ARCHAEOLOGY AFTER THE FIELD: ASSESSMENT OF THE JOSSELYN

COLLECTION AT THE UNIVERSITY OF ALABAMA BIRMINGHAM

by

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ABSTRACT

The University of Alabama at Birmingham's (UAB) Josselyn Archaeological Collection (Josselyn Collection) contains artifacts from over 100 Archaic and Woodland period Native American sites from Alabama and other states in the Southeast. The collection is named for avocational archaeologist, Dan W. Josselyn, and contains both amateur and systematic field collections. The collection is in a state of disorganization. Major organization and restoration of the Josselyn collection needs to be undertaken not only for it to meet federal standards, but to fully meet its research potential. A review of Museum Best Practices was conducted to develop guidelines to revise and improve the Josselyn collection. In addition, a review of five institutions with collections similar to UAB's was conducted to discover their procedures for implementing Museum Best Practices guidelines. Based on this study, it is recommended that the following measures be developed for restoring the Josselyn Collection; (1) Develop a collections management policy; (2) Develop a collections manager position or assign oversight of the collection to department member; (3) Address security of the collection, which includes NAGPRA issues, collection hierarchy, and access to collections; (4) Implement environmental and pest control measures; (5) Develop formal lab procedures; (6) Rectify the poor storage conditions of the collection; (7) Address records and documentation issues, such as offsite backup and the development of database and current institutional records for the collection.

DEDICATION

This thesis is dedicated to my family, friends, and mentors. In particular, everyone that

has supported me through this endeavor with their love, patience, and sage advice.

LIST OF ABBREVIATIONS

OAR   Office of Archaeological Research

CMP   Collections Management Policy

DOD   Department of Defense

AAM   American Alliance of Museums

NAGPRA   Native American Graves Protection and Repatriation Act

MSC   McWane Science Center

USAM   USA Museum

CFR   Code of Federal Regulations

UAB   University of Alabama at Birmingham

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INTRODUCTION

The UAB Josselyn Archaeological Collection

The Josselyn Archaeological Collection, housed at the University of Alabama, Birmingham (UAB), consists of artifacts, faunal, and human remains resulting from a combination of amateur collections, donations, and collections resulting from archaeological fieldwork. Named for Dan W. Josselyn (1900-1970), an avocational archaeologist from Homewood, Alabama, the original collection is composed of artifacts from prehistoric sites in Jefferson, Talladega, and other counties in Alabama. The artifacts collected by Josselyn make up a relatively small portion of the collection. The remainder of the collection consists of artifacts donated by Edward C. Mahan, David W. Chase, Alice Burns, and others, as well as artifacts collected during fieldwork carried out by UAB archaeologists C. R. Nance, Eddie Hatcher, Jack Bergstresser, Brian Hesse, and others, from the 1970s through the 1990s. These collections complement those from Josselyn, and they include artifacts from nearby states such as Florida, Georgia, and Texas, as well as nearly every county in Alabama. Therefore, the use of Josselyn's name for the entirety of UAB's collection is a misnomer, but his name was informally retained because the collection started with his contributions. The use of this name may be misleading as it does not readily inform scholars of the complex representations of artifact types, period, regions, and multiple contributors. The collection houses over 18 thousand artifacts including stone tools, pottery, human remains, and faunal material along with roughly 3 thousand documents housed in three filing cabinets. These documents contain site folders, personnel files, field notes, and other miscellaneous records.

The UAB archaeological collection, previously housed in the anthropology lab of the Dowdy Building at UAB, was moved to room 222 of the Anthropology Department in Heritage Hall when many Social and Behavioral Sciences academic departments, faculty and staff offices, labs, and classrooms moved into new facilities in 2008. The move from the Dowdy Building to Heritage Hall further disorganized a collection that already lacked proper care and protection (Sharyn Jones, 2012, pers. comm.). Department members were responsible for the relocation of their individual office items, research collections, and materials as well as the UAB Josselyn Archaeological Collection. At the time of the move, there was not a collections manager, nor was there a formal caretaker of the collection. Passed from one staff archaeologist to the next, this system led to the loss of instruction about the collection's use and care as well as information about its utility and importance. In addition, materials from the collection were separated and used for teaching by staff members. In a few cases, these materials were not moved with the collection but were moved and stored separately by whichever staff member that possessed them at the time. The departmental move began before the collection could be packed. The Anthropology Department brought in movers to preview the collection and develop a plan for packing and moving it could be developed. They were notified that the collection was fragile and should be handled with care. The department hired students to package the collection, which included placing cardboard covers over trays containing boxes of materials and packing large stones and loose artifacts in cardboard boxes.

Once everything was packed, the movers were displeased with the volume of the collection that they would have to move; they appealed to the dean about throwing out some of the content (items such as grinding stones and soil samples that they deemed unimportant). Department members were required to justify the importance of the collection to both the dean and department chair. The collection was relocated, but stored improperly in its new location. Students were eventually able to put storage trays into shelving units and stack boxes out of the way, but whatever order the collection had been in previously was lost. Although the UAB Josselyn Archaeological Collection was under the care of professors in the Department of Anthropology, it lacked the protection that a collections manager or collections management policy would have provided.

Previous Research of the Josselyn Collection

Previous research about the UAB Josselyn Archaeological Collection includes the reports: *A Preliminary Classification and Cataloguing of the Josselyn Collection* by Eddie M. Hatcher (1979) and *Paleoindian Settlement in Madison County, Alabama and Surrounding Areas* by Mark Cole (2006). Hatcher detailed the sites and artifacts Josselyn compiled during his work. The Hatcher report reviewed one hundred sites associated with Josselyn's collection, provided information about site locations, recovery methods, dates, maps, notes, and field notes. It also provided artifact descriptions and projectile point typologies where or when they were available. In his report, Hatcher also mentioned that archaeological site survey records and artifact collection forms had been compiled for each of the sites. Many of the sites represented by the

Josselyn collection may therefore have further documentation in the Alabama State Site File at the Office of Archaeological Research (Hatcher 1979). The Alabama State Site File is an online resource for archaeologists containing information about archaeological sites throughout the state. Checking the sites represented by the Josselyn Collection against the Alabama State Site File is not within the scope of this research.

