



Listed Plant Species Evaluation

07-368

Background:

Almost ninety percent of federally listed plant species' recovery plans propose reintroduction as an action for increasing populations to sustainable levels. Plant species reintroductions require ex situ (off site) collections of plant cuttings, seeds, spores, and/or tissue cultures. However, existing ex situ collections are spread throughout the United States among many institutions. There is no public database to assess the amount, condition, and age of ex situ plant material potentially available for restoration work. A compilation of existing ex situ plant collections is necessary to enable prioritization of plant recovery work and to ensure the health of plant communities on Department of Defense (DoD) sites.



Freezer storage for seed at Berry Botanical Garden

Objective:

The purpose of this Legacy-funded project is to evaluate the status of existing ex situ plant material of 185 federally listed and candidate plant species occurring on DoD sites.

Summary of Approach:

The Center for Plant Conservation's national network of botanists at botanical gardens, arboreta, zoos and universities conduct research and restoration of vulnerable plants. These institutions have ex situ collections at storage facilities onsite and/or send them to the ARS-USDA National Center for Genetic Resources Preservation facility in Ft. Collins, Colorado. The information for these collections is maintained in a central database at the CPC national office. A survey-based approach was taken within the CPC network to ensure the database included all species of concern and species' collections were up to date. Of particular interest was information on provenance and age of existing ex situ

material. CPC institutions also provided, to the best of their abilities, information on non-CPC ex situ collections not maintained in the national database.

Benefit:

Of the known existing plant material stored by CPC institutions and DoD installations, this evaluation created a list of 61 species that have no ex situ material secured. The remaining 124 species with existing ex situ collections can now be prioritized for recollection by age (as viability decreases as seeds age), and by representation across the species' range (as material from all extant populations will increase options for best matching of genetic material to habitat where restoration work occurs).

Accomplishments:

The resulting report details the species and accompanying species information with existing ex situ plant material, existing ex situ plant material from multiple collection sites (DoD and non-DoD), and species without ex situ plant material. The species information will facilitate setting priorities, budgets, and planning for any future ex situ work by individual DoD services and on specific DoD installations. The 38 species with collections from both DoD sites and nearby non-DoD sites are especially noteworthy as they increase DoD's ability to conduct population level restoration, particularly augmentation or reintroduction work.



Arctomecon californica capsule

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