

Journal of the American Institute for Conservation



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/yjac20

Rehousing a 'Working Collection': Perspectives from the Johns Hopkins University Archaeological Museum

Jennifer Torres, Katherine J. Gallagher, Sanchita Balachandran & Lisa Anderson

To cite this article: Jennifer Torres, Katherine J. Gallagher, Sanchita Balachandran & Lisa Anderson (2017) Rehousing a 'Working Collection': Perspectives from the Johns Hopkins University Archaeological Museum, Journal of the American Institute for Conservation, 56:2, 96-112, DOI: 10.1080/01971360.2017.1285164

To link to this article: https://doi.org/10.1080/01971360.2017.1285164





REHOUSING A 'WORKING COLLECTION': PERSPECTIVES FROM THE JOHNS HOPKINS UNIVERSITY ARCHAEOLOGICAL MUSEUM

JENNIFER TORRES D, KATHERINE J. GALLAGHER, SANCHITA BALACHANDRAN, AND LISA ANDERSON

Johns Hopkins Archaeological Museum, Baltimore, MD, USA

Using the Johns Hopkins Archaeological Museum (JHAM) as a case study, this article explores the unique approaches used to rehouse a collection with a core teaching mission. Unlike the collections of more traditional museums, the JHAM's holdings are meant to be used by students, faculty, and researchers as a means of pursuing knowledge. Supporting this pedagogical mission requires innovative rehousing approaches that protect the collection while ensuring its use. This paper discusses recently implemented rehousing strategies that emphasize high visibility, ease of accessibility, and guided handling of objects, and considers the unique challenges and advantages of providing access to such a collection. Rehousing is also posited as only one aspect of collections care; rather, the authors propose that a more holistic approach to the long-term preservation of objects in the museum's care encompasses not only their physical stability through rehousing and conservation, but also the stability and stewardship of their provenance histories and collection data. The ultimate goal of these various modes of care should be ensuring that the collection "works" such that the use of objects maintains and extends their meanings and utility.

KEYWORDS: Rehousing, teaching collection, university museum, archaeological objects

I. Introduction

[Of] even greater importance is the smaller working collection of the university, which fulfills in a general way the functions of a scientific laboratory. Nothing has more power to attract and hold the attention of students, to awaken and sustain their enthusiasm than the constant presence of the tangible remains of antiquity, the actual work of Greek and Roman hands. To students who by daily contact have become familiar with these things and understand their significance the men of old are real persons and their classical literature becomes the expression of a real life. (*The Classical Weekly*, Harry Langford Wilson 1908)

Envisioned as a teaching museum since its founding in 1882, the Johns Hopkins Archaeological Museum (JHAM) opened a mere six years after the founding of the Johns Hopkins University (JHU), the first research university in the United States. As one of the earliest university museums in the U.S., the JHAM currently comprises a teaching collection of over 13,000 objects primarily from the ancient Mediterranean and Ancient Near East, which consists of a wide range of

media including ceramics, metal alloys, stone, glass, faience, and organic materials such as wood, fiberbased objects, and animal and human remains. Archival documents and publications such as Wilson's statement on the importance of having "daily contact" — both literal and metaphorical — with ancient objects evidence the extensive use of the museum collection in teaching from its very inception. Not only were these objects meant to be held, studied, and admired as reference materials, but they were to be specifically used as objects of primary research. This early insistence on a "working" collection, one that functioned as a usable resource, continues to guide the museum's mission today. But with changes in pedagogical and museological strategies and standards over the past 134 years, collections strategies have also changed and evolved. This paper addresses recent approaches to rehousing and related collection management efforts at the JHAM that work to complement, support, and enhance the ever-expanding teaching mission of the museum. At their very core, these strategies are based on the assumption of extensive and recurrent use of the collection by non-museum specialists for the purposes of teaching, research, exhibition, and enjoyment, with the expectation of making and sustaining the collection as one that "works."

2. HISTORY OF THE COLLECTION

Much of the JHAM's collection material was acquired in the late 19th and early 20th centuries through donations from the Baltimore Society of the Archaeological Institute of America, notable Baltimore donors, and university faculty who purchased collections with university funds for purposes of teaching and research. Originally called the "Historical Collection" and housed in the university's History and Political Science Seminary, the museum's earliest function was as tangible evidence of the past that could be investigated in the same way that historical and literary texts as well as contemporary newspapers could be. A diagram of the main seminary (or department) shows a seminar table at the center of the room surrounded by designated spaces for the historical collection, the "newspaper bureau," a card catalog, bookshelves for texts related to different time periods, and maps (Adams 1884). The centrality of a museum collection to the study of the past is even more evident in early university course listings which explicitly state the use of museum objects in instruction. For example, a 1910 description of the coursework in the Department of Classical Archaeology mentions the collection as "[forming] the basis of original investigation" (1910 JHU Circular). The course "The Private Life of the Romans" taught in 1917 is described as "[including] practical exercises requiring the use of a wide range of archaeological objects...in the museum" (1917 JHU Circular). When the university moved to its current location on the Homewood campus, the museum collection was arranged to be fully integrated into a teaching space in its new iteration. Two undated images, possibly dating to the 1930s or 1940s, show student desks clustered around a lantern slide projector facing a screen and a blackboard; ringing the desks are display cases filled with objects and cabinets presumably holding the catalog cards that document the museum's holdings. It is possible to imagine faculty

projecting images of archaeological sites on the raised screen, writing notes on the blackboard, and then perusing the catalog to select objects to illustrate their lectures (Fig. 1).

Despite the early significance of the collection for teaching, its use appears to have been more limited in the second half of the twentieth century, possibly related to the fact that the collection was relocated to a much smaller and less visible location. The lack of space to properly display and house the collection severely restricted its use in teaching, and by 2007, it was largely underutilized and minimally accessible. However, in 2010, due to the ongoing commitment of the Krieger School of Arts and Sciences (KSAS) of IHU, the museum moved to a custom-built teaching and exhibition facility in the heart of Gilman Hall, the home of the humanities departments at the university (Fig. 2). In the past six years, the museum has become a key locus for teaching, with the necessary space and digital tools used by teaching faculty now in place. It has also been transformed into a new laboratory for technical study through the acquisition of computers, digital cameras, stereomicroscopes, and a portable x-ray fluorescence spectrometer. These recent transformations have allowed the collection to once again become the focus of teaching, study, research, and exhibition under the guidance of faculty and museum staff.

