

## Case Study

# Collaboration of the Natural Resource and Museum programs: A research tool for information archives at Dinosaur National Monument

By Lynn Marie Mitchell and Ann Elder

**A**NYONE WHO HAS BROWSED the natural resource section of a national park library or the files in the resource manager's office probably has encountered handwritten numbers beginning with the letters "NP" or "BibKey" on the cover or first page of print materials. These numbers indicate that the materials contain park-related information that has been deemed significant and that has been cataloged. The numbers link these materials to corresponding records in NatureBib, the NPS natural resource bibliographic database developed by the Natural Resource Program Center (NRPC) in Fort Collins, Colorado.

The cataloging of published and unpublished park-related reports, journal articles, conference proceedings, theses, dissertations, and similar documents provides a valuable information resource for park managers, scientists, interpreters, and other users. The bibliographic database makes finding citation information easy. However, it does not ensure proper management of or easy access to the physical items themselves—some of which are one of a kind—that are scattered throughout park offices, libraries, and files. Through NatureBib the National Park Service (NPS) has invested significant resources to locate, identify, and electronically catalog park-related natural resource information. The physical location of these items is not regulated and cannot easily or reliably be determined. Fortunately, the NPS Service-wide Museum Program has a system for preserving, cataloging, and managing archival materials that maintains the links

between the items and their records in NatureBib.

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One of the strengths of the Service-wide Museum Program is its ability to preserve archival materials in perpetuity, regulate their location for the long term, and provide access. The Museum Program maintains the Automated National Catalog System (ANCS+), a database that facilitates cataloging and is a key accountability component for NPS museum collections. The museum personnel in a park, however, often do not have the resources or expertise to evaluate the scientific significance of information as thoroughly as park or regional natural resource staffs. This presents the perfect opportunity to capitalize on the strengths of two programs to develop a powerful research tool for park managers, scientists, interpreters, and other users while ensuring the long-term preservation of these important materials.

In this article we discuss how staff at Dinosaur National Monument (Colorado and Utah) was able to capitalize on the strengths of the Inventory and Monitoring and Museum programs to solve a records management problem involving historical documents dating to the early 1900s. We also discuss the influence of this project on the archival cataloging protocols for the Intermountain Region and NatureBib.

## More than dinosaurs at Dinosaur

In April 2001 we completed the first systematic museum archival assessment of natural resource information for Dinosaur National Monument. During this process, we found the office of the former resource management specialist to contain an enormous collection of natural resource records and documentation, including raw data (e.g., field notes, wildlife observation cards), photographic images and slides, maps and drawings, central file material, unpublished reports, theses and dissertations, correspondence, and other types of natural resource programmatic information (fig. 1). Surveyors noted that hundreds of individual items were labeled with NatureBib numbers for which corresponding records had been created in the NatureBib database. These materials were spread throughout the office: in piles on the floor, stacks on bookshelves, folders in file cabinets, map tubes, and numerous binders containing photographs and slides.

When the resource management specialist position was vacated in 2002, park managers decided to lock the office until it could be inventoried and the materials boxed in preparation for future archival processing and cataloging. The lockdown meant that resource managers who had relied on this information in the past would not be able to access the office on their own to search for it. From the moment the door was closed, the pressure was on the park museum curator to establish order and accountability to protect this wealth of information and to make the materials easily accessible.

In spring 2003 we began the formal process of sorting this material by various topics and projects so that it could be cataloged and accessioned into park archives. Every paper, document, map, and slide from every stack, pile, and file was evaluated. The initial sort resulted in approximately

75 boxes categorized by management issue, including bighorn sheep, Mormon crickets, peregrine falcon recovery, endangered fish, vegetation management, fire effects, deer and elk management, grazing, and river management. The boxes were moved to a secure area where park staff and researchers could access them. The sorted information was not yet cataloged, and the only way managers could locate what they needed was by searching through entire boxes. The Museum Program at Dinosaur National Monument had yet to make the information easy to find.

