

Botanical Taxonomy

Taxonomy in botany refers to the scientific classification systems and structures of knowledge used to identify plants. This includes the indexing, naming, and defining of relations between plants, and their categorization according to class, order, family, genus, and species. Nomenclature of plants often derives from the Western tradition that first identified them in the 16th century. Some taxonomic families, for example bromeliads, which have their own houses, are marked on the maps in text.

Individual Research Agendas

Specialist collections are also shaped by the specific research interests of scientists, particularly curators. This helps to explain the extensive cacti collection at Bo, where the previous indoor living collection curator who is specialist in cacti. However, as scientists retire or move on, new staff approach the collection with their own scientific interests.

"In some respects it's because we meet every year and we have a conference of the Association of Botanical Gardens in German speaking countries. So there you see the people... Because many of these colleagues are also friends. Sometimes you go collecting with them together or they know them from because you work there or they some of them worked at your institution. So yeah, that's that helps a lot. Of course, there's also, uh, much more official ways to interchange plants..."
- Senior staff member

"My predecessor (former outdoor) was a cactus specialist. That's why all this you see there is really a lot, so he gathered thousands of cacti and our cactus collection is really huge..."
- Senior staff member

Educational Gesture

Plant distributions, their evolution, and their geographical use of particular importance to botanical gardens' research agendas as well as to their mission and public educational strategies. This knowledge is disseminated through the choreography of the plants in relation to one another as part of an exhibition, moving old and new world geographic, and critical climatic atmospheres that mimic tropical or subtropical biomes from other parts of the world. Typically, information is displayed on panels next to the plants. This includes taxonomic data and plant names. More recently, information on the effects of climate change on plants has been displayed. Educational strategy shapes the grouping of some plants. For example, some cacti and succulents are grouped together in the Victoria house. This can be seen on the map in the landscape three-dimensional drawing of the main glasshouse.

Aesthetic Judgment

Finally, the aesthetic judgment of the curator determines an intricate level the spatial and effective organization of plants in the glasshouses and the stories told about nature.

Bromeliads and cacti are growing together in the appendix A of the big tropical house. The Appendix is situated at the south left side of the building with plants of the new world. The south part of the building faces the most sun, while the appendix it is other compared to the rest of the building.

In the Bromeliad house it is shown how bromeliads and cacti are partly living in a symbiosis.