Paleoindian Settlement in Madison County, Alabama and Surrounding Areas by Cole also highlighted the utility of the UAB Josselyn Archaeological Collection. Cole (2006) examined a subset of the Collection amassed by Edward C. Mahan and other sources to develop a model for Paleoindian site occupation. Cole (2006) reported that many sites he examined, including the sites from which UAB's Mahan Collection originated, have been destroyed by development and are no longer available for study. Both the Hatcher and Cole reports provided documentation pertaining to the collection's scientific and research value.

In 1996, archaeologists Jack Bergstresser and Caryn Hollingsworth developed a plan to curate the UAB Josselyn Archaeological Collection according to federal standards. This plan briefly outlined curation measures adopted by the Archaeology Lab at UAB in order to meet the standards outlined by the Curation of Federally Owned and Administered Archaeological Collections (Bergstresser and Hollingsworth, 1996), otherwise known as 36 CFR (Code of Federal Regulations), Part 79 (National Parks Service 2011). Lynne Sullivan and Terry Childs (2003) explained that 36 CFR, Part 79 is a guideline for the curation of archaeological materials and data recovered from federal lands and federally assisted projects. Currently, no other documentation has been located about the proposed Josselyn curation plan; there are no status

reports, policy manuals, databases, nor any other related documents that would signify that any significant progress made. The current chaotic state of the collection indicates that at some point there was a failure to develop and/or implement measures to properly care for and curate the collection. Even so, the development of a curation plan by UAB archaeologists demonstrates the importance of the Josselyn Archaeological Collection was at one time acknowledged and that the responsibilities of collection care were recognized.

Curation of Archaeological Collections

Archaeological collections are important sources for scholarship. They serve as repositories for research, educational tools, and resources of public trust. Research by Andrew Christenson (1979) detailed the urgency of preserving collections as cultural resources for future generations. Christenson (1979) explained that as more and more archaeologists realize the necessity of preservation, they also become aware of the difficulty in preserving cultural resources in their primary contexts. According to Christenson, "the logical conclusion is that a larger and larger proportion of our extant cultural resources will be preserved in secondary contexts; in other words, in museums and storage facilities" (1979: 161). Childs and Sullivan (2004) explained when archaeological sites are destroyed though excavation, the resulting collections and records become the only remaining evidence of the site. Museums and storage facilities will necessarily become repositories for the preservation of primary sources. The preservation of sites and artifacts can be achieved through responsible archaeological stewardship, which in turn promotes public trust. Therefore archaeologists should be responsible for the care of collections as sources of research and public interests (Marquardt, Montet-White

and Scholtz 1982). Major aspects of collections care that must be addressed in order to properly care for a collection include recognizing the importance of record keeping, implementing proper processing and storage procedures, and creating and executing a collections management policy that governs the aforementioned aspects.

The very nature of archaeological work is to uncover, interpret, and generate archaeological data. Christenson (1979) clarified that while data is obviously important for generating an initial report, once the report has been written, the data and documentation associated with it maintain their heuristic value. In fact, Christenson (1979) observed that it is necessary to preserve all pertinent documentation associated with the research. Because the reports archaeologists construct from the archaeological record are hypotheses, they should continually be examined and reinterpreted as new theories, techniques, and knowledge develop. Zoë Henderson (2007) noted that the documentation created through archaeological surveys and fieldwork is important. Henderson (2007) argued that the curation of original documentation is as necessary as the curation of artifacts. According to Sullivan and Childs (2003), original documentation (for example field notes, maps, photographs, etc.) will continue to be valuable in the future as the methods and interests of archaeologists change. Sydel Silverman (1993: 100) wrote about original documentation, stating: "Where they contain information on excavated or destroyed sites, societies that have been fundamentally changed, or cultural products that no longer exist, they represent a thin thread of linkage to knowledge that is otherwise irretrievable." Methodologies and theoretical perspectives will shift, requiring archaeologists to access original documentation and data in order to reinterpret and reexamine the value and meaning of sites lost

to development and the processes of time. A comprehensive database and recordkeeping system is an integral part of providing the long-term protection of this information.

The importance of records and their proper archival preservation extends to those generated through the management and care of collections. Lenore Sarasan (1995) explained that these kinds of records help staff and researchers to locate objects and connect all necessary information sources so researchers may access everything known about an object. These documents are critical for understanding the current state of a collection. According to the Museums and Galleries Commission, "A museum without any documentation is useless; it cannot legally prove that it owns any of its collections; it cannot account to donors for what has been given, or to auditors for what has been bought; it cannot maintain proper security; and it has probably destroyed most of the historical and scientific value of its collections" (1995: 59). Michele Austin et al. (2005) explored the consequences of consistent and thorough documentation of the care, storage, management, and other concerns on a collection's present condition. For example, Austin et al. (2005) found that records detailing the treatment and restoration of an object explain its current condition as well as inform about how the object should be handled in the future. Sarasan (1995) wrote that, historically, collection documentation has been secondary to the collection and preservation of objects. Therefore, documentation often becomes disorganized or sporadic. Sarasan (1995) noted that this problem is exacerbated when curators leave, taking their knowledge of the records and the collection with them. It is necessary, then, for institutions to develop a database and recordkeeping system that is

current, comprehensive, and accessible so that the integrity of the collection is protected for posterity.

The state of UAB's Josselyn Archaeological Collection is not unique. Many collections have faced similar issues in the past, and a wealth of literature examines collections care and management. For example, a review by William Green (1991) outlines the holdings of the Paul Rowe Archaeological Collection at the University of Iowa and describes its history, its importance for regional research, and the attempts to curate the collection. The Rowe Collection consists of the compilation of excavations and surface collections conducted in southwestern Iowa by amateur archaeologist Paul Rowe (1894-1968) (Green 1991). The state of the Rowe Collection was similar to that of UAB's Josselyn Collection, and the measures taken by the University of Iowa to restore it could serve as a model for the restoration of UAB's collection. Curation of the collection included the following measures:

> (1) Clean and stabilize the specimens; (2) organize the collection by Rowe-assigned site designations and complete preliminary catalog sheets; (3) ascertain the specific sites from which collections derive, by field checking wherever possible; (4) conduct final cataloging and add the collection to the State Archaeological Repository; and (5) assess the condition of Rowe Collection materials…and recommend collection management priorities. [Green 1991:79]

Green (1991) concluded his review by pointing out that curation of the Rowe Collection will make it available for research.

Federal collections have similarly suffered from disorganization and deterioration. The United States government has recognized that archaeological collections are nonrenewable resources deserving of national protection. Under 36 CFR Part 79, curation standards have been outlined for the archaeological and historical resources recovered from federal lands (Felix et al. 2000). Susan Felix et al. reviewed 107 repositories from 17 states that house collections from lands owned by the Department of Defense (DOD). Out of this review, statistics were generated from 106 of the repositories. Of the 106, only 29 repositories meet 36 CFR Part 79 standards. Despite the measures established by 36 CFR Part 79, Felix et al. found that most of the DOD collections they reviewed are housed in inadequate facilities. These collections are therefore subject to deterioration and are unavailable for education and research. Inconsistent national policy and limited funding have made it difficult for housing facilities to properly care for collections. Through review of the facilities, Felix et al. (2000) highlighted the problems plaguing DOD collections, encouraging the implementation of procedures to restore the collections reviewed. The restoration of these collections is necessary to realize their potential as resources to the archaeological community.

The Importance of preserving the UAB Josselyn Archaeological Collection

The Josselyn Archaeological Collection contains unique information about Alabama's prehistory from many sites that have been destroyed by development. Hatcher's (1979) report provided information about some of the sites impacted by development. For example, Josselyn-Y Site was destroyed by construction of the Eastwood Mall Shopping Center. Hatcher's (1979)

preliminary classification and catalog of the artifacts amassed by Josselyn is an important resource that highlights the potential of the collection to provide information about prehistoric sites in Alabama, many of which have been compromised due to urban development. Mark Cole's (2006) research also indicated that Mahan's collections represent sites that have been destroyed. For instance, Paleoindian artifacts, including two fluted points, were collected at the site designated as Pear Tree (1MA1335), which was later destroyed by the construction of a housing subdivision. Cole noted that UAB curated the Mahan Collection, which includes artifacts from another important site, Farley (1MA1331), that contained a variety of lithic raw material in an amount that is unprecedented at other Paleoindian sites in Alabama.

Furthermore, the 1996 curation plan drafted by UAB archaeologists indicated that UAB was in possession of, or was likely to obtain the possession of, federal collections. 36 CFR, Part 79, is pursuant of the Moss-Bennett Bill (16 U.S.C. 469-469c) which provided for the preservation of archaeological data which might be lost or damaged as the result of Federal activities, such as construction projects (National Parks Service 2011). Consequently, federal collections are often the result of projects that destroy archaeological sites. Therefore, the collections amassed through UAB archaeological fieldwork include sites that have now been lost. Additionally, the collection contains human remains and potentially other cultural items, such as funerary objects and objects cultural of patrimony, which must be handled in accordance with NAGPRA (National Parks Service 1990). The presence of these cultural items necessitates the curation of the Josselyn collection as well as implementation of measures, including but not limited to providing an inventory and written summary of the items, in accordance with

NAGPRA guidelines (National Parks Service 1990). The Josselyn Collection contains valuable information and artifacts from sites no longer available for research, making it a critical resource that must be protected. The presence of data and artifacts from federal lands and cultural items protected under NAGPRA requires that the proper care and curation of this collection as mandated by law.

The state of the Josselyn Collection

Although the Josselyn Collection houses a wealth of archaeological materials and data, it is currently inaccessible for research in its current state. The lack of proper curation and care has caused the collection to become disorganized. Although there are records available, the collection does not have a complete catalogue of its contents nor does it have policies or procedures concerning its use and protection. Further, the collection suffers from disorder partially caused by the move to Heritage Hall and artifacts have been separated from related materials. Many of the boxes, bags, and containers suffer from deterioration, exacerbating the disorder of the collection. The archaeological information is in a state of peril due to disorder and a general lack of policies and procedures. Developing a comprehensive set of policies and procedures to preserve and catalogue the Josselyn Archaeological Collection would guard against loss of information, facilitate scholarship, and ensure the collection is compliant with federal law.

Purpose of this Study

       The current state of the Josselyn Archaeological Collection underscores the necessity of properly curating, preserving, and protecting archaeological resources. The collection is not a closet of curiosities, but a resource of unique archaeological data in a perilous state which requires the attention of a collections curator or manager. The collection has records and documentation signifying its significance and providing salient data for research. It contains artifacts and data from sites in Jefferson and other counties that are no longer available for research. The Josselyn Collection is the definitive resource for the prehistory of Jefferson County (Jun Ebersole, 2013, pers. comm.). In addition, there is a responsibility to curate and care for the collection as its contents fall under the purview of federal law, such as NAGPRA. The purpose of this study is to review Museum Best Practices, as well as the practices of institutions with similar collections, in order to establish how best to bring the Josselyn Collection up to established standards.

METHODS

The data for this research was collected from interviews conducted at five institutions as well as a review of literature documenting best practices specific to archaeological collections. Institutions were chosen based on their successful curating of collections similar to the Josselyn Collection, their possession of archaeological materials and records from the geographic region of the southeastern United States, and their association with universities.[1] Therefore, these institutions provide examples of scope, size, and institutional frameworks comparable with UAB's collection. The institutions include University of Alabama, Tuscaloosa (Office of Archaeological Research); Auburn University; University of Tennessee, Knoxville (Frank H. McClung Museum); University of South Alabama (USA Archaeology Museum); and McWane Science Center (MSC). The collection facilities and practices of these institutions were observed and interviews conducted with key informants such as curators and collections managers.

Developing a standardized set of questions enabled the procurement of specific information about institutions' policies and their implementation; typically, standard questions were asked during tours of the facilities, since many of the answers would be presented during the inspections. Through a cursory review of McWane Science Center's operations, research of literature pertaining to general collections and museum management, and a preliminary examination of the current condition of UAB's Josselyn Archaeological Collection, a standardized question set was developed in order to best address the specific needs of the

[1] All institutions examined were associated with universities except McWane Science Center, which is a private museum. McWane Science Center was chosen based on the other above-stated criteria, *viz.*, the similarity of its collection and its possession of relevant documents and archaeological materials.

Josselyn Collection. Questions were divided into the following five categories that museums must address to meet federal and professional curation standards: database, storage/environmental controls, lab procedures, NAGPRA compliance, and collections management policies (Museums 2012).

