

The Battle for Best Practices: *The cataloging and revitalization of the collection gathered from the Ninety-Six National Historic Site.*

When handling and revitalizing a collection, a series of best practices are laid out by the National Park Service (NPS) and other museum scholars. These practices help ensure the collection's safety and that of the people interacting. The Ninety-Six National Historic Site (NISI) collection came to The Antonio J. Waring Jr. Archeological Laboratory in deplorable condition. Throughout my undergraduate and graduate career, it was my job to use, and instruct others on, the best practices for the care of the collection. When caring for a collection, it is essential to understand the history of the partner institution, the site's history, and, most importantly, the best practices used for the collection.

In 1976, the Ninety-Six National Historic Site was established on the outskirts of Greenwood, South Carolina. The establishment of this park was on the cusp of a movement within the National Park Service to catalog and revitalize the collections at many of the nation's parks. This movement would be sparked by the release of the State of the parks report in 1980. This report noted "4,000 threats to the natural and cultural resources of the national park system, from both within and outside park borders."¹ Over the next year, the Park Service worked to develop a plan to mitigate the threats in the 1980 report. This plan required each park to create a resource management plan that "includes an inventory of park resources and a detailed program for monitoring and managing the resources, specify necessary staff and funding, and assign priorities to

¹ "America's National Park System: The Critical Documents," *National Parks Service* (U.S. Department of the Interior, n.d.), accessed October 2, 2022, https://www.nps.gov/parkhistory/online_books/anps/anps_8b.htm.

projects so that resources provided could be allocated toward the most serious problems.²" The park service's goal was to have these plans out of development by the end of 1981.

Along with these plans, the Park Service also announced eleven initiatives to help the parks develop these plans and assist with staffing capabilities. Even with this deadline, many parks did not have cultural resource management plans until much later. This delay in plan development was primarily due to funding and a lack of trained museum professionals at the sites. The Ninety-Six National Historic Site was one of the that was affected by this lack of funding and experienced museum professionals.

The Ninety-Six National Historic Site is a Revolutionary War site located in Greenwood, South Carolina. The site is home to the town of Ninety-Six. This town got its name from how many miles it was from the nearest Cherokee village. The town had a population of around 100 people and had homes, a courthouse, and a brick jail; during the American Revolution, the town was under British control. The site was the location of the Battle of Ninety-Six and, later in the war, the Siege of Ninety-Six. The site was the location of the Battle of Ninety-Six and, later in the war, the Siege of Ninety-Six. In November 1775, the first major land battle in the south would occur at Ninety-Six.³ This would not be the last time the site would conflict during the Revolution.

"By 1780, Ninety-Six was fortified and became an important outpost for the British to exert the King's authority in South Carolina's western upcountry. Over 500

² America's National Park System: The Critical Documents," National Parks Service (U.S. Department of the Interior, n.d.), accessed October 2, 2022, https://www.nps.gov/parkhistory/online_books/anps/anps_8b.htm.

³ *Park Archives: Ninety Six National Historic Site*, accessed October 2, 2022, <http://npshistory.com/publications/nisi/index.htm#handbooks>.

Loyalist troops led by Colonel John Cruger were directed to hold Ninety-Six. In May and June 1781, Maj. General Nathanael Greene led 1,000 Continental Army troops and militia arrived at Ninety-Six and found the place strongly fortified with stockades and a massive earthen star-shaped fort. Greene's troops constructed siege trenches and a 30-foot-tall log rifle tower. The Patriots also began digging a tunnel, under the command of General Thaddeus Kosciuszko, in which they hoped to ignite a charge of black powder and blow an opening in the Star Fort's wall. However, after reports of advancing British reinforcements Greene's troops ended the longest field siege of the war. The Patriots never captured the Star Fort, but the long siege greatly weakened Cruger's defenses. Within weeks the British burned and abandoned Ninety-Six, leaving their last outpost in the South Carolina backcountry."⁴

In the 1960s, local interest in preserving the site was on the rise; the citizens of the new town of Ninety-Six created the Star-fort historical commission. This commission would fund many archeological excavations of the area until it was turned over to the Park Service in 1976.⁵ The excavation by the Star Fort Commission was done in 1970. The commission partnered with the Institute for Archeology and Anthropology for this excavation, which took place over four weeks. Working on this excavation was a team that consisted of an Archeologist, a crew chief, and one of two paid laborers. The rest of the team were inmates from the Greenwood County Prison. The number of inmates on the project varied daily, ranging from two to six. Each week

⁴ *Ninety-Six, South Carolina - National Park Ninety-Six Historic Star Fort Battle Site*. Accessed October 2, 2022. https://www.ninetysixsc.gov/?page_id=70.