Since the completion of the new museum space, the number of courses that have met in the museum, both at the undergraduate and graduate level from various disciplines, as well as physical visitorship outside of courses has increased, moving from only a handful of courses being taught in the museum prior to its reinstallation, to an average of forty courses per year since 2012. In the past six years, over 4000 students in 223 courses have worked with the museum collection as part of their coursework. This tremendous growth in the physical use of the museum's objects has required new rehousing strategies to ensure that the collection



Fig. 1 Undated photographs (possibly dated to the 1930s or 1940s) show the integration of the museum collection and teaching spaces.



Fig. 2 The exterior of the Johns Hopkins Archaeological Museum's new exhibition area, with a view into one of the museum's new working and teaching spaces. Courtesy of the Johns Hopkins Archaeological Museum.

could be safely and easily located, transported, examined, exhibited, and regularly used.

3. COLLECTION PREPARATION AND DOCUMENTATION

Despite being an integral part of the pedagogical mission of the university for 134 years, the museum collection had never been fully documented, in part because there was no full-time curator, registrar, or collections manager for the entire collection until the mid-1990s. Historically, individual faculty members were responsible for objects within their area of expertise and often stored objects related to their courses in their own offices. At that time, the most comprehensive documentation of the collection was an undated card catalog. The card catalog is organized by accession number, the primary identifier for an object, and lists for each accession number a brief physical description including material and measurements, time period and cultural affiliation if known, and if the object belongs to a particular collection within the overall collection, such as the Cohen Collection of Egyptian Antiquities. Before beginning the physical rehousing of the objects in preparation for the new space opening in 2010, it was essential to gather as much information about the current nature of the JHAM collection as possible. In 2007, a complete physical inventory was undertaken on paper by then-curator Eunice Dauterman Maguire. In the same year, Sanchita Balachandran carried out a conservation survey to gain a sense of the breadth of the collection, prioritize its conservation needs, and stabilize a limited number of objects prior to their move to temporary storage. This was the first time such attention had been given since the late 1970s and early 1980s when Terry Drayman-Weisser and other conservation staff at the Walters Art Museum had surveyed the collection and treated a small portion of it for the 1984 publication *The Archaeological Collection of the Johns Hopkins University* (Williams 1984). The 2007 conservation survey identified that approximately 25% of the collection had active conservation needs that had to be addressed in order to prevent further damage from active deterioration, and that an additional 44% of the collection required rehousing, examination, and stabilization.

While museum staff continued to track the location of objects and prepare the collections for the move to the new storage and exhibition spaces, a grant from KSAS made it possible to hire a rehousing specialist (co-author Lisa Anderson) for a period of 18 months, and a subsequent gift from JHU alumna Marjorie Fisher made it possible to continue the project for an additional year. In this first rehousing phase, as objects were re-associated with accession numbers and documented in a new customizable digital database, it became clear that the collection was in fact much larger than first estimated and posed significant challenges due to the variability of media, condition issues, and teaching needs it represented. Thus, much more extensive and sustained efforts were necessary to ensure the long-term care, preservation, and regular use of the collection. Through a Museums for America grant from the Institute of Museum and

Library Services (IMLS) awarded in October 2014, the museum has begun a comprehensive rehousing and digital photography project of the collection (Award Number MA-30-14-0339-14) to address these needs.

Initially, the rehousing of the collection was considered to be an isolated first step — caring for the collection at the level of the individual object - and it was assumed the project could be completed primarily by a rehousing specialist. It quickly became evident that such a project could not be efficiently executed without involving many areas of registration and collections management. A holistic collections management approach, one that not only considers the physical care of an object but also the maintenance of critical information about an object such as provenance, loan history, and related research, was implemented shortly after the start of the IMLS-funded rehousing project. Following standard museum practices, information about the acquisition of the object as well as a physical description was entered into the database in a standardized manner for all objects, and a paper printout was placed in object files organized by accession number. In addition to fulfilling the legal requirements of collection care, these digital and paper records are particularly critical as many of the objects in the museum collection were acquired at a time when the recording of archaeological provenance was of limited interest; thus, any information gleaned through archival research, faculty consultation, examination of comparanda, technical study or other means are of vital importance to contextualizing these materials and therefore making them useful for teaching. The challenge of addressing these needs best falls to a professional museum registrar and collections manager whose facility with the appropriate standards for the care of such data is invaluable.

At the start of the rehousing project, the lack of comprehensive and current inventories, a result of the collection's long history as a teaching collection, hindered the start of the rehousing project. Until 2010, objects in the collection were tracked using the catalog cards, inventory notebooks, and word processing software, all primarily in paper form or collated as word-processing documents, both of which were practically unsearchable. Of particular and immediate importance to the project was the tracking of object location changes during rehousing and move preparations in addition to recording changes to accession numbers that occurred as objects were reconciled with the card catalog. The introduction of the use of the FileMaker Pro relational database represented a complete transformation in the way the collection was documented and how objects were tracked, which improved the collection's accessibility for teaching, research, and exhibition.

A large amount of staff resources was put towards the development and maintenance of the database, an

important tool for organizing and administering the rehousing project. The database was customized to indicate which objects were prioritized for rehousing and to track when the rehousing was complete. The database also became integral in researching accession number issues. Because the IHAM collection originated as a teaching collection rather than a traditional museum collection, in its early years objects were not systematically assigned an accession number, but instead often retaining a numeric identifier used before the object was part of the JHAM collection or an inventory number that had no correlation to the accession numbers in the card catalog. To determine the proper accession number for many objects, the information on the cards needed to be searchable. An effort was dedicated to digitizing the information on the catalog cards and other paper documents so that their information is searchable within the database. Though the vast majority of objects recorded in the card catalog are locatable, some are not; for all cards entered into the database the object's status is noted, for example "Storage," "Pulled for Teaching/Study/Cataloging," or "On Exhibit." If the location is unknown, the status is "Unknown." By the end of the rehousing project, the most exhaustive inventory of the collection to date will be completed. Over the past six years, the museum database has been regularly customized to keep pace with the increasingly complex activities taking place in the museum. It now tracks object locations and movement. descriptions and conditions, mount and housing requirements, conservation treatments, scholarly research, as well as historical and analytical data associated with each object. A recent customization tracks the use of the collection in teaching, identifying which objects are used by specific instructors for specific courses, and enables attaching digital copies of syllabi, student reports, and other related materials to individual object records in the database.

To meet current museum standards and to clarify common accession number issues, a new accession number protocol was written to assure each object has a unique accession number. The protocol includes modifying the originally assigned accession number when possible and, for new accessions, using a standard tripartite number following the system outlined by Buck (2010b) that includes the year the object is accessioned (e.g., 2016.01.001). By keeping the original accession number as part of the new accession number, continuity between files identified by the original number, such as critical provenance information, publications, and photographs, is retained. Objects that do not have a number, either because they have lost their association with an accession number or because they may have never been assigned one, are given an FIC (Found in Collection) number (Buck 2010a). By having the card catalog information and FIC numbered objects searchable in the database, it is expected that many FIC numbers can be reassociated with their original accession numbers. All accession number changes are extensively documented in the collections database as well as on paper forms created for recording the process. These essential activities have ensured that objects can be tracked as they are rehoused, photographed, stored, and used in pedagogical activities.

