MUSEUM REGISTRATION METHODS APPLIED TO OTHER INSTITUTIONS: THE PANAMA CANAL MUSEUM COLLECTION AT THE UNIVERSITY OF FLORIDA SMATHERS LIBRARY

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A PROJECT IN LIEU OF THESIS PRESENTED TO THE GRADUATE SCHOOL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

UNIVERSITY OF FLORIDA

2011

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Summary of Project Option in Lieu of Thesis
Presented to the Graduate School of the University of Florida
In Partial Fulfillment of the Requirements for the
Degree Master of Arts

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December 2011

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Major: Museology

Between 2010 and 2012, the University of Florida Smathers Library Special Collections will receive over 15,000 objects from the Panama Canal Museum in Seminole, Florida. The Panama Canal Museum is closing in 2012 and University of Florida Smathers Library Special Collection will be the repository of the museum's collection. The collection consists of objects that were donated to the museum by U.S. citizens who lived in the Panama Canal Zone during its construction and U.S. occupation. Many objects exemplify the merging of cultures that occurred between the U.S. occupants and the Panamanian people. For this reason, the University of Florida and the Smathers Libraries agreed to accept this collection because it can provide valuable research opportunities and open up possibilities for collaboration among departments, programs, and groups across campus such as the Center for Latin American Studies and the Samuel Proctor Oral History Program.

Within the collection there are many types of paper objects such as written documents, books, yearbooks, photographs, maps, and newspapers that the library

handles on a regular basis. However, an overwhelming amount of the collection is comprised of three-dimensional objects that vary in material and size. Although the Smathers Library has other three-dimensional objects in its collection, no standard had been established about how to handle dimensional objects of various materials. With part of the collection arriving at the end of 2010, the Smathers Library was in need of a manual on how to handle a variety of three-dimensional museum objects in a library context. Although museums and libraries share many similarities, such as their dedication to preservation and education, they are fundamentally different in the way they are structured and how they provide public access to their collections. This project outlines the similarities and differences between museums and libraries and how museum registration methods and collections management policies in museums can be adapted to serve the needs of the Smathers Library Special Collections. The result is a customized manual that will guide the library through the various steps of integrating the Panama Canal Museum objects into their collections. Topics included in the manual are processing the collection, object handling, condition reporting, photographing, proper storage, protocol for providing access to the collection, exhibiting, and conducting regular inventory checks.

CHAPTER 1: INTRODUCTION

The Panama Canal Museum History and the Partnership with the University of Florida

In 1998, Joseph J. Wood, Betty LeDoux-Morris, and Charles W. Hummer, Jr., published a museum planning document and marketing plan to form the Panama Canal Society Foundation, Inc., a non-profit 501c(3) organization. As the American Era in the Panama Canal Zone was coming to an end, Wood, LeDoux-Morris, and Hummer, three former residents of the Panama Canal Zone who had settled in Florida, decided it was time to formulate a plan for preserving the history of the era and the friendships that were founded in the Canal Zone.[1] Wood, LeDoux-Morris, and Hummer recruited additional board members to help govern the foundation. They began to collect objects relating to the American Era of the Panama Canal, and soon a museum was opened in Seminole, FL. This particular location was chosen because the Panama Canal Society had its headquarters in Seminole, and many Americans who had returned from Panama and the Canal Zone had settled in Florida, particularly the Tampa Bay area. In 2001, the museum moved into a large facility, and in 2002 it was officially named The Panama Canal Museum.[2]

As its mission stated, the Panama Canal Museum sought to "document, interpret, and articulate the role played by the United States in the history of Panama, with emphasis on the construction, operation, maintenance and defense of the Panama Canal

[1] "Society Information," The Panama Canal Society, accessed September 26, 2011, http://www.pancanalsociety.org/societyInfo.html.
[2] "How We Got Here," The Panama Canal Museum, accessed March 15, 2011, http://panamacanalmuseum.org/index.php/history/how_we_got_here/.

and the contributions to its success by people of all nationalities."[3] To this end, the museum began soliciting and receiving donations of objects from individuals and families of those who had lived in the Panama Canal Zone during the building of the Canal and during the subsequent United States occupation. The tremendous response led to over 15,000 objects being given to the museum between 2001 and 2010. Donated materials range from paper objects such as photographs, yearbooks, government documents and maps to other materials such as clothing, flags, Girl and Boy Scout memorabilia, molas, rugs, swords, small pins and medals, jewelry, paintings, dairy milk containers, a canoe, a railroad spike, and many other objects.

In 2010, the Panama Canal Museum announced its intention to close the museum in 2012. The museum was started by a group of people who had lived, worked, or had gone to school in the Panama Canal Zone. The Panama Canal reverted to Panamanian control in 1999. Therefore, there are no longer any Americans living in the Canal Zone. The population who lived in the Canal Zone during the American Era is aging and acknowledged the possibility that, in the future, the museum would not have anyone to run it. The volunteers and donors of the Panama Canal Museum wanted to secure a legacy and safe storage area where their children, grandchildren, and others interested in learning about the American Era in the Panama Canal Zone could access the collections.

According to the American Association of Museums (AAM), the preferred method of disposal of a collection is to transfer the collection to another cultural institution where it will continue to be accessible to the public. The University of Florida Smathers Library was an appealing option for transfer of the Panama Canal Museum

[3] "About the Museum: Our Mission," The Panama Canal Museum, accessed September 15, 2011, http://panamacanalmuseum.org/index.php/about/our/the_panama_canal_museum.

collection for a few reasons: the entire collection could be kept together, the collection could remain accessible to the public, the collection could be a springboard for interdepartmental collaborations across campus and with the community, and several of the founding members of the Panama Canal Museum are University of Florida alumni. Additionally, The University of Florida Smathers Library has one of the best Latin American collections in the United States.[4] Since the Panama Canal Museum is the only museum in the world dedicated to the subject of the American Era of the Panama Canal Zone, the museum's collection will enhance and supplement the library's Latin American collection.

In August 2010, the Panama Canal Museum and the University of Florida announced the formation of a partnership with the goals of preserving the Panama Canal Museum collection and the history of the United States in Panama. Three entities at the University of Florida will play large roles in this partnership: The Samuel Proctor Oral History Program, the Center for Latin American Studies, and the George A. Smathers Libraries.[5] The Samuel Proctor Oral History Program will conduct high-quality oral history interviews of Americans who lived in the Panama Canal Zone during the Canal's construction and the subsequent U.S. occupation. Equipment and staff from the Samuel Proctor Oral History Program will be provided to conduct the interviews and the Panama Canal Museum will assist in the search for candidates who wish to share their stories of life in the Panama Canal Zone. These oral history interviews will be available online through the University of Florida Library Digital Collection. The oral histories will also

[4] Dr. Rachel A. Schnipper, e-mail message to author, September 23, 2011.
[5] "UF/PCM Partnership," The Panama Canal Museum, modified August 3, 2010, accessed March 15, 2011, http://panamacanalmuseum.org/index.php/press_room/detail/how_will_the_uf_pcm_partnership_work/.

provide more information on the Panama Canal Museum collection since donors will be invited to give their oral histories; they will likely discuss the object they donated, how they obtained it, and its significance to them personally and in relation to the U.S. occupation of the Panama Canal Zone.[6] Thus, the oral histories will add a personal dimensional to many of the objects in the collection.

The Panama Canal Museum has established a research and scholarship fund within the Center for Latin American Studies. This fund will promote contemporary research on the Panama Canal, the Canal Zone, and the history of the United States in Panama.[7] Recipients of this scholarship will greatly benefit from increased access to resources such as oral histories and the Panama Canal Museum collection at the University of Florida Smathers Library.

The George A. Smathers Libraries will be responsible for preserving the collection of objects. In December 2010, transfer of the Panama Canal Museum's collection to the University of Florida's George A. Smathers Libraries began. By 2012, the museum's entire collection of over 15,000 objects will be transferred to the library. The library will be responsible for preserving and storing the collection as well as providing access through individual study and exhibition planning.

Brief Explanation of the Project

Having the Panama Canal Museum collection at the University of Florida Smathers Library offers many opportunities for research, collaboration, and community involvement. However, it also presents one large problem: the library is not equipped

[6] "How will the UF/PCM Partnership Work?," The Panama Canal Museum, accessed September 26, 2011, http://panamacanalmuseum.org/index.php/press_room/detail/how_will_the_uf_pcm_partnership_work/.
[7] Ibid.

with the storage facilities nor does the staff have the knowledge necessary to handle such a large collection of three-dimensional objects. Museum objects should be kept in climate controlled storage areas where temperature and humidity do not fluctuate. Climate controlled areas of the library are already dedicated to other collections, so it will be necessary to locate a large enough space within the library to house the objects and install environmental control equipment to monitor and regulate the temperature and relative humidity. Although the Smathers Library has other collections of three-dimensional objects, no standard had been established about how to handle three-dimensional objects. With part of the collection arriving at the end of 2010, the Smathers Library was in need of a manual on how to handle a variety of three-dimensional museum objects in a library context.

Museums and libraries share many similarities, but they are fundamentally different in the way they are structured and how they provide public access to their collections. Therefore, an existing manual on how to care for museum collections was not an ideal resource for the library. Most library manuals deal solely with the processing, access and storage of books and other flat, paper materials, so this type of resource would only be helpful for a small portion of the collection. A manual for handling a museum collection in a library context, specifically the University of Florida Smathers Library, was needed.

Starting in January, 2011, I began going through objects in the collection that had already arrived at the Smathers Library as well as the database that the Panama Canal Museum had sent with objects that would be transferred at a later date. During this time, I made notes as to what types of materials were included, what size objects were in the

collection, and I took photographs of the objects. I also familiarized myself with the library's facilities so I could make realistic recommendations. After taking into consideration the types of objects in the collection as well as the library's facilities, I produced a customized manual that will guide the library through the various steps of integrating the Panama Canal Museum objects of various materials and sizes into their collection. Although I also referenced a database sent to the library from the Panama Canal Museum, the manual is primarily based on the objects that had already arrived at the library by March 2011. Chapters included in the manual are Processing the Collection, Handling, Condition Reporting, Photographing, Storing, Protocol for Providing Access, Exhibiting, and Conducting Regular Inventory Checks.

Overview of the Paper

The body of this paper is divided into three sections. Chapter two explains the intended use of the guidebook by the library and outlines the process of going through the collection and developing the guidebook. Chapter three contextualizes the project by discussing the similarities and differences between museums and libraries. Museums and libraries have distinct differences, which can make exchanges such as the Panama Canal Museum collection being transferred to the University of Florida Smathers Library problematic. Therefore, chapter three also discusses specific adaptations of museum collections management policies and museum registration methods that needed to be adapted in order to serve the library's needs. Chapter four concludes the body of the paper with reflections on writing the manual and the process. The manual is included, in its entirety in the appendix.

CHAPTER TWO: THE PROJECT

Developing the Manual

In December 2010, I met with Paul Losch, the Associate Librarian for the Latin American Collection at Smathers Library, and John Freund, the head of conservation at Smathers Library, to discuss topics that should be included in the manual. After discussing what types of objects were in the collection, the intended uses of the collection at the library, and the needs and limitations of the library in regards to staff and the facility, I suggested the following topics be included in the manual: processing the collection, object handling, condition reporting, photographing, storage, protocol for providing access to the collection, exhibiting, and policy and procedure for conducting regular inventory checks. Although the library already does many of these things for their book collections, they needed to be adapted to fit the Panama Canal Museum collection of three-dimensional objects of various materials.

Processing is the "task of preparing the materials for the shelves"[8] after they are acquired by the library and includes "accessioning, cataloging, stamping, labeling, and numbering."[9] The objects that comprise most of the Panama Canal Museum collection differ from the books and documents that the library is accustomed to managing. Books and documents have textual indicators, such as titles, abstracts, authors, and a body of text, that assist in the cataloging process. Cataloging is the process of creating entries for a catalog and includes "a bibliographic description, subject analysis, assignment of classification notation, and activities involved in physically preparing the item for the

[8] Mary L. Kao, *Cataloging and Classification for Library Technicians* (New York: The Haworth Press, Inc., 2001), 125.
[9] Joan M. Reitz, "Online Dictionary for Library and Information Science," accessed October 30, 2011, http://www.abc-clio.com/ODLIS/odlis_p.aspx.

shelf."[10] Museum objects do not always exhibit evidence of their use, maker, or origin. In museums, curators who are experts in a subject interpret how an object was used, the context in which it was made, its origin, and its maker. Curators assist the collection manager with entering descriptive information into the museum collections database, which allows museum staff to search and track objects in the collection. At the library, those who are tasked with cataloguing the Panama Canal Museum collection may not have an expert level of knowledge of the Panama Canal. However, it is important that the person cataloguing the collection have some knowledge of the Panama Canal so that they will be able to identify and describe objects more quickly and accurately.

Assigning numbers to objects and labeling objects with their numbers is the first part of the cataloging process. In museums, objects accessioned into the permanent collection are assigned accession numbers. Accessioning is "the act of recording/processing an addition to the permanent collection [and includes] assigning a unique number that allows the museum to connect an object to its documentation."[11] At the library, the accession number will serve as the call number, which "enables users to locate the needed material."[12] In the library's case, the library patron will provide a library staff member with the number so he or she can retrieve the object from storage. My recommendations for assigning accession numbers and labeling objects with their accession numbers can be found beginning on 9 of Appendix B.

General knowledge of proper object handling procedures can be assumed of librarians, archivists, and conservators since they have been trained to handle valuable

[10] Ibid.
[11] Rebecca Buck and Jean Allman Gilmore, ed., *The New Museum Registration Methods* (Washington, DC: American Association of Museums, 1998), 157.
[12] Kao, *Cataloging*, 19.

and fragile documents. However, other library staff, including student assistants, will occasionally handle the collection during processing, object retrieval, or when installing an exhibition. Library patrons will also handle the collection while conducting research. Therefore, a chapter on proper object handling procedures is included in the manual. The library provides public access to its existing collections and allows patrons to handle the objects. However, patrons are not given instructions on proper object handling. Many of the objects in the Panama Canal Museum collection are fragile, but even objects that are not fragile can be significantly damaged if handled improperly. For example, if a metal coin is touched frequently with bare hands, over time, the metal will erode because human hands contain fatty acids. These acids remain on the surface of the object and eventually break down the metal. Therefore, it is important to have staff and library patrons wear gloves while handling library objects. Other rules for object handling can be found on pages 18 through 19 of Appendix B.

A condition report is a record of an object's condition at a certain point in time. Condition reports should first be conducted when the object arrives at the library. This provides a baseline to which future examinations can be compared. As part of the library's commitment to preserving the Panama Canal Museum collection, they should continually check the condition of objects that displayed weakness or damage during the initial condition examination. Objects that are loaned, exhibited, or requested for individual study should be condition reported before they leave the storage area and after they are returned. One copy of the condition report should be sent to the borrower and the library should retain one copy. The borrower should check the condition of the object when it arrives at their facility and complete a condition report. After the loan period

ends, the borrower should again check the condition of the object and note any changes that may have occurred on the condition report. The chapter on condition reporting provides instructions on how to conduct a condition report and how to record damage. A glossary of terms related to common types of damage to object types and materials in the Panama Canal Museum collection is included in the chapter on condition reporting.

The library plans to make the Panama Canal Museum collection available online. Therefore, a chapter on how to photograph and scan the collection is included in the manual. The Digital Library Center at the Smathers Library handles most of the library's photographing, scanning, and digitizing requirements. However, these in-house services are expensive because they require specialized staff time, additional hard drive space, and upkeep of expensive equipment. Further, other departments in the library also depend on the Digital Library Center for their photographing, scanning, and digitizing needs. For this reason, the chapter on photographing provides instructions for staff and interns for scanning objects at a high resolution and professionally photographing objects.

The library has other collections of three-dimensional objects, however, none as large and varied as the Panama Canal Museum collection, which contains over 15,000 objects. Objects in the collection vary in size from very small (such as pins that measure less than half an inch in diameter) to extra large (such as a canoe that is over eight feet long). Objects are composed of a variety of materials including wood, metal, paper, ceramic, glass, leather, fabric and other textiles, paint, plastic, and cardboard. These materials have different requirements for temperature and relative humidity levels and for storage furniture and containers. However, the library does not have much available space to dedicate to storing the Panama Canal Museum collection; objects made of

materials that have different environmental control requirements will have to be stored together. The manual includes a chapter on storage, which is intended to guide the library through which types of materials can be stored together with a compromise in temperature and relative humidity that will not harm the objects. A permanent storage space for the Panama Canal Museum collection has not been determined. It is unlikely that the library will have a large space available to dedicate to storing the collection onsite. Thus, the collection may need to be stored compactly so it can be stored in an on campus location. Storing the collection in an off site location would decrease accessibility to the collection because objects would have to be picked up and delivered to campus by staff. This would also increase the risk of damage to the collection as objects would be exposed to fluctuating conditions, vibrations due to traveling on roads, and possible additional handlers. Due to overcrowding and expanding collections, several library departments, including preservation, are being relocated to off campus facilities. With such a large number of objects being stored in a small space, efficient use of storage space is imperative. The chapter on storage in the manual makes specific recommendations for storage furniture and containers, which allow objects to be organized and arranged compactly, without being overcrowded. Overcrowded storage areas can result in damage to the collections because someone accessing the storage area could easily bump into or knock over objects. Not only is an object damaged when knocked over, but also a heavy or breakable object that falls from a storage shelf could injure someone. Additionally, if the storage area appears crowded and disorganized, those who are returning objects to the storage area are less likely to return them to the exact

spot from which they were originally taken. The recommendations for storage of the Panama Canal Museum collection can be found beginning on page 29 of Appendix B.

The library intends to allow objects in the Panama Canal Museum collection to be studied on an individual and group basis. Since the library already has an area dedicated to study and research of special collections (the Research Room on the second floor of Smathers Library East), I recommended this be the designated area where objects in the Panama Canal Museum collection can be brought for study. The Research Room is locked and library patrons must ring a doorbell and be buzzed in. When using the Research Room, library patrons are required to fill out a form requesting retrieval of an object, document, or book. I devised a form to be used specifically for object requests from the Panama Canal Museum collection that allows staff to verify that the object was returned in the same condition that it was borrowed. This form can be found on 48 of Appendix B. The current request forms that the library use do not have a section for library staff to verify that the objects were returned in the same condition in which they were checked out. Large purses, bags, and backpacks either have to be put in lockers or be placed behind the staff desk. One or two library staff members monitor the Research Room to ensure that library objects are not damaged or stolen. Library patrons will not have access to the storage areas. Rather, a library staff member will retrieve the requested objects from the Panama Canal Museum collection storage area and bring them to the Research Room. When library patrons are done studying the objects, library staff will condition report the objects.