⁵ *Ninety-Six, South Carolina - National Park Ninety-Six Historic Star Fort Battle Site*. Accessed October 2, 2022. https://www.ninetysixsc.gov/?page_id=70.

the crew would have a different objective; the first week, the crew was to locate the fortification trenches that ran around the town of Ninety-Six. The second week they were to work in the area near the star fort. In the third week, they worked on the area of Goudy's trading post. The final week of this archeological dig would be spent excavating the site of Holmes fort.⁶

The collections gathered from the Star-Fort Historical Commission's excavations and those done by the Park Service were not cataloged but boxed up and sent to The University of South Carolina Institute for Archeology, where they would remain. In 2014 Ninety-Six National Historic Sites released an updated version of its foundation document. This document explored all the cultural resources available to the park. It gave their condition and the action plan to slow further degradation of the help. The artifacts that were excavated in the 1960s and 1970s would be included in this plan. The report states that "approximately 16% of total park collection is cataloged. Backlog amounts to nearly 127,000 items (archeology, history, archives, and biology)."⁷ With this high amount of backlog and very few staff, NPS's Southeastern Regional Office contracted the Antonio J Waring Jr. Archeology Laboratory to help revitalize the collection and bring it up to the curatorial standards of the National Parks Service. The team at Waring was a large and diverse team that rotated throughout my time on this project. I was one of the consistent forms of leadership on this project as undergraduate assistants joined and graduated from the project.

⁶ South, Stanley, "Exploratory Archeology at Ninety-Six (38GN1-5)" (1970). Research Manuscript Series. 5. https://scholarcommons.sc.edu/archanth_books/5

⁷ *Foundation Documents (NPS)*, last modified 2014, accessed October 2, 2022, <http://www.npshistory.com/publications/foundation-documents/index.htm>, 34.

When handling the collection, the team at Waring followed the best practices in chapter 6 of NPS museum Handbook I: Museum collections. The handbook section explains the importance of moving and handling objects in a collection with care. For example, if one wanted to move an object, a procedure requires "inspecting equipment to ensure that the object and the handler will be safe during the move. Do you have the proper personal protective equipment? Identify the space where you will move the object. Make sure there is room to house the object in its new location."⁸ Second, one must consider how to move objects. Planning the physical path allows one to account for any potential hazard when moving an object. Once the proper equipment has been obtained, the path is decided. The third aspect to consider is how you will move the object. When lifting an artifact, it is essential to consider the size and weight of the object. A large, heavy object may need two or more people or a cart to be moved safely. It is also essential to consider where on the object you will be lifting. For example, when moving a ceramic container, one would want to steal it from the sides and base, not from the rim and handle, because this could cause the pot to break. Once all the questions are answered, you are ready to move your collection or artifact.

Once the collection was moved into the Waring Lab, the next step was to check the collection for any signs of mold, mildew, and pest activity. Chapter 5 in the NPS Museum Handbook defines a museum pest as "an organism that interferes with the management objective of the site."⁹ When looking for pests in a collection, you first look for dropping, urates, or carcasses of any dead pests. To check for mold and mildew, look

⁸ "Chapter 6: Handling, Packing, and Shipping - National Park Service," accessed October 3, 2022, <https://www.nps.gov/museum/publications/mhi/chap6.pdf>.

⁹ "Chapter 5: Biological Infestations - National Park Service," accessed October 3, 2022, <https://www.nps.gov/museum/publications/MHI/CHAP5.pdf>.

for any white powdery substance. If mold, mildew, or pest are found within the collection. The collection must immediately be quarantined; from here, the best method for dealing with the pests will be determined. In the case of the NISI collection, if pest activity were found, the affected items would be sealed in archival bags and placed in the upright freezer, where they would remain for forty-eight hours. After that time was up, the artifacts would be taken out and allowed to defrost slowly and be checked for any pest activity, then put through one final 48-hour cycle in the freezer before being defrosted and checked for any pest activity once the artifacts were deemed pest free, they would be reintegrated with the collection.

