



Ex Situ Conservation of Native Species: Contribution of German Botanic Gardens to the GSPC Target 8



Marliese von den Driesch¹, Cornelia Löhne¹, Michael Burkart², Wolfram Lobin¹

Botanic Gardens are main actors on the field of *ex situ* conservation of plant taxa. However, to achieve the terms of the Global Strategy for Plant Conservation, activities have to be concerted and coordinated. Therefore, a working group on Ex situ conservation was founded within the German Network for Plant Conservation.

Current Situation

As a first step towards the fulfilment of Target 8 a priority list of plant species was needed. A first list of plants that Germany's *ex situ* conservation activities should focus on is provided by Welk (2002). This list is based on an analysis that considered the taxonomic rank of the endangered plant taxon (e.g., genus vs. apomict subspecies), its range (local endemics vs. globally distributed) as well as status of threat.

An assessment of the current status of *ex situ* conservation measures of German Botanic Gardens showed that 297 native German taxa are cultivated *ex situ* in 26 German Botanic Gardens. From the 21 highest priority taxa (after Welk 2002), 9 are conserved in German Botanic Gardens. Three of them are included in recovery and restoration programmes. However, besides the high priority taxa Gardens will continue working with locally and regionally threatened plant populations since local flagship species are most effective for raising public awareness.



Gentianella bohemica (Bohemian gentian)

The German populations of this biennial gentian are in acute risk of extinction. In a joint project of the Botanic Gardens of Munich, Bayreuth and Adorf *ex situ* cultures have been established successfully. The aim is to harvest seeds to help sustain the natural stock. The seeds are brought to the wild, especially to sites where *Gentianella bohemica* has recently vanished.

Two Examples

Corynephorus canescens (Gray clubawn grass)

has been threatened by extinction in the Rhine area due to extensive destruction of its native habitats, i.e. pioneer sites with moving sand on glacial inland dunes. It has been conserved *ex situ* in the Botanic Gardens in Bonn. The natural population at the Tannenbusch dune near Bonn could be restored successfully by reintroduction.



Ongoing Activities within the Working Group

- **Revision of the priority list** of endangered plants species, with special regard to local endemics and plants that are already extinct in the wild but still present in Botanic Gardens.
- Development and implementation of **protocols** for *ex situ* cultures of threatened native species are developed following a **three-level concept** (varying from pure preservation and cultivation of the plants to genetically controlled propagation and restoration of wild populations). The meaning of these protocols is to guarantee the purity of plant material and to maintain the genetic diversity of threatened species.
- Design and implementation of scientifically monitored recovery and restoration programmes in close collaboration with public authorities in plant conservation and NGO's.
- Strengthening of **public relations** to promote awareness of Germany's plant diversity, with a special focus on local flagship species.

Contact: ¹ Botanic Gardens of the University of Bonn, biogart@uni-bonn.de
² Botanic Garden of the University of Potsdam, mburkart@uni-potsdam.de

Reference: E. Welk (2002): Arealkundliche Analyse und Bewertung der Schutzrelevanz seltener und gefährdeter Gefäßpflanzen Deutschlands. Schriftenr. f. Vegetationsk. 37, Bonn. <http://sundoc.bibliothek.uni-halle.de/diss-online/01/01H044/index.htm>

Photos: *Gentianella bohemica*: S. Rösler; *Gentiana pneumonanthe* (background): K. Körner

