



Article: The role of conservation in the move of collections of the Smithsonian National Museum of the American Indian

Author(s): Leslie Williamson and Emily Kaplan

Source: *Objects Specialty Group Postprints, Volume Eight, 2001*

Pages: 106-115

Compilers: Virginia Greene and Lisa Bruno

© by The American Institute for Conservation of Historic & Artistic Works, 1156 15th

Street NW, Suite 320, Washington, DC 20005. (202) 452-9545

www.conservation-us.org

Under a licensing agreement, individual authors retain copyright to their work and extend publications rights to the American Institute for Conservation.

Objects Specialty Group Postprints is published annually by the Objects Specialty Group (OSG) of the American Institute for Conservation of Historic & Artistic Works (AIC). A membership benefit of the Objects Specialty Group, *Objects Specialty Group Postprints* is mainly comprised of papers presented at OSG sessions at AIC Annual Meetings and is intended to inform and educate conservation-related disciplines.

Papers presented in *Objects Specialty Group Postprints, Volume Eight, 2001* have been edited for clarity and content but have not undergone a formal process of peer review. This publication is primarily intended for the members of the Objects Specialty Group of the American Institute for Conservation of Historic & Artistic Works. Responsibility for the methods and materials described herein rests solely with the authors, whose articles should not be considered official statements of the OSG or the AIC. The OSG is an approved division of the AIC but does not necessarily represent the AIC policy or opinions.

THE ROLE OF CONSERVATION IN THE MOVE OF COLLECTIONS OF THE SMITHSONIAN NATIONAL MUSEUM OF THE AMERICAN INDIAN

Leslie Williamson and Emily Kaplan

Introduction

The collection of the Smithsonian National Museum of the American Indian (NMAI) comprises approximately 800,000 archaeological and ethnographic artifacts from native cultures throughout the Western Hemisphere. We are in the process of transporting the collection from the museum's Research Branch in the Bronx, NY to the new Cultural Resources facility in Suitland, MD. It is anticipated that the move, which began in June 1999, will take five years.

There are 27 term positions dedicated to this project on each end of the move. The structure of the collections move roughly parallels that of the museum. The move "departments" - Conservation, Registration, Collections Management, Photography, and Administration - work in close technical consultation with the corresponding museum departments but are dedicated to the move project, with separate management and budget. Move management includes seven assistant move coordinators: two for conservation (one on each end), two for registration, two for collections and one for photography (in NY only). Within this structure, conservation responsibilities tend to be the most varied and subjective. Often, conservators are problem solvers for anything that falls outside of the normal routine. Because we work at both ends of the move, and as equal members of the move team rather than as consultants from the larger museum, we are able to have daily on-site influence on move activities, and to institute standards for the care of the collection during and after the move. This daily conservation involvement in the move simplifies and ensures the implementation of procedures for preservation.

Research Branch, Bronx, NY

Prior to the move, the museum conducted a full registration inventory and a concurrent collection-wide survey to assess conservation needs. Five conservators and technicians were hired on a temporary basis. The goal of this survey was to identify all condition problems severe enough that the object would require treatment in order to safely transport it to Suitland. Numerous minor stabilization treatments – such as tying off a thread of loose beads – were conducted on the spot during the survey. For objects that would require more involved treatments, comments about condition were entered into a database and the objects were re-shelved for later attention. We began by using designations #1, #2, and #3 to indicate the priority level for each object, #1 meaning "needs treatment prior to moving," #2 meaning "re-evaluate after move" and #3 meaning "stable, nothing needed". For ethnographic objects, we also used the descriptive categories "minor surface repair", "major surface repair", "minor structural repair", and "major structural repair" to indicate the expected scope of treatment that would be needed. Only the objects designated as #1's are being addressed as part of the move project.