The library plans to exhibit objects from the Panama Canal Museum collection in the second floor exhibition space in Smathers Library East. In addition, although nothing

formal has been decided, two other opportunities for exhibiting objects from the Panama Canal Museum collection have been discussed by the library. The first is permanently dedicating a space within the library to rotating exhibitions with objects from the Panama Canal Museum collection. The second is a jointly organized exhibition between the Smathers Library and the Library of Congress on the history of the United States in the Panama Canal Zone. Therefore, the chapter on exhibiting objects in the manual includes topics such as securing the exhibition space, monitoring and maintaining proper environmental controls and light levels, completing loan agreements, packing objects, and making shipping arrangements for objects going out on loan.

Conducting regular inventory checks are important because they ensure that objects are accounted for and remain in good condition. Various collections managers at the library do inventory every five to ten years, however, there is no formal policy or procedure in place for how inventory is conducted; it is speculated that some departments don't conduct inventory at all.[13] This can be partially attributed to the fact that there is no policy or procedure in place. The library also manages such a large number of objects that it makes conducting complete inventories virtually impossible. By including a chapter on inventorying the collection, the library will be able to institute a policy and procedure for conducting inventory of the Panama Canal Museum collection. I suggested that the library keep track of all objects that are requested for study or exhibition and after a set number of objects have been requested, the library do an inventory check of those objects. This insures that objects that were moved from their storage location are checked at a later time to be sure they have been put back in their proper location. While this recommendation isn't an ideal replacement for a complete inventory, it is a viable

[13] John Nemmers, e-mail message to author, October 5, 2011.

alternative for the library because it is a small number of objects (30-50) and can be done in a relatively short time by one staff member. Because the library is short of time and staff to do inventory checks of all their collections, I believe this method for inventory could be effective for other types of similar collections in the library. The recommendations for inventorying the collection can be found on 62 and 63 of Appendix B.

Thus, the manual will serve as a handbook for the library to process, handle, condition report, photograph, store, provide access, exhibit, and inventory the collection. The topics are arranged in the manual in the order in which the library will complete them. During our meeting, Paul Losch, John Freund, and I also considered what standards should govern the manual. In other words, should the manual recommend museum practices and storage or propose more causal library standards? Every topic in the manual requires time, trained staff or volunteers, and money to execute, and I didn't want to be unrealistic in my recommendations. It was decided that the manual should reflect ideal practices and storage conditions without being unrealistic (an example of an unrealistic recommendation would be for the library to build an addition to the existing library structure to house the collection). This decision was based on the intended secondary use of the manual to serve as a tool for fundraising.

When the Panama Canal Museum closes and the entire collection of objects is transferred to the Smathers Library, several of the founding members of the museum, dedicated volunteers, and donors will continue to be involved. One of the primary ways they will work with the library is through fundraising for the collection. Although the library will also fundraise, those associated with the Panama Canal Museum are

dedicated to assisting the library with raising funds that are needed to preserve and digitize the collection, and plan special programs such as exhibitions and lectures. Therefore, the manual will be an important reference for fundraising initiatives and grant applications. For example, if the library and Panama Canal Museum partners apply for a grant for storage materials and furniture, they can refer to the manual's chapter on storage in order to make an effective argument as to why certain storage materials and furniture are necessary for preserving the collection.

Examining the Collection

In order to write a manual that encompassed all of the materials and types of objects within the Panama Canal Museum collection, beginning in January 2011, I examined the objects that had arrived at the Smathers Library. I also referred to a database that the Panama Canal Museum provided to the Smathers Library that they derived from their collections management system, PastPerfect. Although I was not able to see the objects listed in the database, I could gauge if the collection contained any objects that were especially large, fragile, or potentially hazardous based on descriptions entered into the database by the Panama Canal Museum staff and volunteers. These types of objects require special handling, storage, access, legal documentation, and requirements for exhibition. There were several objects at the library and included on the database that fell into the above-mentioned categories, including a large canoe, a sword, and several small pieces of Pre-Columbian pottery. Due to its large size and shape, the canoe will require a special storage mount and several people to handle it each time it is moved. The sword should be stored and transported on a custom cut foam mount that reduces the risk for handlers to be injured. The Pre-Columbian pottery pieces will require

careful handling since they are fragile. In addition to their special handling requirements, Pre-Columbian pottery also has possible legal issues. In 1983, the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property went into effect, as law, in the United States. This law states that no antiquities may be imported to the United States without a permit issued by the country of origin. If the objects were imported prior to 1983, it is legally permissible to buy, sell, and have possession of most artifacts that are in the country prior to that date.[14] The library should insist that the Panama Canal Museum provide them with detailed proof of provenance and ownership that states these artifacts were imported prior to 1983.

Sorting through the collection and database also allowed me to estimate an approximate total of how many objects would eventually be transferred to the library. This guided me in making realistic recommendations on a possible storage space and how to best inventory the collection. My recommendations for storage design and inventory policies and procedures can be found on pages 29 through 45 and 62 through 63 of Appendix B. Of the objects that had arrived, I noted material characteristics of the objects and their sizes. I also took photographs of the collection. Photographing the collection helped me recognize similar types of objects as well as exact duplicates. By recognizing objects that were similar, I was able to make recommendations for them to be stored together.

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[14] Marilyn E. Phelan, *Museum Law: A Guide for Officers, Directors, and Counsel* (Evanston IL: Kalos Kapp Press, 2001), 237-243.

The founding members of the Panama Canal Museum and dedicated volunteers were well intentioned in starting a museum to exhibit and preserve their objects related to the America Era of the Panama Canal Zone. However, they had no formal training in museum practices such as how to handle objects, proper storage methods, how to label objects with their accession numbers, and appropriate temperature, relative humidity, and light exposure levels. Therefore, I encountered several registration and collections management problems such as improper labeling, shipping, and storage as well as damage while sorting through the collection. In the manual, I addressed these issues directly, explaining why they are problematic and what can be done to correct them. For example, I presented several options for labeling objects with their accession numbers, rehousing options, and examples of proper shipping containers.

Many objects were labeled with their accession numbers using permanent marker, pen, or sticker labels. Pen and permanent marker are extremely difficult to remove and contain chemicals that can damage the materials they are written on. Accession numbers are not usually removed because they are a unique identifier of an object. However, it is possible that someone will make a mistake, such as labeling an object with the wrong number, and the number will need to be removed, as was the case with the certificate pictured in figure 2. In a few instances several hundred photographs were stacked directly on top of one another. These photographs were labeled with their accession numbers in permanent marker on the verso. In this case, there is a risk that the permanent marker on the back of one photograph could transfer to the front of another photograph, especially if they are exposed to high temperature and humidity. Although sticker labels are removable, they leave a residue that permanently damages the object. Therefore, it was

necessary to present several options for labeling objects in the manual. Three-dimensional and framed objects can be labeled using artifact tags that are tied to objects with cotton string. The string of the tag should be threaded through an existing hole or gap. A hole should not be created and a tag should not be attached to a breakage that was the result of damage. This could cause further damage to the object. Paper objects should be labeled on the verso with pencil. Objects that cannot be tagged or labeled with pencil can be labeled using Acryloid B-72 Lacquer and ink. A layer of Acryloid B-72 Lacquer provides a barrier between the ink and the object. Recommendations and detailed instructions on labeling objects with their accession numbers can be found beginning on page 11 of Appendix B.

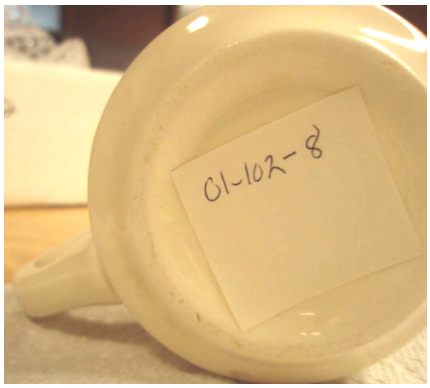

Figure 1: Mug labeled with sticker label

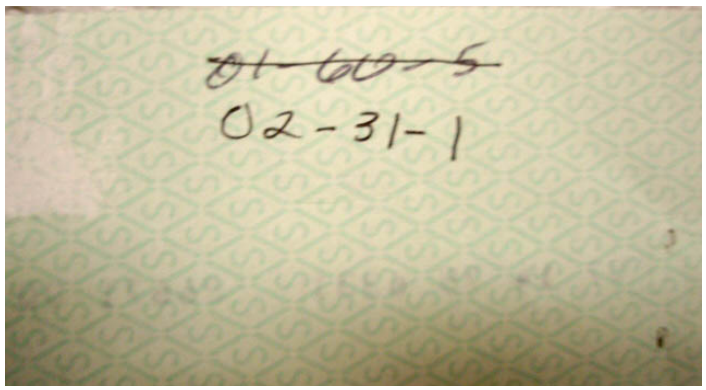

Figure 2: Back of certificate labeled with pen

Figure 3: Letter opener labeled with permanent marker

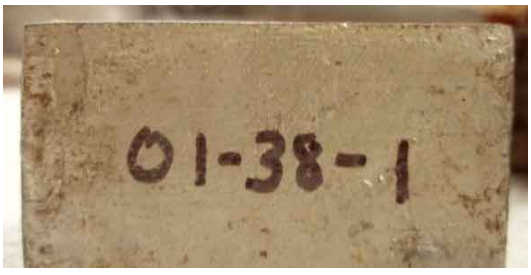

Figure 4: Brick labeled with permanent marker

Many of the objects arrived at the library upside down or on their sides in cardboard boxes. From this, I deduced that objects had not been properly stored prior to

arriving at the library. Many objects were stored loosely in boxes when they should have been padded for travel and stored separately from one another. Even non-fragile objects can be damaged if they shift during moving and travel. Figures 5 and 6 show several objects in boxes in the condition that they arrived at the library. Although none of these objects are especially fragile on their own, materials are able to damage one another when stored together. For example, the leather cover of the book in figure 5 could adversely affect the cloth bandana by transferring some of its color. The iron-on patches and medallion in figure 6 could rip or cause folding to occur to the paper objects in the same box. Since iron-on patches are activated by heat, if this box were exposed to high temperatures, the adhesive could cause these objects to stick to one another or the box, thus causing damage that could easily have been avoided. Figure 7 shows a particularly risky situation; a porcelain plate was shipped without any padding or bubble wrap. If shifted, the plate could easily break.

Figure 5 and Figure 6: Several objects stored and shipped together loosely without barriers

In several instances, objects were piled directly on top of one another in boxes without any barriers (such as interleaving paper) between different types of materials. Figure 8 shows a couple of hundred photographs stored in a single box. If shifting were to occur during movement or travel (which is likely), the surface of the photographs could be scratched. Since the collection is stored and transported in Florida, high

temperatures and humidity levels are major concerns. If the box of stacked photographs were to be exposed to high temperatures and humidity levels, the photographs could become stuck together. Attempts to separate photographs that have become stuck together should only be handled by a conservator. However, it is still possible that permanent damage may occur, so it is best to employ preventative conservation measures to avoid this problem from the outset. In this case, preventative conservation measures include storing the photographs in a climate-controlled area and placing individual photographs in either non-buffered acid free sleeves or partially encapsulated in Mylar. For specific recommendations for storing photographs, refer to pages 40 and 41 of Appendix B.

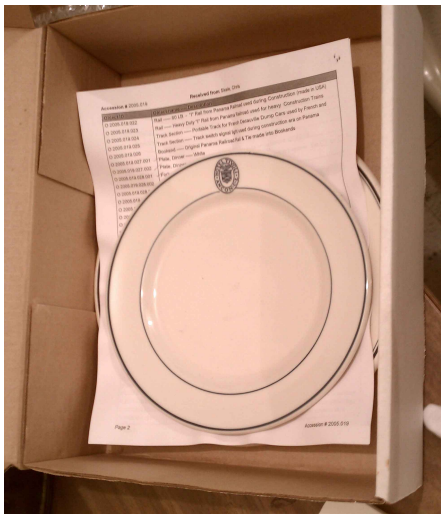

Figure 7: Porcelain plate stored and shipped without padding

Figure 8: Photographs stored stacked on top of one another

Although the library has experience with storing some types of objects in the Panama Canal Museum collection, I felt it was necessary to include an extensive chapter on proper storage in the manual since there was such diversity in materials represented in the collection and the fact that they were arriving in improper storage and shipping situations. The chapter on storage begins on page 29 of Appendix B.

As a large university library, the Smathers Library participates in lending programs such as Interlibrary Loan as well as providing individual loans to students and faculty. These programs are primarily limited to books. Books are less complicated to lend than cultural artifacts because many are still in print (replaceable) and they are typically a square or rectangle so a shipping box or container can be retrofitted with padding to fit almost any book. Aside from rare books (which aren't lent outside the library) books do not require special handling. Cultural artifacts, on the other hand, vary in size and material, are usually irreplaceable, and sometimes require knowledge of object handling. After the collection is digitized, it is possible that museums and other libraries will request objects for loan. Since the collection is being transferred from a museum, the library should lend the objects to libraries and museums that are able to properly care for the objects while they are in their possession. Similarly, if an exhibition with the Library of Congress comes to fruition, objects in the Panama Canal Museum collection will need to be packed and shipped, and loan agreements will need to be filled out. Detailed information and instructions on packing and shipping objects as well as a sample loan agreement form can be found on pages 56 through 61 of Appendix B.

Although museums and libraries share many similarities, caring for and providing access to a collection requires different policies and procedures. Based on the differences and similarities between museums and libraries, the next chapter discusses specific compromises between museum registration methods and the library's needs that were necessary to make the manual relevant and useful to the library for the Panama Canal Museum collection.

CHAPTER THREE: MUSEUMS AND LIBRARIES, SIMILARITIES AND COMPROMISES

Museums and libraries have many similarities and differences. Broadly, museums and libraries both have collections of objects, have educational roles, and provide intellectual resources and services to local communities. More specifically, from a collections management perspective, libraries and museums are responsible for the proper care, storage, and preservation of collections, providing public access to their collections, and developing databases that allow objects to be tracked and searched. However, museums and libraries also have fundamental differences that render them two completely different institutions. Major differences are the types of objects contained in the collections, terminology used, ways that collections are accessed and interpreted, and development of database systems.[15]

In many instances a library would not be equipped with the knowledge, facilities, or staff to handle a large collection of museum objects such as the Panama Canal Museum collection. The University of Florida Smathers Library is a large, university-affiliated library with more resources available than smaller, public libraries. The library has several collections of three-dimensional objects, so their ability to preserve and provide access to three-dimensional objects has been demonstrated. However, the Panama Canal Museum collection is larger and more diverse in materials than other collections housed by the library. Policies and procedures (such as cataloguing, assigning accession numbers, storing, providing access to, inventorying, and lending) vary among library departments depending on the needs of each particular collection. When a library

[15] Hannah Gibson, Anne Morris, and Marigold Cleeve, "Links Between Libraries and Museums: Investigating Museum-Library Collaboration in England and the USA," *Libri,* 57 (2007): 54.

receives a collection of museum objects, many factors need to be taken into consideration in planning how to handle the collection. Factors include specific types of objects in the collection; how large the collection is; and what concessions need to be made in regards to handling, storage, access, and lending since the collection is no longer at a museum. In writing the manual for the library on how to handle the Panama Canal Museum collection, I had to consider what compromises needed to be made between museum collections management policies and the library's needs.

One significant similarity between museums and libraries is that both institutions hold collections of objects. However, the types of objects they contain are different. Libraries collect books and manuscripts. Large research libraries often have special collections that include photographs, maps, blueprints, and other flat, paper materials. Museums, on the other hand, collect objects in a multitude of sizes and materials. Different types of museums collect different types of objects dependent on their mission, collecting plan, and resources. Many museums collect books and other paper documents: An art museum may have artist sketchbooks, works of art on paper, or letters written by artists, history museums may have government papers, original or first editions of historical books, or maps, and natural history museums might contain archaeological dig site maps and detailed drawings of specimens. Still, the majority of objects in a museum, especially those that are exhibited, are not textual sources such as books or documents.

One of the main reasons that museums and libraries have different collections is that they allow access (both physical and intellectual) to them in different ways. The public accesses museum objects through exhibitions. In exhibitions, objects are selected and interpreted by curators and sometimes educators, depending on the institution.

Museums have "cultural artifacts," which, according to Hannah Gibson, Anne Morris, and Marigold Cleeve, require interpretation.[16] Museum professionals who have extensively studied the subject are regarded as the authority for interpretation of cultural artifacts. Libraries have "open-access and support freedom of information," and materials are accessible to the public on an individual or group basis.[17] Libraries collect what Gibson, Morris, and Cleeve refer to as "knowledge artifacts;" that is, primary and secondary sources that "speak for themselves."[18] Then, what happens when libraries receive "cultural artifacts" that need to be interpreted for the user such as the Panama Canal Museum collection at the University of Florida Smathers Libraries? In these cases, it is imperative that library users have direct access to many information sources on the collection. One of the main reasons that the University of Florida Smathers Library is receiving the Panama Canal Museum collection is because they have one of the best Latin American collections in the United States.[19] Thus, library users are able to access a plethora of primary and secondary source materials in the library to inform their interpretations and study of objects in the Panama Canal Museum collection. Because primary and secondary source documents and the Panama Canal Museum collection are located in the same facility, library patrons are able to access both at the same time. For example, a library patron is able to study one of the many molas from the Panama Canal Museum collection while having direct access to a number of books on the history of molas in Panama and the process of mola making.

[16] Gibson, Morris, and Cleeves, "Links," 54.
[17] Ibid., 56.
[18] Ibid.
[19] Dr. Rachel A. Schnipper, Associate Dean for Technology and Support Services at the University of Florida Libraries, e-mail message to author, September 23, 2011.

The number of objects that visitors have access to greatly varies between museums and libraries. It is estimated that between 1% and 5% of a museum's collection is on display at once, leaving 95-99% of a museum's collection in storage and, thus, inaccessible to the public.[20] Some museums, especially those associated with a university, allow scholars, researchers, and students to view objects in storage, but only if there is adequate space and a staff member available for supervision. The general public usually cannot take advantage of this benefit and their access to objects is generally limited to those on exhibition. Conversely, most library materials are available for view at any time. Policies for checking out materials varies, but public libraries provide library cards for free to anyone living in the local area. University libraries, such as the University of Florida George A. Smathers Libraries, reserve check out privileges to faculty, staff, and students who pay semester fees. However, public and university libraries allow for the use of their collections by the public within the library facility, regardless of whether they have a library card.