The next step for the team at Waring was to create an initial inventory for the collection since one did not exist. This inventory would allow the team to see what was in the collection and what condition the artifacts were in. This initial survey found that the collection was unstable due to improper storage. When it got to Waring, the collection was in large boxes that, when tested, were not acid-free. Inside the boxes, the artifacts were also kept in envelopes that were also not acid-free. The boxes also had traces of some mildew which showed that boxes were not kept at a consistent temperature in low humidity. The Museum Registration Methods version 6 states that collections should be stored in a low light environment and at "70° F± 2°F and 50 percent ± 5 percent relative humidity."¹⁰ These controlled environmental factors allow Waring to minimize any further collection degradation. This initial survey also allowed

¹⁰ John E. Simmons and Toni M. Kiser, "Storage," in *MRM6: Museum Registration Methods* (Lanham, MD: Rowman & Littlefield, 2020), p. 337.

the team to see that this collection contained artifacts of various material types, such as bone, glass, ceramic, and metal.

The team's next step was cataloging the collection in the Department of the Interiors Database. The National Park Service uses the Interior Collection Management System (ICMS) to catalog and monitor collections in their care. Cataloging for the Ninety-Six National Historic Site (NISI)¹¹ collection involves entering the artifacts into ICMS but also bagging and organizing the artifacts into trays. The team used the best practices in Appendix I in the NPS Museum Handbook when handling and cataloging the collection. This appendix describes the proper way to process and handle an archeological collection. The appendix notes that archeological collections differ from a typical museum collection in that they were lost and covered by the ground or water. It also states, "The condition of these objects depends entirely on their reaction to the environmental conditions to which they have been exposed through time. Underground the object reaches a kind of equilibrium with the surrounding soil. Then, when the object is excavated, it must adjust to a new and radically different environment. Reactions can involve both physical and chemical changes. Regardless of the object's condition before excavation, the moment it becomes exposed, it is vulnerable to rapid deterioration."¹² Due to this instability, handling these artifacts must be done with the utmost care. The handbook advises that moving these objects is always appropriately supported, meaning these objects should always be carried on a tray.

¹¹ <https://www.nps.gov/nisi/index.htm>

¹² "Appendix I: Curatorial Care of Archeological Objects," accessed October 3, 2022, <https://www.nps.gov/museum/publications/MHI/AppendI.pdf>.

The next step after learning how to handle archeological collections is to learn how to catalog and store this type of collection. The handbook advises, when cataloging and storing this type of collection, "Use acid-free boxes with lids rather than self-closing boxes with flaps that will wear out over time—store small objects like lithic points and nails in boxes manufactured to store archival and photographic collections. Use small resealable polyethylene bags for individual specimens and stack them vertically within each box section. You can staple them to acid-free index cards to make them easier to stack. If the objects are not numbered, include an acid-free tag with an identification number inside each bag. Also, be sure to write the number on the outside of the bag or the card."¹³

The first step when cataloging for the NISI collection was creating an entry in ICMS for the item. This entry included the temporary object catalog number, the artifact's collection, the weight, a brief description, and the artifact's provenance. Each of these fields would give the artifact a way to be identified and tracked as it was processed. The two most important fields are the artifact's description and provenance. These two fields can give you the most information on the artifact. The description can provide you with the physical characteristics and appearance of the artifact. An excellent detail can be the difference in telling one artifact from another. For example, if you were cataloging two hand-wrought nails that look almost identical. The description for one of the nails is a hand-wrought, faceted T-head nail. The description for the other nail is a

¹³ "Appendix I: Curatorial Care of Archeological Objects," accessed October 3, 2022, <https://www.nps.gov/museum/publications/MHI/AppendI.pdf>.

hand-wrought, rose-head nail. The type of nail in the description allows the researcher to quickly identify the difference between the nails.

As well as having a detailed description, the artifact's provenance can be an essential identifying factor. The provenance tells the researcher where precisely in the ground the artifact was found. This can be important when researchers are looking for items from a specific site location. After entering ICMS, the next step is to mark a bag with the site number, collection number, temporary catalog number, and artifact description. Like the information in ICMS, the artifact can be identified and tracked. When choosing what bag to put an artifact in, it is essential to choose one that fits it perfectly. If a bag is too big, the artifact could be jostled around, causing damage to it. If a bag is too small, the artifact is at a greater risk of being damaged when it is removed during research. The artifact is also at risk of breaking from any pressure on the box or the bag it is in. The final step in the cataloging process is to send the completed records to the Southeastern Archeological Center. The center would then give the records permanent catalog numbers and send them back to the team at Waring.

