The "Sicilian Plant Germplasm Repository" of the University of Palermo: 25 years of activity in biological conservation

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The "**S**icilian **P**lant **G**ermplasm **R**epository" was created in 1993 from the Department of Botanical Sciences of the University of Palermo (SGCR/PA) – today section of Botany and Plant Ecology of the Department "STEBICEF" - with the aim to preserve the genetic diversity of endemic or endangered native plants, species of economical relevance and wild progenitors of plant cultivars. The collections are mostly constituted by seeds, and were recently expanded with tissues and DNA accessions.

The specific tasks of SPGR/PA include the short- and long-term *ex situ* conservation and exchange of seeds, the recovery of the phytogenetic heritage, the reintroduction of threatened or endangered species into the wild, as well as basic research on reproductive biology and conservation strategies.

Furthermore, SPGR/PA contains monitoring collections routinely used for seed quality tests upon and during long-term storage, as well as the safety "black boxes" of seed accessions from other Seed Banks. The core collection, one of the most extensive and representative ones, contains over 480 taxa specific and infraspecific of the Sicilian vascular flora. Within this collection, there are represented 38% of the existing endemic taxa and 32% of the critically endangered ones. More specifically, more than 75% of the taxa listed among "The Top 50 Mediterranean Island Plants" are preserved in the SPGR/PA bank, with over 102 individual accessions. Additionally, the individual entries of the tissue and DNA collections are used for scientific exchange and to promote globally researches in the field of genetic characterization, systematic biology and phylogenetics. Moreover, reference samples, documenting and supporting published scientific researches related to taxonomy of critical species and inherent molecular characterization, are deposited and preserved in separate collections.

Recently, the management of Palermo Botanical Garden and Herbarium Mediterraneum – which has historically and traditionally led the scientific education and research in the field of botany - has been transferred to a newly created athenaeum museum system "SiMuA, Centro Servizi Sistema Museale", whose main aim is to rationalize and advertise university-related museums of all disciplines, and promoting their fruition to a wider audience. Within this context, the fate and scientific mission of SPGR/PA has become uncertain, and a concrete risk of losing both the biological assets and the invaluable scientific expertise and know-how built over the past 20 years has come to light.