Significant benefits to the care, management, and use of the JHAM collection have resulted from the rehousing project; this includes clarifying accession numbers for objects, drafting a comprehensive numbering policy, developing and populating a collections database, and increased physical control of the collection. Entering all the known data about objects into the database, even when the objects were missing, has dramatically improved the accessibility of the collection to museum staff and faculty thereby improving the ability to care for the collection and facilitating the use of the collection for teaching. Some objects in the collection have limited teaching value because over the years the connection between the object and its accession number was lost and consequently, they lost their historical context. By searching details of these objects against records in the database, many of these objects are being "rediscovered." For example, a photography request from a scholar set into motion research that reunited an ancient object with its history. In a publication of the IHAM collection (Williams 1984), a decorative copper alloy Etruscan ladle was identified as accession number 620. A researcher wanted a recent color photograph of the object, but the object could not be found in the database or card catalog. However, a part of the object that had been recently rehoused was recognized by museum staff, and a subsequent search in the JHAM storage located the ladle handle and bowl. The handle had broken off the bowl; a repair that had been done about twenty years earlier for the publication but had since failed. The bowl had been labeled and housed with the number "A.744" which is an inventory number and was described in the database as a copper alloy disk. The handle was not labeled with an accession number so it had been assigned FIC.07.189, housed with that number, and cataloged as a copper alloy rod. Due to the descriptions and tracking of the objects in the database, the searchability of the database, and the staff's familiarity with the collection, these pieces were reunited with their original accession number, 620, and its provenance and rich research history.

4. REHOUSING STRATEGIES AND PRIORITIES

Although object rehousing is integrated into the general care and preservation efforts of museum professionals

as a means to minimize the deterioration of collections, the goals of rehousing projects and the needs that necessitated these projects vary among institutions and collections types. While peer-reviewed literature about rehousing efforts is limited, a number of museums have documented their rehousing projects on their websites and blogs. The American Museum of Natural History, the Phoebe A. Hearst Museum of Anthropology, and the Smithsonian Institution National Museum of the American Indian (NMAI), are just a few institutions that have completed large-scale rehousing projects that take aim at specific collection care purposes. The American Museum of Natural History began a rehousing project of their fossil mammal type specimens, which are dispersed throughout the entire storage space. This led to issues pertaining to inventory control and poor housing. To protect the integrity of these type specimens, rehousing measures were prioritized (Type Rehousing Project 2016). The Phoebe A. Hearst Museum of Anthropology implemented similar rehousing measures, but as a result of a large-scale move of their archaeological collections. The rehousing of these archaeological collections was not only implemented to prepare the objects for the move, but also served as a time-saving strategy for future collections care (Moving Archaeology Towards the Future 2013). Likewise, the NMAI completed a large-scale move and rehousing of more than 800,000 Native American archaeological and ethnographic objects over the course of five years. Rehousing mounts were created for each object at the new storage facility with the intent "to make the supports safe, functional, unobstrusive, and esthetically pleasing so that objects would not undergo unnecessary physical handling, and would be visible while still in the mounts" (Kaplan et al. 2005, 224).

While the collection needs that necessitated the rehousing of objects are similar among many institutions, the rehousing efforts at the JHAM are fundamentally different due to the museum's unique pedagogical mission. Unlike most museum collections that are primarily on display or in storage, up to a tenth of the IHAM collection moves from storage to the classroom each year due to teaching requests. Even when in storage, the objects in the collection must remain as visible as possible to allow faculty, researchers, student staff, and professional museum staff to browse objects by culture and material type, fulfilling the teaching, research, and preservation goals of the museum. This sustained use of the collection by various constituencies with differing levels of training in object handling was a decisive factor in how the collection was to be rehoused. The rehousing approach therefore had to be flexible and customizable by object type, material, and object condition; strive to provide maximum support, limit vibration, and protect against other risks to the objects while moving between collections and teaching spaces; be minimally visually intrusive so as to provide maximum visibility and reduce the need to handle objects to see relevant information; and be simple enough to facilitate ease of the removal and return of objects to storage containers when handling was needed. Furthermore, all of these goals needed to be met in storage designs with a small footprint due to the museum's extremely limited storage space.

Unlike most museum collections where objects predominantly remain stationary, either in storage or on exhibit, the collections at the JHAM frequently move due to teaching and research requests and storage in teaching drawers and rolling storage units. This high level of object use and movement is expected for the museum's objects in part because work with the collection occurs in many different contexts. An object is typically first encountered in the museum's storage area, where faculty and researchers might select objects for study, or where museum staff monitor the stability of the objects. For daily activities such as cataloging, research, teaching, or display, objects must move from storage to the museum through a heavily trafficked public corridor used by students, faculty, and staff. Once in the museum space, objects are expected to be handled by students and faculty in the teaching spaces, examined under microscopes, or mounted within student-designed exhibits in the museum's exhibition drawers. In each of these contexts, structural stability and high visibility of objects in their storage containers are essential. Given that student staff are involved in many of these activities, storage containers need to be easily understood, and the objects safely removable and returnable to them. Furthermore, as faculty, researchers, and students who are not particularly familiar with museum objects might be handling these objects, additional safeguards such as small signs or visual cues need to be integrated into the design of storage containers to ensure that objects are not damaged in these routine activities.

With these considerations influencing the features of mounts created, objects that fell into the following categories were prioritized for rehousing:

 Objects that were in potentially damaging nonarchival or poorly supportive containers Given the museum's long history, objects often came to the museum in storage containers such as cigar boxes, metal food tins, or cardboard boxes padded with cotton wool or acidic papers. While such containers are significant in terms of object history and provenance and need to be retained and thoroughly documented as data, they are inappropriate for long-term storage.

