

Plants with primitive flowers

On this walk we will discover various plant species known as gymnosperms, the seeds of which are not enclosed by a ripened fruit, as is the case with the angiosperms. The flowers of the gymnosperms are considered primitive, and usually go unnoticed as they tend to be small and not particularly attractive to the eye.

1 We start our walk in the part of the garden that stands between the streets of Aribau and Diputació. Here we find a magnificent example of a maidenhair tree (*Ginkgo biloba*). The tree is over a hundred years old and has been declared of local interest by Barcelona City Hall.

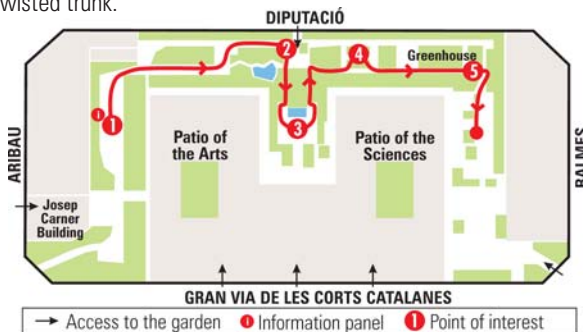
2 If we follow the garden path as it runs parallel now with Diputació street, and just before we reach the pond, we come to an Arizona cypress tree (*Cupressus arizonica*). Native to the United States, this cypress can be identified by its blue-green pine cones and reddish bark. Beyond the pond, stand a Japanese cedar (*Cryptomeria japonica*), and a fine, hundred-year-old, example of a yew tree (*Taxus baccata*), which has also been declared of local interest. In the ancient world, the yew was considered a sacred, magical tree, and is one of the oldest living trees in the world.

3 Turn now and head towards the University and we find an enormous deodar cedar native to the Himalayas (*Cedrus deodara*). This species has a pyramid structure and can reach a height of more than 50 m. Its branches grow out horizontally, their tips drooping and trailing somewhat, giving it its name of the weeping cedar. Opposite the cedar stands a large cypress (*Cupressus sempervirens*), typical Mediterranean tree used in graveyards as a funerary symbol in the belief that it helps human souls find their way to heaven.

4 From the same vantage point we can also see two fine examples of the stone pine (*Pinus pinea*), which cover the ground with their pine nuts. These trees can be identified by their dense, broad, flat branches which give them their characteristic umbrella-like shape. The patio also houses a number of examples of the weeping cypress (*Cupressus funebris*). This species, native to China, has earned its name thanks to its slender, pendulous branches.

5 Before reaching the greenhouse we should spot the towering branches overhead of the Norfolk Island Pine (*Araucaria heterophylla*), a species endemic to Australia. This slow-growing conifer is characterised by its widely spaced branches that seem to occupy different floors as we look up to the top of the tree. The tall trees beside the greenhouse include two more examples of weeping cypress and a Monterey cypress (*Cupressus macrocarpa*). The latter is native to California and has a dense, bright green foliage which, when rubbed, releases a strong lemon scent.

To finish our walk, head towards the library annex, where we find one Aleppo pine (*Pinus halepensis*), with its irregular branches, sparse, light green foliage and twisted trunk.



The attractions of the garden:

- Bringing together plant species from around the world.
- Helping to alleviate the environmental excesses of the city centre.
- Supplying fresh air, thanks to the absorption of CO₂ by the garden's plants.
- Providing an oasis of calm in the middle of the bustling city.
- Granting an opportunity to get closer to nature and to understand it better.

Visitors please note

- Use all the garden installations as intended.
- Enjoy the garden without damaging its flora and fauna.



Garden Nature Walks

The Ferran Soldevila Garden

Historic Building

University of Barcelona



Find out more about the garden on our webpage where you can also download the routes of our four walks and other activities:
www.ub.edu/ossma/mediambient/jardi/home_jardi.htm

Mediterranean trees

The trees and shrubs on this walk have had to adapt to the harsh conditions of drought and water restrictions that are typical of the Mediterranean climate, characterised by clearly-defined seasons, with hot dry summers and moderate winters.

1 In the part of the garden next to Gran Via we find two species of tree that have been used since ancient times for their fruit: they are the carob tree (*Ceratonía siliqua*), and the olive tree (*Olea europaea*). Both have typical Mediterranean leaves: small, leathery and coated with wax, which helps to minimise water loss during the hottest times of year.

