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**Park/NPS Unit:** Mesa Verde National Park

**Title of Project:** Long-term Population Trends of Schmoll's Milkvetch (*Astragalus schmolliae*) and its Response to Fire and Post-fire Mitigation

**Administered through the: (pick from drop down list):** Colorado Plateau Cooperative Ecosystem Studies Unit Cooperative Agreement Number H1200-09-0005

**CESU Partner (pick from drop down list):** Colorado State University

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**Amount Funded: (**$27,000)

**Project Dates:**

**Start Date:** April 15, 2011

**Any Other Product Milestone Dates you need to include:** (full dates can go in with the project description)

**End Date:** April 15, 2012

**PROJECT ABSTRACT:**

We will conduct investigations on the critically imperiled (G1) Schmoll’s milkvetch (*Astragalus schmolliae*) starting in the late spring of 2011 that will address several conservation questions, answers to which can be addressed through revisiting permanent demographic monitoring plots established in burned and unburned areas in 2003, re-sampling survey transects that were visited in 2001 and 2003, and visiting other key sites cited in U.S. Fish and Wildlife’s finding for Schmoll’s milkvetch. In addition, plots will be randomly distributed in a balanced sampling design within each treatment type selected for this study to address questions relating to post-fire management practices. Additional demography plots may also be needed to address impacts of management practices on demographic variables. Re-measurement of variables and attributes that will support fire management needs will be emphasized.

As with Schmoll’s milkvetch, two other species, the Cliff Palace milkvetch (*Astragalus deterior*) and the Mesa Verde stickseed (*Hackelia gracilenta*), also are critically imperiled and limited mostly to Mesa Verde in their global distribution. We will investigate these species as well. These species are the focus of efforts by the Colorado Rare Plant Technical Committee to improve current information about the state’s highest priority plant species. Priority for these species would be on investigations of range and population size, with possible establishment of monitoring plots and baseline data collection if robust populations are found.