- Objects with no storage mount The construction of the new museum space between 2007 and 2010 required the collection be packed and moved. For the move, objects were wrapped in layers of acidic tissue paper or Tyvek to the point of being nearly invisible, and packed in boxes without storage mounts. When unwrapped after the move to new storage, these objects had no designated storage containers.
- Objects in grouped housing Between 2010 and 2012, similar types of objects were often housed in one container to save space in storage and to increase the likelihood that teaching faculty would be able to locate related objects. However, the increased use of the collection for teaching has made it evident that group storage is neither efficient nor safe for objects. For example, if one object in the container is requested for use, it requires either all of the objects to be relocated for the class, or that the single requested object be transferred to a less secure container for temporary use. Since 2015, all objects are housed in their own container, and while this may take up more space in storage, the benefit of using a single, wellsupported object for teaching outweighs the need to simply save storage space.
- Objects that are frequently used for teaching As faculty become familiar with the collection, they often request the same objects for teaching year after year. As needed, these high demand objects are rehoused for easier access, improved visibility, and ease of removal for teaching.
- Fragile objects Fragile objects that were actively deteriorating or risked significant and imminent damage required improved protective mounts for storage and monitoring. This was particularly true for the museum's archaeological glass and organic objects.
- Objects with storage mounts that are too elaborate for non-trained staff to safely use For some objects, the mounts created in the initial phase of rehousing the collection were found to be too complicated for non-trained staff to successfully return the object to the mount. A mount might also be replaced if returning the object safely during class requires a significant amount of time that interrupts the flow of instruction.

In the proposal for the IMLS-funded phase of the rehousing project, the stated aim was to rehouse approximately 2000 objects in their individual custom storage mounts. In order to tackle this significant task with the resources of only one full-time dedicated staff member and the museum's often-changing student staff, several processes were initiated to maximize limited staff time and to assure a standard approach from all staff members. To streamline the rehousing process, similar types of objects are rehoused at the same time when possible. In the preparation for

rehousing any new type of object, professional museum staff discuss the requirements for the storage mounts, identify specific challenges posed by the material type, manufacture, or condition of the objects, and brainstorm ideas for housing prototypes. This discussion guides the building of two or three prototypes which are tested for object stability, visibility, and ease of object removal. The staff select the most appropriate option and develop a written workflow that includes materials and all steps of production of the storage containers. A descriptive and clear workflow plan is particularly critical given that the rehousing project depends on assistance from student staff. The workflow increases the speed of the manufacture process, improves the quality and standardization of the final product, and serves as a record of the rehousing project that can be consulted for similar projects in the future. Because objects are often rehoused in batches according to type, or as needed for teaching, it is critical to track which objects have been rehoused. The museum's FileMaker Pro database was customized to allow staff to record when an object is in need of rehousing and to mark when the rehousing is complete. By regularly updating the database, staff has the ability to generate reports on the progress of aspects of the overall rehousing project, and create a record to assist in determining when a mount might need to be replaced in the future. The database is also used to carefully monitor the status of the object's photography and cataloging, thus ensuring that all data related to an object remains fully documented and associated with the rehoused object.

4.1 REHOUSING STRATEGIES

Given that extensive object use for pedagogical purposes is expected for the JHAM collection, rehousing strategies always focus on approaches that make the objects as visually and physically accessible as possible while striving to maintain the highest collections care standards. The following strategies were developed for large groups of similar objects in the collection, with the assumption that they could be further customized for other groups of objects as needed.

4.1.1 SINGLE OBJECT HOUSING

Prior to 2015, rehousing methods prioritized storage space and the ease of locating similar types of objects together, rather than ease of physical use of individual objects. Thus, many objects that were similar in form or function were housed in a single corrugated polypropylene archival box. While this grouped housing method was effective in conserving storage space, it was not ideal for a teaching collection as it caused unnecessary handling of objects that were not needed for a specific teaching or research request. In addition, some of the objects were housed so closely together as

to risk abrasion or damage. These overly compact mounts also made it difficult for non-professional users of the collection to safely return objects to their proper storage position.

A new housing strategy ensuring that all objects have their own storage containers has alleviated some of these stresses, and was first developed for over 300 ancient Egyptian faience shabtis and figurines in the museum collection. Due to their similarity in shape and size, as well as culture and function, the shabtis were previously housed together (Fig. 3) with as many as twelve shabtis housed in a single box in some cases. Custom individual housings using acid-free corrugated blue board were constructed for each figure, using the minimum dimensions needed to provide appropriate space for the objects and white polyethylene Tri Rod inserts to stabilize the objects in their boxes. By carefully determining the minimal size needed for a custom box, it was possible to store these individual containers in a storage footprint that is only slightly larger than the size used for the group housing method. By following the written workflow, the size requirements could be easily scaled up or down to rehouse a range of similar types of objects. The individual rehousing of the collection of Egyptian shabtis and figurines allows specific objects to be pulled from storage for study as needed, eliminating the risk of damage to other objects (Fig. 4).

4.1.2 FILING SYSTEM FOR SMALL OBJECTS

As the greatest risk to an object occurs during handling, prototypes for reducing or eliminating physical contact while still providing unobstructed visual access were developed for the museum's collection of over 200 ancient Egyptian faience amulets and small Greco-Roman metal objects. These small objects have previously been housed in archival boxes with dividers to allow multiple objects to be stored in a single box. Some of these objects were in polyethylene bags which limited access and visibility, while others were simply placed in boxes for ease of access. In the latter case, objects were at risk of being easily lost given their small size. The archival boxes also consumed significant storage space and were difficult to quickly search for a specific item. These obstructions had resulted in limited use of the collection despite the fact that it represented a tremendous diversity of cultural material.

By modifying the vertical stacking storage suggested in Appendix I of the National Park Service (NPS) publication *The Museum Handbook Part I: Museum Collections*, a "file" storage system was developed to house these objects (Fig. 5). Corrugated blue board is cut to a predetermined standard size (3 1/2" × 5 1/4") to maximize space in the museum's storage drawers. Three polyethylene zip bag sizes were chosen based



Fig. 3 Ancient Egyptian shabtis and figurines were previously housed together in groups in the same container. Objects were often from different time periods or made of different materials. Courtesy of the Johns Hopkins Archaeological Museum.

on the size of the objects (1 $1/2'' \times 2''$, $2'' \times 3''$, and $3'' \times 1$ 4"). Objects were placed with the diagnostic side of the object facing forward in the polyethylene zip bag lined with a rectangle of 1/8 in.-thick Volara cut slightly smaller than the bag so that tension on the object is minimal. Above the zipper closure of the bag, two small holes, about I inch apart, were punched through the backside of the polyethylene zip bag and through the corrugated blue board. Cotton twill tape (1/4 in.) was threaded through the corrugated blue board and polyethylene zip bag to secure the bag to the board and firmly tied in the back. Thick Volara was glued to the back of the corrugated blue board to mitigate damage to any objects behind it and secure the tied twill tape. A label with the accession number was printed and adhered to the top center of the blue board. Each object/board was then "filed" upright in alphanumeric order into a custom-made box that fit the length of the museum's storage drawers, with the object's accession number label clearly visible at the top (Fig. 6). More detailed procedures for this storage system can be found on the Storage Techniques for Art, Science, and History Collections (STASH) website (Torres et al. 2016).

