Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Bat Inventories at Grant-Kohrs Ranch NHS and Little Bighorn Battlefield National Monument

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Utah State University

Effective Dates: 6/1/2005 - 6/30/2007

Funding Amount: $14,342.00

Investigators and Agency Representative:

NPS Contact: Mike Britten, Rocky Mountain I&M Network, 1201 Oak Ridge Dr., Suite 201, Fort Collins, CO 80525, 970-267-2150, mike_britten@nps.gov

Investigator: Mike Wolfe, Department of Forest, Range and Wildlife Sciences, Utah State University, Logan, UT 84322, 435-797-2533, mlwolfe@cc.usu.edu

Project Abstract:

The Rocky Mountain Inventory and Monitoring program has the objective of characterizing the bat fauna of two small parks in Montana: Grant Kohrs Ranch NHS (GRKO) and Little Bighorn Battlefield NHS (LIBI).

Initial selection of possible sampling sites at GRKO and LIBI will be accomplished by examination of topographic maps and/or other cartographic materials. Following diurnal reconnaissance of these sites, indices of relative bat activity will be obtained from active acoustic monitoring with an ANABAT detector. Based on the results of these preliminary surveys, 2-3 primary sampling sites at both locations will be selected for sampling with mist nets. Mist nets will be operated for 4-5 hours at each location on 2 or 3 different nights to minimize the effects of possible variation in bat activity due to weather and moon phase. Probable windows for sampling efforts will be mid-June and mid-July. All capture sites will be geo-referenced with a GPS instrument, and environmental data (ambient temperature, wind speed, cloud cover and moon phase will be documented on each sampling occasion. Digital photos will be taken of the respective sampling sites. Species ID, digital photo vouchers and other pertinent biological information (see attached data form) will be obtained for each individual captured. The ANABAT detector will be operated simultaneously with mist-netting and echolocation sequences recorded as separate files on a laptop computer. These files will be analyzed for provisional identification of species that might not be captured in the nets. In addition, this procedure should provide potentially useful information for sites around buildings where use of mist nets would be ineffective.

Outcomes with Completion Dates:

Bat species occurrence information for both park units "certified" and included in NPSpecies database; Final Report; and a Power-Point presentation illustrating the sampling locations, and photos of the specimens captures as well as signatures of the echolocation sequences obtained from the bat detector.

Final report due November 30, 2006

Keywords: bat inventory, Grant-Kohrs Ranch NHS, Little Bighorn Battlefield National Monument, Utah State University, Rocky Mountain I&M network

<u>**For Administrative Use Only:**</u>

Date Annual Report Received:
Date Final Report Received:
Publications, etc. on file: