Bonn University
Botanic Gardens
THE BOTANIC GARDENS

The Botanic Gardens of the Rheinische Friedrich Wilhelms Universität developed from a formal renaissance garden. They are now among the most beautiful and prestigious botanic gardens in Germany. Some 11,000 plant species, that is several times the number of species occurring naturally in Germany, are cultivated on its 13 hectares.

Research and teaching are the main tasks of the gardens; most importantly, they serve to disseminate their information to an increasingly ecoconscious public. Words like ‘ecology’ and ‘biodiversity’ became political catchphrases. It is now estimated that there are around 30 million different species of plants and animals in the world, of which just under 1.7 million are known and have been classified scientifically. The remaining 95% will stay unknown to us – the destruction of their habitats (especially tropical rain forests) is progressing too fast to allow us to catalogue their inventory.

Around one third of the 300,000 known plant species are currently cultivated in botanic gardens throughout the world, 50,000 of these in Germany. All in all there are some 100 german botanic gardens and they attract more than 14 million visitors per year. This represents a significant potential to raise public awareness for research on the diversity and ecology of plants which is so urgently necessary. These tasks, among others, are what modern gardens set out to fulfil, so it is great to see that in recent years, Bonn Botanic Gardens received substantial support from the University, the State of Northrhine-Westphalia, the Friends of the Botanic Gardens and the University Association – this enables us to better fulfil our tasks and keep students as well as the general public better informed. More information can be found on our homepage: www.botgart.uni-bonn.de.

Professor Wilhelm Barthlott
Director
On the ancient agricultural land which is now home of Bonn Botanic Gardens at Poppelsdorf Palace, there used to be a medieval moated castle, owned by the Archbishop of Cologne from around 1340. Around 1650, the castle was surrounded by magnificent renaissance gardens and conservatories. The more recent baroque garden, unchanged in its basic structure to this day, was constructed around 1720. The rococo palace of ‘Clemensruh’ was completed in 1746 by the Archbishop Clemens August.

When the University of Bonn was founded in 1818, the first director, Dr Christian Gottfried Daniel Nees von Esenbeck, turned the gardens’ focus towards scientific aims. Nees described more than 5,200 plant species from tropical areas throughout the world: *Goethea cauliflora* reminds us that he maintained a close relationship with the famous poet; some more species described by Nees are the well-known gloxinias (*Sinningia speciosa*) and the giant bamboos (*Dendrocalamus*).

Important scientists like Sir Dietrich Brandis, F.A. Körnicke, M. Koernicke, J.W. Pfeffer, J. von Sachs, A.W.F. Schimper and E. von Regel worked in Poppelsdorf. Under the directorship of E. Strasburger, around the turn of the last century, Bonn owned one of the most important gardens in Prussia, second only to Berlin. The garden paths (see plan) remind us of some famous personalities who are part of its history.

The first world war had no direct impact on the gardens; in 1945, however, there was nothing but ruins. The reconstruction was not finished until 1979-1984, when the building of two conservatories was completed.

The history of the *Economic Plant Garden at Katzenburgweg* is closely linked to the University’s Agricultural Faculty, founded in 1847 as the ‘Royal Higher Agricultural Academy at Poppelsdorf near Bonn’.

In 2002, the two botanic gardens of Bonn University, the agricultural-botanic garden (now the Economic Plant Garden at Katzenburgweg) and the Botanic Garden (now Botanic Garden at Poppelsdorf Palace) were joined under one administration.
Owing to the area’s Atlantic, mild climate, around 3,000 species of plants from temperate zones of the world can be cultivated outside at Bonn Botanic Gardens. In the Arboretum (collection of woody plants), there is a large specimen of the monkey puzzle tree (Araucaria araucana), stinking cedar (Torreya), tupelo tree (Nyssa) and Chinese pine (Pinus bungeana), which is especially striking due to its multicoloured bark; and there are old specimens of swamp cypress (Taxodium distichum) from the Everglades in Florida. One curiosity is a ginkgo (Ginkgo biloba) with male branches grafted onto it.