Student staff were essential to the completion of this major project that provided highly visible compact storage for over 200 objects. In addition to written work plans for this project, students were provided with templates for the corrugated blue board and

Volara foam. To ensure that the project had a steady momentum, student staff prepared sets of board and Volara in advance so that the collection could be batch-processed quickly in their modular, standardized housing. The modified vertical stacking storage method grants each object its own housing, eliminates the need for unnecessary handling, and ensures that groups of objects can be easily browsed, and quickly located, searched, and accessed. Even when removed from its filing system for teaching, the object is secure in its storage mount and can be safely held by faculty and students during classes.

4.1.3 HIGH VISIBILITY WITH INTUITIVE MOUNTS FOR FRAGILE OBJECTS

Though maximum visibility of objects in a teaching collection is essential for identification, research, and teaching purposes, the museum's visibility requirements add additional complexities when housing fragile objects such as the museum's collection of over six hundred glass vessels and vessel fragments. Finding a balance between visibility and physical stability requires new strategies that take object use into account, and designs for storage of the glass collection have evolved over the past six years as its use has grown. Initial mount designs housed the glass vessels upright so as to orient the objects as they would have been when they were being used; these storage containers had low wall barriers so that all sides of



Fig. 4 Ancient Egyptian shabtis and figures are now housed in individual boxes to facilitate ease of use for teaching and Study. Courtesy of the Johns Hopkins Archaeological Museum.

the vessel could be seen, maximizing object visibility and conserving storage space. However, the low wall barriers required an elaborate support system using Volara straps across the upper portions of the vessel (Fig. 7). With the recent increase in teaching with the collection, this rehousing method was too complicated and time consuming for removal and return of objects, and therefore sometimes discouraged their use and examination. Therefore, storage mounts had to be more intuitive to ensure that returning an object to its storage mount would be simple and quick. For particularly fragile objects, supplementary visual resources were incorporated into the mount designs to further assist in object handling. Visual aids such as written directions for object removal and replacement, photographs on the outside of the box that show the correct orientation of the object in its mount, and arrows that point to extremely fragile areas or distinguishing marks on the object all assist the user in replacing the object correctly. These cues must also be large enough in size that users notice them immediately. While these visual aids were initially considered distracting and not esthetically pleasing, they are now recognized as essential to the safe use of the collection.

Though the initial storage design had emphasized orienting the objects in the position that they were once used in antiquity, the most recent rehousing effort has required compromising this ideal orientation in some cases. Given the need to simplify the removal of glass objects from their containers, while also ensuring their safe storage, most vessels are now housed on their side rather than upright (Fig. 8). Such a design also allows easier visual access to some of the key manufacturing characteristics of glass such as pontil marks, and also contains delaminating glass layers detaching from the surfaces of the deteriorated archaeological glass. This new approach does increase the storage footprint required,



Fig. 5 An ancient Egyptian faience amulet is housed in a vertical stacking storage mount. The object is easily visible without being removed from its storage container, but it can also be quickly removed for closer study. Courtesy of the Johns Hopkins Archaeological Museum.

but the increased ease in use of this previously underutilized collection was considered of primary importance.

4.1.4 DUAL PURPOSE MOUNTS

Over the past six years, safely rehoused objects have become increasingly utilized in quasi-display or actual display contexts in the museum space's glass-topped pull-out drawers. These drawers are currently used for several pedagogical purposes. Objects that are regularly consulted by faculty for teaching are stored in drawers for the duration of the course (Fig. 9). Additionally, objects that are the focus of student research projects or are in the process of being cataloged for the museum database are stored in the drawers so as to minimize their movement between storage and the museum space. The recent increase in interest and research of the collection has also spurred the creation of thirteen student-curated exhibits in the museum drawers which have brought previously under-utilized collections into view (http://archaeologi calmuseum.jhu.edu/the-collection/object-stories/). As the museum has no staff mount-maker, nor does it have the resources to regularly hire one for student



Fig. 6 In the vertical stacking storage system, each object is housed so that it can be filed upright to save storage space. Objects can also be easily located through the filing system. Courtesy of the Johns Hopkins Archaeological Museum.

exhibitions, storage mounts perform the dual function of providing support to the objects as the drawers are opened and closed, but also displaying objects to their best esthetic advantage. Instead of creating two mounts for each object, i.e., one for storage and one for the exhibition, a single mount serves both these purposes. As the museum is a teaching collection, these mounts do not have to be as unobtrusive as those typically produced for art collections on display. In fact, the use of these more utilitarian mounts highlights the "working" aspect of the collection, and are often designed and built by students themselves with the advice of professional museum staff. Even when objects are not part of a student exhibition, but on temporary view in drawers while being cataloged or consulted for class, their storage in custom mounts not only secures them but also showcases the care taken to steward them. In this way, the museum externalizes its commitment to caring for the collection as a whole, prioritizing the safety and use of not only the objects on active display but also those in storage as well.

These dual purpose mounts provide the necessary support for objects while on exhibit in addition to long-



Fig. 7 Whenever possible, objects are stored in the orientation in which they were originally used. Though extremely stable, the use of Volara straps in the early prototypes to store glass upright became too cumbersome when objects were removed regularly for teaching. Courtesy of the Johns Hopkins Archaeological Museum.

term stabilization in storage (Figs. 10a, 10b). Volara bumpers are adhered to the drawer lining around all sides of the mount to stabilize it in drawers. These Volara bumpers allow the objects and their mounts to be easily removed and returned to the drawer as needed. In addition, these mounts allow for quick installation and deinstallation of exhibitions, and safe and easy removal of objects requested by an instructor or researcher. The flexibility of these mounts also reflects the museum's broader efforts to be more sustainable in our practice; by creating only one mount that serves two purposes, materials, staff time, and monetary resources are conserved while maximizing the object's use and access.