Once we cataloged, bagged, and organized the artifacts, the next step for the team was to create micro-environments for the metals in the collection. To do this, the team used the NPS Conserve-O-Gram on the microenvironment to create them. The NPS defines a microenvironment as "an enclosed space with an airtight seal that controls RH with desiccants such as silica gel or montmorillonite clay. These remove excess RH from the enclosed space."¹⁴ Microenvironments are essential in that they help stop and

¹⁴ "Con Serve o Gram - National Park Service," *Conserve-O- Gram Creating A Microclimate Box for Metal Storage*, last modified September 2011, accessed October 2, 2022, <https://www.nps.gov/museum/publications/conservoogram/04-16.pdf>.

prevent any further corrosion from happening to metals in a collection. The team's first step in creating a microenvironment was acquiring airtight plastic containers. The container recommended to the Waring team were weatherproof Tupperware containers. These containers have a rubber seal around the top which makes that airtight. After acquiring the containers, the next step was calculating and measuring how much silica gel was required for each container. The amount of silica is determined by the volume of the container. The larger the container, the more complex the environment is to control, so more silica is needed. Silica gel is a desiccant that absorbs any humidity that makes its way into the microenvironment. Eliminating and controlling this humidity is essential in maintaining the stability of the artifact. The final step in creating a microenvironment is adding the humidity strip. This strip allows the repository to check the humidity within the microenvironment. Once this last step is complete, the team adds metal objects to the microenvironments.

Direct labeling was the second to last step that the team at Waring did during my time there. Direct labeling is when you physically write the catalog number on the artifact. Doing this allows the item to be identified in case it is separate from its bag and tag. When direct labeling an item, it is essential first to know what items are safe to label. Items such as glass and ceramic are perfect for direct labeling because they are non-porous and offer a hard flat surface to write on. Items like bone and metal are not to be directly labeled because bones are very heavily porous and will absorb the labeling medium. Metal is not directly marked due to the corrosion on the item; if labeled, the medium would flake off, rendering the label useless. When directly labeling artifacts, there are many things to consider, like what method and medium are to be used. It is

essential to ensure that whichever method and medium are reversible. It must be reversible if the item's catalog number changes or it needs to be sent off for other conservative processes.

The most common medium for direct labeling is B72, a plastic polymer that is dissolved in acetone. When creating the medium, add .25 grams of B72 to .75 grams of acetone and stir well. When the mixture is ready, you will have a liquid plastic that is the consistency of room-temperature maple syrup. Once the medium is mixed, the method needs to be determined. The sandwich method is the most common method used when directly labeling. To do this method, you first put down a thin layer of B72 and let it dry. Once it is dry, you will do one of two things; if it is a light-colored object, you will write the catalog number on the artifact using a quill pen and water-soluble India ink. If the artifact is dark, you will put a layer of white acrylic paint. Once it dries, you will write the catalog number on the artifact with a quill pen and water-soluble India ink. The final step in direct labeling is once the ink dries, you put one last layer of B72 over the label. Doing this seals the label to the artifact. Once the B72 is dry, the artifact can return to its bag and collection.

Once the objects are directly labeled, the last step is to box the artifacts. When boxing the artifacts, it is essential to have a standard system for collection organization. Having a standard system allows the collection to be quickly and easily searched. When boxing, the team at Waring had to first organize the artifacts by putting them in trays in numerical order by catalog number. Once this was done, the artifact trays were set into acid-free boxes. After putting the trays in the boxes, the next step was creating an inventory list for each box. This list would include the artifacts' catalog number,

collection, and count. This inventory allows for quick and easy access to the artifacts. Once the boxes were packed, the next step was to create labels for the outside boxes. These labels included information such as the collection name, the catalog number range in the box, the provenance, and the location where the collection would be stored. After this final step, the collection was ready to be placed in its final location.

While working on the Ninety-Six National Historic Site collection, I learned and implemented the best practices when caring for an archeological collection. Through this project, I learned the best ways to store and catalog a collection, the proper way to handle artifacts, and many other skills that will help me in the museum profession. The collection from the Ninety-Six National Historic Site is a prime example of why best practices must be implemented. Without these practices, the collection would have continued to degrade until it was to the point that it had little to no research value. The best practice that was implemented by the parks service allows those that have very little training with collections to be able to handle and store them properly. Without the findings of the 1980 State of the Parks Report, the push to stabilize collections held by the National Parks Service would have happened much later, which may have been too late for some of the collections in their care. This could have led to the loss of valuable information about our nation's history. The push for collection cataloging and stabilization within the park service continues. As the large backlog of collections is stabilized and its staff is instructed on the best practices in storing and handling a collection, the National Park Service comes ever closer to the goals set forth by the 1980 State of the parks report being completed.

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