipu, Yellow jacaranda (*Tipuana tipu*)
- 11 — Kapok tree (*Ceiba crispiflora*)
- 12 — Bald cypress (*Taxodium distichum*)
- 13 — Bunya pine (*Araucaria bidwillii*)
- 14 — São-Tomé pine (*Afroparpus manii*)
- 15 — European fan palm (*Chamaerops humilis*)
- 16 — Wild plum (*Harpephyllum caffrum*)
- 17 — Dombeya (*Dombeya x cayeuxii*)
- 18 — Persian ironwood (*Parrotia persica*)
- 19 — Royal tree (*Cryosophyllum imperiale*)
- 20 — Yew (*Taxus baccata*)
- 21 — Coral reef araucaria (*Araucaria columnaris*)
- 22 — Montezuma bald cypress (*Taxodium mucronatum*)
- 23 — Coast coral tree (*Erythrina lysistemon*)
- 24 — Coast redwood (*Sequoia sempervirens*)
- 25 — Swiss cheese plant (*Monstera deliciosa*)
- 26 — Camphor tree (*Cinnamomum camphora*)
- 27 — Dragon tree (*Dracaena draco*)

Arboretum

The arboretum of a botanic garden comprises trees and bushes. This Arboretum was designed by Jules Daveau in 1876. Its large trees from several regions across the globe result in a tropical and sub-tropical landscape. In 1892, Henri Cayeux introduced ornamental plants. Among the highlights are the gymnosperms collections, particularly cycadophytes, and the tropical palms and fig trees collections. The middle and lower ponds and the alley of palm trees providing access to the Rua da Alegria gate are important features of the Arboretum.

CREDITS
Texts — MJHNAC
Illustration — Ana Dias (AD); Carolina Correia (CC); Carolina Silva (CS); F. Antoine (FA); Luísa Cristóvão (LC); Marisa Santos (MS); Nuno Farinha (NF); Pedro Salgado (PS); Rita Cortês de Matos (RM); Simone Strieker (SS); Tetyana Chiyana (TC)
Map — Nuno Farinha
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Classe

Two professors of the Lisbon Polytechnic School, Count of Ficalho and Andrade Corvo, promoted the planting of the Garden in 1873. The upper section is called the Classe (Class, in English). In the 19th century, under the supervision of chief-gardener Edmund Goeze, plants were organized systematically. In the 1940s, after the construction of the Herbarium building (project by architect Adelino Nunes), plants were re-organized ecologically, around a central pond, the upper lake.

Meteorological Station

The meteorological station was created in 1853. It provides the longest continuous meteorological data series of Portugal. The station is part of the D. Luiz Institute, Faculty of Sciences, University of Lisbon and it integrates the national network of meteorological stations, managed by IPMA – Instituto Português do Mar e da Atmosfera.

Statues

The busts of Bernardino António Gomes, father and son with a shared name, are respectively on the monumental stairs, made with traditional Portuguese-style calçada, and in the Classe. The former studied the quinine, a South American plant, and played a role in the identification and isolation of the active ingredient against malaria.

Collections and Garden Sites

- A — Fig trees collection
- B — Training room; C — Botany building
- D — Upper Lake; Aquatic Collection
- E — Astronomical Observatory
- F — Weather Station (IDL)
- G — Education Gallery 'Palmário'; H — Middle Lake
- I — Bryophytes and Lichens; J — Amphitheatre
- L — Araucaria Collection; M — Lower Lake
- N — Birds; O — Palm trees Collection
- P — Cycads Collection; Q — Monocotyledons Collection
- R — Xerophytes Collection; S — Sensory Garden
- T — Insect House

Coral reef araucaria, Cook pine
(Araucaria columnaris)

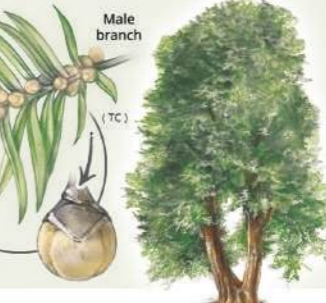
An endemic araucaria of New Caledonia, was described by the botanists who accompanied Captain James Cook on his second voyage. Very cultivated as ornamental, it has a columnar habit due to the numerous short branches surrounded by twigs that resemble cords, covered by overlapping scaly leaves. Male and female cones on the same tree, the male cones cylindrical (5 cm), at the tips of the branches, the female cones most globular, up to 15 cm in diameter. JBL has a collection of araucaria, considered primitive plants, including several species.