5. VISIBILITY AND OUTREACH OF PROJECT

In most museums, much of the work of museum staff and researchers occurs out of public view such that visitors are rarely aware of either the physical or intellectual labor that goes into the maintenance, preservation, and exhibition of the museum and its



Fig. 8 Glass vessels are currently housed on their sides for ease of accessibility and for more straightforward return to their storage containers. Courtesy of the Johns Hopkins Archaeological Museum.

collection. In recent years, several museums have begun to showcase the work of the museum as an opportunity for public outreach; this has been particularly true for conservation projects taking place within galleries (Williams 2014). However, other activities such as rehousing or cataloging are rarely put on "display," perhaps because they seem too mundane to capture the public's interest. At the JHAM, however, the main museum space is both exhibition and working space by architectural design and museum staff intention. The space contains display cases and drawers a well as several rolling work tables used by museum and student staff, faculty, and researchers. Unlike the quiet gallery spaces expected at most museums, the JHAM's exhibition space is one of dynamic activity, where visitors enjoying museum visits may also hear snippets of discussion about how to describe an object in the museum database, see staff examining objects under stereomicroscopes to understand their manufacturing techniques, or witness rehousing work in progress. Even casual passersby who are traversing the exterior of the museum space



Fig. 9 Objects that have been requested by faculty for teaching are stored in museum drawers within the museum's main teaching space. Faculty and students can have regular access to these objects over the course of the semester.

can glimpse the ongoing work through the large glass panels of the exterior-facing display cases. This openness and visibility of the museum and its work speaks to its role as a space of intellectual engagement within the context of a major research university. Thus, all museum activities are "displayed" as part of the care necessary to make the collection useful.

All of the rehousing activities described in this article take place within public view. By taking the rehousing project out of the storage space and working in the main museum space, students, faculty, and visitors alike can gaze inside the museum and see the rehousing of objects in progress at all times. During museum open hours, visitors can engage in conversation with staff about the rehousing project and also get a close look at the objects being housed. Over the past three

years, the museum has averaged 1200 visitors a year who enter the main museum space, in addition to students visiting the museum as part of a class session. Visitors ask not only about the ancient objects being rehoused but are also curious about the archival materials and hand tools used for rehousing. Furthermore, they are often surprised by how much attention and physical labor is required to care for each individual object, an aspect of museum work that they may never have encountered before. Such informal interactions with visitors are only possible in small teaching museums such as the JHAM, and these intimate discussions with visitors who are often unfamiliar with rehousing practices provide an effective way to educate the public about the many aspects of collection care required to preserve museum collections. Aside from members of





Fig. 10 (a) above and (b) below. Objects in student-curated exhibitions are displayed on mounts that function as both exhibition and long-term storage mounts. Courtesy of the Johns Hopkins Archaeological Museum.

the public, many of the visitors to the museum are prospective undergraduate students and their families who often feel more comfortable approaching the student staff engaged in rehousing projects and querying them

about their work. In addition to learning about collections care, prospective students are often startled and exhilarated by the idea that choosing JHU as their undergraduate school might give them the opportunity to

work hands-on with ancient objects, either within the context of the classroom or as a trained museum staff. In fact, the visible work of the museum has had a significant impact on the students who choose IHU as their undergraduate school. Each year, approximately 5800 prospective students and their families encounter the museum as part of a campus tour of the JHU campus; student tour guides discuss the ongoing courses and projects taking place within the museum, and give visitors a few moments to view their peers engaged in the work of the museum. Even these brief glimpses of the physical interaction with museum collections have impacted student enrollment, as more students entering the university each year testify that the opportunity to work with museum objects was a key factor in making their college decision. For these incoming students, there is then a clear connection between rehousing and the intellectual mission of the museum and the university.

The public visibility of the rehousing project also extends beyond the museum space into the virtual realm to maximize its impact and relevance and to further the teaching mission of the JHAM. There are three distinct goals of the virtual outreach utilized in this project: to raise awareness and excite a virtual audience about the need for and possibilities of rehousing; to offer rehousing solutions to other institutions that may not have the resources to design and implement these strategies; and to document the approaches and labor as well as the progress of the project over its duration. Different engagement tools are best suited for these distinct goals as they often reach different types of audiences. The first goal is most easily met through weekly updates about the rehousing project on the museum's Facebook page (https://www.facebook.com/ JohnsHopkinsArchaeologicalMuseum/). The immediacy and informality of the Facebook platform are well-suited for sharing images of collections safely and attractively housed. Guest posts by student staff trained in rehousing tasks and interviews with rehousing staff about the work they do have been extremely popular, with over 7200 people reached through this platform. Facebook postings are also used to showcase the way classes utilize collections; here again, images of students working with objects rehoused in archival containers emphasizes the direct impact of rehousing in teaching with museum objects. This high visibility social media tool is considered a first step to raising awareness about the ongoing work at the JHAM, but more in-depth transferrable information about the implementation of the rehousing project is given on the museum's website, which had over 33,000 views in 2015. Project workflows and scalable designs for custom storage containers are provided to aid other cultural institutions, museum professionals, and others who are seeking more information about rehousing methods (http://archaeologicalmuseum.jhu.edu/aboutus/2014-institute-of-museums-and-library-sciencesgrant-awarded/rehousing/). Furthermore, as these workflows and designs have been developed at the IHAM with student staff feedback, they are also accessible to non-specialists as well as museum staff. The desire to share educational resources and preservation strategies grew out of a recognition that many small cultural and educational institutions such as ours were in need of simple, achievable storage solutions that could be implemented by non-museum staff. In fact, as an outgrowth of the visibility of our rehousing project, staff from numerous local and regional institutions have visited our museum spaces to discuss its implementation and to gather information for planning projects for their own collections. Finally, the documentation of the rehousing project is closely tracked through the museum's database as previously mentioned, allowing a real-time assessment of its progress. In the first 19 months of the IMLS-funded project, 1981 objects have been rehoused. These objects, in addition to the estimated 1500 objects rehoused in previous years, represent approximately 27% of the total museum collection.

6. Rehousing Outcomes and Future Directions

Ultimately, the rehousing and collections care strategies described here have three long-term goals that will far outlast the duration of the project: to ensure the pedagogical and research value of objects; to raise awareness about the ethical responsibilities of stewarding a museum collection; and finally, but most importantly, to train new generations of thoughtful cultural stewards of collections no matter what career paths they eventually follow. As previously mentioned, the value of a rehoused, documented collection has already been borne out in the statistics gathered since the reopening of the museum in December 2010. With each year, the use of the museum space and its increasingly accessible collection has led to an outpouring of interest among JHU faculty and students and local educational institutions eager to incorporate research with the museum's artifacts into their coursework, particularly at the undergraduate and high-school levels.