Database

At each institution or museum, the following questions about database procedures were asked:

- How do you database?

- What database system do you use?

- What information fields do you use?

- Who has access to the database?

- How do you store records?

- How and where do you back up digital data?

- How do you ensure consistency in the database?

The aim was to garner information about each institutions database process, capturing the factors behind each institutions choice in database software and its utilization.

Storage/environmental controls

The questions asked about storage, environmental and pest control measures during the reviews included:

- How do you store your collections?

- What climate controls are in place?

- What pest controls do you employ?

- What security measures are used and who has access?

- What products does the institution use?

- How does the institution deal with light control?

The intent of these questions was to get at the general practices and standards shared by the institutions as well as discover techniques tailored to the unique needs of the collections.

Lab procedures

The following questions were asked about lab procedures at each institution:

- What are your lab procedures for artifacts arriving from the field?

- Where do you do your lab procedures?

- What kinds of equipment are used?

- How does the institution handle acquisitions?

These questions were asked to get at each institutions procedure for processing artifacts, as well as, the kinds of equipment and lab space each has available.

NAGPRA compliance

Each institution visited has taken measures to comply with NAGPRA. Therefore each institution was asked:

- How did you approach compliance with NAGPRA?

The intent of this question was to garner as much information about the various ways each institution ensured they were compliant with NAGPRA.

Collections Management Policies

Questions concerning collections management policies were also asked at each institution. The questions were:

- Do you have a collections management policy?

- Would you provide a copy?

These questions led to a review of institution's collections management policies. Crucial information was garnered through this review that established which procedures were shared by each of the institutions and how each institution tailored these procedures to fit their collections.

Review of the state of the Josselyn Collection

The Josselyn Collection underwent a cursory document review to examine the types of records and information presently held in the collection, as well as the condition of the records available. Students were hired as anthropology research assistants to help with the document review. One of the anthropology research assistants began scanning the Josselyn documents during the fall semester of 2012. This project will require additional time to complete due to the volume of records present. As a result of this partial review, a sample of the records was compiled in an Excel spreadsheet for two reasons: first, to begin the necessary process of compiling a database and, second, to get a snapshot of the extent of the collection.

Three filing cabinets contain records related to the Josselyn Collection. One filing cabinet contains the bulk of the information about archaeological sites, were the site information was inventoried and entered into an Excel document, and 741 records sampled for this study. The document inventory was then compared to a site inventory previously begun by research assistants. The site inventory was begun during the fall semester of 2012, and progress is continuing to be made by research assistants. This inventory is a general listing of the number of boxes in each drawer in the collection and the nature of its contents. By comparing these two inventories, researchers can uncover the extent to which the artifacts have corresponding documentation. Although neither of the inventories are complete, both are crucial for developing and understanding of the current state of the Josselyn Collection. These inventories yielded substantial information—even in their incomplete states.

RESULTS

Reviewing the practices in place at the five institutions provided information about their policies and procedures. Specific approaches and measures developed by each institution are provided to demonstrate the diversity of implementing curation policies and procedures.

Museum Database and Records Keeping

The American Alliance of Museums (2012: 5) notes that, "Documentation captures an object's condition, history, use and value. It is how a museum maintains physical and intellectual control over its collection." Database systems and proper recordkeeping are used to create, compile, and store documentation about their collections. Developments in technology have led to an increase in its use by museums and institutions. Technology can be beneficial for storage of records, streamlining data, and facilitating accessibility to information. Pnina Wentz (1995) explained that the limitations of manual systems can be overcome by the use of computer applications. Some limitations that computer systems can resolve include facilitating consistency in recordkeeping, allowing for easier updates and changes, and compiling records maintained by multiple departments (Wentz 1995). Sullivan and Childs (2003: 104) wrote that computer systems can "improve collections accountability and allow for better budgeting of future collections, including more efficient inspections, routine conservation work, and basic equipment needs." The benefits that technology affords to recordkeeping and collections database systems validate its growing use in museums and other institutions. Henderson (2008) argued that as documentation becomes progressively more digitized, issues unique to the use of technology will

have to be addressed. Software and computer hardware are continuously changing, increasing the rate at which previous technology becomes obsolete. Additionally, compatibility between new and obsolete software is not guaranteed. Henderson (2007) insisted that data must be made accessible, including compatibility with (or convertibility to) new software. In addition to issues of compatibility, Sarasan (1995) explained that any computer project must be initiated by people knowledgeable enough about the technology (and knowledgeable enough about the old manual system) so that digitization goals can be met. There are a number of software companies that provide database systems for museums. Systems vary from one company to the next, which requires providing training information to the museums using the product (Jun Ebersole, 2013, pers. comm.). For example, software companies provide customers with a CD based training system. Customers may use the CD training systems to train staff and volunteers. Software companies generally provide initial training and technological support for their products. Training of students, volunteers, or employees is the responsibility of the institution. How often a person in trained, who is trained, and how they are trained is determined by the museum. Software updates are also offered by the companies. Maintaining up-to-date software requires that the museum be cognizant of updates and changes. The benefits of technology are obvious, and technology will undoubtedly continue to be used for databasing and record storage. Technology is a valuable tool as long as users understand how it functions, regular updates and maintenance are met, and the limitations of computer systems and software are recognized.

Although database systems are continuously described by curation literature as necessary, there is not a uniform approach that all museums and repositories follow. Instead,

each institution develops a system that works best to meet its general curation standards. By visiting multiple institutions and reviewing their policies, it was possible to observe the guidelines they established for their collections and their implementation of their guidelines, exploring issues such as what kind of database system they chose to use, why they chose to use a particular system, and how they have tailored it (if at all) to best fit their collections.

The McWane Science Center Database and Records

At MSC, collection and item data are recorded. Data falls into two types, descriptive and administrative, which are recorded into separate Excel spreadsheets. Descriptive data includes information about the object itself, such as locality, material, and artifact type. Administrative data includes details such as where items are stored and the accession number assigned. MSC often relies on supervised volunteer work to examine and process artifacts in the collection. Although data such as classifications, descriptions, and identifications may be generated by volunteers, the information is added to the database only by the collections manager, Jun Ebersole. This allows for the collections manager to review the data, verify identifications made by others, ensure data-entry consistency, and make any final changes. The software used at MSC is called Luna Insight. This is where Ebersole maintains both administrative and descriptive data. Primary records are protected from loss or damage due to smoke, fire, or water. Offsite data backup provides for duplicate records.

