

Ex-situ conservation at the Zurich succulent plant collection: activities and limitations

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Botanical collections serve as stakeholder for biodiversity. Important factors for a sustainable value of ex-situ collections are: (a) precise and continuous documentation of original data and data concerning propagation; (b) properness of plant handling and avoiding of material confusion; (c) maintenance and propagation of living material, reference to and from herbarized material.

The Zurich Succulent Plant Collection offers a high plant density, making this institution unique in Central Europe. Problems are a higher susceptibility for diseases and non-flowering of some never maturing specimens. Documentation is given highest priority. Plants from well-documented sources are preferred, others rejected. A careful accession policy is essential, but confusion may have already happened before accession. Detailed data along with the plants serves manifold: students and researchers can make use of living plant material; the database may give an idea concerning plant distribution and variation and help while arranging regional plantings for the public presentation. The well-documented collection is highly educative. Loss of correct data occurs in horticulture while relabelling, repotting and propagating. A high plant knowledge of the personnel helps recognize severe mislabelling. Visitors may mindlessly take out etiquettes for a photo “without a disturbing artefact”, and children sometimes take out labels just for fun, leaving them somewhere. Care and propagation varies significantly: many Cacti, Euphorbias and Aloes are propagated through cuttings, thus maintaining the original genotypes. Monocarpic and slow growing plants are propagated through seed, which may increase the combination of genetical diversity. Genetical selection in culture is different from the wild and there always remains the occasional hybridisation or other input of foreign genes, although of course efforts are made to avoid these. In an international network, ex-situ collections may serve in re-introduction programmes and as a source of manifold information. For us it is hoped to contribute here more in the future, but limitations due to insufficient funding and hindering laws are always a risk.