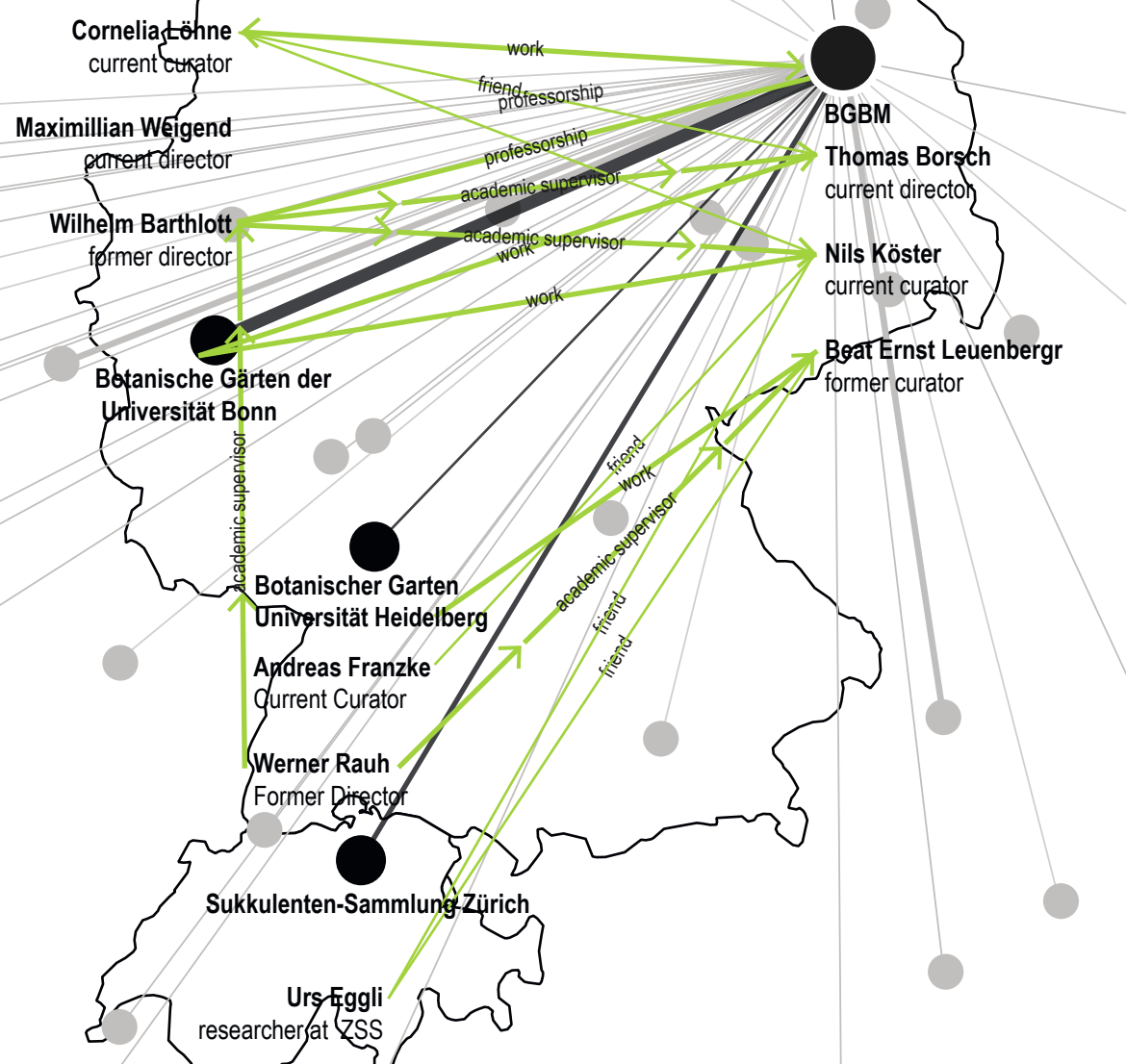
Epiphytic cacti are the only part of the cacti family found outside of the Americas. Its seeds were transported via land over the sea to Madagascar, from where they spread wider into the "Old World". They are shown in the orchid house, in the bromeliad house and in the right part of the big tropical house. Often they are growing in pots hanging from trees.

A big part of the collection of epiphytic cacti was formerly situated in Bonn. When the curator, Gian of Bonn retired in 2006, he gave it to the senior staff member as a present to keep the collection safe.

The collection of leaf cacti was collected by the former curator. The leaf cacti is origin of all other cacti in the cactus family, which makes them a fundamental species to have in the collection.

Socio-Institutional Networks

Where one of the objectives of Bo is to store and display a comprehensive collection of the world's plant species in one garden, the exchange of plant material and information between institutions is common. So too is missing taxonomic information. Although highly regulated, this practice is facilitated by the social networks between individual researchers, often based on interpersonal relations such as previous work collaborations, their PhD supervisors, past colleagues, or people met at conferences. A schematic of this network can be seen on the right.



Climate Zones

The first spatial logic applied to the glasshouse corresponds to the Earth's climatic zones. These are five categories that classify the world into horizontal bands according to key definitions of temperature zones, including tropical, dry temperate, continental and polar. The collections of glasshouses at Bo store and display mainly tropical, sub-tropical, and Mediterranean plants across 16 houses. This is depicted in colour range (dark green to light green) on the map. This means, for example, that moving plants which require tropical conditions into cooler or less humid houses is impossible.

Climate zones relevant to the Bo cacti collection following horizontal bands parallel to the equator.



Old and New World

In botanical classification systems, the old world refers to species native to zoogeographic realms in Asia, Africa, Oceania, and Europe. The new world refers to the Americas. The terms were coined in 1503 by Amerigo Vesputi, an Italian explorer. This distinction between species is used to organise the material arrangement of the living collection and to communicate knowledge pertaining to plant evolution at Bo, where plants from the old world are usually separated from new world species. On the map, old and new worlds are depicted by two types of hatching.