One of the main adaptations that was needed in the manual was devising protocol for providing access to Panama Canal Museum collection objects. I used the Samuel P. Harn Museum of Art's Collections Management Policy and list of rules for use of the study rooms as a basis for this section but adapted it to fit the needs of the library. For example, the Harn Museum will not allow non-staff members to handle objects. This is not practical for the library so I indicated that visitors should be able to handle objects, but be given special instructions and wear gloves. Currently, library patrons are not given special object handling guidelines or required to wear gloves when handling objects.

[20] Diane Haithman, "Too Many Treasures," *Los Angeles Times* (December 27, 2005), accessed September 22, 2011, http://articles.latimes.com/2005/dec/27/entertainment/et-artkeeping27.

Although the Panama Canal Museum collection is comprised of museum objects, the collection will be accessed more like other objects in the library's collections. The objects will not be available for check out from the library like circulating collections, but they can be requested for study and viewed in a secured study area. As mentioned in the previous chapter, I recommended that the library utilize the Research Room in Smathers Library East for patron viewing and study of objects.

Because of the way access will be provided to objects in the Panama Canal Museum collection at the library, object handling rules needed to be considered in the manual. Policies vary from museum to museum on who can handle objects, but most restrict handling to museum staff. Some museums may allow volunteers or interns to handle objects. Restricting handling of the Panama Canal Museum collection to library staff is not practical. The library does not have enough staff for one person to supervise and handle objects in the collection while a patron researches them. The staff member monitoring the Research Room is available for help if an object is too large, fragile, or awkward for one person to handle, but they are also responsible for monitoring and helping other patrons using the Research Room.

Many of the objects in the Panama Canal Museum collection are objects people may encounter on a daily basis—juice cartons, mugs, plates, clothing, coins—and library patrons and even staff may be inclined to treat them less like museum objects since they regularly encounter these types of objects in their daily routines. However, as caretakers of the collection, the library is responsible for ensuring that all objects are treated with respect and handled carefully by staff and patrons. Some of the objects in the collection are fragile (Pre-Columbian pottery) or potentially hazardous (sword) and require careful

handling. I created a list of object handling guidelines for the library to distribute to library patrons before they handle or move objects. Not only does this convey important information about handling the objects, but it informs patrons that even though these may seem like everyday objects, they are special collections and should be treated as valuable museum objects. This list of handling instructions can be found on page 47 of Appendix B.

Although most interaction with library materials occurs on an individual or group study basis, some libraries have a space dedicated to temporary exhibitions. Librarians or archivists working with particular collections serve as curators of the exhibitions. This is one instance where libraries serve a similar function to museums in that they interpret objects for visitors. Some large libraries, such as the Smathers Library, have an exhibitions coordinator who facilitates exhibition planning by providing technical and design support for librarians/departments who are curating exhibits, developing an annual budget, targeting sponsors and funding sources, and ensuring proper storage and handling of exhibition objects. The Smathers Library has a dedicated exhibition space on the second floor of Smathers Library East where exhibitions are rotated on a monthly basis. Since the UF and Panama Canal Museum partnership began, there has been interest in curating a temporary exhibition to go in that space using objects from the collection.

Exhibitions at the library are relatively short compared to exhibitions in a museum. Temporary museum exhibitions can last from two to six months. “Permanent” displays can last from six months to several years. The library’s exhibitions are usually changed every month. Therefore, it is unlikely that any object in the Panama Canal Museum collection would be on display for more than a month at a time. This partially

decreases possible damage due to light levels and fluctuating temperature and relative humidity. However, I did recommend that the library purchase thermohygrometers, which are designed to measure temperature and relative humidity inside display cases. Since temperature and relative humidity might not be able to be completely controlled in this space because it is above the entrance to the library from outside, I also recommended purchasing silica gel packs that help maintain stable humidity in microclimates.

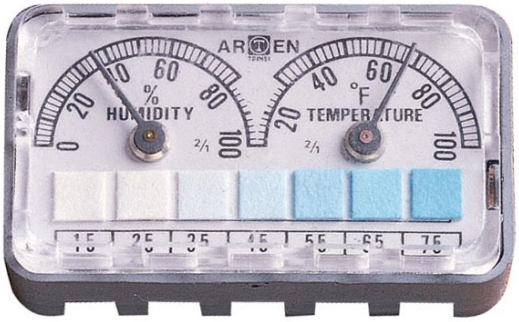

Figure 9: Thermohygrometer

Figure 10: Silica gel pack

If the library decides to dedicate a space to exhibiting objects in the Panama Canal Museum collection on a regular basis, they will need to invest in hygrothermographs, instruments that measure and record temperature and relative humidity, as well as light level meters to ensure that proper conditions are maintained in the exhibition space. Additionally, if the Smathers Library and the Library of Congress jointly organize an exhibition, the Smathers Library will need to know how to pack and ship a variety of objects (including those that are fragile) as well as complete loan agreement forms. Recommendations for designing packing containers, making shipping arrangements, and a sample loan agreement are included in the manual, beginning on page 49 of Appendix B.

Museums and libraries both have specialized database systems for searching their collections. Museum searching systems are "designed for the staff and not the public," whereas libraries "list and advertise all items of the collection through a catalogue."[21] In museum collections databases, much of the terminology used is only widely understood and searchable by museum staff. For museums' purposes, this is usually sufficient because the only people who search the collections database are those working in the museum. However, in the library it is likely that as many visitors will search for objects in the Panama Canal Museum collection as staff, so it is important to describe objects in terms that will be searchable by the visitor. Therefore, another adaption that was made in the manual was how to record and describe objects so that they are searchable in a database by the public. To do this, the library should utilize the knowledge of those associated with the Panama Canal Museum such as staff members, volunteers, and donors. They will be able to identify objects and help "tag" terms to objects that will aid patrons searching for them. Words that describe the physical appearance of the object are also helpful to include in the database because a library patron may have a vague notion of what an object they are searching for looks like, but not know its formal name. Therefore, objects in the Panama Canal Museum collection should be integrated into the library's catalogue. This is beneficial for two reasons. First, it keeps the collection information in one place that is already organized and accessible to the public. Second, objects in the Panama Canal Museum collection will appear in catalog searches. Library patrons who aren't aware that the library has this collection would then be made aware that these objects are available for study.

[21] Gibson, Morris, and Cleeves, "Links," 56.

CHAPTER FOUR: CONCLUSION

As the Panama Canal Museum collection continues to arrive at the University of Florida Smathers Library, the manual will be a guide for the library in handling the collection and for fundraising for collections storage, digitization projects, and exhibitions. In researching what needed to be included in the manual, I relied heavily on the *New Museum Registration Methods*, the National Park Service *Conserve O Grams,* and *the National Park Service Museum Handbook*. Although some of the information in the manual involved compiling information from these sources (for example, what types of materials require specific environmental controls), most of the manual was written specifically with the library and the Panama Canal Museum collection in mind (such as developing a feasible inventory procedure and policy and picking out or designing specific storage furniture, mounts, and containers for the objects in the collection). Since I was unable to find any literature on storing a museum collection in a library, I had to determine what compromises could be made between standards set forth in the above-mentioned sources and the library.

One might imagine that when a collection is transferred from a museum to a library, the general conditions might be less ideal in a library than a museum because the facility isn't designed to accommodate three-dimensional objects of various materials, and because the staff is not trained to handle these types of objects. Although the founders of the Panama Canal Museum had good intentions in founding the museum, the Panama Canal Museum collection had previously been handled in a less-than-ideal manner because those involved at the museum were not trained museum professionals (see chapter two for specific collections management and registration issues I

encountered in the collection). In this case, the collection will be better preserved in going from a museum to a library.

In the manual, I discussed specific objects in the Panama Canal Museum collection, but also wanted to make the manual broad enough to be helpful to other large, research-based libraries facing a similar situation of receiving a large collection of museum objects. Something that would have been helpful in making the manual more applicable to other institutions would have been to create a survey that could be distributed to and filled out by other large university-affiliated, research-based libraries. I could have used data supplied by the surveys to investigate how other libraries that received large museum collections are handling them and what types of topics they would like to see included in a manual on handling a museum collection in a library context.

Because I am not trained as a conservator, the manual does not contain a chapter on conservation treatment. As a student assistant, I have worked in the conservation department at the UF library, performing conservation treatments on architectural drawings and blueprints, but my conservation knowledge is limited to those media. However, the library does employ a conservator. I would like to have included a chapter on conservation in the manual because it would have been useful for other libraries that don't have a conservator on staff. I could have collaborated with John Freund, the conservator on staff at the library, to write a chapter on minor conservation treatments that can be carried out by library staff. However, I did include preventative conservation suggestions in the chapter on storage. Preventative conservation involves identifying and reducing possible hazards to objects by controlling the surroundings and environment in

which they are kept. This includes proper storage furniture and containers, maintaining environmental controls, and keeping light exposure levels at acceptable levels. Conservation, preventative conservation, and registration are all integral to collections management in both museums and libraries. Collections managers ensure that collections are cared for so that the institution can continue to use the objects for educational purposes through exhibitions, programs, and individual study.

The manual includes chapters on processing the Panama Canal Museum collection, object handling, condition reporting, photographing, storage, providing access to the collection, planning exhibitions, and conducting inventory. Throughout the manual, images and diagrams provide visual instructions on how to carry out the various policies and procedures explained in the manual. When followed correctly, the manual will ensure the proper preservation of the objects as they are stored, handled by library patrons and staff, packed and shipped, and exhibited.

Glossary

Accessioning: The act of recording/processing an addition to the permanent collection. This includes assignment a unique number that allows the museum or library to connect an object to its documentation.

Accession number: A control number, unique to an object, whose purpose is identification, not description. This number helps to ensure that all documentation is linked to the proper object.

Call number: Number by which users are able to locate materials on library shelves. Each call number is unique.

Cataloging: The process of creating entries for a catalog and includes a bibliographic description, subject analysis, assignment of classification notation, and activities involved in physically preparing the item for the shelf.

Catalogue: A listing of the institution's holdings. This can be in book or digital format.

Condition report: A record of an object's condition at a certain point in time.

Hygrothermograph: An instrument that measures and records temperature and relative humidity.

Light level meter: A device that measures the intensity of light on a certain spot.

Processing: The task of preparing the materials for the shelves after they are acquired by the library and includes accessioning, cataloging, stamping, labeling, and numbering.

Registration: The process of developing and maintaining an immediate, brief, and permanent means of identifying an object for which the institution has permanently or temporarily assumed responsibility.

Thermohygrometers: A device that measures temperature and relative humidity inside display cases or other small, enclosed spaces.

Conservation: Encompasses actions taken toward the long-term preservation of cultural property. Conservation activities include examination, documentation, treatment, and preventative care, supported by research and education.

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BIOGRAPHICAL SKETCH

Kim Tinnell graduated with a Bachelor of Arts degree in Studio Art with a minor in Art History from Stetson University in 2008. As a graduate student in Museum Studies at the University of Florida, Kim interned at the Samuel P. Harn Museum of Art and the Philadelphia Museum of Art. She also completed an object cataloguing project for the Bob Graham Center for Public Service and has worked as a conservation technician in the University of Florida Smathers Library conservation lab on a project to conserve and preserve John Carrere and Thomas Hastings' original architectural drawings and blueprints of the Hotel Ponce de Leon (now Flagler College) and the Flagler Memorial Presbyterian Church in St. Augustine, Florida. Upon graduating, Kim plans to pursue a career in collections management, potentially focusing on art conservation.

APPENDIX A: PANAMA CANAL MUSEUM AND UNIVERSITY OF FLORIDA PRELIMINARY AGREEMENT

Preliminary Agreement
Between
The Panama Canal Museum and the University of Florida

This is a preliminary agreement between the Panama Canal Museum (PCM) and the University of Florida Foundation, Inc. (UFF), on behalf of the George A. Smathers Libraries (Smathers Libraries), Center for Latin American Studies (Center) and the Samuel Proctor Oral History Program (OHP) of the University of Florida. The purpose of the agreement is to confirm and document the intention of the PCM to transfer its collections and assets to the University of Florida through the UFF and dissolve not later than July 2012. This will ensure the preservation of and access to the collections, support related research and scholarship, and document the history of the United States in Panama through oral histories. The agreement also documents the responsibilities of the parties during the transition period from October 2009 through July 2012 (Transition Period) and expectations subsequent to integration of the PCM collections and transfer of assets to the University of Florida through the UFF (Integration).

Gift agreements and deeds of transfer will be executed as needed to document the transfer of assets and collections during the Transition Period. A final agreement will be developed and executed prior to the closure of the PCM and transfer of its collections and assets to UFF. That agreement will serve as the Deed of Gift for any remaining collections and assets.

TRANSFER AND DISPOSITION OF ASSETS

It is the expressed intent of the Parties (PCM, UFF and the University of Florida) that:

1. The term "collections and assets" in each appearance in this Agreement shall include, but not be limited to:
    - Original documents, publications, letters and other writings, reports, plans, maps, photographs, audio/visual materials, computer-generated materials, oral histories in any format, etc.;
    - Published materials (books, magazines, government-issued publications, circulars, pamphlets newspapers, bulletins, etc.);
    - Select artifacts that complement photos and other items described in a. and b;
    - Additional physical artifacts identified by the Smathers Libraries for display in permanent or traveling exhibits;
    - Artwork, Pre Columbian and Indigenous artifacts (pottery, baskets, Molas, etc.);
    - Exhibit and display materials (panels, lighting, display cases, shelving, bookcases, etc.); and
    - Office equipment (furniture, computers, televisions, digital video recorders and players, etc).

2. The Smathers Libraries may acquire any and all the collections and assets described above during the Transition Period, provided that the PCM's use of those items is no longer required, in PCM's sole discretion. Each transfer will be documented through a Deed of Gift.

3. The Smathers Libraries will identify other items not expressly desired for exhibit, display or permanent retention, but which have been, for any reason, deemed to be suitable and appropriate for permanent preservation through digitization. During the Transition Period, these items will be loaned to the Smathers Libraries for digitization and, once digitized, they shall be returned to the PCM for disposition at its discretion.

4. The remaining collections and assets not requested by the Smathers Libraries for permanent retention and/or digitization shall be disposed of by the PCM in accordance with its policies and pursuant to its discretion. It is the intent of the PCM to either return such items to their donors, or otherwise dispose of its residual collection and assets by sale, auction, direct transfer or donation to allow other museums, universities, institutions or individuals to continue their preservation and enjoyment of those items to the extent possible.

MISSION OF THE PARTNERSHIP

The mission of the Partnership (Mission) is to document, interpret, and articulate the role played by the United States in the history of Panama, with emphasis on the Panama Canal and the people of all nationalities who contributed to its success. This Mission is of mutual interest to the PCM and the University of Florida and will continue to guide preservation of and access to the collections, support for related research and scholarship, and documentation of the history of the United States in Panama through oral histories after Integration.

SMATHERS LIBRARIES

During the Transition Period, subject to available funding, the Smathers Libraries agree to work with the PCM to:

- Evaluate the PCM collections and begin to catalog, digitize and preserve (Process) items that will be transferred to the Libraries;
- Prepare and promote travelling and virtual (online) exhibits, lesson plans and other materials suitable for the 100th anniversary of the opening of the Canal in 2014;
- Identify and seek to obtain materials that enhance the collection and further the Mission, whether those materials will be given to the Smathers Libraries directly or through the PCM;
- Create links between the PCM web site and the Smathers Libraries web site, including links to digital collections available for public access;
- Develop a plan for additional staffing in the Latin American Collection at the Smathers Libraries at least from the Transition Period through the 100th Anniversary events and activities;
- Plan for a successor advisory council for the PCM Board of Trustees that can continue to advise the Smathers Libraries, the Center and the OHP on matters related to the Mission;

- Participate in the annual reunions of the Panama Canal Society; and
- Assist with raising funds payable to UFF to be used during the Transition Period and after Integration to Process and sustain the collections supporting the Mission and to establish a fellowship to support the study and use of the collections by qualified scholars, who will interact with UF faculty and staff.

In addition, the Smathers Libraries will:

- Prepare its Latin American Collection and other relevant collections for integration with the PCM collection;
- Catalog and digitize publications of the Panama Canal Commission and its predecessor organizations and establish its Government Documents Department as a center of excellence for U.S. maps and documents related to Panama, the Panama Canal and the Panama Canal Zone;[1]
- Create and host a digital collection of materials related to the Mission from the PCM collection, its own collections and other sources;
- Assign a Librarian with expertise in Latin America as a subject specialist to consult with the PCM during the Transition Period;
- Designate an Associate Dean to serve on the PCM Board of Trustees and act as the primary liaison between the Smathers Libraries and the PCM staff and trustees; and
- Invite the President and Executive Vice President of the PCM Board of Trustees to Serve on the Library Leadership Board.

CENTER FOR LATIN AMERICAN STUDIES

During the Transition Period, subject to available funding, the Center agrees to work with PCM to:

- Create research awards to foster scholarship on Panama, the Panama Canal, the Canal Zone and the role of the United States in the history of Panama;
- Assist with raising funds to be used during the Transition Period;
- Participate in events and activities related to the 100th anniversary of the opening of the Canal; and
- Participate in PCM Board of Trustees meetings and foster a collaborative relationship between the Center and the PCM staff and Trustees.

SAMUEL PROCTOR ORAL HISTORY PROGRAM

During the Transition Period, subject to available funding, the OHP agrees to work with the PCM, the Smathers Libraries and the Center to:

- Identify and prioritize individuals for oral histories related to the mission of the PCM;
- Conduct oral history interviews, transcribe and digitize them, and make them

[1] The phrase center of excellence is used here as it is used within the U.S. Federal Depository Library Program to identify a library establishing a collection and related services focused on a specific Federal agency or subject area represented by Federal documents. This is distinct from, and unrelated to, the Florida program of the same name that is intended to bridge the gap between academia and industry.

available online; and
- Assist through presentations and materials with raising funds to collect oral histories during the Transition Period, as well as to continue to collect oral histories supporting the Mission for at least 5 years after Integration.

PANAMA CANAL MUSEUM

The PCM agrees to work with the Smathers Libraries, the Center and the OHP to accomplish the objectives identified above and to:

- Develop a plan for disposition of duplicates and other materials that will not be transferred to the Smathers Libraries;
- Invite a representative from the Smathers Libraries and a faculty member from the Center to serve on the PCM Board of Trustees during the Transition Period; and
- Assist with fund raising during the Transition Period with the goal of sustaining the Mission after Integration.

INTEGRATION

All parties agree to collaborate to ensure a smooth transition and to develop the appropriate documentation to effect the Integration.