In the Systematic Section, plant relationships of around 1,200 different species are presented; ‘order in diversity’ is the overriding subject. Hemp palms (Trachycarpus fortunei), passion flower (Passiflora caerulea) and Californian laurel (Umbellularia californica) can be found here, to name but a few. A stroll through this department helps you to spot plant relationships and lets you divine the paths that the evolution of flowering plants took. In the Geographical Section around the palace, plants are grouped according to their geographical origin. Summer is the best time to visit this part of the garden.

The Biotope Section shows the most important locally occurring plant communities. Endangered species of the region around Bonn are on display.

Living history of botany in Bonn: Goethea cauliflora

Living history of botany in Bonn: Poppelsdorf Palace (1720–1746), view from garden
The greatest diversity of bizarre plant species can be found in the tropics, subtropics and deserts. Around 3,000 of these species are cultivated in the 2,500 m² conservatory, that was completed in 1984. A well-signposted round tour guides the visitor through the most important climatic zones represented within the glasshouses. A modern compression system makes it possible that some of the houses (for example, the Fern house) are immersed in a dense mist of pure water at irregular intervals.

At the main entrance, the tour starts in the Palm house with its large rain forest plants such as bananas and bamboos and epiphytes growing on tree branches and rocky outcrops. The Fern house accommodates tree ferns and other indigenous plants of the cool cloud forests of tropical mountains. Carrying on through the Victoria house, we can find some tropical bog plants, but also the Titan Arum (Amorphophallus titanum). The side beds are planted with flowering lianas (such as Aristolochia and Passiflora). In the large pool, the famous giant water lily (Victoria) can be seen to unfurl its large leaves with their upturned rims; the blue, pink and white flowers of water lilies (Nymphaea) complete the impression of African and Asian tropical splendour.

In the Succulent house which follows, there is a display of water-retaining (= succulent) plants from the world’s deserts and semi-deserts. On the left, there are plants from the American arid zones such as cacti and agaves. On the right, however, one can find their counterparts from the old world – Aloes and Euphorbias as their most eye-catching representatives. The bizarre Welwitschia mirabilis is a relative of the conifers and comprises nothing but two ribbon-like leaves;
it is native to the Namib desert. The display case at the head of the glasshouse has some ‘living stones’ (*Lithops*) and other diminutive succulents. On our way out, we pass the two **Orchid houses**. During the winter, the **Mediterranean house** shelters some subtropical plants from the Mediterranean, South Africa, California and Australia. In summer, the house is empty and the plants are moved outside. They are grouped according to their origin around the conservatory. The round tour takes us back through the palm house, back to the exit.

Along the Winter-Weg, there are two further small conservatories, the **Carnivorous plant house** and the **Geophyte house**.

*The world’s largest flower (Amorphophallus titanum) in the Victoria house: height 306 cm.*
ECONOMICALLY USEFUL PLANTS – GREEN DIVERSITY FOR MANKIND

The Economic Plant Garden at Katzenburgweg is divided into two sections, separated by Carl-Troll-Straße. In total, around 2,000 species of cultivated and wild plants are grown here. Entering from Katzenburgweg, on the left there are several glasshouses that are not open to the public. Along these, containerised plants are placed during summer months; most notable is a representative collection of the genus *Citrus*. To the back of the glass houses, there are some beds with economically useful plants from the world’s temperate zones. Here, you can find different leafy vegetables (e.g. purslane) or plants with edible flowers (e.g. artichokes). Different interesting mediterranean trees are also planted here, such as the strawberry tree (*Arbutus unedo*), pistachios (*Pistacia vera*) and cork oak (*Quercus suber*).

Crossing Carl-Troll-Straße, you get to the second part of the garden. In the large beds, you can see wild species from central Europe. Particularly interesting is a bed where some important weeds grow. At the back of the garden, you can also find the Botanic Gardens’ Centre for Environmental Education, next to the Garden of Magic and Witchcraft. Nearby is an exhibition area, used for seasonal displays.

