

Seed Collections of Rare and Threatened *Pediocactus* for Conservation

One of the easiest and undoubtedly most important conservation actions that we can take is to bank seed. These seeds can then be used for future genetic research projects and for developing living, ex-situ collections for reintroduction. It is apparent that climate change is not going away (IPCC, 2007) and maintaining genetic material for the future is one way in which we can buffer against the unknown outcomes associated with a shifting climate. We believe that a multi-year seed collection effort will result in a genetically and geographically diverse seed bank that will have many future uses.

There are three primary objectives to this project: 1) Collect seed from *Pediocactus sileri*; 2) collect seed from *P. bradyi*, and 3) collect seed from *P. peeblesianus* var. *peeblesianus*. Collected seed will be cleaned at The Arboretum. Seed collections will be made using Center for Plant Conservation best practice protocols and standards (Maschinski and Haskins, 2012) and will be made from geographically dispersed areas/populations and stored by maternal line at the National Center for Genetic Resources Preservation in Ft. Collins, Colorado.

We are beginning a two-year project to buffer against weather impacts on our ability to collect seed. Each year of this project will look similar in terms of the timing of events. Research will commence in January/February. Scouting trips will coincide with peak flowering of each species, generally in March/April. During scouting trips, efforts will be made, weather permitting, to document pollinator visitors. Seed collection will be timed accordingly, but will generally fall in May. Once fruits are collected, they will be dried and cleaned at The Arboretum, prior to shipment to the NCGRP seed bank.

For more information on this project, please contact Sheila.Murray@thearb.org.