This structure seemed reasonable when we first developed it, but in fact it became difficult to manage. First, space and equipment didn't allow for computers in the collections areas, so all of this information had to be recorded on paper and the data entered into the database later on. Second, in an attempt to ensure the longevity and accessibility of our data, we decided to integrate this information into the collections database the museum was using at the time, rather than making a stand-alone conservation database. We assumed that this would be easier to keep upgraded and be more likely to keep pace with the museum's needs. Unfortunately, the museum's database was in transition and changed systems twice during the life of the survey, actually making our record keeping rather scattered. Currently the data is being maintained, but it is still not in one single format together

We also found that with the changing databases, objects designated as #2's (such as minor glass disease or efflorescing but stable salty ceramics), became very difficult to track. Therefore, this information probably won't be used for planning future treatments as we had been originally envisioned. The data for the #1's, though, does serve now as a planning tool for work to be done ahead of the move process proper. We are moving the collection by cultural groupings (i.e. geographic area and tribe) so prior to moving a given group, we search the data for all the #1's, pull them from the shelves, and take them to the conservation laboratory for treatment. We have a staff of six in the conservation department at the Research Branch and are completing the expected treatments for each group several months in advance of their scheduled move.

Inevitably, as each group is processed we identify more unstable objects, those overlooked during the survey or those with new conditions. These objects are treated as rapidly as possible, with the minimum treatment necessary to stabilize the object for transport. Every effort is made to try to keep the objects moving together with the rest of their cultural grouping. This is important because the compactor storage at the Cultural Resources Center has very little extra room. There, we re-sort the collection by group, provenience, and object type for storage, before shelving them using the minimum space possible. This makes it important for the Research Branch to send entire cultural groups together, to ensure that adequate space is allotted for all objects, and that no unnecessary space is wasted as we work our way through the compactors.

Along with our space constraints, the move project has severe time constraints. At the Research Branch, this means that the day-to-day conservation tasks require fast decision-making so that the flow is kept constant. Figure 1 is an oversimplified flow chart of the move process. Conservation work is done immediately after the objects are pulled from the shelves and bar-coded by the members of our Registration Department. Therefore, the imaging and packing that follow conservation are dependent on our efficiency. Although time is an issue, all objects pulled for treatment in the laboratory receive complete written and photo documentation.

Conservation tasks at the Research Branch include determining the stability of the artifacts, and performing stabilization treatments, surface cleaning, determining pest management procedures, and constructing specialized packing mounts as necessary. For surface cleaning we use only

HEPA (high-efficiency particulate filter) vacuums, and wear protective clothing and gloves. Our goal with cleaning is twofold: first, to remove loose grime that could cause damage to the artifacts during transit, and second, to remove all evidence of old pest infestations so that in the future it will be easier to identify any new infestations. We attach a label to the barcode for each object indicating the appropriate pest management procedure. Our labels include: “freeze”, “do not freeze”, “needs IPM,” “Vikane” and (soon) “CO₂.” In this way we communicate the needs of each artifact to the people working farther down the line, as this will affect each stage of the process at the Research Branch and the Cultural Resources Center. Figure 2 shows the Integrated Pest Management (IPM) labels and the standardized notes that conservation sends with individual objects, with directions for the Cultural Resources Center staff. Figure 3 describes each of the IPM designations.

In sum, conservation handles much of the irregular work so that the flow of the rest of the move won't be impeded. At any one time, about half of the conservation staff is cleaning artifacts, leaving the rest to do treatments and work with other problems. For example, oversized packing was done in the conservation laboratory until enough space was freed up in collections storage - this took about two years. Conservation packs most of the very fragile objects and many of the treated objects to minimize handling.

Other ongoing conservation responsibilities include coordinating testing of environmental hazards within the collection areas, advising on materials and packing systems, monitoring and documenting damage, and object handling training.

Collections-based hazards

Museums all over the United States are now forced to deal with the possible presence of contamination from past pesticide treatments in their respective collections. The responsibility of repatriating objects back to native communities has made this long-time concern urgent. At NMAI, testing is done as a matter of course for objects being repatriated. But in the course of this move, each object is handled a number of times by a number of people, so we are of course concerned about staff exposure to contaminants. Therefore we designed and undertook a testing project as one part of the work the museum is doing in this area.

