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## BOTANICAL GARDEN, PADUA

*“Here, amongst many varieties of plants that I am seeing for the first time, the hypothesis that in conclusion all the forms of plants can be derived from only one plant becomes increasingly clear and vivid.”*

*Italian Journey, Johann Wolfgang von Goethe*

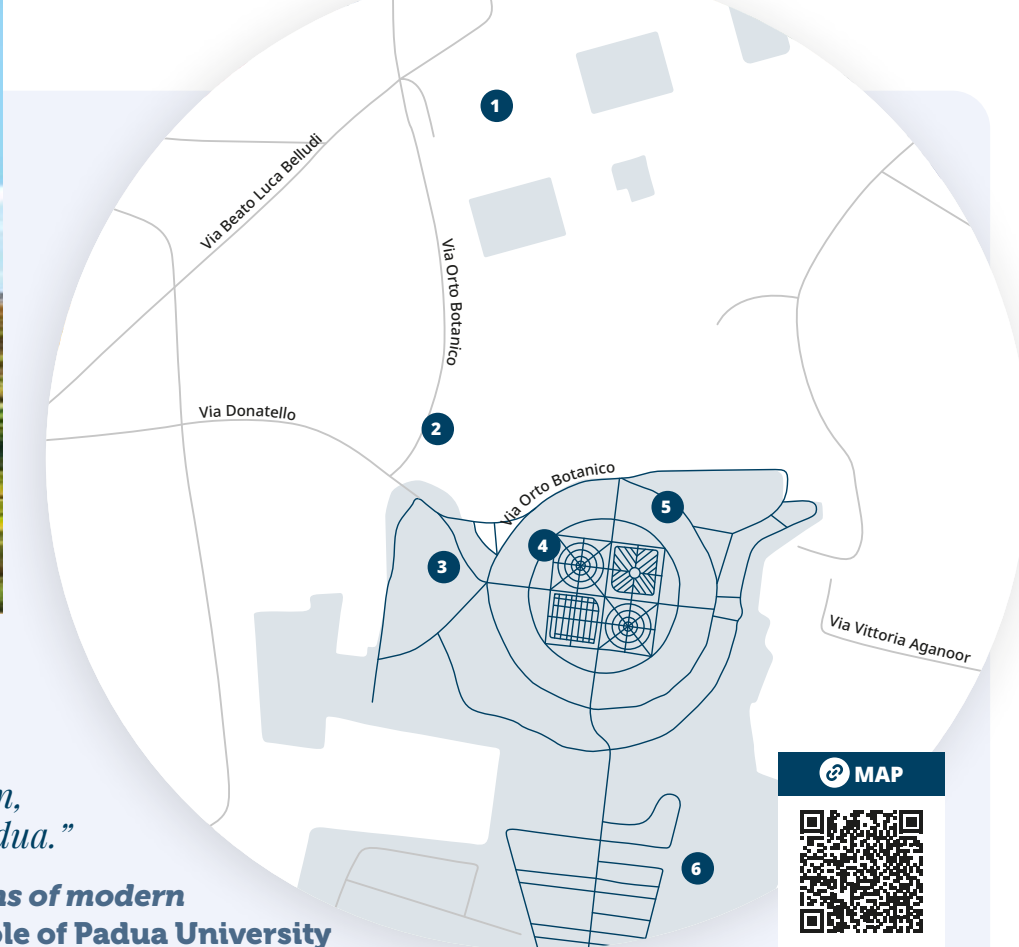
It is 1786: in the living peace of the Botanical Garden in Padua, the German poet Goethe contemplates a specimen of dwarf palm bedded two centuries earlier and notes how the shape of the leaves has changed as the plant has grown. His sensitive intuition seized on the idea of the change over time of living forms, the embryo of what today we call “biological evolution”. On 29 June 1545, the Senate of the Venetian Republic decreed the establishment of a Hortus Simplicium for the cultivation of medicinal plants, known as “simples” on the request of the School of Medicine of the University of Padua. Luigi Squalermo, its first custodian, put every effort into bedding some 1800 plant species, from harvests which were being accumulated in those feverish decades for the knowledge of history. This is how the oldest university botanical garden, which has remained in its original site with its conception essentially unchanged, came into being. The design of the Hortus Sphaericus, its oldest nucleus, is based on a square inscribed in a circle and reflects the continuation in the Renaissance of the symbolic image of the microcosm. The intellectual audacity of the feat and the international prestige of the university means that, since its creation, the garden has become the mother and model for other similar European institutions, from Lisbon to Uppsala. Over the centuries, the garden has grown larger and has continued to be modelled following the trajectories of knowledge, yet keeping its role in research and in popularising scientific information.