APPENDIX B: LIBRARY MANUAL

Panama Canal Museum Collection at the George A. Smathers Libraries: A Guide to Processing, Handling, Condition Reporting, Photographing, Storing, Allowing Access to, Exhibiting, and Inventorying the Museum Collection in a Library Setting

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2011

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Introduction

Libraries typically collect "knowledge artifacts" in the forms of books and papers. "Knowledge artifacts" are primary and secondary sources that relay information directly through text or images. Many special collections departments within libraries also contain paper objects such as maps and photographs, but very large collections of three-dimensional objects are less common. This is mainly because three-dimensional objects are usually "cultural artifacts," which require interpretation. Unlike "knowledge artifacts," "cultural artifacts" do not speak for themselves. Typically, these large mixed collections are stored in museums, where museum staff, mainly curators and educators, is available to interpret objects for visitors through exhibitions and education programs. However, as is the case with the Panama Canal Museum (PCM) collection, mixed collections do end up in libraries.

The University of Florida Smathers Library has other collections of three-dimensional objects within their special collections, however, none as large as the Panama Canal Museum collection, which contains over 15,000 objects. Because the collection is so large and arriving within a short period of time, it is important to outline an efficient and effective way of processing, cataloguing, photographing, and inventorying the collection. Likewise, the current storage area for three-dimensional objects in the library is not large enough to store the entire Panama Canal Museum collection. Objects in the collection range in size from a very small pin to a large canoe, so proper planning is imperative for designing a storage space. The library is already short of space for storing all of their collections, providing a place for students and staff to do research, and displaying objects. However, if planned properly, most of the Panama Canal Museum collection will fit into a few small storage areas (with the exception of a few larger objects that will likely need to be stored in the library's auxiliary storage area). Recommendations for efficient and safe storage are outlined in this manual.

This manual will provide the University of Florida's George A. Smathers Libraries Special Collections Department with a blueprint on how to process, handle, condition report, photograph, store, provide access to, exhibit, and inventory the collection from the Panama Canal Museum. Below are details listed on the topics that are included in specific chapters.

Processing
This chapter of the manual provides guidance in the physical processing and recording of an object including topics such as assigning numbers, physically numbering objects, describing objects, database entry, and collecting policy.

Handling
Museum staff members that have been specially trained in handling art, historical objects, or natural history specimens are the only people allowed to physically handle museum collections. As a library collection, such a strict policy on handling is not feasible. This chapter makes recommendations for determining who will be allowed to handle the

objects, if there is special handling training required, what types of gloves to use, and the requirements for a physical space for handling and research.

Condition reporting
Since many people will potentially handle the objects, the collection should be condition reported frequently. This chapter instructs staff on how to conduct a condition report and provides sample forms.

Photographing
Taking photographs of the collection is important for many reasons. This chapter outlines the three principle reasons for photographing objects (identification, condition reporting, and publication) and the best methods for photographing the collection.

Storage
This collection is much more diverse than the library is used to storing. Different types of materials require different storage conditions. This chapter of the manual makes recommendations on proper storage furniture, boxes, and atmospheric conditions for specific categories of objects in the collection.

Accessing
In museums, public access to collections is through exhibitions. Some museums, particularly university affiliated museums, allow scholars, researchers, and students accompanied by professors to access objects in storage. Access to library collections is usually the opposite. Most access is through individual access rather than exhibitions. This chapter guides the library through developing a policy for accessing the collections including who can access it, where they can access the objects, and limitations.

Exhibiting
Although the collection will mostly be accessed in a study area, the library has a space where they put up exhibits for short periods of times. The library has also mentioned possible plans for a permanent exhibit space for this collection as well as a possible traveling exhibition in collaboration with the Library of Congress. This chapter outlines exhibition procedures and conditions and includes a section on preparing objects for traveling exhibitions.

Inventorying
Since many people will potentially access the collection, an inventory should be conducted to be sure objects are not missing. This chapter makes recommendations on procedure and how often to conduct inventory on such a large collection.

Chapter One: Processing

Accessioning is "the act of recording/processing an addition to the permanent collection [which includes] assigning a unique number that allows the museum to connect an object to its documentation."[22] Because the Panama Canal Museum collection is being processed in large quantities, it is important to establish an efficient means of recording and processing the incoming objects.

There should be a space dedicated solely to processing this collection. This will ensure that objects from different collections do not get mixed together before they can be properly identified, numbered, and catalogued.

Numbering

The collection is coming from a museum so many of the objects have already been numbered and described. The Panama Canal Museum's system includes four numbers in a series that denote the donation year, the donor number, the batch, and usually the number of objects within the batch, if applicable. For example:

Since the library is obtaining such a large quantity of objects in a relatively short period of time, it is possible to keep this system and continue using it for future accessioned objects. However, this system has several drawbacks. First, the number can end up being very long. Each object has to be physically numbered. A number this long can result in the number being visible while exhibiting the object or not fitting at all if it is a small object. Second, someone who isn't aware of the numbering system (for example, someone who comes in to study an object in the collection once) may get very confused because there are so many components. Third, if an object is found in the collection and the donor is not known, the question of "what do you put as the donor number?" comes up. Leaving the number out completely would be confusing because the number that normally designates the donor would actually stand for something else. If the library decides to stick with this system, a standard number should be used when the donor is not known (such as 00).

In addition, the system of numbering has been inconsistent among the objects in the PMC collection. Sometimes numbers are written as shown above, separated by periods. Other times they are written with dashes (2005-040-005-001) or with abbreviated versions of the date (02-040-005-001). Sometimes the inconsistency occurs within the documentation of a single object (for example, an object will be labeled with 2005.040.005.001 and the documentation associated with that object will be labeled 02-040-005-001). Whether the library chooses to continue using the same numbering system that the Panama Canal

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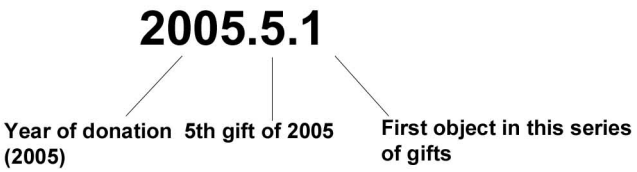
[22] Clarisse Carnell and Rebecca Buck, *The New Museum Registration Methods* (Washington DC: American Association of Museums, 1998), p. 157

Museum implemented or adapt a new one, the format that is chosen should be used consistently.

If the library adapts a new numbering system, the donor number should be removed. Since all donor information should be kept in the documentation files, there is no reason it needs to be in the accession number. Here is an example:



If the library adapts the Panama Canal Museum's numbering system and removes the donor number, all documentation should retain a record of the old numbering system so that information does not become lost in the process of changing numbering systems.

The library has a few collections of objects within their collections, so it is necessary to have a numbering system that differentiates objects in one collection from another. An effective way to do this is to incorporate letters into all of the accession numbers in one collection. For the Panama Canal Museum Collection, an abbreviation of the collection name such as "PCM" would be effective. For example, using the example above, an accession number for an object in the Panama Canal Museum collection would look like this:

PCM2005.5.1

When an object arrives at the library, it should be recorded immediately. The accession number should be written on the object and any documentation of the object. It is a good idea to keep a master log of numbers that have been used. This will help prevent inconsistencies that have occurred in the past as well as insure that numbers are not skipped or repeated. Each time an object is assigned a number, write that number in the log.

Objects that have more than one piece (such as the seal maker and case) can be numbered a and b. For example, PCM2002.88.12a and PCM2002.88.12b. This will alert people that the object has multiple parts.

Some objects that have arrived have no accompanying documentation and have not been assigned a number. It will be unlikely that certain pieces of information will be determinable such as donor. Record as much information as possible when the object comes in. These objects will need to be assigned a number. Since the Panama Canal Museum is continuing to collect objects until they close in 2012, the best option would be to assign these objects with a number starting with the first year the museum will be

closed (2013). This will insure that the same number does not get assigned to two different objects.

Labeling objects

Each object should be labeled with its assigned number. Many objects that have numbers have been labeled, however, improperly. Some have been labeled with permanent marker or in visible places. Objects should be labeled only with reversible materials and in locations that will not be visible when they are on display, if possible. Different types of materials and sizes of objects require different labeling techniques. If the library decides to continue using the numbering system that the Panama Canal Museum has established, objects should still be renumbered if the format of the number on the object is not consistent with the format in its documentation.

Here are acceptable guidelines for numbering types of objects in the PCM Collection:

General: Everything done to an object needs to be reversible. Objects that can be directly written on (paper, photographs) should be done so in a back corner lightly and in pencil. Objects should be consistently labeled in the same place. For example, all photographs should be labeled in the top right corner (or whichever corner the library decides).

Tagging: Most types of objects can be tagged with prestrung artifact tags as long as they have somewhere through which to feed the string. There are benefits and drawbacks to tagging. Tagging objects can be much faster than other numbering methods, especially when processing a collection as large as the Panama Canal Museum collection. It is also fairly obvious where the tags are located on most objects, so the number is easily found. A major drawback is that the tags may become separated from the artifacts over time. They are made of string and (acid free) paper, so the paper tag may become detached if the paper gets torn or worn out. If the collection is handled often, this is a strong possibility. Tagged objects should be checked often, particularly after they have been in use (either on exhibition or for individual study) to be sure the tags are still intact. If they are not, a new one should be attached immediately.

Tags should be numbered with pencil before attaching it to the object. The string of the tag should be threaded through an existing hole or gap (one that is not damage related). String should be cotton or another material that is pure. Silk is pure, but less durable than cotton. Do not create a hole in an object to thread the tag through. If there is nowhere to attach a tag, use another numbering method. These tags can be purchased from Gaylord.

Figure 1: Archival tag for object labeling.

Objects that cannot be labeled with pencil or tagged can be labeled using Acryloid B-72 Lacquer and ink. Here is the proper procedure for numbering objects with this method:

1. Compile the material safety data sheets for all chemicals and keep them close by.
2. Make sure you have the proper materials on hand before you start. You will need Acryloid B-72 Clear Lacquer (25% Solution) in a bottle with a brush top, Acryloid B-72 White Lacquer (25% Solution) in a bottle with a brush top, permanent black ink, acetone, artist brushes, paper towels, cotton swabs, and water.
3. Choose a well-ventilated area for labeling objects.
4. Select a clean area on the surface of the object. The area should be small and unobtrusive, but easily found.
5. Choose what color lacquer to use for a base. For dark colored objects, white lacquer can be used. For light colored objects, clear lacquer will work.
6. Make sure there is not too much lacquer on the brush. You don't want it to drip. With one steady movement, make a mark slightly larger than the number to be applied. Then, stroke again in the opposite direction to use the remaining lacquer from the other side of the brush.
7. Apply the number using a fine point brush and permanent ink once the Acryloid is dry (this should only take a few minutes). Numbers should only be written on the lacquer surface so that it does not penetrate the object's surface. Permanent ink can be used since it will not actually touch the surface of the object (the lacquer serves as a barrier). The person who writes the number should have a steady hand and good, legible handwriting. Another option is to print accession numbers on acid free paper or spun polyethylene (Tyvek), and then attach them using the method above. In this case, the Acryloid B-72 Lacquer serves as a glue to fix the printed number to the object. This insures numbers are legible. If done this way, numbers should be printed on a laser printer and the ink should be tested to make sure it does not smear when the clear Acryloid B-72 Lacquer is applied.
8. Apply a layer of clear Acryloid B-72 lacquer over the number. Make sure the ink is dry before doing this. Because drying times vary for different inks, it is recommended that you try this on a non museum object first.[23]

Porous objects may need multiple layers of Acryloid B-72 Lacquer before the number can be applied. Additionally, some materials, such as textiles, require different application altogether. Below is a list of specific types of objects and any special needs they have related to number labeling.

Extra large objects: Label (or tag) very large objects in more than once place. For example, the canoe in the PCM collection can be labeled on both ends on the bottom. Since there is a lot of surface area on large objects, it can take awhile to find. For this reason, it is a good idea to note in this object's documentation where the number can be found on the object.

[23] National Park Service, "Use of Acryloid B-72 Lacquer For Labeling Museum Objects," *Conserve O Gram*, July 1993, Number 1/4.

Very small objects: If small objects are kept in boxes (see chapter on storage), both the box and object should be numbered, if possible. This will insure that objects are returned to the same box. Objects that cannot easily be numbered and have no place to attach a tag, such as a coin, should be very well documented photographically. A photograph of the object can be placed in the box and contained in polyester or another material that will not affect the material of the object. This will help insure that objects are returned to their proper boxes. Coins can be placed in acid free coin holders and numbered on the holder (see chapter on storage).

Ceramics: Ceramics can be numbered using the technique above. Porous ceramic objects may need more than one initial coat of Acryolid B-72 Lacquer. It is best to label ceramics on the bottom of the base or on the inside of the lip (if it is a vessel). If a ceramic piece has a handle, a tag can be attached.

Textiles: Tags should be sewn on the verso (for one –sided objects) or in the inside (for garments). Large textiles should be numbered in two opposite corners (on the verso). Sometimes there are not large enough gaps to thread an existing tag through (such as the ones available from Gaylord). If this is the case, tags can be made for textiles using Tyvek. Follow the instructions above for numbering objects with Acryolid B-72 Lacquer, but instead of numbering on an object, you will number the Tyvek tag. Once the tags have dried, they can be sewn onto textile objects. All sewing should be done between the fibers of the textile. Sewing should be tight enough so that the tag does not fall off, but loose enough that it will not damage the textile. Figure 2 demonstrates the proper method of attaching a tag between the fibers of a textile. Cotton or another pure, non-dyed thread should be used. Silk is not recommended due to its fragility. A thin beading needle can be used if the fibers of the textile are very close together.

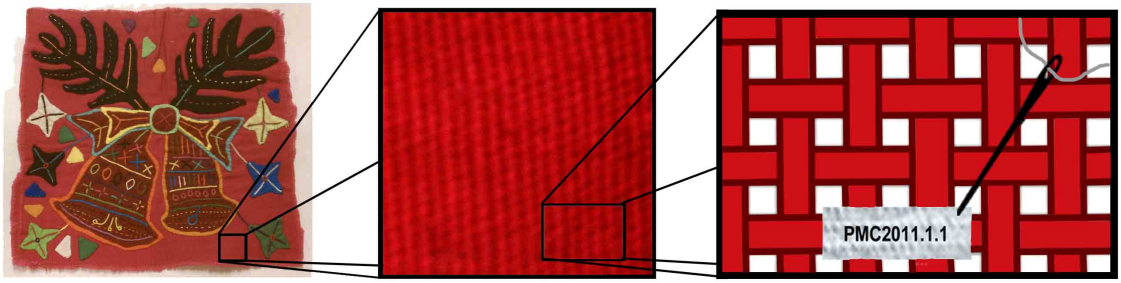


Figure 2: Diagram of how to sew a tag onto a mola.

Metals: Metals can be numbered using the technique above. Areas that are corroded or have painted decoration should be avoided.

Paper: Paper objects, including written documents, photographs, works of art on paper, maps, books, certificates, diplomas, yearbooks, brochures, stickers, newspapers, stamps, and programs, should be labeled with pencil in an unobtrusive place. Press lightly so no indentions are created. Three-dimensional paper objects can be tagged rather than written on. This may include objects such as books and gift bags. Some modern photographic paper resists #2 pencil markings. These can be labeled using a #1 or wax pencil.

Paintings: Paintings should be marked on the verso on the stretcher bar or wood panel. Never mark a painting on the front or on the verso of the canvas. Paintings can be labeled with Acryloid B-72 Lacquer using the technique outlined above. Sometimes, there are areas on the back of the canvas support where a tag could be attached.

Wood: Wood objects can be labeled with Acryloid B-72 Lacquer using the technique outlined above.

Plastic: Plastics can be complicated to label because their chemical composition is often undeterminable. It is best to label plastic objects using an archival tag.

Leather: Leather objects should be numbered with tags. The string with the tag should be threaded through an existing hole in the leather. Do not write directly on leather or attempt to use Acryloid B-72 Lacquer as this will permanently damage the material.

Cataloging

Many objects that have arrived at the library have printout sheets from PastPerfect, a database commonly used in museums. These printouts have some information about the object. It is important that this information be retained. For objects that have come in without any documentation or numbers, record as much information on that object as possible when it first arrives at the library. In many cases this information may only consist of a physical description and size.[24] If there are any captions or markings on the object, record them. Since members and volunteers from the Panama Canal Museum will continue to be involved, the library can use them as valuable resources for identifying objects and the object's significance to the American Era of the Panama Canal Zone. Be sure to record as much information that they provide as possible. A form can be devised that helps keep information organized. This information can be entered into the library's database and catalog for searching for objects.

The Panama Canal Museum should be contacted before they close to be sure there is no existing information on these objects. In many cases, legal issues will not come up. However, it would be in the library's best interest to know that the Panama Canal Museum does own these objects and has the right to deaccession and transfer them to the library. Additionally, the library will need to know if there are any restrictions in the deed of gifts for these objects that may make stipulations on how they can be exhibited or deaccessioned. If the library decides to deaccession any of these objects, they will need to show that they have the authorization to dispose of these objects. Without a proper title, showing ownership could be much more difficult. It is best to try to obtain this information while the museum is still open.

There are also several Pre-Columbian pottery pieces in the Panama Canal Museum's collection. These can pose a problem for the library if the donor of these objects and the

[24] Sandra Varry, "Photographic History, Preservation, and Digitization: Skills and Strategies for Working with Collections," Workshop given at the Society of Florida Archivists Annual Meeting in St. Augustine on May 4, 2011.

Panama Canal Museum does not have enough provenance information to prove they were imported prior to 1983. In 1983, the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural property went into effect, as law, in the United States. The law states:

> Section 307 (19 U.S.C. § 2606): Import Restrictions. No restricted materials exported from the State Party may be imported into the U.S. without an export permit issued by the State Party (country of origin), or other documentation showing that it left the country of origin prior to the imposition of restrictions. Such import restrictions are applicable even if the material is imported into the U.S. from a country other than the country of origin.

Since Americans were in the Panama Canal Zone for such a long span of time prior to 1983, it is likely the Pre-Columbian pottery pieces in the PCM collection were imported to the United States prior to the law going into effect. If the objects were imported prior to 1983, it is legally permissible to buy, sell, and have possession of most artifacts that are in the country prior to that date. However, the donors of the objects and the staff at the PCM should provide the library with proof of provenance and ownership that verifies these objects were imported prior to 1983. This law applies to all antiquities, not just Pre-Columbian artifacts.