Conservators at the Research Branch wiped a designated area on each storage bank in the building, and then analyzed the wipes using a rented portable X-ray fluorescence unit to look for lead, arsenic and mercury. The results gave us a broad “map” of contamination by these metals in the settled dust in the collection. Based on this “map,” we can schedule personal breathing zone monitoring and hand wipe testing to correspond with times when we are working in known “hot spots”. This way, we monitor staff at the times of highest risk to exposure so that we can feel confident that no one is experiencing any unacceptable exposures. Lead, arsenic, and mercury have been found throughout the Research Branch but in amounts consistently below hazardous levels.

The Cultural Resources Center (Cultural Resources Center) opened in 1999. The building was designed to house the collection, and to serve as a center for research, for community services and outreach and to support the NMAI public facilities on the National Mall and in New York City. The museum on the Mall will open in 2004.

The carefully choreographed flow of objects from station to station at the Research Branch is mirrored, approximately, at the Cultural Resources Center. At the Research Branch, after conservation the objects are digitally imaged, packed into boxes, frozen if appropriate, packed into our modular crates, loaded onto a truck and sent to the Cultural Resources Center in Suitland. In brief, the process is this: upon arrival at the Cultural Resources Center, the move team unloads crates from the truck and puts them in a temporary holding area in collections storage. As each object, box, crate, and truck are bar-coded and scanned; registration staff can generate detailed lists of the contents of each crate and box. From this data, we are able to establish an unpacking order, which depends on the content of the shipment and often by the needs of other departments, including repatriation and curatorial for exhibitions.

Crates and boxes are brought to unpacking stations, and once unpacked and scanned out of their respective boxes and crates, the artifacts are moved and scanned into another station, where move technicians construct custom storage mounts, and sort the objects on carts by culture or geographic area. Finally the objects are shelved, a process requiring ingenuity, agility, brute strength, and no fear of heights.

Registration and the collections database

The NMAI registration system of object tracking should be noted at this point, as it is an integral part of the move. In brief, each object receives a unique barcode at the Research Branch, as does each box, crate, and truck. The object is scanned into the box, the box into the crate, and the crate onto the truck. At the Cultural Resources Center, the reverse happens: the crates are scanned off the truck, the box out of the crate, and the object out of the box. Then the object is scanned into a temporary location at the mounting station, and finally it is scanned into a shelf or drawer – which will in turn indicate the exact location in storage. The data from scanners is uploaded daily to the collection database, and from there our registration staff can (among other things) track the object's movement history, access the respective digital images, and sort according to a number of variables to aid in the shelving process.

Conservation is incorporated throughout the move process on both ends, but at the Cultural Resources Center there is no single designated place such as the cleaning and inspection station on the move line for conservation. One full-time conservator is dedicated to the collections move at the Cultural Resources Center. We rely on training and communication with the rest of the move team and with our counterparts at the Research Branch. For example, a formal condition assessment of each object on unpacking (such as we would do for loans) would be impossible.

Conservation conducts object handling training for all NMAI staff who will be handling

collections, to members of the move team including contractors, and of course volunteers and interns. During handling training we emphasize the importance of communication and asking questions: we instruct team members to alert the conservator immediately upon encountering any objects that have been flagged by the Research Branch, any pest management concerns, damage or potential for damage, handling questions, anything that is at all questionable. With some experience, members of the move team become familiar with different materials and potential problems. Conservators and packers at the Research Branch attach notes to crates, boxes, and objects, to alert conservation at the Cultural Resources Center to particular condition concerns, and to special or new packing systems that will need evaluation and documentation on unpacking. We use digital images often, which help us provide timely feedback to the Research Branch. Conservation is alerted immediately if damage - which occurs very, very rarely - happens or is discovered. If there is damage, we complete a formal damage report.

The move conservator deals with minor treatments that can be done in situ. Anything more complex will be sent to the laboratory if it can't wait, otherwise, objects with damage or other problems are documented and remain in storage until they become a priority.

Integrated Pest Management

Conservation is responsible for pest management on both ends of the move. In tandem with the sticker system above, we have identified several pest management categories (see figures 2 and 3). Registration staff created barcodes for each of these categories and conservation scans the information. This means that the category and the date are attached to the object's record. For example, organic objects that cannot be frozen safely are flagged for inspection by conservation upon unpacking. If the object appears uncompromised - there is no recent frass or insect-related damage, and thorough inspection is possible - it will be scanned as "Inspected Deemed Okay." If the condition is at all questionable, the object will be scanned as "Bag and Monitor." We search the database periodically for bagged objects and their respective locations in storage. In addition, sometimes we may choose to freeze an object that was not frozen at the Research Branch, or to put the object in a low oxygen environment.