**CULTURAL HERITAGE**  
UNESCO DOSSIER: 824  
PLACE OF INSCRIPTION: **PADUA, ITALY**  
DATE OF INSCRIPTION: 1997



**CRITERIA FOR SELECTION:** The Botanical Garden of Padua is the oldest university botanical garden in the world still in its original site and is an exceptional example of scientific and cultural importance. Over the centuries it has been a model for the creation of other similar institutions in Italy and in Europe.



*"[...] in so far as any single place could claim the honour of being the seat of the scientific revolution, the distinction must belong to Padua."*

**Herbert Butterfield, in *The origins of modern science*, highlights the crucial role of Padua University in the history of scientific feats. A city with a divided soul, Padua is also a fervently religious place, as shown by the cult of St Anthony.**

This itinerary abandons the "city of faith" with St Anthony at its centre, to reach that "island of science", namely the Botanical Garden and concentrate on the living beauty of its collections. Start from **1** **Piazza del Santo**, dominated by the oriental-style lines of the Basilica of St Anthony and take Via del Santo, which, almost crossing an invisible conceptual watershed, becomes Via Orto Botanico. In the suspended dimension of an oasis dominated by vegetation, the **2** **Alicorno Canal** isolates the Botanical Garden from the rest of the city. After going through the gate and passing the ticket-office, you will be welcomed by the specimens that populate the **3** **Arboretum**, the garden's tree collection. Amongst the dozens of types, one of the most charismatic is the 1680 **plane**

**tree**: as you can see from the crevice, it was struck by lightning but keeps its vitality intact. Going towards the centre, you will see the wall built in 1551 to set the boundaries of the **4** **Hortus Sphaericus**, the historical heart of the institution. Four gates oriented according to the cardinal points correspond to the same number of avenues that divide the internal layout. Specimens of rare, medicinal and poisonous species are bedded in the plots of each quarter. The ginkgo of 1750 and the magnolia of 1789, amongst the first specimens of their kind to reach Europe, are very interesting from the historical and scientific points of view. From here you will not have any difficulty in recognising the greenhouse that protects the famous **5** **palm of**

**Goethe**, observed by the poet in 1786 and which inspired, in the intellectual's mind, an embryonic intuition of evolution. Taking the avenues that lead southwards, you will reach the most recent expansion of the garden, a stretch of green lawn in the shade of the dome of the Basilica of St Justine. The large building of the **6** **Garden of Biodiversity** will be awaiting you. In its climate-controlled greenhouses, a synthesis of the main plant biomes of the planet has been recreated, ranging from tropical rain-forests to deserts. Amongst alien-shaped orchids, tree-like ferns and surprising cacti, let yourself go and contemplate the "infinite and very beautiful shapes" which, as Charles Darwin would say, natural selection has modelled over millions of years.



## PADUA'S GREEN SQUARE

*"The largest square in the city called Prato della Valle, is very large, and in the month of June, a fair is held there. [...] There is an elliptically-shaped space in it, surrounded by statues of illustrious men, who were either born in Padua or held a chair in its university. [...]"*

*Italian Journey, Johann Wolfgang von Goethe*

The German poet uses these words to photograph the Prato della Valle, the urban backdrop that embodies the face of late 18<sup>th</sup> century Padua, showing how the city modulates its spaces while retaining their original purposes. In the Middle Ages, this enormous square was the venue for fairs, carousels and religious holidays; the fair at the end of June described by Goethe, dedicated to St Anthony, is still celebrated today, as are the weekly markets held in Prato della Valle. Redevelopment started in 1775 and gave rise to one of the largest squares in Europe, dominated, in its conception, by the interaction of water, stone and vegetation inside an elliptical shape. In the stone population of statues, which since Goethe's time has continued to grow, there are many literary personalities you can have fun recognising.



