

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Rare plant surveys (*Physaria*, *Astragalus*, and *Lepidium*) at Fossil Butte NM and Review of NCPN Plant Species List

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: University of Wyoming
Effective Dates: 9/30/2009-6/1/2014
Funding Amount: \$23,000

Investigators and Agency Representative:

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Project Abstract: *Rare Plant Surveys - Physaria, Astragalus, and Lepidium* are all rare plants found at Fossil Butte NM (FOBU). Since no hunting is allowed in the park, elk congregate there during hunting season. There are some indications that elk may preferentially graze on these species. An inventory will help to determine if the park should consider taking additional management steps to protect these rare plants. This project was rated in the highest priority category by resource managers at NCPN parks in the NCPN Inventory Needs List.

University of Wyoming (UWYO) will conduct species specific plant surveys for the rare plants during the best time of the year to identify these species using key morphological traits. UWYO and NPS will discuss the most likely places where these species could be found within FOBU. During field work, UWYO will also have the following lists pertaining to plants at FOBU: Species documented to be present, species that are reported but there is no voucher, list of potential species for the park and a list of species that are considered to be questionable. Efforts will be made to update these lists opportunistically. Habitat, abundance, and location data (using a handheld GPS unit) will be recorded for all native and naturalized species that were not previously known from FOBU or were not represented by vouchers in the FOBU herbarium. Collections will be labeled, mounted, and deposited in the FOBU herbarium.

Update of Plant Species Lists - From 2004-2007, the NCPN funded a series of research projects to update vascular plant species checklists for each of the 16 national park units in the NCPN. A species checklist is never complete; however, as new species are continually uncovered through additional field work and species nomenclature is also prone to frequent change.

This work will entail reviews of any new literature and reports from the parks, new species detected during monitoring activities, re-examination of specimens of questionable identification from NCPN work or other research activities in NCPN park units, and additional field work to corroborate unverified species reports or locate new species.

With each report, 4 lists will be updated:

1. A revised checklist of species that were present in the park (confirmed by an authenticated voucher);
2. A list of species that were reported in the literature but not corroborated with a voucher (equivalent to "probably present" in NPSpecies terminology);
3. A list of potential species ("unconfirmed" in NPSpecies) known from the vicinity of NCPN park units using unpublished lists generated by botanical experts; and
4. A list of species that are now known to be misidentified or highly questionable

Outcomes with Completion Dates:

- 1) Report on rare plants at FOBU.
- 2) Annual or bi-annual updates on plant species lists for 16 national park units.
Due Date for Final Report and/or Other Products: June 1, 2014

Keywords: Rare plant surveys, plant species list, Fossil Butte NM, Northern Colorado Plateau I&M Network, University of Wyoming