Habit Female cone

Yew, English yew
(Taxus baccata)

Native to almost all of Europe, America, North Africa, Asia and Australia, the yew occurs in the northern mountains of Portugal, but with protected status due to habitat destruction. A shrub or tree, it can reach 15 m in height. With dark green foliage, it is dioecious (sexes separated into different individuals) and the seed is surrounded by a fleshy red structure (aril), the only edible portion since the plant is extremely toxic. Taxol is extracted from yew, a drug used in the fight against cancer, chemically synthesized today. The wood is of high quality, very flexible.



Persian ironwood
(Parrotia persica)

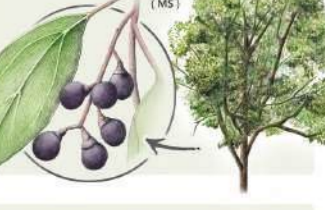
The Persian ironwood is a deciduous tree, native to forests in the South of the Caspian Sea, Iran and Azerbaijan. An ornamental species, its trunk is covered by a smooth, pink-brown bark. The leaves, with wavy edges, are green, bright and turn red in the autumn, giving it a unique beauty. The flowers are small and red, without petals. The wood is very hard to work. It was discovered by a German naturalist, F.W. Parrot, on Mount Ararat, while searching for traces of Noah's Ark.



Flowers without petals

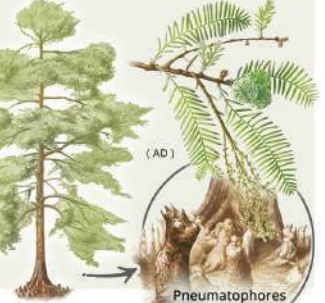
Camphor tree, Camphorwood
(Cinnamomum camphora)

The Camphor tree belongs to the laurel family, rich in essential oils. Native to China, Taiwan, southern Japan, Korea and Vietnam but grown in many tropical regions for camphor and wood production. Camphor is obtained from steam distillation of the chipped wood and is used medicinally, as a component of incense, as a spice and as an insect repellent. The remains of dried and crushed leaves and branches attest to the smell of camphor.



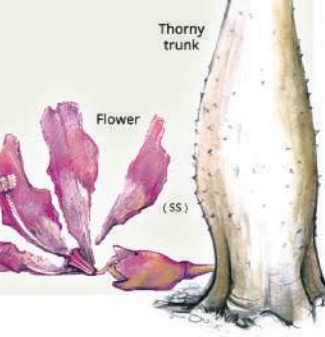
Bald cypress
(Taxodium distichum)

Bald cypress is a deciduous tree, native to the warm temperate marshlands in southeastern North America. It can reach 40 m in height and the trunk 2 m in diameter. Male and female cones grow in the same individual. The main trunk is surrounded by cypress knees (pneumatophores), roots that emerge from others in the ground to easily access oxygen, which is lacking in the flooded soils. The wood is of high quality however the tree is mostly used as ornamental.



Kapok tree
(Ceiba crispiflora)

Deciduous species that can exceed 20 m in height, native to Central and South America. The common name is derived from the presence of 'paina' or kapok (silky strands that surround the seeds), used to fill cushions. The shape of the trunk is enlarged in the lower part, where water is stored to tolerate periods of drought. Conical spines cover the trunk as a strategy to prevent animals from accessing the canopy. Pink flowers appear in the fall before the leaves. It is a species very cultivated in parks and gardens.



Thorny trunk Flower