At JHU, these courses are no longer only in departments typically associated with museum use, such as Classics, Near Eastern Studies, History of Art, or JHU's Museums and Society program, but now include a more expansive set of involved faculty from Materials Science and Engineering, History of Science and History of Medicine, and the German and Romance Languages and Literatures, among twenty other departments. The broadening of the types of courses utilizing the museum for class is also seen in the students who take

more in-depth courses in the history, archaeology, and technical study of museum objects. These hands-on courses, which meet weekly in the museum, are enrolled to near-capacity and draw students across disciplines, bridging the humanities-science divide that is endemic to many universities. Furthermore, our commitment to providing students with regular access to museum objects has resulted in unprecedented utilization of the collection beyond just the classroom. Over the past six years, students have developed thirteen new museum exhibits, which have brought previously under-utilized collections into view not only in the museum space but also online on the museum's website (http://archaeologi calmuseum.jhu.edu/the-collection/object-stories/). This kind of student-generated original research draws a diverse physical visitorship to the museum: about 50% of visitors to the museum are not affiliated with the university. In 2015, physical visitor numbers remained about the same as 2014, while online visitor totals increased 32% as new content became available. Looking forward to the phase following the completion of the current IMLS project, we expect to make our entire museum collection of approximately 13,000 objects available online, and expect that this will make the collection a more fully utilized resource that is available not only to faculty, students, researchers, and members of the public locally, but also across the globe.

These strategies strive to make transparent the many responsibilities of the ethical stewardship of museum collections. Beyond the resources of time, labor, and finances that are required for physically stabilizing collections, documenting and caring for the many kinds of records, histories, and data associated with them is equally important. The holistic approach of rehousing, registering, conserving, and managing both the objects and their information should be the goal of any museum. As the JHAM considers the means to ensure the long-term preservation and stewardship of the collection, the professional and student staff are also growing more aware of the need to work toward the preservation of the local environment and more responsible stewardship of the planet. To this end, the JHAM is investigating ways of minimizing the amount of materials used and wasted in the rehousing process. This has involved reusing or recycling as much material as possible, ensuring that the smallest amounts of adhesives are used, and educating the professional and student staff to carefully consider the consumption of natural resources that even a mission as altruistic as preserving cultural heritage can require. In addition, the visible monitoring of the museum's display and storage environments with the use of dataloggers has led to conversations between staff, students, and public visitors about the importance of maintaining reasonable environmental conditions for the longevity of the collection. The museum's location in Gilman Hall, a Leadership and Energy Efficient Design-silver certified building (http://sustainability.jhu.edu/sustainability_initiatives/buildings_and_infastructure/), links the JHAM's commitment to sustaining museum collections and the university's commitment to sustaining the environment.

The museum's commitment to spurring and sustaining positive long-term changes is perhaps most visible in our work with student staff. These young students, ranging in age from their late teens to their late twenties, represent the cultural stewards, patrons, teachers, and scholars of the future. Through the intentional effort to involve student staff in all aspects of collections care, from training in the basic construction of storage mounts for objects, following appropriate techniques and protocol for photo-documentation, and practicing current standards for cataloging, students gain a practical and tangible sense of the work necessary to preserve and make a collection usable for research, exhibition, and teaching. Student staff have also consistently contributed in meaningful ways to the development of project workflows and designs and are often providing valuable feedback and suggestions for innovations to make processes more intuitive. Though these students remain with the museum for only a few years, they leave the museum with valuable and usable skills that they have gone on to utilize at other museums and universities, at archaeological sites, and even in their corporate careers. Given the brief history of the museum in its current incarnation, the long-term effects of training our student staff are still unfolding. But the attentiveness toward collections care that students cultivate at the JHAM at an impressionable early stage in their careers makes them more likely to support the stewardship of museum collections in the future, no matter where their professional lives lead them.

One of the distinct privileges of stewarding a "working collection" is the opportunity to see the ways in which the collection revitalizes — and is revitalized by — those who handle, teach with, research, and appreciate the collection for its many values. The sustaining of collections, made possible through rehousing and care with contemporary hands, makes the evidence of ancient hands visible once again.

ACKNOWLEDGMENTS

We would like to thank Connie Cox Bodner for her guidance throughout the grant process. The authors thank the museum's director Betsy Bryan and its Faculty Advisory Committee and acknowledge the tremendous contributions of the student staff at the JHAM between 2010 and 2016. We are also indebted to the many museum professionals who shared their expertise particularly during the planning phases, including Vicki Cassman, Sean Charette, Suzanne Davis, Diane Fullick, Helen Ingalls, Claire Larkin, Emily Kaplan, Lara Kaplan, Michele Marincola, Kelly McHugh, Nancy Odegaard, Susanna Pancaldo, and Lori Trusheim.

FUNDING

Several grants made the rehousing and documentation project presented here possible. The authors are grateful to the Dean's Office of the Krieger School of Arts and Sciences of the Johns Hopkins University for initial funding, followed by support from a gift from JHU alumna Marjorie Fisher. Since 2014, the project has continued with generous grant funding awarded by the Institute of Museum and Library Services through the Museums for America program (Award Number MA-30-14-0339-14).

ORCID

JENNIFER TORRES (b) http://orcid.org/0000-0002-7215-280X

REFERENCES

Adams, Herbert B. 1884. New methods of study in history. Johns Hopkins University Studies in Historical and Political Science, Second Series.

Appendix I: Curatorial Care of Archaeological Objects. NPS Museum Handbook, Part I: Museum Collections. National Park Service, U.S. Department of the Interior. Accessed February 19, 2016. https://www.nps.gov/ museum/publications/MHI/AppendI.pdf.

Buck, R. A. 2010a. Found-in-collection. In Museum registration methods, 5th ed., ed. Buck, R. A. and J. Allman Gilmore. Washington, DC: The AAM Press. 109–118.

Buck, R. A. 2010b. Numbering. In Museum registration methods, 5th ed., ed. R. A. Buck and J. Allman Gilmore. Washington, D.C.: The AAM Press. 206–208.

Johns Hopkins University. May 1910. The Johns Hopkins University Circular 29 (225): 125.

Johns Hopkins University. 1917. The Johns Hopkins University Circular 36 (294): 435.

Kaplan, E., L. Williamson, R. Perkins Arenstein, A. Yvarra McGrew, and M. Feitl. 2005. Integrating preventive conservation into a collections move and rehousing project at the National Museum of the American Indian. Journal of the American Institute for Conservation 44 (3): 217-232.

Moving Archaeology Towards the Future. October 21, 2013. Phoebe A. Hearst Museum of Anthropology, http://hearst museum.berkeley.edu/blog/moving-archaeology-towardsfuture (Accessed 09/07 /2016).

Torres, J., K. Gallagher, and S. Balachandran. 2016. Vertical storage for small robust archaeological objects. STASH (Storage Techniques for Art, Science & History Collections). Foundation of the American Institute for Conservation. http://stashc.com/the-publication/containers-2/bags/vertical-storage-for-small-robust-archaeologicalobjects/ (Accessed 09/02/2016).

Type Rehousing Project. 2016. American Museum of Natural History. http://www.amnh.org/our-research/paleontology/ collections/fossil-mammals/type-rehousing-project (Accessed 09/07/2016).