The University of South Alabama USA Museum Database and Records

      The University of South Alabama's USA Museum (USAM) uses a software system called Rediscovery System. This program allows for the bar-coding of artifacts and artifact lots. The barcode can be scanned to find artifacts locations as well as other information such as dates of accession. Currently, most of the artifacts do not yet have barcodes, but a barcode project has been implemented. The Rediscovery System has an archaeology section that the USAM uses to store photographs, site numbers, field specimens, catalog/accession number, weight, and other data. The system is searchable by site and accession number. Only two people have authority to make changes and input data in the Rediscovery System at one time. Occasionally, this includes students, who are required to have system permission and a log-in account. Artifacts are itemized either individually or in lots if they are small. The software is installed on multiple computers with an offsite backup. In addition to the Rediscovery System, USAM has an Excel spreadsheet, created in the early stages of curating their collection, of all the objects and their locations. The museum uses a curation changes manual, located in the collections room, where any changes (such as relocation or the borrowing of an item by a professor) are recorded. A searchable Excel file is also kept in the collections room to enable quick location of an artifact. All of the original paper records associated with the collection are being digitized.

The Frank H. McClung Museum Database and Records

      The Frank H. McClung Museum houses archaeological and non-archaeological collections, which have two separate databases. The museum uses the software PastPerfect for

both collections, but maintains separate licenses for the different versions for archaeology and general collections. For the archaeology database, items and lots are assigned a number consisting of state and locality information instead of an accession number. Objects in the general collection are assigned accession numbers, and a ledger is kept where artifacts are recorded before being added to the system. Predetermined categories in PastPerfect used for the collections include: site, time or period an object dates from, associated cultural group, condition, dimensions/weights, notes/legal status, and object's origin. In PastPerfect, a search for artifacts is conducted with a query that can be narrowed to seven terms. In addition, PastPerfect tracks information about receipts, loans, and gifts. For the archaeological database, the museum created a unique lexicon relevant to their collection. This lexicon was generalized so the database could be searched easily. An example is an artifact is entered as a general type, for example, as a "scraper" instead as a specific type of "Antler Hafted End Scraper". Data is entered into the database straight from observation of the artifact to minimize issues such as omission of an object or its information. Two people have administrative privileges to the archaeological database, and restricted usage can be set up to allow students and researchers access to the database without editing privileges. PastPerfect also allows for the addition of notes made by researchers. PastPerfect has a global update function to aid with adding and saving new data. The global update function is crucial for ensuring that all data on each computer used for the database is consistent. The museum also saves the database once a week and backs it up on the offsite server hosted by the University of Tennessee, Knoxville. All physical records associated with the collection are currently being digitized.

The Moundville Database and Records

Moundville is the location of the Office of Archaeological Research (OAR) which maintains Alabama's State Site File. There are two distinct databases, the site file database and the collections database. The database software used for the Alabama State Site File is Oracle. The OAR State Site File contains reports for all archaeological sites in Alabama, including Section 106 reports generated during the assessment of federally owned historic and archaeological resources (Alabama 2009). The Curator of Archaeology, Eugene Futato, has administrative control of the State Site File. Researchers may make an appointment to access the database, while businesses and government agencies can subscribe to a web-based version (Alabama 2009). All of the databases are backed up offsite at the University of Alabama. For the collections database, OAR uses FileMaker software. Categories assigned in the collections database include accession, source/person of contact, date obtained, how obtained/fee curation or other, lots, folders, negatives, slides, digital images, and comments. The database also contains storage location information, site number, and provenience data. The database can be searched by site or accession and is capable of carrying out multiple queries. There is a folder titled the "Master File" accessible to only the Curator of Archaeology and the Director of the Collections Department. Data can be entered and then uploaded all at once into the collection database by the Director of the Collections Department, Mary Bade. Both databases are backed up offsite at the University of Alabama. In addition to the databases, OAR has a library with a digital format that is being added to the State Site File database. The primary records, including photographs, field notes, et cetera, are stored in a fire-protected room.

The Auburn University Database and Records

During this research the anthropology department at Auburn University was in the process of moving its archaeological collection to new facilities. The move included relocating the computers that house the database for the collection, which were down at the time of the visit. A modified Excel spreadsheet is used for the collections database. In addition to the database, the archaeology department maintains primary records such as cultural resource management reports, field notes, maps, and other records, which are stored in a separate and secure location from the collection.

Collections Storage

Henderson (2008: 80) wrote, "The safety of a collection is of paramount importance. This includes ensuring that objects do not decay." Proper storage procedures protect artifacts and collections from decay and damage. Poor storage and handling can further negate conservation treatments (Singley 1981). Therefore, the proper storage and handling of collections is critical. The storage procedures necessary for proper care of a collection vary. Environmental conditions, for example, may be different depending on the artifacts, specimens, and materials in the collection. Katherine Singley (1981) provided some general advice for archaeologists, which includes the use of archival bags and boxes, packing with acid-free tissue paper or foam sheeting (in order to reduce the effects of rubbing and protect against fluctuations in temperature), and avoiding overloading boxes. Henderson (2008) noted some general guidelines indicating that

collections be stored in stabilized conditions or conserved in the manner suitable for preservation. When it comes to storage facilities, William Marquardt et al (1982) explained that there is not an established definition about what constitutes adequate or proper facilities. Singley (1981: 38) addressed the storage area writing "The curatorial area should be accessible, well-ventilated, and free of dust and vermin. A general stable environment, with ideal levels of relative humidity at 45-55% and temperature at 65-75°F, is preferable to an environment with severe daily and seasonable fluctuations." Singley's sentiment is shared by Marquardt et al. (1982), who also insisted that storage areas be secure, free of insects and vermin, and climate-controlled. Marquardt et al. (1982) wrote that these are minimal standards of adequate curation that the anthropological community must agree on.