## Cataloging begins

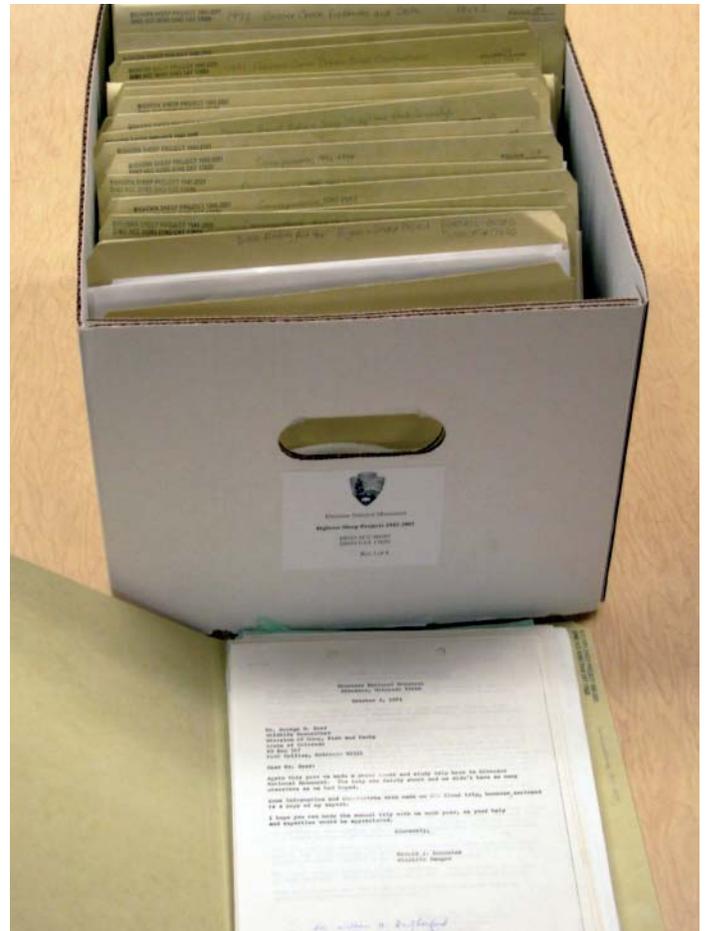
In FY 2003, Dinosaur National Monument received its first backlog cataloging project funds as part of the Service-wide Comprehensive Call. Park staff chose grazing

as the first collection of materials to be cataloged because cattle and sheep grazing within the park is a critical management issue. Cataloging was completed by the Intermountain Region Museum Service Archives Program. Subsequently, we have cataloged land records (e.g., grazing, water, air quality studies); ecology study of the Green River, 1962–1965; natural history records, 1940–1995; mule deer migration and ecology, 1963–1969; bighorn sheep management, 1940–2001 (fig. 2); Mormon cricket management, 1961–1992; and feral horse removal, 1973–1979. Peregrine falcon recovery and the deer and elk pellet project were cataloged in FY 2007. To date we have cataloged more than 138,560 items into 231 records or record groups and have given each collection a finding aid, which is a key access tool that is tailored to the anticipated use of the collection.



**Figure 1 (above).** Without proper cataloging, resource management records generated by field staffs may take on whatever organizational structure works best for the originator, limiting their access and use. A cataloging project at Dinosaur National Monument combined the expertise of the Museum and Inventory and Monitoring programs of the National Park Service to create permanent catalog records for important natural resource information so that it can be easily discovered and broadly used. NPS

**Figure 2 (right).** Box 1 of the Bighorn Sheep Project, 1940–2001, after processing and cataloging. NPS



**Intermountain Museum Services Program  
Tucson, Arizona**



**NatureBib Form**

The Project Archivist should complete this form to permanently link previous bibliographic reference numbers to the ANCS+ catalog record. Provide a completed copy of this form for each number to the MSP Archivist. The citation number will be based on one of the following:

**Bibkey ID:**  
or  
**NPBib ID:** 35779  
or  
**NRBib ID:**

**Folder Title:** Thesis "Ecological Evaluation of the Dinosaur National Monument Bighorn Sheep Herd"  
**Document Title:** "Ecological Evaluation of the Dinosaur National Monument Bighorn Sheep Herd"  
**Item(s) Description:** Thesis of Gary Thaddeus Skiba, based on field work conducted at Dinosaur National Monument between June and September, 1978 and May to December, 1979. Thesis addresses: 1) population size, 2) population parameters (sex/age ratios and survival rates), 3) physical and physiological parameters of the herd, 4) determination of disease and inbreeding as limiting factors, and 5) descriptions for distribution, movements, and habitat use.

**Item(s) Location:** Dinosaur National Monument  
**Collection Title:** Bighorn Sheep Project, 1940-2001  
**Park Accession No:** DINO ACC-00385  
**Park Catalog No:** DINO CAT. 17620

- Bibkey/NPBib/NRBib ID printed on the first page
- Bibkey/NPBib/NRBib ID printed on folder
- Bibkey/NPBib/NRBib ID entered into the 'Summary Note' field in the Collection, Series and File Unit levels in ANCS+

**Figure 3.** Form used by archivists to link NatureBib materials cataloged in the Museum Program's ANCS+ to the Natural Resources Program.