Williams, E. R. 1984. The archaeological collection of the Johns Hopkins University. Baltimore, MD: The Johns Hopkins University Press.

Williams, E., ed. 2014. Public face of conservation. London: Archetype Publications.

Wilson, H. L. 1908. The archaeological collection of the Johns Hopkins University. The Classical Weekly 24 (1): 189-191.

Sources of Materials

Corrugated blue board sheets and boxes (various sizes) University Products Inc.

517 Main Street Holyoke, MA 01040

Tel: (800) 628-1912

Fax: (800) 532-9281

www.universityproducts.com

Polyethylene Tri Rod (various sizes)

Weatherall Company, Inc.

106 Industrial Way

Charlestown, IN 47111

Tel: (877) 275-2739 Fax: (812) 256-2344

www.weatherall.com

Gluesticks

Grainger Industrial Supply 2100 Haines Street

Baltimore, MD 21230 Tel: (800) 472-4643

www.grainger.com

Polyethylene ziplock bags (various sizes)

Gaylord Archival Supply

PO Box 4901

Syracuse, NY 13221-4901

Tel: (800) 448-6160 Fax: (800)-272-3412

www.gaylord.com

Volara

Conservation Resources International, LLC

5532 Port Royal Road Springfield, VA 22151

Tel: (800) 634-6932

Fax: (703) 321-0629

www.conservationresources.com

Résumé - En utilisant comme exemple le Johns Hopkins Archaeological Museum (JHAM), cet article présente l'approche particulière utilisée pour relocaliser une collection, pour laquelle l'enseignement constitue l'objectif principal. Contrairement aux musées plus traditionnels, les collections du JHAM sont réservées pour l'utilisation par les étudiants, les enseignants et les chercheurs, dans un but d'acquisition des connaissances. La mise en œuvre de cette mission pédagogique a nécessité des approches innovantes pour protéger la collection, tout en permettant son utilisation. Cet article présente des stratégies récemment mises en place qui favorisent une grande visibilité, un accès facile et une manipulation encadrée des objets. On y traite aussi des défis particuliers et des avantages à donner accès à une telle collection. La relocalisation ne constitue qu'un aspect du soin des collections; les auteurs proposent une approche plus holistique qui comprend non seulement la stabilité à long terme des objets, atteinte grâce à la relocalisation et la conservation, mais également la garde et la gestion des données sur leurs origines et de toute autre information recueillie. L'objectif ultime de ces différents modèles de préservation devrait faire en sorte que le fonctionnement de la collection permet l'utilisation des objets, tout en prolongeant à la fois leur signification et leur utilité. Traduit par André Bergeron et Bruno Pouliot.

Resumo - Utilizando o «Johns Hopkins Archaeological Museum» (JHAM) como um caso de estudo, este artigo explora as abordagens únicas utilizadas para reinstalar uma coleção cuja missão central é o ensino. Ao contrário das coleções de museus mais tradicionais, as colecções do JHAM são destinadas a ser usadas por estudantes, por professores e por investigadores com o objectivo de perseguir o conhecimento. Apoiar esta missão pedagógica requer métodos inovadores de reinstalação que assegurem a protecção da colecção e, simultaneamente, a sua utilização. Este artigo discute estratégias de reinstalação recentemente implementadas que enfatizam a alta visibilidade, fácil acesso e o manuseamento orientado de objetos; e considera os desafios e vantagens únicos de implementar o acesso a tal coleção. Reinstalar também é postulado como apenas um aspecto do cuidado das coleções; em vez disso, os autores propõem uma abordagem mais holística para a preservação a longo prazo de objetos ao cuidado do museu abrangendo, não apenas, a sua estabilidade física através da reinstalação e conservação mas, também, a estabilidade e a administração do seu historial de proveniência e dados da coleçção. O objetivo final destas várias formas de cuidado deve ser a garantia de que a coleção "funciona" de tal forma que o uso de objetos mantém e amplia os seus significados e utilidade. Traduzido por Teresa Lança Ruivo e Beatriz Haspo.

Resumen - Utilizando el Museo de Arqueología de Johns Hopkins (JHAM) como un estudio de caso, este artículo explora los enfoques únicos utilizados para reacondicionar el almacenamiento de una colección que tiene como misión central la enseñanza. A diferencia de las colecciones de museos más tradicionales, las colecciones del JHAM son para ser utilizadas por estudiantes, profesores e investigadores como un medio para aumentar el conocimiento. Para apoyar esta misión pedagógica se requieren sistemas innovadores que protejan la colección y garanticen su uso. Este documento discute las estrategias de reacondicionamiento recientemente implementadas que hacen hincapié en la alta visibilidad, facilidad de acceso y manipulación guiada de los objetos, y considera los desafíos y ventajas únicas de proporcionar acceso a dicha colección. El reacondicionamiento también se postula como sólo un aspecto del cuidado de las colecciones. Los autores proponen que un enfoque más holístico de la preservación a largo plazo de los objetos bajo el cuidado del museo, abarca no sólo su estabilidad física a través del reacondicionamiento y la conservación, sino también la estabilidad y la protección y administración de sus historias de procedencias y datos de recolección. El objetivo final de estas diversas maneras de cuidarlos debe ser garantizar que la colección "funcione" de tal manera que el uso de los objetos mantenga y amplíe sus significados y utilidad. Traducido por Amparo Rueda.

AUTHOR BIOGRAPHIES

JENNIFER TORRES received her MA from the George Washington University in Museum Studies with a concentration in collections management. She is currently the collections technician at the JHAM where she rehouses and digitally documents the museum's collection with funding support through a grant from the Institute of Museum and Library Services. Address: Johns Hopkins Archaeological Museum, 150 Gilman Hall, 3400 North Charles Street, Baltimore, MD 21218, USA. Email: jennifertorres595@gmail.com.

KATHERINE J. GALLAGHER is the collections manager/registrar at the JHAM. She received her MA in Anthropology and her MA in Museology from the University of Washington. She has worked as a field archaeologist and archaeological laboratory analyst and manager, as well as museum registrar. Address as for Torres. Email: kgallagher@jhu.edu.

SANCHITA BALACHANDRAN is the curator/conservator of the JHAM and Lecturer in the Department of Near Eastern Studies at Johns Hopkins University. She teaches courses related to the technical study and analysis of ancient objects, as well as the history, ethics, and practice of art conservation. She completed her graduate work in art history and art conservation at the Institute of Fine Arts, New York University. Address as for Torres. Email: sanchita@jhu.edu.

LISA ANDERSON is a rehousing specialist with extensive experience at the National Museum of American Indian and the Textile Museum. Address as for Torres. Email: labirdinhand@aol.com.