Repositories housing federal collections are expected to meet the curation standards outlined by 36 CFR, Part 79, which includes implementing climate, pest, and security measures that would ensure the longevity of collections (Felix et al. 2000). While the aforementioned measures are necessary, the particulars of implementation and policy regarding pest, climate, and security controls vary from one institution to the next as situations necessitate the tailoring of measures to best fit their specific collections. In addition to the institutional variation of controls and procedures, Felix et al. (2000: XXV) found that despite the guidelines established by 36 CFR, Part 79, "funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented compliance on any large scale." It is evident, then, that not only should "minimal" curatorial and storage measures be established and implemented, but these measures must be supported by adequate funding and consistent policies.

Storage procedures can either be general or very specialized, depending on the collection. The similarity of these collections to the UAB Josselyn Archaeological Collection suggests that their storage procedures should be appropriate and conveyable. Therefore, the storage facilities and procedures were reviewed to discover how each institution handles the storage process.

McWane Science Center's Storage Procedures

MSC has tight security measures. Only the collections manager has a key to access the collections room. Volunteers and researchers are allowed access to the collection under the collections manager's permission and supervision. The collection is housed in a climate-controlled room where humidity is kept between 50%-70% and is constantly regulated. There is a double-door entry to the collection area, adding to temperature control as well as pest control as temperature from public to collection space becomes increasingly controlled and regulated for collections care. This double-door system consists of two rooms, a lab area and office/library space, on either side of the collection storage room. Entry to the lab and office are strictly controlled and provide the security barriers between the public areas of the MSC and the collection. Pest-control measures also include a strict no-food policy. There is a quarantine room in the lab space where objects and materials are placed to be treated for pests. The entirety of the secure area (which includes the lab, office, and collection storage area) does not have exterior windows, a feature which helps with light control. In the lab and storage area, UV filters are also used to mitigate the damaging effects of light. Archaeological materials and artifact are stored by

site and organized by artifact category including lithics, pottery, et cetera. They are itemized and assigned a number so that particular pieces can be researched or photographed.

The USA Museum Storage Procedures

USAM has two collections storage areas, one for artifact analysis and the other for long-term curation. Both have climate control and electronic security systems. Access to the collections room is secured via a key pad and key code controlled by the director. Members of staff are assigned codes if they require access the rooms. If a staff member leaves the university's employment, access codes are changed. Access codes are not provided to students, researchers, student assistants, or members of the general public. In addition to these security measures, the museum has a fire system that includes a fire extinguisher, fire-abort button, sprinkler system, and clean-agent fire-suppression system. Light control includes manually turning off lights when the collection room is not in use. The collections space does not have exterior windows, a feature that also provides light control. For climate control they have a separate thermostat and cooling system for the collection room. USAM's pest-control measures are extensive and have been detailed in an Integrated Pest Management Procedures manual. Generally these measures include the use of sticky traps, a ban on food and drink, and a freezing policy using a Freezer-So-Low Ultralow Freezer. As part of the Integrated Pest Management Procedures, the freezing policy has been developed that details how freezing of objects such as books and archaeological artifacts should be carried out before they are stored in the collection room. Cardboard is not allowed in the storage room, only archival quality plastic boxes and bags

are utilized. The freezing policy and ban of cardboard was initiated to prevent silverfish infestations. These measures are also useful in preventing other pest issues. In addition, the museum tracks the number and type of bug found on traps in an Excel spreadsheet. USAM's Collections Management Policy details how artifacts will be stored, indicating everything from the information to be written on bags and tags, the handling of oversize specimens, types of boxes to be used, and how artifacts will be shelved. The museum uses permanent collapsible shelving provided by the Walter H. Hopkins Company.

The Frank H. McClung Storage Procedures

At the Frank H. McClung Museum there are two primary storage areas where general/non-archaeological and archaeological collections are housed. Most of the archaeological collection that is funerary in nature or used for research is kept on the second floor in the archaeology lab. The rest of the archaeological collection, including human remains and soil samples, is housed in a basement room along with the general collection. Both areas are secured with locks that requiring codes available only to members of staff who require access. There is a new air conditioning system that provides temperature control for the entire building. There is a third storage area offsite called Middle Brook, where more soil samples and large items such as furniture are stored. In the room that houses both general and archaeological collections, artifacts are organized by row, column, shelf, and box location. One section of shelving contains collections from WPA (Works Progress Administration) projects, which are stored alphabetical by county. The shelving system was tested by pulling out boxes and then replacing them, to

discover if it was efficient and if order was maintained. The system was successful at keeping the collection organized. Light-sensitive objects are stored behind black plastic on shelves. In the archaeological lab, pots are stored on shelves along with associated lithics. This room contains double-walled and locked storage cabinets where other smaller artifact lots are stored. They refer to standard museum literature for pest control, although they did not specify which reference they use.

Moundville Storage Procedures

At Moundville the Office of Archaeological Research (OAR) keeps its collections in the Erskine Ramsay Building. This building is secured though key control as well as an alarm system that requires the user to have the access code. Only the director, executive director, curator, and facilities manager have key and alarm access. Visitors are not allowed in the building unattended. The OAR staff try to keep the front of the building (where records, photos, and special collections are stored) at 69°F +/-2 and 38-40% humidity, ten degrees cooler and drier than the rest of the building. They also use a hygrothermograph to monitor atmospheric changes. In room one of the building, negatives and maps are stored in flat map cases and acid-free papers. Room two houses records which are boxed in acid-free boxes and folders with the collections number visibly marked. The boxes are strapped to keep people from opening them without permission. Artifact lots are stored in rooms three and four of the building. There is a fire proof door and dry fire-suppression system (sprinklers activate only when they get hot) for this area. Generally, boxes of artifacts are organized by accession number, then box number. The

boxes used by the OAR are built to meet certain specifications. For example, they do not have handle holes like standard cardboard boxes because it makes them weaker. The boxes are custom built specifically to fit the shelves and are filled to no more than 30 pounds to keep them from becoming unwieldy and to avoid overloading the artifacts. Special collections are housed in room four. This room has a separate key control from the rest of the building. It is in this room that more sensitive artifacts are kept, such as metals and whole pots. Gloves are mandatory when handling artifacts in this room. Chloroplast sheets are used to create dividers in drawers as they do not produce off-gasses. Most of the artifacts in this room are stored in perforated plastic bags to keep moisture from becoming trapped. OAR has begun a new project in this room where pictures are placed on top of artifact boxes so that they can be observed without opening the box or touching the object. There are no UV filters in this room as the artifacts are protected by drawers and shelving units. Pest-control measures include monthly spraying of pesticides around the outside of the building. Fire extinguishers and back up lighting are available on each floor. In addition to the Erskine Ramsay Building, there is one large storage space connected to the OAR offices where uncurated and unprocessed collections are housed. This storage space is organized by box number and site. Records associated with these collections are kept also in the large storage space on the mezzanine.