Databases

The library has several systems that are used for cataloguing various collections within the library. The library catalog contains most descriptive information on the collections. Therefore, the best option is to integrate the PCM collection into the library catalog so it is easily searchable by patrons and the library staff. Some of the PCM collection is searchable and viewable on the Digital Library of the Caribbean, an initiative that was started by the University of Florida in 2004. This database allows users to search for objects using title, publisher or author, date, type, and some keywords. There are also images of every object on this database. As it currently exists, there are four collections available from the University of Florida on the Digital Library of the Caribbean. When searching for an object, there is no indication which collection it is coming from. This should be added. Adding the physical location in which the object can be found, a physical description of the object, and the accession number that gets assigned to the object would also be helpful to those hoping to view the object in person. This database can serve the public, especially those who wish to view the collection but aren't able to travel to Gainesville to see it in person. Here are links to the Panama Canal Museum collection in the Digital Library of the Caribbean:

http://dloc.com/pcm
http://dloc.com/pcm/all

Separate files, to be used by librarians and collection managers, should also be kept. These files should include a photograph of the object, title, material/medium, physical description of the object, object type, condition report, location, donor information, a

copy of the deed of gift, insurance value (or an appraisal), the accession number, measurements, and exhibition history.

As the objects are catalogued and physically processed, they should be placed in safe storage conditions. Currently, the Panama Canal Museum collection has a semi-permanent storage space on the first floor of Library East, located next to the conservation lab. As much as possible, objects should be arranged according to type (i.e. all photographs together, all wooden objects together, all paintings together, etc…). Should space and money become available, ideal storage conditions are outlined in chapter five.

Collecting plan

The Panama Canal Museum collection is large, with an estimated 15,000 objects. Some objects are duplicates (such as three yearbooks from the same school and year). The library is accepting the collection in its entirety and will continue to accept donations. Therefore, it is important for the library to write a collecting plan. This will keep the collection from getting too large by maintaining a single focus, refusing duplicate objects or objects that do not meet the mission, and deaccessioning objects that do not meet the mission of the collection, are duplicates, are in poor condition, or are not able to be safely cared for and stored by the library. Being a duplicate object should not automatically qualify it for deaccession. In fact, having a few duplicates of an object could benefit the library since library patrons may potentially handle the collection often. If one object becomes worn and damaged from being handled too often, then there is still another duplicate in good condition.

The library should form a collections committee specifically for this collection that can make decisions on accessioning and deaccessioning. Deaccession decisions and the process for disposing of deaccessioned objects should be taken seriously.

The best place to start research for what the collecting plan should include is the mission statement. Although the Panama Canal Museum is closing, their mission statement can still serve as the collection's guiding mission statement. The Panama Canal Museum's mission statement is:

> The Mission of the Panama Canal Museum is to document, interpret, and articulate the role played by the United States in the history of Panama, with emphasis on the construction, operation, maintenance and defense of the Panama Canal and the contributions to its success by people of all nationalities.[25]

The collecting plan should take into consideration what types of objects are already in the collection, what types of objects will and will not represent the mission statement, and what objects the library has the capacity to store and properly care for. Students and scholars who are using the collection for research will benefit from a concise collecting

[25] Panama Canal Museum Website, *Mission Statement*, accessed May 7, 2011, http://panamacanalmuseum.org/index.php/about/.

plan because they will not have to waste time weeding through objects that are not relevant to the collection's main focus.

When newly donated objects are added to the collection, a deed of gift should be completed. The library should use their existing system for accepting donations, if possible. This will make the paperwork and procedure much easier since the library staff is likely already familiar with the process. Only gifts without restrictions should be accepted except in special circumstances. Special circumstances should be discussed among the members of the collections committee and the head librarian, curator of the collection, conservator, or anyone else not on the committee who the restriction may impact to be sure that the restriction can be accommodated. It is unlikely the library can make promises to exhibit objects continually, conserve objects in very poor condition without an additional monetary gift, or make excessive use of donor plaques or donor written accompanying material.

The collecting plan should outline the justification and process of deaccessioning objects. When deaccessioning, the best course of action is to donate the objects to another museum, library, or archive for educational purposes. In anticipation of their closing, the Panama Canal Museum has decided to donate their extensive collection to the University of Florida Smathers Libraries. If the library decides to deaccession any objects, they should first be offered to a museum or another library.

There are many reasons to deaccession objects, such as the object is beyond the scope of the collection, there are duplicate objects, or that the library cannot reasonably care for and store these objects. There are several objects in the collection that fall into the categories. For this collection, the best time to make deaccession decisions is upon arrival and during processing at the library. At this time, objects that are candidates for deaccession can be set aside. Be sure to take into account if any donors have made restrictions on his or her gifts.

Chapter Two: Handling

Since students, professors, the public, and other academics will use the collection frequently, it is not best practice to restrict handing to only library staff. However, objects are most vulnerable while being handled, so precautions must be taken and rules should be put in place for those who handle the collection. Damaged objects should not be handled by non-library staff and should be sent to the conservation lab for evaluation, stabilization, and treatment.

This chapter is broken up into handling instructions for the two groups of people who will handle the collection the most: library staff who process the collection and retrieve requested objects and patrons who use the collection for research purposes. General rules for handling objects that apply to everyone will be addressed first.

General rules

When handling objects, do not wear jewelry that protrudes or could get caught on any type of object. Key cards should not be worn around the neck because they could get caught on an object. Gloves should be worn when handling objects, except in cases when an object is too slippery. Only cotton and nitrile/vinyl gloves should be used. Latex should be avoided since many people are allergic to it. If gloves cannot be worn, make sure to wash and dry hands thoroughly before touching any objects.

Never walk backwards or run when carrying objects. Walk slowly and be aware of your surroundings. Before you pick up an object, know where you plan to set it down. You should never lift one object over another. Objects should be carried one at a time, no matter how small. If an object is large, heavy, or awkward, ask for help with moving it. Do not hand objects from one person to another. Instead, set it down on a stable surface and have the other person pick it up.

Handle objects as little as possible. When picking up and moving an object, hold it in its most stable position. This is usually (but not always) the position in which it is stored.

Do not eat, drink, or smoke around objects.

When handling works of arts or historical documents (including paintings, photographs, drawings, etc…), never touch the front where the image or writing is located. Carry paper objects that have no secondary support (e.g. backing board) in a rigid folder that is slightly larger than the object. Use a sheet of paper or micro spatula to lift a piece of paper from a surface. Do not try to get under it with your fingers since this may result in creasing or bending of the corner of the paper.

Carry framed objects with one hand on the side and one hand on the bottom. Do not carry framed works by the hanging wire or the top of the frame.

Library Staff

Library staff will be handling objects while processing the collection and later when objects are requested for study by library patrons.

Many objects have arrived packed together, loosely, in boxes. Without knowing what is inside, it is difficult to determine how to move the box to make sure the contents don't get damaged. If possible, open the box to see what types of objects are inside before moving it. If this is not possible, locate a stable surface as close to the box as possible. Pick up the box carefully and walk slowly, being careful to keep the box level so that objects do not roll around. Remove objects individually from boxes, starting with those on the top. Only move one object at a time and always use two hands even if it is a small object.

When retrieving objects for study from the storage areas, use a cart to transport objects. Carts should have at least a 3-4 inch lip so that objects cannot roll off the side and should be padded. If there are very few, flat objects that need to be moved, they may be carried in solander boxes from the storage area to the study room.

When transporting objects to different floors of the building, elevators should be used. The entire cart can be pushed into the elevator. If an elevator is not accessible, carts should be available on each floor for object transport. Objects should be put on a cart and moved to the staircase. Objects can then be carried, carefully, one by one, up the staircase to another cart at the top of the staircase. Someone from the library staff should always remain with each of the carts as to not leave objects unattended.

Staff should make sure that library patrons and new library staff understand how to properly handle objects in the collection. Staff members are responsible for making sure library patrons read and sign a form acknowledging they have read and understand the rules for accessing the Panama Canal Museum collection.

Library Patrons

Library patrons using the PCM Collection may range from undergraduate students to secondary school teachers to college professors and will have varying degrees of object handling knowledge. Generally, anyone using this collection should understand that the objects are irreplaceable and should be handled with care.

In addition to the general rules of object handling, library patrons should read and sign a form acknowledging that they understand and agree to comply with library rules and regulations for object study. An example of this form can be found in chapter six on access.

Only use pencil when writing around objects.

All backpacks and oversized purses must be stored in lockers or behind the librarian's desk.

Patrons may not take objects in the PCM Collection out of the library study room.

Chapter Three: Condition Reporting

Damage can occur to objects instantly or over time so it is important to monitor the condition of the objects. The best way to do this is through condition reporting. This chapter will include sections on when to conduct condition reports and how to perform them, and will provide sample examination forms to use.

When

Damage can happen during transport, while objects are in use, or gradually over time. Objects should first be condition reported when they are brought into the library and processed. Objects are being shipped together in boxes in vehicles that were not designed to transport museum objects. Objects that are damaged excessively during transport should be taken to a conservator or deaccessioned.

Objects should also be condition reported after they are studied or exhibited. A person using the object may not report damage. Some damage can occur without the person noticing, or someone may panic about causing damage and fail to report it.

Objects that are vulnerable to damage should be flagged during processing and the initial condition report. Damage may be a result of poor handling, an accident, or an inherent flaw in the object. The library should examine and condition report these objects regularly to be sure that the damage has not worsened. If it has, a conservator should be contacted.

If objects are exhibited or loaned to other institutions, condition reports should be conducted prior to the object going on exhibit or out on loan and upon closing of the exhibit or receiving it back from a loan.

How

Before beginning an examination and condition report, make sure that an area is set up and all the tools needed to conduct the condition report are present. Here's what is needed:

-A clean, white surface upon which to set the object
-Pencils
-Examination forms and extra paper
-Computer
-Camera
-Tape measure
-Ruler
-Gloves (white cotton or nirtile)
-Flashlight
-Loupe or other magnifier
-Natural hair brushes
-Tweezers

Objects should be examined in a clean, well-lit area. Conducting examinations on a white surface will help the examiner notice any part of the object that is flaking or cracking off. Photograph, measure, describe, and save any debris that comes off during examination, including dust. This should be shown to a conservator to evaluate the condition further. Broken pieces or debris should be stored in archival grade plastic zip lock bags or in boxes. The bag or box should be labeled with the object's accession number and a short description of how the piece fell off and what part of the object it is from.

Follow the guidelines in chapter two on handling while conducting condition reports. When writing a condition report, it is a good idea to make note of any areas that may be weak. This will help ensure that future handlers will not grab the object in this area. If there are cracks, chips, or breakages, measure their length and width and record the location on the examination form. Photograph the damaged or weak area. For two-dimensional objects (including paintings, although they are not truly two-dimensional), record damage in terms of proper right and proper left.

A flashlight or other light source can be used to create raking light. Raking light is a light source that comes from the side so that certain irregularities or other types of damage can be noticed. If you can determine whether damage is chemical, biological, mechanical, or inherent in nature, record it.

A glossary of terms related to damage that objects in the PCM collection are vulnerable to can be found at the end of this chapter, beginning on page 24.

Forms

A condition report should include information about the object such as the accession number, object composition, physical description, title, artist or maker, medium, size, and date created. The date of examination and examiner should also be noted on the condition report. The report should include the type of damage, the extent of the damage, the location of the damage, previous repairs, and cause and date of damage (if known). A photograph of the object should also be included with notations of where damage is located. A color-coded system may be used, but be sure to note what different colors or type of lines mean next to the photograph. Be sure to record on the form if the damage is located on the front or back of a two dimensional object.

Be sure that all condition reports and documentation of examination are on archival materials or in archival formats. You may record condition reports on the computer, but back them up in case of unexpected computer problems or power/server outages.

University of Florida Smathers Libraries Panama Canal Museum
Object Condition Report

Documentation:

Accession Number_____

Title/Description_____

Artist/Maker_____

Medium/Material Composition_____

Date Created_____ Number of Components_____

Condition:

Describe structural and surface conditions (e.g. tears, losses, cracks, chips, holes, foxing, abrasion, scratches, tape residues, mold, buckling, discoloration, stains, flakes, patina) and any other conditions, and note location:

Please refer to photograph and/or diagram on reverse.

Examiner_____ Date_____

Needs Conservation Work? Y or N

Needs Monitoring? Y or N

1954-56-191. Rafaellino da Reggio. Madonna and Child. Before Treatment. Normal Light

Glossary for common terms related to the damage of objects in the PCM collection

General

Abrasion: A wearing or tearing away of the surface caused by scraping, rubbing, grinding, or friction.

Accretion: Any external material deposited on a surface (splashes, drips, flyspecks etc…)

Biological damage: Damage that weakens an object's structure as a result of pests or mold.

Chemical damage: Damage as a result of a reaction between a material and an energy source (heat, light) or a chemical (water).

Chip: A defect in the surface caused by material that has been broken away.

Crack: A surface fracture of fissure across or through a material. No loss is implied.

Dent: A defect in the surface caused by a blow.

Discoloration: A partial or overall change in the color caused by aging, light, and/or chemical agents. Yellowing or darkening can occur, along with bleaching, fading, and the loss of color or a change in hue.

Distortion: A warping or misshaping of the original shape.

Inherent fault (inherent vice): Weakness in the construction of an object or an incompatibility of the materials that constitute it.

Loss: missing area or hole.

Missing element: Loss of an integral component of the object such as a handle or tassel.

Mold: Biological in nature and can come in the form of colored, furry, or web-like surface excrescences and be of musty odor.

Pest damage: Surface loss, tunneling, holes, fly specks, etc… obviously caused by insects or other pests.

Physical damage: Damage caused by mechanical stress (i.e. handling, improper storage).

Scratch: Linear surface loss due to abrasion with a sharp object.

Sheen: A polish produced by handling, often occurring on areas that are frequently touched.

Soil: A general term denoting any material that dirties an object.

Stain: A color change as a result of soiling, adhesives, pest residue, food, oils, etc…

Tear: A break in fabric, paper, or other sheet material as a result of tension or torsion.

Wear: Surface erosion, usually at edges, due to repeated handling.

Ceramics

Crackle: A network of fine cracks.

Patina: A colored surface layer, either applied or naturally occurring.

Metals

Corrosion: The chemical alteration of a metal surface caused by agents in the environment or by reagents applied purposely. Corrosion may affect an object's color or texture without altering the form (such as bronze disease) or it may change the color or texture (such as patina or rust).

Patina: A colored surface layer, either applied or naturally occurring.

Pitting: Small, irregular, shallow pinhole-size losses scattered over the surface of metal caused by acidic conditions or caused by the casting process.

Tarnish: Dullness or blackening of a bright metal surface.

Paintings

Buckling: Waves or large bulges in a canvas from non-uniform tension around the stretcher.

Chalking: Loss of paint or emulsion by powdering off.

Crackle: A network of fine cracks.

Flaking: Lifting and sometimes loss of flat areas of the surface.

Paper

Crease: A line of crushed or broken fibers generally made by folding.

Delamination: A separation of layers; splitting.

Embrittlement: A loss of flexibility causing the material to break or disintegrate when bent or curled.

Fold: A turning over of the support so that the front of back surface is in contact with itself.

Foxing: Small, yellow, brown, or reddish-brown spots on paper; caused by mold or oxidation of iron particles in paper.

Wrinkling: An angular, crushed distortion.

Photographs

Ferrotyping: Glossy patches found on the surface of photographs; resulting from lengthy contact with a smooth-surfaced storage enclosure such as polyester or glass.

Frilling: Separation and lifting of the photographic emulsion from the edges of the support.

Textiles

Fraying: Raveled or worn spot indicated by the separation of threads, especially on the edge of a fabric.

Chapter Four: Photography

Photographing the collection is important because it aids in the documentation of the objects (for identification and condition reporting purposes) and is an additional means for which the collection can be displayed in digital form. Quality photography is necessary, but it doesn't need to be outsourced to a professional photography studio. The library already owns the equipment needed to take good photographs and has an entire department, the Digital Library Center, dedicated to digitizing collections. Although most of the photography and digitization can be done in-house, it is still expensive. Web space, hard drive space, and staff time all cost money. Fortunately, money is often available through a variety of granting agencies that fund digitization projects. The National Endowment for the Humanities (NEH), National Endowment for the Arts (NEA), and the Institute of Museum and Library Services (IMLS) are good places to look for grants.

If the Digital Library Center cannot do the photography and digitization of the collection, it is possible to hire a student or have another staff member who is interested in photography or digitization practices to do the work. This can be worked out in a variety of ways; the student could be a student assistant, a graduate assistant, or a student receiving credit (essentially volunteering). In any case, if a student or staff person is used, the library will need to provide him or her with access to all the equipment they will need to photograph the collection and the student will need to be trained in proper object handling procedures.

Equipment photographer will need access to:

Computer with adequate storage space
Digital camera
Photo editing software (such as Adobe Photoshop)
Easel
Lighting kit
Seamless (backdrop material)
Tripod
Lighting kit (including photo floods)
Small chalkboard or dry erase board

Photographing an object:

After the object to be photographed is secured, place the small chalkboard or dry erase board next to it with the object identification number written on the board. Next, center the tripod and camera in front of the object and frame it in the viewfinder of the camera. The object should take up as much space in the viewfinder as possible. Be sure that the face of the lens and viewfinder are parallel to the surface the object is sitting on. To light an object properly, the photo floods should be raised to the same height as the camera and be placed about six to eight feet away from the object. The reflectors should be turned toward the object and should form an angle of about 45 degrees with the object. Before taking photographs of the object, look through the viewfinder to make sure there is no

glare or shadow that interferes with getting a clear picture of the object. The photo floods and reflectors may need adjustment depending on the size and shape of an object. Certain aspects of the image can be altered later in photo editing software, but it is much easier to get the color correct and eliminate cast shadows while you are taking the photograph than try to change it later.

Digital images can be shot and stored as different file types. RAW files are very large files that have to be converted into another form later in order to use. They are versatile because of their ability to be converted into several other formats without losing any image quality. TIFF files are large, uncompressed files and are good for making reproductions, but are not easily readable by all computers. They are a good way to store files, but not for publishing online. JPEG files are smaller, compressed files that are not good for making reproductions. However, most computers will read JPEG formats and JPEGs can be used for publishing images of objects online or in a catalogue/online database as long as they are high resolution of at least 300 dpi.

Several types of objects in the collection that would be better off scanned rather than photographed. Examples of these are documents, maps, posters, photographs, negatives, and slides. These can be scanned on flatbed scanners or in slide scanners at a resolution of at least 600 dpi for photographs, maps, documents and 4,000 dpi for slides and negatives.

Although digital images are less fugitive than printed photographs and film, all technology has its flaws. Servers and computers can crash or someone can accidently delete digital files. Therefore, it is important to back up all digital images and files. This can be done online, on external drives, on large capacity CDs and DVDs, or on a flash memory stick (USB drive).

The photograph and scanning process will take a long time since there is a large number of objects that need to be documented. It will be necessary to download them onto the computer several times before the project is complete. It is also possible that the same person will not do all of the photography and scanning so it is important that a standard is set on naming the photographs and scans of these objects. I would recommend putting them all on a share drive titled Panama Canal Museum Object Photographs and making access to editing files in that folder limited. A good system for naming the individual files would be an abbreviation for the Panama Canal Museum followed by the object number (for example PCM 2005.5.1. This will make images of objects easier to find. It may take a little longer initially, but it will help if the scanning and photographing is done in increments of 50-100 objects at a time. In the long run, taking the time to coordinate the file numbers with the object numbers properly will save a lot of time and frustration. Keeping this in mind, it is important to make sure all objects are assigned numbers when they arrive at the library.