As part of the cataloging process, we preserved NatureBib numbers, creating a permanent link between the Service-wide Museum Program's ANCS+ record and the NRPC NatureBib database. The Intermountain Region Museum Services Program developed a NatureBib form (fig. 3) that we used to record and track specific NatureBib numbers or their predecessors: NPBib and NRBib. A project archivist completes the form for each item that has a NatureBib number. The form links the item to the park accession and catalog number, and a copy remains in the

file folder containing the informational materials. An additional copy is retained by the park curator for reference in the appropriate accession folder. A spreadsheet is furnished to the NPS natural resources bibliographic coordinator with the Natural Resource Program Center, who maps the data to the "ANCS+" field in the NatureBib database. The project archivist also places the NatureBib number in the "Associated Materials" field throughout the archives module of the ANCS+ catalog record.

With this process complete, park managers and researchers can locate a specific NatureBib reference by searching either the ANCS+ or NatureBib database. Users of NatureBib can search electronically for the associated park accession number where the references are permanently housed. Users of ANCS+ can search electronically and find all NatureBib numbers associated with a single accession. When physically searching a project such as "peregrine falcon recovery, 1978-1999," researchers can quickly locate all similar NatureBib references by looking for the NatureBib forms filed with the items or the NatureBib numbers on the file folder or storage enclosure. The link is preserved between the databases of the two programs.

## A successful archival collection

A well-processed and -cataloged archival collection should ease the search for requested resource materials. Finding aids are fundamental research tools for gaining access to unique and diverse archival collections. Dinosaur staff requested that finding aids be easy to use, easy to distribute to both park staff and outside researchers, and easy to update. The Intermountain Region Museum Services Program developed a process whereby specific fields can be mapped from ANCS+ to a word processor template. These finding aids meet professional archival standards by including a collection history; scope, content, and arrangement sections; series descriptions; and a container list or index. A sample of a finding aid is available on the *Park Science* Web site ([http://www.nature.nps.gov/ParkScience/graphics/vol\\_25\\_1/Mitchell\\_DINO\\_BighornSheeProjectFindingAid.pdf](http://www.nature.nps.gov/ParkScience/graphics/vol_25_1/Mitchell_DINO_BighornSheeProjectFindingAid.pdf)).

After we had cataloged a significant number of archival collections from the national monument, data managers with the Northern Colorado Plateau Inventory and

Monitoring Network visited Dinosaur to evaluate additional materials for inclusion in NatureBib. They found that their ability to retrieve previously identified NatureBib references was greatly enhanced by our cataloging efforts. Working with cataloged collections reduced by approximately 25% the amount of physical information that had to be reviewed because duplicates, non-park-specific information, and temporary records were removed in accordance with the NPS Records Disposition Schedule (i.e., Director's Order 19). The data managers also surveyed previously unavailable materials to establish new citations. One of the greatest advantages of the cataloging was that similar NatureBib references were now located together because materials were organized by topic.

The new archival protocols developed for use at Dinosaur National Monument were incorporated into the recently published *Intermountain Region Archival Processing and Cataloging Handbook*, which has been distributed to every park in the region. This handbook was written for and by project archivists who are completing regional archival cataloging projects and includes a completed NatureBib form and an example of an archival finding aid.

## Lessons learned

The linking of NatureBib and ANCS+ combines the strengths of the Service-wide Museum Program and natural resource programs at the park, regional, and national levels to create a tool that promotes research, preserves documents, and enhances access. The NPS Inventory and Monitoring Program's efforts to capture through NatureBib a vital collection of information needed by parks to manage their natural resources is strengthened by the permanent location and physical protection afforded by the Service-wide Museum Program. End-users of Nature-

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Bib benefit by having this bibliographic information stored in NatureBib tied to topical projects identified with permanent museum accession and catalog numbers that will not change. End-users of the very powerful ANCS+ search engine can use finding aids to locate NatureBib references and benefit when search time is minimized because all materials of a certain topic are found together.

The work at Dinosaur National Monument has shown that collaboration between natural resource and museum programs can further the efforts of each for the benefit of park resources. Any park with active museum and natural resource programs has the potential to link their ANCS+ and NatureBib databases. Museum cataloging can be funded through Service-wide Comprehensive Call proposals that meet appropriate criteria. Benefits extend beyond museum and natural resource staffs. Interpreters benefit from having information organized by topic, making retrieval of applicable materials more efficient. Visitors benefit because interpreters have access to a greater depth of knowledge on which to base their programs and exhibits. We hope that the effort to preserve NatureBib numbers using ANCS+ is only one of many fruitful collaborations to come between these programs.

## Acknowledgments

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## Reference

Intermountain Region Museum Services Program, 2006. Archival processing and cataloging handbook. National Park Service, Tucson, Arizona, USA.

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