Auburn Storage Procedures

      The collections at Auburn University have recently been moved to a facility provided by the college. The building has a fire-alarm system but does not have sprinklers-since these can be very damaging to collections. For security, cameras will eventually be mounted outside of the building, and access is granted though key card. Only two faculty members have key cards, and they are required to accompany students and visitors into the collections area. Security also includes barred and darkened windows. The building has a thermostat for temperature control. Plastic totes are used to store artifact lots instead of archival boxes because they are cheaper and sturdier. Most of the shelves are organized by site file number. There is one shelf that contains small sites and surveys that are arranged alphabetically by county. For pest control, a strict no-food-or-drink policy is in place. The university also sprays for pests, but is not allowed to spray inside of the labs and collections storage space. In addition to this collection repository, the anthropology department at AU has a storage building at Hickory Ground where artifacts and records related to the annual field school are stored. The building at Hickory Ground is locked, and the site is part of Auburn University property.

Laboratory Procedures

      Archaeological field work is inherently destructive to sites, and as Singley (1981) noted, it jeopardizes artifacts as they are removed from their stable environments. Henderson (Henderson 2008) reports that archaeological material needs to be processed, which should include sorting, packaging, and labeling. Singley (1981: 36) wrote that "the curatorial process of

labeling, packing, and storing must be regarded as equally as important as the excavation." Other measures include cleaning and preservation, which J. M. Cronyn (1990) defined as the act of balancing archaeological materials with their environments.

Conservation of artifacts can be complicated. The physical state and material of the artifact necessitates specific, specialized treatments. Singley (1981) argued that trained conservators are required for the specialized stabilization of artifacts. She recognized that proper treatment of artifacts may take years to begin as trained archaeological conservators are in short supply. AAM (2012) standards for collections stewardship make a note of the necessity for museums to provide suitable methods for recognizing and prioritizing the conservation and care needs of its collections. Therefore, in addition to database and storage procedures, lab procedures were reviewed for each institution to observe the methods they employed to conserve their collections.

McWane Science Center Lab Procedures

At the MSC, lab space is separated by doors from the collections storage space. Lab equipment includes acid traps, a sediment trap, a fume hood, a photography box, and a quarantine room. The quarantine room is where objects and materials, such as road kill, are placed until pests are eliminated. The lab area contains large heavy-duty tables with wheels that can be moved to accommodate different spacial needs. There is a vacuum system and HEPA filter for chemicals and gasses. The center also has a 400-lbs.-capacity forklift to move heavy objects. MSC has specific lab procedures for washing, sorting, numbering, cataloguing, et cetera,

that the collections manager reviews with all volunteers and researchers. The lab procedures provide guidelines and techniques that ensure artifacts are properly handled and preserved.

USA Museum Lab Procedures

At USAM, lab and storage space are also separated. Each space is located in a different building. Everything brought in from the field goes through the lab where volunteers and students wash, sort, and label artifacts. The museum has water-screen stations outside the lab building, drying stations, as well as iron conservation equipment. A Records of Artifact Conservation document allows for notes to be made about the state in which an object arrives and the measures taken to preserve it. Artifacts are inventoried and tagged with the Rediscovery barcode as well as receiving acid free paper tags.

Frank H. McClung Museum Lab Procedures

The Frank H. McClung Museum has an archaeology lab equipped with sinks, sediment traps, a fume hood, and pottery/vessel reconstruction area. A photography station is located in the general collections area. The museum has its own in-house shop where displays and other things are custom built. Collections already housed at the museum have been undergoing a re-bagging/boxing process carried out by students. This process includes retaining tags or labels from original boxes and bags and placing this information on or in the new containers housing artifacts. In addition, the museum no longer directly labels artifacts but ensures that labels and tags are associated with each bag. For incoming collections, a strict policy is in place regarding

how they should be cleaned and packaged before they are accepted by the museum. The policy helps to cut down on the time, cost, and labor the museum would otherwise spend washing and packaging collections.

Moundville Lab Procedures

Moundville has a lab that is also separate from the Erskine Ramsay Building. Everything is brought into the lab before it goes into storage. The lab has a flotation and washing station where water can be drained outside. Curation-quality plastic bags with white blocking are used because labels and notations show up better on the white blocking. The custom boxes are stored and assembled in the lab. Collections that come from the University of Alabama campus have to be washed and packaged to OAR specifications before accepted for storage.

Auburn University Lab Procedures

At Auburn University there is minimal lab space in the collections room and a larger lab space located in a separate building. The larger lab is located in one of three rooms that have been provided to the department for records storage and lab work. It is in these rooms that primary records are stored. There is a table in the lab where an artist draws artifacts. The lab space has sinks with sediment traps, drying racks, and large tables. Students wash, bag, and tag collections in the large lab space. Water screening is done offsite on the land where Auburn University holds yearly field schools. In the collections room there is table space as well as two

sinks. The sinks do not have sediment traps, and the department does not anticipate using them often for washing artifacts since this is completed prior to their movement into the storage room.

NAGPRA Compliance

On November 16, 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) became law (National Parks Service 2011). NAGPRA was enacted "to address the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American cultural items, including human remains, funerary objects, sacred objects, and objects of cultural patrimony" (National Parks Service 1990). All federal agencies, as well as all public and private museums that receive federal funds, are subject to NAGPRA (National Parks Service 2011). These federal regulations made it critical to ask each institution about their NAGPRA compliance.

Each institution has completed inventories of cultural items, whether they are culturally affiliated or culturally unidentifiable. These inventories are available in National NAGPRA Online Databases (National Parks Service 2011). The University of South Alabama (USA Museum) and Auburn University have published culturally unidentifiable inventories, indicating which cultural items in their possession or control are culturally unidentifiable. McWane Science Center, Office of Archaeological Research at Moundville, and the Frank H. McClung Museum have identified, reported, and repatriated Native American human remains or grave related artifacts.