Storage Mounts

At this point, time is our greatest pressure: this means our short-term, weekly goals of keeping up with the trucks from New York, our relatively long term deadline of five years to complete the move, and our very long-term goal: permanent storage of a collection we expect will be much used. The move is our one chance to organize and rehouse the collection so that it is both safe and accessible. Because a conservator has been dedicated to the move team from the beginning we have been able to have complete oversight of the design, construction, and materials used for storage mounts. We evaluate and document innovations as our techniques have gotten better and faster. The storage mounts must be safe but must not obscure the object,

Williamson and Kaplan

they must be as small as possible but still allow access, they must be aesthetically pleasing. And overall, economy of time, materials, and space is essential.

Conclusion

The Research Branch and the Cultural Resources Center are physically very different and face different problems but the move staff at both ends must function smoothly together. Both ends work with the same restraints of time, space, scheduling, and resources in different configurations. Communication is essential. Move-related conservation work - whether it is stabilization treatments before packing, or storage systems on the receiving end - must integrate the immediate with the long-term needs of the collection.

Authors' addresses

Leslie Williamson, Smithsonian National Museum of the American Indian - Research Branch, 3401 Bruckner Blvd, Bronx, NY 10461 (williamsonL@si.edu).

Emily Kaplan, Smithsonian National Museum of the American Indian - Cultural Resources Center, 4220 Silver Hill Rd., Suitland, MD 20746 (kaplaneE@nmaircr.si.edu).