Chapter Five: Storage

In accordance with the Panama Canal Museum's mission to document, interpret, and articulate the role the United States played in the history of Panama during the construction, operation, maintenance, and defense of the Panama Canal, the museum obtained its collection primarily from donors who lived in the Panama Canal Zone during the American period.[26] For this reason, the collection is diverse both in media represented and size of objects. Different materials require different storage conditions. This chapter gives general storage guidelines, which are followed by storage recommendations for specific categories of objects in the collection.

General Storage Guidelines

Good storage facilities can help reduce the risk of damage to objects. It is very important that there be an area dedicated only to storing objects. Object study, photographing, and all other activities should take place in another, designated location.

Ideally, a centralized HVAC (heating-ventilation-air conditioning) or climate control system, which will maintain temperature and relative humidity at constant levels, should be installed. Fluctuations in temperature and relative humidity can cause damage to objects by allowing them to expand and contract. Smathers Library (Library East), the location where this collection will be stored, already has a centralized HVAC system installed for the whole building. A solution to climate controlling the storage rooms would be to have each room on its own temperature control within the existing system. If necessary, humidity can be adjusted using a humidifier or dehumidifier. Hygrothermographs, devices that record and output information on the consistency of temperature and relative humidity, should be placed in every storage space. These should be checked often (every week). If climate controlling each storage space is not an option, closed storage cabinets can help create microclimates.

Different materials require different constant temperature and relative humidity. With a mixed collection as large as the Panama Canal Museum Collection, a compromise will have to be struck. The New Museum Registration Methods recommends temperature be kept between 68°-72° F (20°-22° C) with a constant relative humidity between 45-55% for mixed collections. However, this relative humidity may still be too high for some objects such as photographs, unstable metal objects, and unstable glass. If possible, two or more small storage rooms should be dedicated to this collection. Objects that require similar conditions should be grouped in the same room. Although the ideal situation is to keep the entire collection together, the collection can be separated if proper storage is only possible if separation occurs (e.g. photographs in the PCM collection can be stored with photographs from other collections because there is an existing space dedicated to and designed with proper temperature and humidity controls for photographs).

Rooms designated for storage should not have windows. If there are windows in the storage room, a barrier should be placed over the window that does not permit light to

[26] The Panama Canal Museum website. "The Panama Canal Museum Mission." Accessed March 29, 2011. http://panamacanalmuseum.org/index.php/about/our/the_panama_canal_museum.

come into the room. Lights in the storage areas should remain turned off except when someone is accessing the area. Light affects materials in various ways, but causes permanent, irreversible damage. Objects that are especially sensitive to light, such as textiles, photographs, paper objects, should be kept in an enclosed storage cabinet or archival grade boxes. Fluorescent bulbs can be used in storage areas as long as they have UV filters.

Objects should be stored in as natural a position as possible. For example, clothing or other textiles should not be folded and hats should be supported from the inside with tissue or foam to retain the form they would have if being worn on a head. An exception to this is objects that are more stable on their side. However, supports can be purchased from a number of archival supply manufacturers that help stabilize objects that don't stand on their own (such as round objects).

Many objects arrived at the library in the same box (as is shown in the images below). This is not a good method of storage for a few reasons. First, materials from different objects can cause damage to other objects in the box. Second, some objects are folded. Third, someone who wishes to access an object in the box would have to move and sort through all of the objects in the box. This could cause damage and misplacement of objects.

Figure 3: PCM objects in a box.

Figure 4: PCM objects in a box.

Objects (including boxes with objects inside) should not be crowded or stacked on top of one another in storage. Someone should never have to reach over an object to get to another object. Every time an object is moved, there is risk of damage. Therefore, it is important to prevent any unnecessary moving of objects.

The Panama Canal Museum Collection contains over 15,000 objects, so preventing crowding may be difficult. Crowding can be minimized by careful design of a storage facility and using space as efficiently as possible. There are many manufacturers that specialize in museum storage equipment. Here is an abbreviated list of vendors:

Southwest Solutions
http://www.southwestsolutions.com/markets/museums

Donnegan Systems

http://www.donnegansystems.com/Drawer_Cabinets.html

Delta Designs, Ltd.
http://www.deltadesignsltd.com/

There are storage solutions for objects of all sizes and materials. Once a permanent storage space has been decided on, specific furniture can be ordered. In an ideal situation, storage would incorporate a combination of closed cabinets with shelves and drawers, flat files, and painting screens. If closed cabinets will not fit or are too costly, open shelving can also be used. Dust covers should be employed if open shelving is used. Tyvek is a good material to use for this purpose. All shelves should be lined with archival grade foam.

Below are storage recommendations for types of objects in the Panama Canal Museum Collection.

Object handling and security/access are also important aspects of storage. These topics will both be discussed in their respective chapters.

Extra Large Objects

There is not space within the Smathers Library to house some of the larger objects in the collection. They will be stored at the Library Auxiliary Storage Area. It is important that these objects have the best storage conditions possible. Microclimates can be created for these large objects by storing them in closed cabinets that have sulfur-free gaskets. This will help minimize environmental fluctuations inside the cabinet. Solutions for storing extra large objects will be handled on a case-by-case basis.

Examples of large objects in this collection: canoe

A canoe presents a storage dilemma because a canoe cannot simply be placed on one side. If done, damage can occur as moisture and mold may collect on the side touching the ground. It also increases the likelihood of infestations. The best solution is to build a mount for the canoe to keep it at least six inches off the ground. This can be done for a reasonable cost using 9 pound polyethylene foam, which is thick like wood, and polysuede as a buffer between the rougher foam and the canoe. Figure 5 shows a diagram provided by Atlas Fine Art Services.

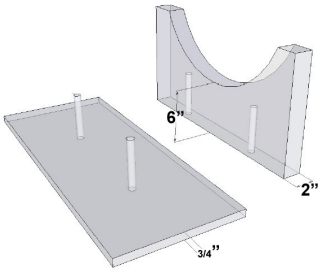


Figure 5: Mount for a canoe.

This is a good solution since it is inexpensive and can be made in-house. A downside is that the mount may not be very attractive. If the canoe is ever exhibited, a separate mount will need to be made.

Additional resources for storing extra large objects: National Park Service, "Creating a Microclimate For Oversized Museum Objects," *Conserve O Gram,* July 1993, Number 4/4, http://www.nps.gov/history/museum/publications/conserveogram/04-04.pdf.

Very Small Objects

Very small objects present the opposite problem of extra large storage areas. How will they be stored without getting lost? Depending on the type of object, there are many solutions. One option is to purchase archival boxes with separators inside. Each object will be placed in a section of the box. The boxes can then be placed on shelving or in cabinets.

Figure 6: Archival boxes with dividers.

Figure 7: Archival boxes with windows and dividers.

Many archival supply companies sell such boxes. The examples in figures 6 and 7 were taken from Hollinger Metal Edge. The boxes in figure 6 will protect objects from excessive light exposure since they have solid lids. Although boxes should be labeled on the outside with which objects they contain, the boxes in figure 7 will make it easier to identify objects without opening them. Boxes containing light sensitive objects should have solid lids. Boxes with clear lids are better suited for objects that are not light sensitive.

Another option is to purchase small, individual archival boxes and put them inside a flat file cabinet or cabinet with drawers. Examples of these are in figure 8.

Figure 8: Small archival boxes.

Figure 9: Artifact storage box.

These are also available from many archival supply companies. The boxes in figure 8 are available from Hollinger Metal Edge and the boxes in figure 9 are available from Gaylord.

The library may choose to use both systems. For example, the Panama Canal Museum Collection contains small pieces of Pre-Columbian pottery. It is likely that someone who wishes to study these objects would want to see more than one. Storing these in one box with separators (the first solution) would make handling and transporting these as a group much easier. There are also objects in the collection that people may want to study individually, such as a class ring. Rather than moving many objects by moving an entire box (and risking damage to those objects), it would be easier to move a single box containing the class ring. In this case, the second solution would be better.

For both of these solutions, accession numbers should be written on the outside of the box or drawer to save time and minimize opening more boxes than necessary.

Boxes should be lined with either archival foam (Plastazote or ethafoam) or acid free tissue paper. These materials are available from Gaylord and Hollinger Metal Edge. Gaylord has shredded acid free tissue available. This can be packed around the sides of the object, which keeps it from shifting while being moved and is much more economical than foam.

Figure 10: Plastazote foam.

Figure 11: Ethafoam squares.

Figure 12: Acid-free shredded tissue.

The Pre-Columbian ceramics have been rehoused in acid free boxes (see figures 13 and 14). The boxes need to be lined with either foam or acid free tissue paper. These objects are fragile so ethafoam cut to the shape of each object is a good option. Even though each section of the box is labeled with what each object is, each object will also need to be numbered or tagged (see section on numbering objects in chapter 1).

Figure 13: Pre-Columbian artifacts storage.

Figure 14: Pre-Columbian artifacts storage, detail.

Examples of very small objects in this collection: coins, high school class ring, jewelry, pins and medals, patches, Pre-Columbian ceramics (rattles, whistlers, pipes).

Ceramics

Ceramic objects in the collection range from small pieces of Pre-Columbian ceramics to modern mugs. The amount of glazing and firing the ceramic has gone through affects its sensitivity to temperature and relative humidity. For example, Pre-Columbian ceramics are more sensitive to temperature and relative humidity changes than modern mugs that have been mass-produced. *The New Museum Registration Methods* recommends 45-50% relative humidity for ceramics such as the Pre-Columbian ones in this collection. For glazed and fired ceramics, 55% relative humidity is recommended.

Depending on the size of the objects, they can be stored in a variety of ways. Artifact storage boxes come in a variety of sizes and are suitable for objects of the same material. Again, these should be lined with either archival grade foam or acid free tissue.

If there are objects that are too large to fit in boxes, but aren't considered extra large (such as the canoe), they can be stored directly on a shelf on a shelving unit or inside a cabinet. Foam rings can be used if objects are round or need extra stabilization. These are available from Gaylord.

Figure 15: Ethafoam ring.

Figure 16: Ethafoam rings and mounts.

Examples of ceramics in this collection: Pre-Columbian whistles, rattles, and pipes, mugs

Textiles

The term "textile" includes anything made of a type of fabric or fiber. There are several different types of textile objects in this collection including shirts, hats, bandanas, scarves, molas, flags, and rugs. Because, when laid flat, textile objects tend to be large, there is a tendency to fold them. Folding should be avoided since folding fabric objects can cause stretching in the areas of folds, thus resulting in damage. If there are extra large textiles, they should be rolled rather than folded. A lining of acid free tissue should pad the inside of the textile when it is rolled. An exception to this is padded quilts and other thick textiles. These should be folded rather than rolled and padded to reduce the fold creases.

Generally, textiles should be stored at 40-50% relative humidity. This is about the same requirement for ceramics, so these two materials could be stored in the same room.

There are storage boxes and materials made specifically for types of textile objects. Many manufacturers make flag boxes. These are a triangle shape and require the flag to be folded. Since this is a military tradition in the United States, it is generally an accepted storage method. Good instructions on how to fold a United States flag according to the Army and Navy custom are available at this website: http://www.usflag.org/foldflag.html.

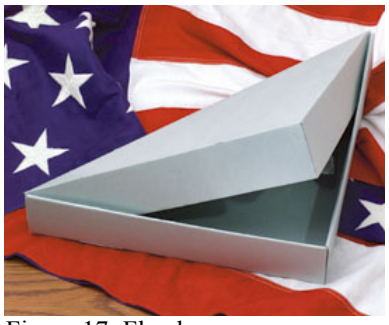


Figure 17: Flag box.

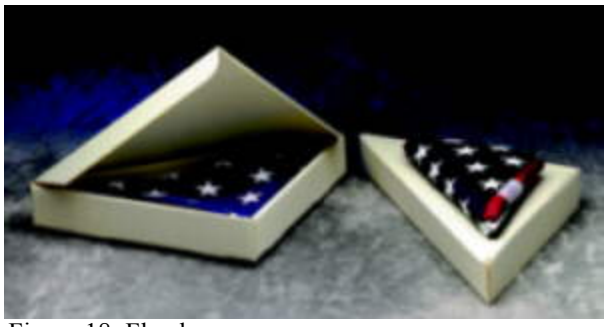


Figure 18: Flag box.

The box in figure 17 is available from Gaylord and the boxes in figure 18 are available from Hollinger Metal Edge.

The collection also includes small, souvenir type flags that are made of thin fabric. The colors are not lightfast, and extra care should be taken to ensure that they do not receive unnecessary light exposure.

Figure 19: Flags in PCM collection.

Figure 20: Flags in PMC collection.

There are several types of hats in the collection including baseball hats and berets. These should be stuffed with acid free tissue to mimic the form in which they would be worn. It is important not to overstuff the beret. A beret does not fit over the whole head like a baseball cap, but rather, sits on top of the head.

Figure 21: Girl Scout beret.

Figure 22: Girl Scout beret.

Currently, the beret is stuffed too much. The tissue paper needs to be replaced with acid free tissue. This type of hat can be stored in an appropriate sized acid free box.

There are also several baseball caps in the collection. Gaylord sells boxes specifically for baseball caps. Baseball caps can also be stored in regular, appropriately sized archival boxes.

Figure 23: Archival baseball cap box.

Additional types of hats should be stored in the same manner, stuffed with acid free tissue to mimic their natural form and in acid free boxes.

Hats may also be stored on mounts specially made to fit the hat. Most hats do not follow the shape of the human head, so hat mounts used in store windows are not ideal for long-term storage.[27] These can be outsourced or made in-house. It is typically more economical to purchase the materials and make them in-house, but companies such as Bill Mead Museum Mount Maker construct custom mounts. The Philadelphia Museum of Art stores hats in their costume and textiles collection on custom made mounts on shelves in compact storage as is seen in figure 24.

Figure 24: Top hats in storage at the Philadelphia Museum of Art.

Smaller types of textiles such as bandanas and scarves (example in figure 25) should be laid flat.

Figure 25: Scarf in the PCM collection.

Thin archival boxes are available for storage, but another option is to store them in flat files or drawers in cabinets with several layers of tissue and sturdy acid free buffer paper

[27] Claire F. Meyler at the Oakland Museum of California, "Caring for Our Collections," http://museumca.org/blog/start-here-caring-our-costumes, posted December 30, 2010, accessed June 25, 2011.

or board between them. If storing them this way, be sure that there is a piece of paper or board under each object. The paper or board should be thick enough not to give into the weight of the object when picked up. This will allow for ease in handling of objects by picking up the paper instead of the object. Archival board is available for purchase from Gaylord and Hollinger Metal Edge in a variety of sizes and weights. Light colors such as white or cream are preferred as this will alert staff of debris or parts of the object that fall off or the presence of insects.

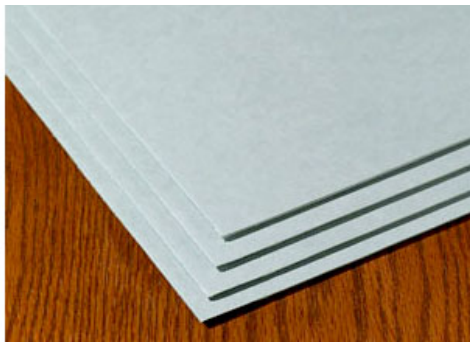


Figure 26: Barrier board sheets.

Figure 27: Barrier board sheets.

Shirts, pants, jackets, and other clothing in the collection should not be hung on hangers. Although storage cabinets and archival grade hangers available to store garments in this way, in the long run it is better for these objects to be stored flat with tissue paper inside. Hanging causes stress on the fibers and results in stretching. These can be stored in drawers in cabinets. These types of objects will probably be too thick to fit in flat files.

Examples of textiles in this collection: clothing (t-shirts, Boy Scout uniform, police uniform), flags, case for seal, hats (baseball caps, Girl Scout beret), molas (a traditional Panamanian textile), handmade rug, scarves, bandanas, varsity letter,

Metals

Metal objects should be stored below 40% relative humidity. Sterling silver objects need to be stored in anti-tarnish tissue or cloth and placed in an airtight sealed container. The size of the metal objects in the collection varies, but most should fit either in artifact boxes or directly on lined shelves.

Coins can be stored in coin holders and then placed in small boxes. Archival coin holders are available from University Products: The Archival Company (figure 28), Intercept Preservation Products (figure 29), and The Coin Supply Store (figure 30).

Figure 28: Coin holders made from cardboard and Mylar.

Figure 29: Plastic coin holders.

Figure 30:Plastic coin holders.

The coin holders in figure 28, made with archival cardboard and Mylar, are a good option for a few reasons: they are relatively inexpensive and allow for handling the coins easily without actually touching the metal surface of the coin. This also makes numbering the coins easy because they can be labeled on the cardboard rather than the coin, which would be quite difficult. They are only readily available in standard United States coin sizes, but these could easily be fabricated to fit any size coin using archival cardboard and Mylar.

Large metal objects can be stored directly on lined shelves as long as they are not silver. These will need to be placed in airtight containers. Two such objects are a dish cover and a trophy (figures 31 and 32). These should be kept in airtight containers lined with anti-tarnish tissue or cloth. Storing in an airtight container will help prevent corrosion.

Figure 31: Sterling silver dish Cover in the PCM collection.

Figure 32: Silver trophy in the PCM collection.

The metal sword in the collection can be stored directly on a shelf (figure 33). It would be best to have a foam pad made specifically for this object. The blade could be sharp and someone handling it could cut himself or herself by accident. Plastazote or ethafoam can be used for this. Both are available from Gaylord and Hollinger Metal Edge.

Figure 33: Sword in the PCM collection.

Examples of metal objects in the collection: sword, small pins and medals, seal maker, medallions, jewelry (necklace with pendant, class ring), silver dish cover, brass box, metal plates, pocket knife, coins, bells, police badges, plaques, dog tags, railroad spike.

Paper

An extensive part of the collection is paper objects. The library already has protocol for storing books and other paper documents. This collection should be handled in the same way that other collections in the library are stored. This includes books, yearbooks, and government documents.

Photographs should not be stored above 60% relative humidity; 30-35% relative humidity is ideal. This is a similar relative humidity required for metal objects, so these types of objects could be stored in the same room. Right now, many photographs are stored piled in boxes like in figure 34.

Figure 34: Photographs from the PCM collection piled on top of one another in a box.