**"I AM GOING BACK TO MY LABORATORY IN PADUA, HERE I BEGIN TO MAKE VERY STRONG TELESCOPES [...] THEN, ON A CLEAR AUTUMN NIGHT, FROM A WINDOW ON THE TOP FLOOR, I LOOK AT THE SKY WITH MY INSTRUMENT [...]."**

Padua is the "city of science" not only thanks to its Botanical Garden. The great Galileo Galilei taught at the university and spent many years of important discoveries there, testing his telescopes on the sky, as Luca Novelli

describes in *Galileo e la prima guerra stellare*. There are countless institutions and museums dedicated to various branches of knowledge: this itinerary will help you discover them, in the most beautiful corners of the city. Start from the **1 Botanical Garden**, where in the perfect geometry of the Hortus Sphaericus, the oldest part, you can get to know plants with extraordinary pharmaceutical properties. Don't forget to enjoy a visit to the **Garden of Biodiversity**, which will give you the chance to explore lush rain forests and arid deserts through close encounters with the plant species that inhabit it. After leaving the garden, go to the former **St Francis' Hospital**, which

houses the **2 MUSME - Museum of the History of Medicine**. Forget about usual museums: everything here is marked with the motto "Touching is NOT forbidden". This way you can take a fascinating journey through the human body, thanks to the many interactive stations that allow learning while literally putting yourself on the line. Near the **Scrovegni Chapel**, there stands the newest and shiniest of the city's museums, founded to give a worthy home to the extraordinary natural science collections that the university has accumulated throughout its long history: the **3 Museum of Nature and Man**; it is a mosaic of finds that range from minerals to fossils, from geological collections to anthropological ones, and they merge in an interactive story dedicated to the history of mankind's bond with nature. After having named it so many times, the time has finally come to get to know the famous university of the city, **4 Palazzo del Bo**. Its historic seat is just a few steps away from the **Palazzo della Ragione**, in Via VIII Febbraio. Various parts, rooms and monuments can be visited. The most interesting are the monument to Lucrezia Cornaro, the first woman graduate in the world, and the famous anatomical theatre of 1595, for the study of anatomy by students of medicine. Thanks to Galileo, but not only to him, astronomy also occupies a very important place in the city. Its most memorable symbol is **5 La Specola**, the astronomic observatory which since 1761 has occupied the top of the **Torlonga**, the tall medieval tower that was part of the most important Paduan fortification. Here one can visit the rooms and collection of instruments that every good star-gazer ought to be familiar with.



KIDS



## THE BOTANICAL GARDEN OF PADUA in books

*Reading suggestions to get to know the green people of the Botanical Garden of Padua.*

- **The metamorphosis of plants**, Johann Wolfgang von Goethe (1790). The bulimic mind of the "last true polymath to walk the earth" to use George Eliot's words, explores the natural world, with special attention to plants. In this essay of an essentially historical and philosophical value, Goethe anticipates some topics of Darwinian evolutionism, but through a lens which is that of German idealism.
- **Italian Journey**, Johann Wolfgang von Goethe (1816-17). The fascinating reportage of the Grand Tour that Goethe went on between 1786 and 1788 is a journey through the art, culture and beauties of Italy.
- **The origins of modern science**, Herbert Butterfield (1962). In this classic of the historiography of science, the author follows the development of

scientific knowledge from the origins to the revolution in which Padua and its university played a prominent part in between the 16<sup>th</sup> and 17<sup>th</sup> centuries.

• **La giostra dei fiori spezzati**, Matteo Strukul (2014). Plunged into the deep sleep of winter, Padua finds itself in a nightmare in the truest sense of the word, when one by one, the lives of young prostitutes are brought to an end, like the delicate flowers whose names they share, by a serial killer. The city has its monster, its angel of death, that acts in the gothic atmosphere of the late 19<sup>th</sup> century, but transplanted into the squares of Padua.

• **Uomini che amano le piante**, Stefano Mancuso (2014). At the centre of this biography of biographies, full of discoveries, adventures and twists, the scientist and populariser Stefano Mancuso tells the story of life among the plants of some of the greatest explorers of the plant universe: centuries of passion, strokes of genius and dedication, from Leonardo da Vinci to Charles Darwin, from Marcello Malpighi to Gregor Johann Mendel, who completely revolutionised our knowledge of the "nation of plants".

• **Le piante son brutte bestie**, Renato Bruni (2017). If visiting the Botanical Garden of Padua has opened your eyes to the incredible richness of the plant world, you can follow in the footsteps of the author on this plant safari: after taking off his laboratory botanist's coat, Bruni takes readers with him to "get their hands dirty" in a city garden.

### Children's books:

- **Galileo e la prima guerra stellare**, Luca Novelli (2002). "Adopted" by Padua, Galileo Galilei makes some of the most revolutionary discoveries in the history of science there.
- **Tra fogli e foglie**, Rossella Marucci, Mariacristina Villani, Valentina Gottardi (2021). There is no better way to approach the world of plants than to learn and become familiar with the concepts, methods and tools that all good botanists should have in their "toolbox": the herbarium. This splendidly illustrated book is an introduction to the botanical universe which will guide young scientists in their study of the wonders of the plant world.