

Options for Managing Park Natural History Collecting and Collections: Case Study—Acadia National Park

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Acadia National Park has established a collections management program that is multi-disciplinary, collaborative, and flexible to ensure that all relevant information and specimens associated with a study are protected and available for future park managers and the scientific community.

The program resides in the resource management division with responsibilities for natural and cultural resource management, research, environmental compliance, lands, and recreation management. Curation of specimens and their associated data is closely linked with the management of other information, such as the park bibliography, spatial data (GIS), and other natural and cultural resource databases.

The curatorial program and museum curator are considered on par with other natural and cultural resource programs and managers in the resource management division.

Scientific research and collecting at the park requires close collaboration with the curatorial program as well as with other disciplines in the resource management division. When a research proposal is submitted, it is reviewed by the division chief (permit coordinator) and resource management staff with expertise in the discipline and others who could evaluate potential impacts of the proposed work. The proposals are evaluated to determine if proposed research and/or collecting activities will affect park resources, the visitor experience, and/or park operations. The proposals are also reviewed to see if the cost of curation is included in the proposed study budget.

If a proposal includes collecting activities, after it is reviewed the researcher is required to meet with the park curator prior to the issuance of a research permit, if the specimens collected will not be consumed during analysis. The meeting can occur in person, over the phone, or via e-mail. During the meeting, the park-specific collecting conditions are discussed, including preparation of the speci-

mens for deposit into the collections, description of associated data, and the park-specific specimen data. Researchers may also be required to meet with the park's data manager and the park GIS specialist to discuss the park requirements for both spatial and tabular data prior to receiving a permit.

Acadia's park-specific conditions are available to research applicants on the park's web site (nps.gov/acad/rm/research.htm). This information is reiterated by the division chief and the resource management staff scientist who is assigned to oversee the logistical coordination and oversight of the research project once it is permitted.

The park requires two copies of all final reports generated from research conducted within the park. One copy is deposited into the park archives, the other into the park library. Two copies of all electronic data, such as charts and graphs, are requested, as well as two hard (paper) copies of all electronic data. Specimens collected must be properly housed (for example, wet specimens must be in flint glass jars with vapor-barrier screw caps) and labeled by the researcher. All associated data, such as field journals, photographs, and drawings, whether they are on a cocktail napkin or nicely typed, are requested.

Acadia requires that all federally funded projects submit the originals of their associated data. We request that non-federally funded projects submit good, clear copies of their associated data and consider Acadia as a repository for their originals if and when they decide to deposit them in an institution.

Investigators who receive federal funds are responsible for cataloging the specimens and associated data from their study into the

National Park Service's Automated National Catalog System (ANCS+). The park will catalogue specimens collected by non-federally funded researchers who collect fewer than 50 specimens. If more than 50 specimens are collected, then we require the non-federally funded researchers to catalogue the specimens into ANCS+.

Acadia is not getting 100% compliance on our requirements, but we have seen a significant improvement in the products that we are receiving. We go out of our way to ensure that researchers have every opportunity to meet the requirements. We will provide them the software, training, and computers (if catalogued at the park) to ensure that the specimens and data are catalogued into ANCS+. The park provides acid-free paper and/or copy machines for researchers to copy their associated data. We will also provide diskettes for the electronic data. We will accept prepared specimens even if they don't meet our requirements. For example, if a researcher remembered to place her wet specimens in 70% ethanol in a vial and labeled the specimen, but forgot to use a vapor-barrier screw cap, we will still accept the specimen as ready for deposit into the collections and we will replace the cap.

Researchers submit an update annually on the status of their projects and the collections of specimens and associated data. The primary investigator fills out this information in the investigator's annual report. These reports are filed by the permit coordinator in the resource management files until the project is completed; then they are transferred to the archives.

Acadia has two natural history collections: scientific and educational. The scientific collection is composed of voucher specimens and associated data that were systematically collected as part of a study proposal. The scientific collection is accessioned into the museum collection and retained in perpetuity; access to the collection is provided to the scientific community and park staff. The scientific collection is not used for exhibitions unless the exhibition is about scientific research in the park. Scientific proposals to conduct

destructive analysis on a specimen in the scientific collection are reviewed by the resource management division chief, park curator, and resource management staff with expertise in the discipline.

The educational collection comprises specimens that were collected especially for interpretive programs and exhibits. Because these specimens were not systematically collected as part of a scientific study, they have no associated data. These specimens are accessioned into the collection with a notation that they will be deaccessioned once the interpretive program or exhibit is over or upon deterioration/loss due to handling.

Acadia has two repositories where specimens and associated data are stored. The William Otis Sawtelle Collections and Research Center, the central repository, is located at park headquarters. Plant specimens are deposited at the College of the Atlantic's herbarium. The college is located in Bar Harbor, three miles from park headquarters. The specimens at the college are on loan to the college. The loan agreement permits the college botanist to collect specimens in the park and use the specimens for teaching botany (each class is taught how to properly handle the specimens). The specimens cannot be loaned by the college to another institution without first contacting the park curator. In exchange, the college catalogues the specimens into a database that is converted into ANCS+, annotates them, and provides access to the scientific community (each researcher signs into a logbook). Should the college's herbarium ever be disbanded, the park's specimens will be returned.

Changes have begun that will contribute to the future vision of the program. Acadia National Park is a member of the Northeast Temperate Network of the inventory and monitoring (I&M) program and has been designated as the repository for the specimens and associated data collected as part of the I&M program. We are working closely with the program coordinator to establish a collecting and curation policy for the I&M program, fielding questions from curators and scientists in the Northeast Temperate Network and

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within the Northeast Region, and reviewing specific needs for the care and preservation of existing collections.

In addition, the park has established a learning center at a former naval base. The Schoodic Education and Research Center (SERC) will provide key infrastructure (housing, offices, and labs) to support research conducted in the park. Plans call for the park to move its natural history collection to SERC so that the scientific community can have ready access and so that it is available to be used as a teaching tool in scientific workshops.

Acadia's curatorial program faces many challenges, including the need for a budget

that increases with the growing size of the collection, the need to update the taxonomy of the historical collection, improving on-going communication between resource management staff and researchers on collecting issues, achieving adequate staffing levels and expertise, and interpreting the code of federal regulations.

Acadia's curatorial program works because it ensures that the specimens and associated data that are collected as part of the park's research program are preserved for future park managers, yet are accessible to current park managers and the scientific community.