Photographs should not be stored one on top another. Each photograph should be separated and have its own enclosure. It is widely debated among conservators, registrars, and archivists as to the best enclosure in which to store photographs. Paper enclosures are an alternative to polyester enclosures. Paper enclosures are opaque so photographs have to be removed for someone to view them. If paper enclosures are used, they should be lignin-free, non-buffered (pH neutral), and not highly colored. If possible, the supplier of paper enclosures should be contacted to see if the enclosures have passed the Photographic Activity Test. This test detects image fading that results from harmful chemicals in enclosures and detects staining reactions between enclosures and gelatin. The sleeves in figure 35 come in a variety of sizes and are available from Light Impressions.

Figure 35: Acid-free, non-buffered photograph storage sleeves.

Envelopes that open from the side are also a viable option and are available in a variety of sizes. The ones in figure 36 are from Hollinger Metal Edge.

Figure 36: Acid-free, non-buffered storage envelopes.

The National Park Service recommends storing photographs in polyester enclosures made of DuPoint Mylar D. The library has an ultrasonic encapsulator that can be used to make Mylar sleeves for the photographs. Polyester enclosures will protect a photograph from dust, pests, and other agents of deterioration in the atmosphere, but there is a possibility of condensation getting inside the enclosure and damaging the photograph if the temperature and relative humidity are not kept at stable temperature and relative humidity. Although someone viewing the photograph is able to see the image without removing it from the enclosure (which could cause damage by scratching the emulsion or creasing the edges), polyester enclosures do not protect photographs from light exposure. If the storage area is not strictly climate controlled, the better option is to use acid-free paper or folders. Once encapsulated or put into folders, photographs can then be stored in archival boxes.

Figure 37 illustrates a storage case from Hollinger Metal Edge, which is another option for storing photographs.

Figure 37: Document storage case.

Cold storage is an additional option for storing photographs. Cold storage requires a dedicated space that is not accessed very often. Temperature is kept at 35-40°F. Temperature cannot vary more than 2°F and more than 3% relative humidity. Photographs, negatives, film, and transparencies in cold storage must be stored in archival folders within archival board boxes within Ziplock bags. Objects can only be retrieved from cold storage in emergencies. This option would be best if all the photographs were being digitized. Although cold storage is not the best storage option for this collection, if the library makes an initiative to store all of the photographic collection in cold storage, the PCM Collection could be included. The National Park Service has a few documents that can help with implementing cold storage:

National Park Service, "Caring For Photographs: General Guidelines*," Conserve O Gram*, June 1997, Number 14/4, http://www.nps.gov/history/museum/publications/conserveogram/14-04.pdf.

National Park Service, "Cold Storage for Photograph Collections-An Overview," *Conserve O Gram*, August 2009, Number 14/10, http://www.nps.gov/history/museum/publications/conserveogram/14-10.pdf.

Other types of paper objects in the collection include maps, brochures, newspapers, programs, diplomas and certificates, and gift bags. These objects should be stored in flat files with acid-free storage materials (such as interleaving paper) between them. Paper objects are especially light sensitive so they should be kept in the dark when not being studied or exhibited. This method can be used for storing photographs as well.

Many paper objects (including photographs) in this collection are mounted on cardboard or foam core. Cardboard and foam core are extremely acidic. Leaving objects adhered to these supports will result in more rapid deterioration. A conservator should remove these backings.

Examples of paper objects in this collection: maps, photographs, books, certificates, diplomas, yearbooks, brochures, stickers, newspapers, newsletters, stamps, church programs, small cardboard jewelry box from Misteli (The Jeweler Panama), gift bag (with Mola design), raised map of the Panama Canal Zone, milk cartons, unflattened juice containers.

Paintings
The collection includes a small group of paintings. Paintings should be stored at a relative humidity of 45-50% and can thus be stored in the same room with textiles and ceramics.

Paintings can be stored in metal bins, shelves, or on sliding racks. If space allows, metal sliding racks are the best option because it allows paintings to be stored in their natural, hanging upright position and provides easy access. Although the unit takes up space, it will actually save storage space. Storage furniture can be purchased from a number of vendors. The unit in figure 38 is available from Gaylord and is very compact.

Figure 38: Compact sliding painting storage screen.

Unfortunately, these screens are somewhat expensive. The unit in figure 38 costs $10,000. Fortunately, the National Park Service published a *Conserve O Gram* on constructing a painting screen from readily available materials. That Conserve O Gram can be accessed at: http://www.cr.nps.gov/museum/publications/conserveogram/12-01.pdf. Another way to find expensive screens (and other types of object storage cabinets) for less money is to join museum listservs such as the RC-AAM (Registrar's Committee of American Association of Museums) because frequently museums are looking to sell some of their cabinets or giving them away if the museum or library is willing to pick them up or pay the shipping. They advertise on these listservs. Since there are few paintings in the collection, they can be hung on the wall as long as there is enough space for someone in storage to maneuver around them without risking bumping into them. Metal screening can be ordered from several suppliers including Hebei Yongwei Metal Products Co., Ltd (figure 39). This can be cut to fit a wall. One of the best options for hanging paintings is to install D rings on the back. Metal hooks can be hooked through the screen and D ring in order to create a table support for storage (figure 40).

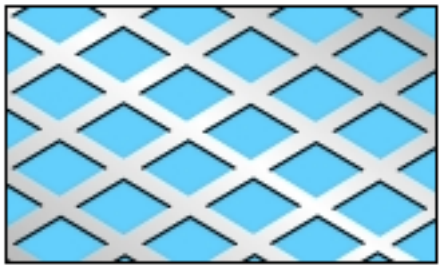


Figure 39: Metal screen.

Figure 40: Metal hooks.

Paintings stored on racks for long periods of time should be covered to protect them from dust. Slip covers can be made from Tyvek, as shown in figure 41. It is recommended to attach a photograph and/or identifying information such as accession number, artist, and title, on the outside of the slip cover. This keeps staff from having to remove the slip cover to identify an object.

Figure 41: Paintings and framed works hanging on a painting screen, some covered with Tyvek slip covers.

Paintings can also be stored in bins kept at least six inches off the floor. Bins should not be made of flimsy materials or wood. Paintings should be stored face-to-face, back-to-back.

Wood

Wood objects should be stored at 50-55% relative humidity. They can be stored in the same room with paintings, textiles, and ceramics. Wood objects should be stored in archival boxes or on lined shelves. Wood objects are susceptible to damage from dust, so it is important that dust covers are used where wood objects are stored.

Examples of wood objects in this collection: swagger stick.

Plastic

Plastic objects should be stored at 50% relative humidity, so they can be stored in the same room with textiles, paintings, ceramics, and wood. Degradation of plastics is complicated because it depends on its specific chemical composition, which can vary significantly among objects. If concern about a specific object arises, a conservator who specializes in plastics should be consulted.

Plastic objects should be stored in archival artifact boxes or on lined shelves. Hard hats should be supported from the inside with archival foam cut to fit inside or tightly packed acid-free tissue paper.

Examples of plastic objects in this collection: hard hats.

Leather
Organic materials such as leather, fur, and hide should be stored at 45-55% relative humidity. Unlike the other objects in the collection, these materials need moderate light. They should be stored separately from the other objects for this reason. Most of the leather objects in the collection are book covers. These can be stored away from the rest of the collection with the other books.

Examples of leather objects in this collection: book covers.

Other
Other types of materials may be found as the collection continues to be processed and transferred to the library from the Panama Canal Museum. Following the general guidelines provided in this chapter should result in good storage conditions. If an object of unusual materials arrives, the New Museum Registration Methods book published by the American Association of Museums can be consulted. Other resources are the National Park Service *Conserve O Grams* and National Park Service Museum Handbook. Both are accessible online.

Conserve O Grams:
http://www.nps.gov/history/museum/publications/conserveogram/cons_toc.html

Museum Handbook:
http://www.cr.nps.gov/museum/publications/handbook.html

All shelves, drawers, cabinets, screens, and anything else in which objects are stored should be labeled with the location that it will be identified by in the database. For example, if an object is stored in the first storage room, in the first cabinet, on the 2nd shelf, the door to the storage room should be labeled “Panama Canal Museum Collection Storage Room 1,” the cabinet should be labeled “Cabinet 1,” and the shelf inside the cabinet should be labeled “Shelf 2.” It will be difficult and time consuming to locate and inventory objects if the actual locations in which they are stored in are not labeled.

Chapter Six: Access

Only library staff should have access to the storage areas for the PCM Collection. This will help prevent damage to and theft of objects. Library staff will be more familiar with object locations in the storage area, so it will also save time and prevent unnecessary moving of objects. Those who want to view objects for study should make a written request. A staff member can retrieve the object(s) from the storage area. The library already has a retrieval request form that can also be used for object study requests for this collection. Another example of a sample form can be found at the end of this chapter. People using the collections should be given a set of instructions (sample instructions form on page 47) on proper handling procedures and rules regarding the collection.

The research and study area should be located in a space separate from the storage area. Ideally, the research and study area should be located close to the storage area so the objects don't have to be moved far. However, the Special Collections Research Room on the second floor of Smathers Library East is also an option since access is controlled. Objects should only be made available for study when a staff member is able to supervise. This is another reason why the Special Collections Research Room is an ideal location for this collection to be studied; there is always a staff member supervising the room.

Storage areas should be locked when not being accessed. A key card entry system is used throughout the library and should also be used here. This will monitor who enters the storage area. A paper log should also be kept next to door of the storage area so staff members can sign guests in and out. Gusts should be restricted to graduate assistants and trained volunteers and should only enter the storage area when accompanied by a staff member. When a staff member removes an object from the storage area, it should be recorded. Likewise, when an object is returned to the storage area, that information should be recorded and the object should be checked for damage (see chapter 3 beginning on page 20.

Storage areas should be kept clean. Library staff may prefer to clean these areas themselves rather than delegating the duties to janitorial staff. Janitorial staff is less likely to be aware of procedures for cleaning around cultural objects than those who study and organize those objects. Cleaning of objects should always fall under the responsibility of library staff or a conservator.

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The Foundation for The Gator Nation

George A. Smathers Libraries

Instructions for Use of the Panama Canal Museum Collection

1. Object study requests must be made in writing at the Special Collections Research Room on the second floor of Smathers Library East. Please allow 24 hours for objects to be retrieved. An appointment should be made to examine the objects.

2. Objects may not be removed from the Special Collections Research Room. The Research Room is open Monday through Thursday from 9:00 am until 6:00 pm and Friday 9:00 am until 5:00 pm.

3. You will need to sign in upon arrival to and departure from the Special Collections Research Room.

4. Purses, backpacks, and oversized bags must be stored in the lockers located along the north wall of the Special Collections Research Room.

5. Objects should be handled with care. Two hands should always be used when moving an object and gloves should be worn (provided by the library). Only one object should be picked up at a time. Please ask for assistance from library staff when moving large, heavy, or fragile objects.

6. Writing utensils should be limited to pencils only (no pens).

7. With permission, photographs may be taken.

8. Inform a library staff member immediately if you notice any damage to objects or if a tag becomes detached from an object.

Panama Canal Museum Collection Object Study Request

Name_____ Date_____
Institution affiliation_____ UFID_____
Department_____

Collection: Panama Canal Museum Collection
Object number_____ Object type_____
Approximate size_____
Object descripition_____

For official use only
Object location _____
Request received by_____ Date _____
Retrieved by_____ Date_____
Object returned_____ Date_____
Condition Notes_____

Collection: Panama Canal Museum Collection
Object number_____ Object type_____
Approximate size_____
Object descripition_____

For official use only
Object location _____
Request received by_____ Date _____
Retrieved by_____ Date_____
Object returned_____ Date_____
Condition Notes_____

I acknowledge that I have read and understand the handling instructions for using the Panama Canal Museum Collection. By signing below I agree to abide by all rules set forth by the Smathers Library.

Student signature_____ Date_____

Chapter Seven: Exhibition

In addition to being used for study in the research room, the Panama Canal Museum Collection may also be exhibited. A space on the second floor of Library East is used for temporary exhibitions and the Library of Congress has expressed interest in curating an exhibition in collaboration with the University of Florida Smathers Library using the objects in this collection. Additionally, if the collection is available to view online, other museums and libraries may come across objects they would like to borrow when planning their own exhibitions and request to borrow them temporarily. This chapter is broken into three sections; the first section focuses on general information such as safe ways to display different types of objects in the Panama Canal Museum Collection, the second section focuses on producing exhibitions in-house, and the last section focuses on the logistics of loaning objects to other institutions for exhibition. Objects are most vulnerable when they are being handled and on exhibition so it is important to always follow proper procedures when handling and moving objects, which are outlined in previous chapters.

General

When objects are exhibited (as well as when they are taken to the research and study areas), the place they have been stored in should continue to be reserved for that object. It can be tempting to use "open" space for other objects, but if the space is not kept for the objects on exhibition or being studied, finding space for them when they are returned to storage may be difficult. Putting a photograph of the object labeled with the object's accession number in its storage location can serve as a placeholder and a reminder not to put anything else in that space. Returning an object to the same place from which it was removed will also keep location records straight. When an object is moved to an exhibition space or sent out on loan, the temporary location should be recorded. However, the location history should always be retained so its storage location can easily be recalled. Storing an object in the same place will minimize confusion and insure that it is placed in an area that has been designed to preserve that specific type of material.

Since exhibitions will most likely feature objects made of different materials, a compromise needs to be struck as far as temperature and relative humidity are concerned in the exhibition space. A temperature in the range of 68°-72° F (20°-22° C) with a constant relative humidity between 45-55% is recommended. Hygrothermographs made for exhibition spaces can be purchased from a variety of vendors, at different costs, and with different length chart rotations. The best option is to purchase a long-cycle hygrothermograph, which allows you to record up to three months of relative humidity and temperature without changing the chart paper roll. The one in figure 42 is available from Oakton Instruments and costs just under $1,200 and chart replacement rolls can be purchased in one and three month rotations for $25. It would be ideal to have one of these models in each of the storage areas for the collection.

Figure 42: Hygrothermograph.

Less expensive hygrothermographs are available, but their chart paper rolls have to be changed more often because they only record one week at a time. Someone will have to remember to change the roll every week and to make sure there are replacement rolls on hand. Oakton Instruments has an economical model available for just under $350 (figure 43), with replacement rolls costing $21.50 for a pack of 55.

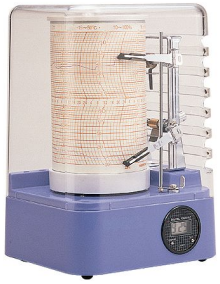

Figure 43: Economical hygrothermograph.

The library's exhibitions generally last a month, so with the economical hygrothermograph model the chart would need to be replaced at least 4 or 5 times. Regardless of which model of hygrothermograph the library uses, it is important to remember to check it at least once a week to be sure the temperature and relative humidity are at the proper levels.

Since the library usually displays objects in secured vitrines, microclimates are created, which also need to be monitored. Some thermohygrometers are designed to measure temperature and relative humidity in display cases. One should be placed in each case. These can be purchased from University Products for $80 each, plus a calibration kit that can be used for multiple thermohygrometers (figure 44).

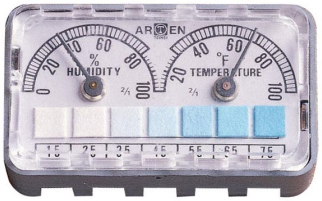

Figure 44: Display case thermohygrometer.

If the library only displays objects in secured vitrines, an expensive hygrothermograph isn't absolutely necessary in the exhibition space. However, the temperature and relative humidity should still be monitored. A radio-controlled thermohygrometer is available from University Products that monitors temperature and relative humidity using sensors and a base station (figure 45). Sensors work up to 90 feet from the base station and transmit information every thirty seconds.

Figure 45: Radio-controlled thermohygrometer.

Keep in mind that most hygrothermographs and thermohygrometers operate by batteries, so remember to check that the batteries have not expired, and always keep spare batteries on hand. Most monitoring devices operate on standard sized batteries.

Silica gel packs can help maintain stable humidity in microclimates. These packs work by acting as a buffer against relative humidity changes. Rhapid Pak (figure 46), available from University Products, was developed specially for museum displays. Rhapid Pak units are available dry or at 30%, 40%, 50% or 60% relative humidity and one Rhapid Pak will condition 2 to 4 cubic feet of display case volume.

Figure 46: Silica gel pack.

Since many of the objects in the PCM Collection are paper or textile, light intensity is also an issue. Light meters can measure the amount of light (in footcandles and lux) hitting a specific place (figure 47). The most light sensitive works in the PCM Collection are photographs, paper documents, and textiles. Light levels should not exceed 50 lux or 5 footcandles when on display.

Figure 47: Light level meter.

As when in storage, objects need to be properly supported while on exhibition. This may range from using plastic picture frames to support paper documents to building custom mounts for hats or mannequins for clothing. The best and cheapest mounts will be the ones built in-house, specifically to fit each object. They can be very minimalist and as long as they don't detract from the object, the same mounts can be used in storage and on exhibition. Mounts should be built to support an object in its natural or intended position and be made of archival quality and chemically stable materials. If wood is used, it should be a wood that does not off gas.

In-house exhibitions
The library's in-house exhibitions are installed in the gallery on the second floor of Smathers Library East. Exhibitions typically last a month and are organized by different departments in the library. For this reason, none of the objects in the PCM Collection will be in danger of being significantly overexposed in this space. However, the space does not have a guard, so vitrines should be secured. Additionally, the lights are fluorescent. If possible, the light covers should have UV filters. If possible, apply a UV filtering film to the virtines. Many of the other collections in the library that go on display in this gallery would benefit from these small changes.

It is important that an exhibition have a completed layout before objects are brought in for installation. Knowing ahead of time where objects are going to be placed will prevent unnecessary handing and movement.

Exhibitions at other institutions
Other libraries or museums may request to borrow objects in the PCM collection for their own exhibitions. A lot of work goes into loaning objects, but it is a great opportunity for others to see objects that they may not otherwise have access to, and makes others aware of the significant collections at the University of Florida's Smathers Library.

The first thing to do regarding lending objects is to determine who will decide if requested objects can travel. This decision should be made by someone in charge of the collection who can determine if the object is needed at the library during the requested period in consultation with the conservator who can evaluate if the object is in good enough condition to travel. The person (or people) who decides whether or not to lend objects should ask that potential borrowers make their request in writing. This can be done through a paper form or online form. Information to be included with the request

includes reason for borrowing, dates of the loan, what object(s) is requested, and a facility report of the borrowing institution. Facility reports include important information about the institution such as security, environmental conditions, insurance, staff, and a floor plan and/or images of the space. Facility reports will help the library decide if an institution can ensure that an object will not be damaged or stolen while on loan. If there are doubts after reading a facility report, the library can stipulate specific measures be taken (such as locked vitrines or a guard in the space). If an institution requests an object for study rather than to put on exhibition, the library can decide who should be allowed to handle that object and should make it clear to the borrowing institution.