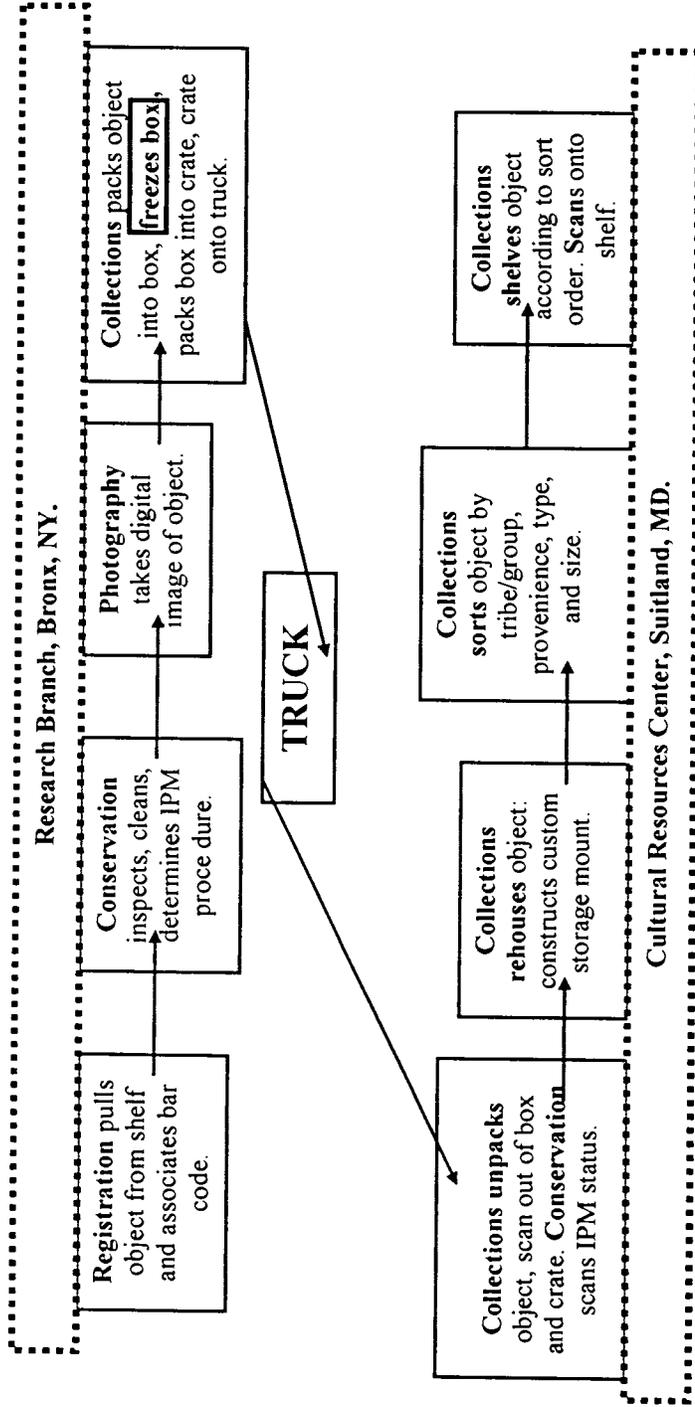


Figure 1. A vastly oversimplified plan of the NMAI move line.