2 Further on, we find a Balearic box tree (*Buxus balearica*), a shrub endemic to the western Mediterranean, which although currently in recession, is found in abundance in the Balearic islands. Its oval-shaped leaves are shiny and at times yellowish in colour, and appear to have a small bite at their tip.

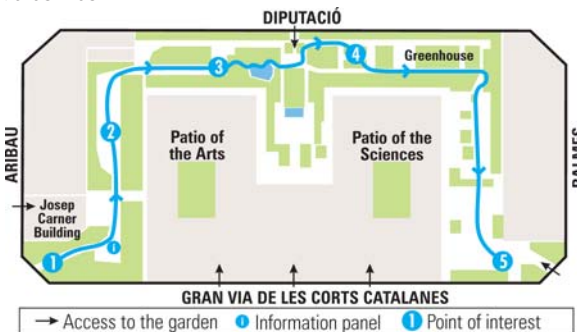
3 As we venture further into the garden, we find ourselves on the path that runs parallel to Diputació street. In the middle of this path, there is an area of many palm trees. Among them we find a fan palm (*Chamaerops humilis*), the only European autochthonous palm tree native to the Mediterranean. Several stems rise from its single base, and its palm leaves have numerous yellowish spines emanating from the stalk.

4 Near the greenhouse we find some of the best known Mediterranean species. On the path to the left stands a cork oak (*Quercus suber*), a species with a thick rugged bark from which the cork can be harvested, and with which the tree defends itself from sudden temperature changes and fire. Further along we find a Holm oak (*Quercus ilex*), a tree with a finely-fissured bark which, in its natural state, makes up the typical woods of the Mediterranean, the holm-oak woods. However, its intense exploitation over the centuries has seen its numbers dwindle in favour of the pine forests.

5 By the steps that lead to the car park, we find three oleander trees (*Nerium oleander*), an evergreen shrub that is often found in Mediterranean streams. The flowers grow in clusters at the end of each branch throughout the summer and can be white, yellow, pink or red in colour.

Our walk finishes in the car park. In the upper section there are two species of pine: the stone pine (*Pinus pinea*) and the Aleppo pine (*Pinus halepensis*). Both have needle-shaped leaves growing in bundles of two, which remain on the tree for two or three years, and seeds enclosed in pine cones.

Beside the car park exit, we find two examples of laurustinus (*Viburnum tinus*), a species native to the Iberian Peninsula, and a shrub that constitutes one of the most typical Mediterranean plant communities - the Holm oak with laurustinus.



City trees

Often we seem not to have time to stop and look around us and so we miss the chance of discovering the trees and shrubs that grow in the streets and squares of our towns and cities. Together they provide us with a spattering of the nature that we seem set on destroying and make our urban landscapes a little bit nicer and more pleasant to look at.

1 Looking out towards the main University square, we can see various examples of cherry plum (*Prunus cerasifera* var. *pissardii*). The bright red colour of their foliage makes it a popular tree in our city streets. We can also see two magnificent examples of the ombú (*Phytolacca dioica*), a fast-growing species of exotic beauty.

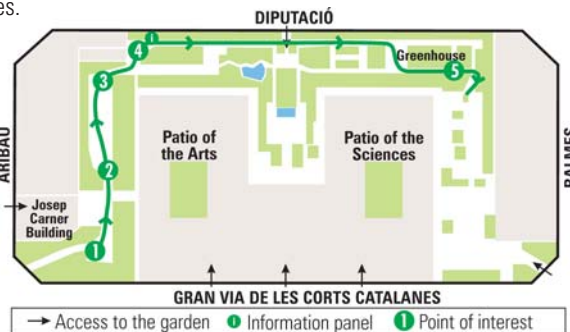
2 Beside the entrance to the University's Patio of the Arts we see the luxuriant foliage of the Peruvian pepper (*Schinus molle*), a highly rustic and resistant tree, used for fixing shifting dunes and hill slopes. The fruit of this tree has been used as a substitute for pepper.