Once the library has agreed to lend an object, a loan agreement form should be filled out spelling out all the terms of the loan. This should include information such as the borrower, the lender, dates of loan and reason for loan (study or exhibition), the library's requirements for security, light levels, display, insurance, credit line, staff, shipping arrangements, care and handling, photographs and reproductions, costs, and any other specific requirements the library believes are necessary. It is usually understood that the borrower will pay for all costs incurred in borrowing an object, including framing and any necessary conservation work. However, the borrower should be informed of this up front and it should be reiterated in the loan agreement. A sample loan agreement that the library can use or amend can be found at the end of this chapter beginning on page 56.

Moving an object from storage to an exhibition space in the same building is quite different fro moving an object from one city to another. Objects will have to be packed securely and travel by truck or van. Several companies specialize in shipping art and historic artifacts, but their services can be expensive, especially if only a few objects are being shipped. FedEx offers an affordable alternate, which some museums use for smaller or lesser value objects. FedEx Custom Critical vans are temperature controlled and are never left unattended. One drawback that prevents many museums from using this service is that there is no room for a courier. However, couriers are only really necessary if an object has a high value or is especially delicate. It is unlikely that the library will send any couriers with these objects, with the possible exception of a few objects such as the Pre-Columbian pottery, which is very fragile. Make sure all vehicles are air ride equipped when transporting objects.

It is also possible to retrofit one of the library's vans or trucks to transport objects. This would also work with a rental truck or van, although less will need to be done if one can be procured that is already air ride equipped. The National Park Service published a Conserve O Gram on the topic of retrofitting a moving van for transporting museum objects, and is available at:
http://www.nps.gov/history/museum/publications/conserveogram/17-04.pdf.

Individual objects will need to be packed. The specific method for each object will depend on the size, material, and fragility of the object. Some less fragile objects may be able to be wrapped in blankets or bubble wrap (bubble side always facing away from the object) and placed in a box with handles. The box should be padded with additional bubble wrap or blankets to make sure the object cannot move within the box. Custom

boxes can be built to fit specific objects using foam and archival padding materials such as in figures 48 and 49. The library may also choose to purchase several plastic crates. These can be refitted using foam so that they can be reused for different objects. Paper objects (including books) can be shipped in Solander boxes. These can be purchased from most library and archival supply companies. If these shipping materials are being purchased specifically for a loan, the library should ask the borrowing institution to pay for any costs related to shipping or packing objects for travel.

Figures 48 and 49: Customized shipping box constructed by art handlers at the Philadelphia Museum of Art.

All objects should be condition reported and photographed prior to being packed. The library should keep a copy of the condition report and send a copy of the condition report to the borrowing institution for them to complete upon unpacking. Condition reports should be kept in a binder along with other important information that the borrower needs to know such as library staff contact information, packing and unpacking instructions (including pictures), a copy of the loan agreement, and any other important information the library thinks the borrower may need to know.

The library does not have a covered loading dock, so a plan needs to be made in case objects need to be loaded while it is raining. Objects should be wrapped in bags or plastic and then sealed using tape. This can be done within an object's shipping box or crate, around the outside of the shipping box or crate, or both. When using tape for sealing openings, fold the end of the tape over to create a tab. This will make unpacking easier. Be sure to include instructions and pictures for complicated shipments. The clearer and easier it is to pack and unpack an object, the less risk there is that the object will be damaged during packing and unpacking. The last thing the library wants is someone who is frustrated unpacking and handling its objects.

Even when being as careful as possible accidents do happen, so make sure that the borrowing institution has contact information where someone at the library who works with the PCM collection can be reached in case of emergency, even after hours. Insurance will cover most incidents, but be sure to include in the loan agreement whose insurance will cover the object while in transit and on exhibition.

Sample loan approval letter (based on the loan approval letter used by the Philadelphia Museum of Art)

Date

Addressee

Dear,

We are pleased to inform you that the following object(s) has been approved for loan to the [institution name] for the purpose of [exhibition, study, etc…] from [beginning date] to [end date].

Object number	Object title or description Artist or creator Year Material

Your institution will be responsible for all costs involved in the loan, including packing and labor, transportation, insurance, loan fee, conservation, courier expenses (if necessary), and any other related expenses. The mailing address and to whom the invoices should be sent needs to be provided before shipping.

The objects must be displayed in secure vitrines that are weighted or attached to the floor or wall. Light levels on paper or textile objects must not exceed five footcandles of incandescent light.. All light sources must be filtered to eliminate ultraviolet component. Temperature should be maintained at 68 to 72° Fahrenheit and relative humidity at 50% ± 5%.

The library will accept "nail-to-nail" private coverage offered by the borrower. A certificate of insurance should be sent in advance of the shipment.
Or
The library will maintain our fine arts insurance and you will be charged the premium of around ___. A certificate of insurance is enclosed for your files.

Enclosed you will find two copies of our Loan Agreements, please sign and return both copies to my attention at your earliest convenience. The loan agreements will be countersigned and an original copy will be returned to you shortly. If you have any questions, please feel free to contact me.

Sincerely,

[sign]

Sample Loan Agreement (based on the loan agreement used by the Philadelphia Museum of Art)

LOAN AGREEMENT

This Loan Agreement is between the **University of Florida Smathers Library** and the institution (the "**Borrower**") named below.

Intending to be legally bound, the Borrower and the Library agree that the attached **Terms and Conditions** apply to the loan by the Library (the "**Loan**") of the object(s) listed below (the "**Objects**"), which the Borrower has requested identified below.

This Agreement has been signed by each of the parties as of the respective date(s) set forth below.

Borrower:

Signature:
_____

Print Name & Title:
_____

Address:
_____

_____

Date: _____

University of Florida Smathers Library

Signature:
_____

Print Name & Title:

Date: _____

REASON FOR LOAN:

PUBLIC VIEWING DATES of EXHIBITION OR STUDY DATES:
Begin Date **End Date**

OBJECTS

Object ID #
Artist/Maker
Title or Description
Date
Media
Credit Line:
Value $

Terms and Conditions of Loan Agreement

1. Loan. The Borrower agrees to comply with each of the terms and conditions of this Agreement, including those set forth on the **Exhibit A** ("General Conditions") and **Exhibit B** ("Special Conditions"), attached to this Agreement. Subject to such terms and conditions, the Library agrees to loan to the Borrower the Objects for the period of the Exhibition or for Study. Unless otherwise instructed by the Library, at the end of such period the Borrower will return the Objects to the Library at the address specified in Section 13. The Library reserves the right to terminate the Loan if any of the representations of the Borrower are untrue or the Borrower fails to comply with any terms or conditions of this Agreement.

2. Facilities, Etc. The Borrower represents and warrants to the Library: (a) the facilities report submitted by the Borrower to the Library in connection with the Loan is complete and accurate in all material respects and no material adverse change in the Borrower's facilities has occurred since the date of preparation of the facilities report, (b) the Borrower is not undergoing any material renovations and none are planned for the period that the Loan is in effect at the Borrower's venue, and (c) the Borrower is borrowing the Objects for the purpose of exhibiting or studying the Objects during the period set forth at the beginning of this Agreement.

3. Insurance.

3.1. The Library will insure the Object(s) under its policy against all risk of physical loss or damage from any external cause while in transit and on location during the period of the Loan ("wall to wall"). The Library hereby confirms that its policy waives subrogation by the insurance company against the Borrower and other exhibiting institutions. The Borrower may maintain equivalent insurance only if approved below in writing by the Library. In such event, before the Loan is shipped or released to the Borrower, the Borrower must deliver to the Library a Certificate of Insurance or Indemnity, from a carrier satisfactory to the Library, naming the Library as an "additional insured" (and a copy of the policy if so requested), and confirming coverage for the value(s) of the Object(s) as specified by the Library. The Borrower agrees not to disclose such values to any third party except as may be necessary to obtain such insurance.

_____ **Insurance coverage will be accepted from the Borrower.**

_____ **Insurance coverage will be maintained by the Library.**

4. Credit Line. Whenever an Object is on exhibition, the Borrower will at all times display a descriptive label with such information as is furnished by the Library, together with a credit line in the form specified in the Object information provided.

5. Security and Other Protection from Harm. The Borrower will take all action necessary to protect the Object(s) from harm, including harm from the hazards of fire, theft, exposure to extreme or deteriorating light, extremes of temperature and relative humidity, insects, dirt, or handling by unauthorized or inexperienced persons or the public.

6. Staff.

6.1 The Objects may only be handled by packers and staff specially trained.

7. Shipping.

7.1. All shipping arrangements will be made by the Borrower with approval by the Library. The Library will pack the works for outgoing loan and the Borrower will be charged for all labor and materials.

7.2 All ground transportation must be via air-ride, climate-controlled service.

7.3 The Borrower will keep Library crates and packing materials for return shipment, and Objects will be repacked using the same protective methods and materials. Packing crates will be stored in appropriate environmental conditions.

7.4 Each condition report accompanying the Loan will be annotated and signed upon receipt of the Loan and upon repacking for outgoing shipment by a qualified representative of the Borrower and by a Library representative if one is present.

8. Care and Handling.

8.1. The Borrower will exercise the highest degree of professional care in handling each Object in its possession or control. No Object may be altered or changed in any manner whatsoever. Without limiting the foregoing, no Object may be unframed, unglazed or removed from mats, mounts, vitrines, or bases without the prior written consent of the Library. Unless it is necessary in an emergency situation to protect an Object from further damage, no Object may be cleaned, repaired, retouched or altered in any way without the prior written consent of the Library.

8.2. In the event of an emergency, the Borrower will take all steps prudent and necessary to halt or minimize damage to the Object(s). Should any loss or breakage occur, or any deterioration be observed, the Borrower must notify the Library immediately, first by phone and then in written detail with photographs if possible.

8.3. Objects will remain in the possession of the Borrower for the Loan period specified above, plus a reasonable time for receiving and returning the Objects. Any extension of time past the final end date shown above must be applied for in writing within a reasonable time before the end of the Loan period.

8.4. When the Loan is returned to the Library, the Borrower is responsible for packing and shipping it in exactly the same manner as received, using the same cases,

packages, padding and other furnishings, unless the Library specifically authorizes a change.

9. Photography and Reproduction.

9.1. The Borrower may make slides for use by the Borrower or for loan to educational institutions. The Borrower may lend photographs of objects to schools, college, or other education institutions for study. Permission for other photography may be requested, in writing, from the Library. No such photograph, slide or reproduction may be offered at unrestricted sale. Any photographs or slides lent for purposes stated above must be marked, "Courtesy of the University of Florida Smathers Library."

9.2 Photography is permitted for purposes of recording the condition of the Objects and installation views of exhibitions are permitted for record and publicity purposes.

10. Catalogue, Etc. The Borrower agrees to provide to the Library __2__ complimentary copies of each book, catalogue and other publication published with respect to an Exhibition.

11. Multiple Venues. If any Object will be exhibited or studied at any venues in addition to the Borrower's own venue, the Borrower will be responsible for causing the other institutions to comply with the terms and conditions of this Agreement. All shipments between venues must be approved in advance by the Library.

12. Loan Costs. The Borrower will bear all expenses of the Loan, including shipping, packing, handling, courier expenses, if necessary, and insurance premiums. If the Borrower cancels the Loan, any expenses incurred to the date of cancellation and any expenses that the Library cannot avoid will be the responsibility of the Borrower. The Library will prepare invoices for all expenses for which the Borrower is responsible. All invoices are due within 30 days of receipt. A loan fee of $25 per object will be charged or $50 per object when the loan request arrives less than 4 months before shipment.

13. Location to which the Object(s) must be returned, unless otherwise notified in writing:

University of Florida Smathers Library
[Insert shipping address here]

14. Miscellaneous. This Agreement may not be amended except in writing

Exhibit A
GENERAL CONDITIONS GOVERNING LOANS

1. Security

1.1. All exterior openings not used for public entrance, including accessible windows, roof doors, and air ducts, will be secured by alarm at all times. Alarms will be

monitored at a central control station within the Borrower's building, at a local police department, or at a reputable alarm company 24 hours per day. There will be written alarm response procedures that employees are trained to follow, and a designated official of the Borrower will be available at all times to respond to emergency situations.

1.2. Storage areas where the Objects are located will be locked with alarms on windows, doors, and any other openings. Access to these storage areas will be restricted.

1.3. Institution personnel will check exhibition galleries or study areas where the Objects are located on an established basis of frequency. Exterior checks of the building are desirable but not mandatory when a 24-hour guard is posted in the building. If a 24-hour guard is not posted in the building, local police or private security personnel will perform exterior checks of the premises on a periodic basis during hours of closing. Access to the facility will be controlled during hours of closing.

1.4. Records will be maintained on all movement of the Objects, including internal relocations, and only the Borrower's staff may sign for the removal of objects.

2. Fire Control.

2.1. Exhibition buildings will be equipped with early-warning smoke detection and fire alarm equipment connected to and monitored 24 hours per day at an internal security monitoring system, a local fire department, or a reputable alarm company. There will be written alarm response procedures and a designated official available at all times to respond to emergency situations.

3. Relative Humidity and Temperature Controls

3.1. There will be facilities for control of relative humidity and temperature in gallery, storage and packing areas where Library objects are located. All efforts should be made to keep relative humidity maintained at 50%±5% with no more than a 5% fluctuation within that range during a 24-hour period. Temperature should be maintained between 68°F and 72°F (19°C to 25°C).

4. Light Levels

4.1. Natural, quartz, tungsten-halogen, and fluorescent light will be filtered for ultraviolet radiation.

4.2. Works of art on paper will be stored, exhibited, and studied only in incandescent light or other light that has been filtered to remove at least 97% of the ultraviolet radiation.

5. Display Conditions

5.1. No Library object will be displayed in close proximity to sources of heat or cold air, or in cases of vitrines in which the internal temperature exceeds 77°F (25°C) or the relative humidity is out of the range specified by the Library.

5.2. No food or beverages will be present in areas where Library objects are located, nor will smoking be permitted in those areas.

5.3. The Library may require that its small objects be secured in locked cases that are fitted with alarms; and that some type of security mounting be used in the installation of framed objects when not monitored by guards.

Exhibit B- Special Conditions

Library or approved courier required.
Required per diem of $[enter amount] a day for courier.
Display requirements: [enter special display requirements].
The Library reserves the right to update the object(s) value up to three months before the shipment date.
No changes can be made to packing or hanging hardware without Library permission.
The Library will/will not charge a loan fee.

Chapter Eight: Inventory

Conducting inventory is an important part of collections care and preservation. The most basic reason to conduct regular inventory checks is to make sure the library knows where all of the objects in the PCM Collection are located. If objects' locations are not known how can the library expect to care for them properly or let others use them for study or exhibitions? Other reasons to take inventory are to update location information, to identify objects that need conservation, to aid in security, to make sure all objects are numbered or tagged, and to help identify objects that should be deaccessioned or areas where the collection is lacking so more objects can be acquired.

Taking inventory involves checking the physical locations of objects to be sure the locations are properly recorded in the database. As the objects are brought into the library and catalogued, their locations should be recorded. This will be the first major inventory and should be a complete inventory of the entire collection.

While a complete inventory check is the most comprehensive, the library does not have the staff time to dedicate for constantly checking the locations of over 15,000 objects. Therefore, the library can perform section-by-section and spot check inventories. Section-by-section inventories are done by working through one area of the collection (such as high value objects, paper objects, metal objects, etc…) at a time. Section-by-section inventories should be done on a regular basis and rotate the area of concentration. Spot check inventories are very limited in scope, but can be a good indicator of how well the locations for objects are being recorded.

Organization and planning are imperative to making sure that any method of inventory is done quickly and efficiently. First, the storage area should be well organized with the doors, cabinets, screens, drawers, and shelves are all properly labeled. Second, the amount of time available for taking inventory should be decided. This will help determine how many people are needed. Inventory will be taken quicker if the person doing it is already familiar with the storage areas. Good candidates are librarians, collections managers, and graduate assistants working with the PCM Collection. Third, a list of objects to be inventoried should be compiled.

The best way to do this is to generate a list from the catalogue with a space where notes can be made if the location is correct, if the object is located in a different place, or if the object cannot be found. Using the list, the person doing the inventory should update the locations in the catalogue. Even if the objects were in the place where they were listed in the catalogue, it should be noted in the catalogue that the location was correct when the inventory was taken on a specific date.

What is the best way to generate a list of objects to be inventoried? If a section-by-section inventory is being conducted, the target area should be identified. Then, using the object catalogue, a list can be generated of all objects in that section (such as paper objects, metal objects, paintings, etc…). Some programs will generate lists automatically and others will require manual selection of objects. It is best to invest in software where the

program will generate lists. Manually selecting 500-1000 objects could take as long as the actual inventory check. Make sure the list contains information that will help with identifying the object. The accession number will be the first indicator, but other information such as approximate size, color, materials, and a short physical description will help locate objects if the number has fallen off or faded or if the object is mislabeled. A small photograph is helpful as well.

Lists for spot check inventories can be generated in a variety of ways. One way is to have the computer randomly select between 50 and 100 objects from the catalogue. Another is to select between 50 and 100 objects manually from the catalogue. It is also a good idea to do this process in reverse; go into the storage areas (and exhibit areas, if applicable) and write down the locations of 50 to 100 random objects and then check the computer to be sure their locations are properly recorded.

Since this collection will mostly be used for individual study and not in exhibitions, an inventory of objects that have recently been studied should be taken periodically. Checking the location of the last 30-50 objects requested for study can accomplish this. Objects are most likely to disappear or be misplaced when they are being moved from one place to another. How often this type of inventory will need to be taken will depend on how much the collection gets used. If 30-50 objects are studied every week, then the inventory should be taken more often than if 30-50 objects are studied in a year. The objective is to make sure that each object that was moved was placed back in its proper storage location. While no inventory method can be as accurate and thorough as an entire inventory check or a section-by-section or spot check inventory, this method can be used. It is relatively quick and, if done frequently enough, can be effective in making sure objects that were moved have been put back in their proper storage place.

If an object is found in an improper place at any time during the inventory, it can be moved to its proper location. However, be sure another object has not been put in the proper object's location. All the guidelines for handling objects outlined in chapter two should be followed. If an object looks too fragile, large, or heavy to be moved by one person, record its current location and make a note that it needs to be moved to its proper location so that it can be moved at a later time when a conservator is available to evaluate the condition or several staff members are available for heavy or awkward lifting.

Inventory can be time consuming, but it a very important part of preservation and care. An organized and well-labeled storage area combined with well-trained individuals will help ensure that inventory goes quickly, efficiently, and smoothly.