*Nutmeg (Myristica fragrans), a very important spice tree.*

![Image of nutmeg](image-url)
The Botanic Gardens are part of the University of Bonn and their prime task is teaching and research. The gardens provide materials for research and teaching to the university’s faculty of mathematics and science as well as to its agricultural faculty. Traditionally, the gardens always cooperated closely with the Nees-Institute of Plant Biodiversity which is under the same directorship as the Botanic Gardens. Research projects closely connected with the gardens are investigations into the evolutionary history of plants (phylogeny and evolution) and cataloguing of plant biodiversity (taxonomy). Increasingly, molecular techniques are also used in the institute using plant material from the gardens. Our focus is, among others, on epiphytes, carnivorous plants and ancient flowering plants. The mapping of global patterns of biological diversity is another focus of the Botanic Gardens. In the field of molecular science, we supply various plant material to the different working groups to conduct research. The gardens inspired an extraordinary number of projects: copying from nature, the so-called ‘Lotus effect’ was discovered. It is a wonderful example of bionics that is now used in such applications as paints for outside walls. The conservation of endangered species is also very important for Bonn Botanic Gardens. Thus, endangered local species from the Rhineland such as Lady’s Slipper Orchids, but also protected species from other countries such as Toromiro (Sophora toromiro) from Easter Island, are cultivated within the gardens. The Botanic Gardens Bonn are committed towards the aims and objectives of the Convention on Biological Diversity (CBD) and the Global Strategy for Plant Conservation (GSPC). The Gardens are involved in the implementation of these international agreements within the German botanic gardens community.
HOW TO FIND THE GARDENS

The Botanic Gardens are about 15 minutes walk down the Poppelsdorfer Allee from Bonn’s main train station (Hauptbahnhof). The gardens around the rococo Poppelsdorf Palace encompass roughly 6.5 hectares of land (0.5 hectares under glass). The garden of economic plants at Katzenburgweg comprises 2 hectares. In addition to these, there are around 3 hectares which are not open to the public. A total of about 11,000 different plant species are cultivated in the following gardens (see map): The ARBORETUM (A) is a collection of 700 different woody plants. In the SYSTEMATIC SECTION, roughly 1,200 species are arranged in beds according to their evolutionary relationship. The plants in the GEOGRAPHICAL SECTION (G) are arranged according to their natural occurance. The BIOTOPE SECTION (B) houses local indigenous species, and The EDUCATIONAL SECTION (L) illustrates medicinal plants, among others. Economically useful plants are marked with the letter ‘N’. The GLASSHOUSE COLLECTIONS indicated in pink on the map are open to the public. The other areas are reserved for cultivation and research.

*Victoria cruziana – the lightweight leaves of this giant Amazonian water lily can easily bear loads of up to 80 kg.*
GUIDED TOURS AND LECTURES

The Friends of Bonn Botanic Gardens offer a regular programme of guided tours and lectures (Phone: +49-228-734721). On the website (www.botgart.uni-bonn.de), and in the display case at the main entrance, you can find their current programme.

There is a regular programme of guided tours during spring and summer (1 April to 31 October). General GARDEN TOURS take place on Sundays and Public holidays at 11 a.m. and 3 p.m. (approx. 60 min; meet at the garden entrance). Private guided tours can be booked at +49-228-2497903, on weekdays between 7 and 9 p.m.

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OPENING HOURS

Summer (Apr – Oct)
Daily 10 – 18h; closed only Sat

Winter (Nov – Mar)
Mon – Fri 10 – 16 h; closed weekends

conservatories
Mo – Fri 10 – 12 and 14 – 16h;
on summer-Sundays 10 – 17:30h

Admission on weekdays free,
on Sundays and public Holidays in summer 2 Euro, concessions 1 Euro.

The Botanic Garden are always closed on Saturdays.