Behind the pittosporum shrubs, there is a fine example of a European nettle tree (*Celtis australis*), an urban tree *par excellence*. It grows vigorously even in the poorest conditions, which explains why it is replacing the Oriental plane tree (*Platanus orientalis* var. *acerifolia*), currently predominant in the streets of Barcelona. A little further on, in the middle of the path, the garden boasts a beautiful Japanese pagoda (*Sophora japonica*), a tree that despite its name does not originate from Japan but rather from China. At this point in the gardens there is an abundance of yuccas (*Yucca elephantipes*), and this particular species owes its name to the fact that the base of its trunk resembles the foot of an elephant.

3 Before turning right we come across a small group of rosewoods (*Tipuana tipu* var. *speciosa*). Often found in our avenues and squares, their yellow flowers carpet the ground. To the left of these, there is a small example of a China tree (*Koeleruteria paniculata*); its fruit contains saponin, a substance that dissolves fat, and so it has been much used for washing clothes.

4 Right outside the Department of Mathematics, we find one of the most unusual trees in the city, the bottle tree (*Brachychiton populneum*), which owes its name to the shape of its trunk, which is also bottle green in colour. To its right, stand two trees of heaven (*Ailanthus altissima*), this invasive species is rapid growing and colonises easily. Today it has naturalised across much of the country, since it is drought-hardy and tolerates soils of any type.

5 If we walk further into the garden and past the greenhouse, we find another typical city tree: the southern magnolia (*Magnolia grandiflora*). Native to North America, it was introduced and has been cultivated for the ornamental value of its foliage and flowers. Worth looking out for is a jacaranda (*Jacaranda mimosifolia*), with its violet coloured flowers, and various examples of the honey locust (*Gleditsia triacanthos*), with their sharp spines growing out of the branches.



Plants with a specific use

As well as those plants that have an ornamental value, on this walk we will discover the trees and shrubs in the garden that are, or have been, put to a good use for one reason or another: plants with medicinal or culinary uses, species used in the making of furniture and tools, and even those with symbolic or cultural values.

1 At the junction between the University square and Aribau street we can see the branches of various carob trees (*Ceratonía siliqua*). Their edible fruit, of the same name, has been used to feed livestock, and has even formed part of our diet in times of hunger. Thanks to its sweet taste, the fruit has also been used in making cakes and pastries.

2 To the right of the carob trees, we find an olive tree (*Olea europaea*), cultivated throughout all the regions of the Mediterranean. The tree is a symbol of peace and life, and from its olive fruit a highly nutritious oil is extracted. Up against the walls of the Josep Carner building are various examples of pomegranate (*Punica granatum*), a shrub cultivated mainly for its pomegranate fruit, but which is also known to have medicinal properties.

3 In the Patio of the Arts there stands a group of bitter orange trees (*Citrus aurantium* var. *amara*). Originally native to Asia, the tree has adapted to the Mediterranean climate. Its flowers are used in medicines, for making «aigua del Carme», while its fruit can be used in jam making.

4 If we continue our walk to Diputació street, we find several camphor trees (*Cinnamomum camphora*) from which camphor is obtained, a substance that can be used as an antiseptic and for treating nasal congestion. Its wood is used for making furniture. Here, we also see various examples of the common fig tree (*Ficus carica*), the fruit of which is considered a rich source of energy.

5 Coming down into the area between the two patios, we can see various examples of the paper mulberry tree (*Broussonetia papyrifera*). The fibres of its bark were much used in ancient times in paper making. There are also two white mulberry trees (*Morus alba*) that serve a variety of purposes: the leaves are feedstock for silkworms, its fruit (the mulberry) is edible, its roots are used in dye-making, and its bark is used for making rope.

6 If we return to Diputació street and head towards the greenhouse, we pass beside a number of bay laurels (*Laurus nobilis*), one of which is a particularly large example. The aromatic leaves of this tree are used as a flavouring in cooking, and they have long been considered a symbol of victory. A little further on, there stands a large-leaved linden tree (*Tilia platyphyllos*), the flowers of which are used to obtain a tea with relaxing properties, the linden tea.

7 Beside the greenhouse we find a small group of jujubes (*Zizyphus jujuba*), the wood of which is used for making the typical wind instruments played at the Catalan fiestas when human towers are built. If we walk down to the car park, we can finish our walk by admiring a peach tree (*Prunus persica*), a small tree well known for its fruit.

