

Thematic Workshop 2.

Scientific research. Ex situ conservation. Role of Botanic Gardens

Email to: Ana Sola [asola@ual.es]

Demographic structure of *Gypsophila struthium* L. subsp. *struthium* in three contrasting habitats in the gypsum outcrops of Sorbas (Almería, SE Spain)

Sola, A. J.; Cueto, M.; Jiménez-Sánchez, M. L.; Pérez-García, F. J. & Mota, J. F.

Abstract

Gypsophila struthium is an endemic Iberian gypsophyte that successfully colonises the abandoned gypsum quarries. We examined its demographic stage structure during three consecutive years (2001-2003) in three contrasting habitats in the gypsum outcrops of Sorbas (Almería, SE Spain): two unaltered habitats (gypsum outcrops and *Ononis tridentata* community) and an abandoned quarry. Density of established plants was significantly higher in the quarry where population structure showed high proportions at young stages. In contrast, it was dominated by reproductive individuals in the unaltered shrublands. The proportion of non-reproductive to reproductive plants varied eighteen-fold, the quarry having the highest rates and the *Ononis tridentata* community the lowest. Although mortality of established plants was very low along the study period, recruitment was extremely low, and there were not significant differences among habitats and years. The results support our hypothesis that *Gypsophila struthium* shows different types of population structure depending on habitat, being the quarry a clear example of invasive habitat, characterized by a large proportion of young individuals. By the contrary, the unaltered shrublands are normal or regressive habitats dominated by long-lived mature individuals which offset seedling mortality due to unfavourable environmental conditions.

Keywords: demography, SE Iberian Peninsula, gypsophyte, gypsum quarries

Thematic Workshop 2. Scientific research. Ex situ conservation. Role of Botanic Gardens