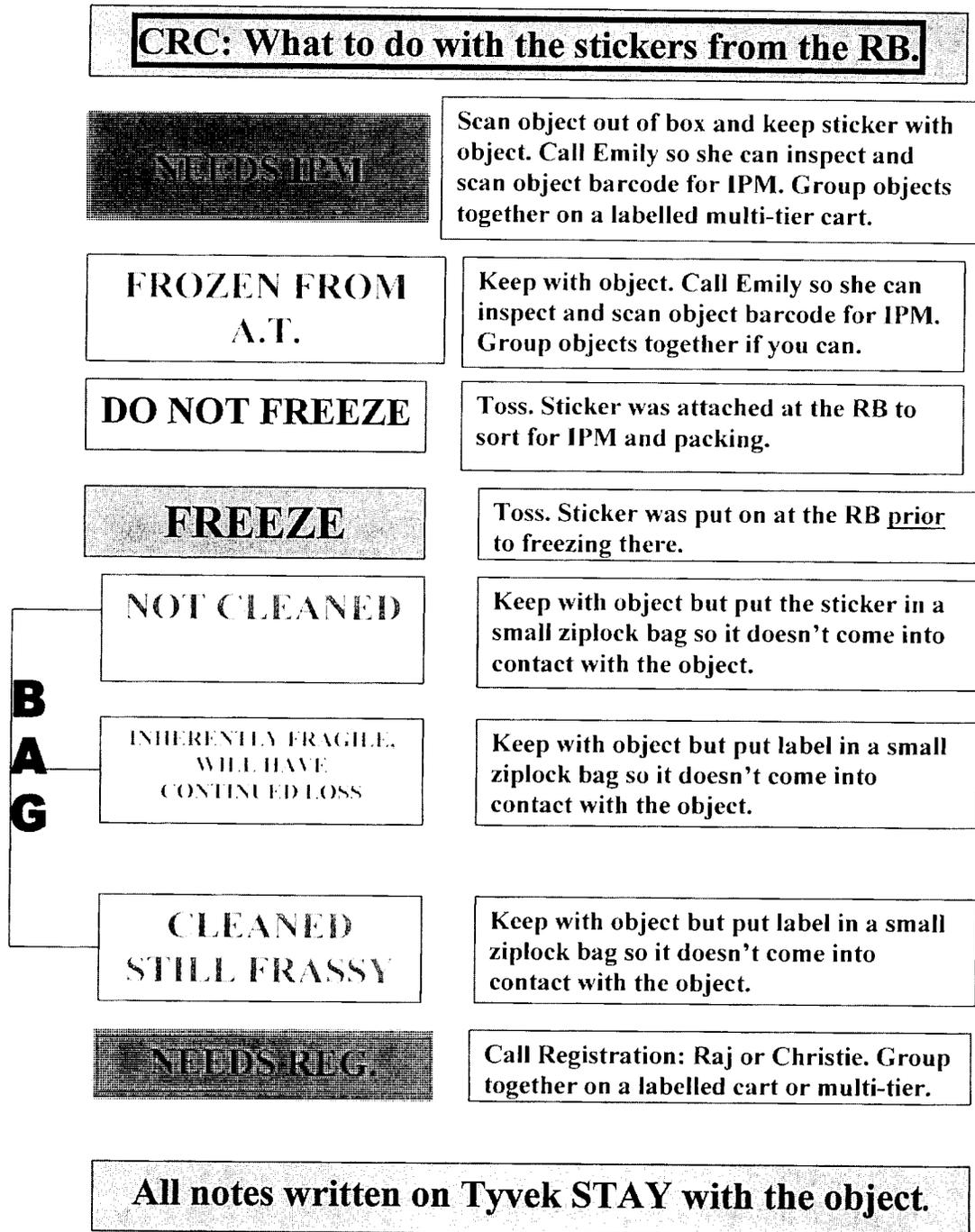


Figure 2. Labels attached by Research Branch conservation staff to object barcodes. This alerts the conservator at the Cultural Resources Center. The original labels include color coding which cannot be reproduced here.

Inspected, deemed OK.

Denotes an object that was 1) not frozen at the RB to avoid potential damage from freezing and 2) inspected upon unpacking at CRC, and deemed to be pest-free. This includes objects like ivory and bone, which are not readily infestable, but for which we want to have a record of not freezing. This category also includes objects (like drums) that have a structure that can be seen from all sides. An object that has “hidden” areas would not be in this category.

Frozen from Audubon Terrace.

Denotes an object we would not usually freeze, but which was frozen at the RB after it was moved from the old museum at Audubon Terrace in 1994/5. The notation is used in case there is a condition problem that might be related to freezing.

Bag and monitor: possible active.

Denotes an object that was 1) not frozen at the RB to avoid potential damage from freezing and 2) inspected upon unpacking at CRC, and found to have suspicious evidence of insects, or more commonly cannot be fully inspected due to the structure and/or materials. Examples include a fur bag with decorations of claws and teeth: one cannot fully inspect the interior or the fur, and we usually do not freeze claws and teeth due to their laminar composite structure. These objects are shelved along with the rest of the culture. Registration can create a spreadsheet from the database of all objects scanned as needing monitoring, their respective locations, and date of bagging. This spreadsheet can be used to locate and monitor these objects.

Bagged and monitored, OK.

Denotes an object that shows no evidence of pest activity after being bagged and monitored for several months.

Needs low O2 – active.

Denotes an infested object that we don't typically freeze. The method of low O2 is not specified here. (We will add a barcode for **CO2 – Needs CO2 –preventive and active and done.**) This barcode also serves as a sort of back-up documentation, so that the date of infestation becomes part of the object's record in the CIS database.

Figure 3a. Integrated Pest Management labels used for National Museum of the American Indian collections move

Needs low O2 – preventive.

Denotes an object that we don't typically freeze and for which pest activity is not apparent. This barcode may not always be used. For logistical reasons, it is more likely that the object will get scanned only after the treatment is done.

Low O2 done.

Denotes an object we don't typically freeze, that was infested, and was treated with a low oxygen method. The method of low O2 is not specified here. We will add a barcode for **CO2 - Needs CO2 –preventive and active and done.**

Freeze – active.

Denotes an infested object that can safely be frozen. This barcode also serves as a sort of back-up documentation, so that the date of infestation becomes part of the object's record in the CIS database.

Freeze – preventive.

Denotes an object which can safely be frozen, and for which pest activity is not apparent. For logistical reasons, it is more likely that the object will get scanned only after the treatment is done.

Frozen.

Denotes an object that was frozen. As of this writing, the only objects that get scanned as "Frozen" are those frozen at the CRC. The large quantity of objects frozen at the RB precludes scanning each one, and at this time we are not able to do a batch scan.

To Be Vikaned.

Denotes an object that cannot be safely frozen or is too big to fit in one of the NMAI walk-in freezers. This barcode is rarely used, as objects are Vikaned at the RB.

Vikaned.

Denotes an object that has been treated with Vikane. Most often such an object will only be scanned after treatment.

NOTE: The term "**preventive**" here, somewhat misleading, describes pest management treatments that are done even though pest activity is not apparent. NMAI policy mandates that every infestable object that comes into the CRC gets some kind of preventive treatment in case of infestation

Figure 3b. Integrated Pest Management labels used for National Museum of the American Indian collections move