



Seed Banking Federally Listed Mainland Plant Species on DoD Lands

Project # 10-101,
11-101, 12-101

Background:

The Center for Plant Conservation (CPC) through its network of professional botanists and published protocols has established organizational commitment to ongoing conservation work. CPC's 36 (now 39) participating institutions nationwide have been conducting seed-banking efforts for 25 years. Along with our USDA-ARS partner, the National Center for Genetic Resources Preservation, we maintain multiple seed-banks in which to secure the genetic integrity of over 700 imperiled species. The network's credibility and experience make our national office and our PIs nationwide excellent partners who can provide the local leadership needed to identify existing collection efforts within the network and solicit information on other collections outside the network.

Objective:

The Center for Plant Conservation, through its network of participating institutions, works to conserve species from extinction by active programs in seed banking, plant propagation, and other related conservation work. The objectives of this multi-year project were to collect and secure seed material from federally listed mainland plant species that occur on Department of Defense lands.

Summary of Approach:

Collections were made using CPC protocols, cited in the USFWS Policy Regarding Controlled Propagation of Species Listed under the Endangered Species Act. Guerrant et al (CPC 2004) recommends collecting genetically representative propagules that can be used during plant reintroductions. The guidelines:

- Collect no more than 10% of any individual plant's reproductive output in any year.
- For species with < 50 populations, collect from as many populations as possible.
- For populations with < 50 plants, collect from all known individuals.

- For populations with > 50 plants, collect from 10% of the plants or at least 50 individuals if 10% is not possible.
- Collect randomly from a diverse selection of plants regardless if characteristics are rare or common (do not select for only the plants with the largest blooms, unique colors, etc.).
- If the genetics are unknown, collect as broadly (in an area) as possible to collect the most diverse selection of material.

Benefit:

Securing ex situ collections of federally listed species provides a genetically appropriate seed source to serve future management needs of populations on DoD lands. These ex situ collections increase DoD's flexibility to manage biodiversity on DoD lands in the future. The completed project benefits all DoD installations with federally listed plant species. CPC is committed to continuing support for this work into the future in using existing protocols, accession database, database maintenance and agreement with NCGRP to provide future ex situ collection and management support of DoD lands.

Accomplishments:

To date, approximately 148 seed samples, using established CPC protocols, were collected from over 60 rare plant species on Federal lands. These seed collections have been stored for long term conservation purposes in CPC-affiliated seed banks as well as at the USDA-ARS facility in Ft. Collins.

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