At the Frank H. McClung Museum, human remains are boxed individually and shelved according to the previously mentioned system. The system—which includes the use of individual boxes for human remains, shelving them separate of other materials and objects, and storing them in a secure location—ensures that the museum is compliant with NAGPRA. At MSC the human remains are stored in a separate cabinet from the rest of the collection. A NAGPRA compliance measure utilized by Moundville is the storage of human remains offsite at the University of Alabama. In the collection storage area at Auburn University, there is a smaller room designated for human remains and funerary-object storage only. This room is secured by lock, with only one key kept by an authorized faculty member. At USAM, human remains and cultural items are stored in the collections room on shelving separate from the rest of the collection.

Policies

The American Alliance of Museums (AAM) (2012) explains that the mission of a museum is to advance its collections, which are held in public trust. The AAM states, "To demonstrate these standards, museums establish policies to support its mission and operations and to guide decision-making. Policies give the governing authority, staff, and public the opportunity to learn about standards and help the museum fulfill its responsibilities as stewards of collections" (2012: 2). Every museum and university visited was asked if they have a collections management policy (CMP) and if they would supply a copy. Each institution has a

collections management policy. The Frank H. McClung Museum, the USA Museum, and the McWane Science Center were able to provide copies of their collections management policies.

CMPs create the framework to ensure that collections receive the proper care and security needed in order to retain research efficacy. These policies are so necessary that the AAM provides a guide for developing a CMP which explains the importance of these policies and outlines the major recurring elements. A CMP defines the collection's scope, details the collection's care, cultivation and access, and outlines roles and responsibilities (Museums 2012; Simmons 2006). CMPs are unique from one institution to the next, as they are tailored to meet the specific needs of each museum and collection (Museums 2012; Simmons 2006). Sullivan and Childs (2003) and AAM (Museums 2012) explained that the standard policies such as acquisition, accession, and cataloging ensure that ownership information and other documentation remain with the relevant objects and collections. Further, policies that detail the control of inventory and the management of data guarantee that objects can be located (Sullivan and Childs 2003; Museums 2012).

Through delineation of the museum's scope and acquisition policies, CMP can tackle the problem of burgeoning collections. Henderson (2008) explained that since the function of a repository is to house archaeological materials in perpetuity, the repository will likely continue to acquire material until archaeologists cease to uncover it. CMPs provide a scope in which the institution can limit the kinds of materials acquired and also detail the state that collections or materials must be in before they will be accepted (Museums 2012). For example, through a CMP, a repository could and should require that collections be clean, come with any and all

related documentation, and detail the costs of conservation. This last aspect is particularly important for repositories and museums, as the costs of conservation can be high and funding can be difficult to procure. These kinds of policies provide important details about the acquisition, storage, security, and data management of collections, and they work to protect collections in perpetuity.

AAM (2012) explains that CMPs will differ in organization and content from museum to museum, as each is influenced by their individual histories, collections, and communities. Despite these differences, the AAM (2012) recognizes key elements that are frequently found in collection management policies including mission, vision, and history, code of ethic, statement of authority, scope of collections, categories of collections, acquisitions/accessioning, deaccessioning/disposal, loans, objects in custody, conservation/care, insurance and risk management, documentation, collections records and inventories, access, appraisals, legal and ethical considerations, intellectual property, review/revision, and glossary. Many of these categories were included in the collections management policies of the Frank H. McClung Museum, MSC and USAM.

Common Themes of Collections Management Policies

The following categories were represented in all three of the CMPs reviewed: (1) ethics, (2) mission statements, (3) collection scope, (4) access, (5) acquisition policies, (6) accessions, (7) deaccessions, (8) loans, (9) records, and (10) collections care. Appearance of these topics in a collections management policy do not have to meet any specific organization or layout, as many

of these topics overlap and sections can be intertwined or separated depending on the museum's preference. What is most important is that all of these categories are covered in a museum's CMP. While these categories are tailored specifically to the unique collections of these institutions, each category concerns an aspect of curation that all museums and universities with collections must address. The collections management policies provided by the USAM, MSC, and Frank H. McClung Museum are extensive, therefore, for each topic only a few examples from each will be provided to explain the importance of the policies.

(1) Ethics

AAM (2012) notes that museums should be aware of ethical concerns their employees face such as conflicts of interest or the sale of items from the collection. Ethics sections of the CMPs are crucial for providing the standards to which the museum holds itself and its employees accountable. By establishing ethical codes, each museum recognizes its responsibility to protect its collection for scientific research, public service, and education. Ethical standards include, but are not limited to, addressing the professional and private conduct of employees and explaining the museum's stance on objects obtained illegally. For example, all three museums require that staff and employees do not use the museum or museum activities to start or expand personal collections. MSC stipulates that employees are prohibited from having private collections that are in their professional field of interest. The museum recognizes that collectors may be tempted to keep valuable objects for personal collections instead of the museum. At the Frank H. McClung Museum employees must notify the museum about their own private collections and

providing details about their nature. The museum will then determine whether there is a conflict

of interest under the University of Tennessee Conflict of Interest Policy. USAM forbids

employees from creating or expanding personal collections of artifacts from archaeological

contexts. In addition, other conflicts such as appraisals are covered by each museum. MSC

prohibits staff members from making appraisals of objects belonging to private individuals or

corporations. At USAM, appraisals are only provided when trying to determine the insurance

value of objects in the center's accessioned collections. The Frank H. McClung Museum only

allows staff members to provide appraisals upon the written approval of the director. The topics

covered by a museum in its ethics section should be extensive, detailed, and unique to the needs

of that institution. Ultimately, all museums must establish ethical guidelines in order to ensure

the integrity and security of its collections.

(2) Mission Statement

The mission statement details the goals of the museum, including its responsibilities to

professionalism, scholarship, public trust, and the care of its collections. According to AAM

(2012), museums discuss their mission so that users may appreciate the policies and procedures

that a museum adopts. The Frank H. McClung Museum, for example, recognizes and is

dedicated to the mission of the University of Tennessee, Knoxville, as well as advancing the

understanding of science and human cultures through teaching and scholarship. USAM, as part

of the University of South Alabama, is dedicated to its goals of teaching, research, and public

service. McWane Science Center's goals include education in the sciences, natural history, arts,

and humanities. With the mission statement made explicit, museums can develop a framework to ensure their goals are realized.

(3) Scope of Collections

Scope, according to AAM (2012), is where museums can provide a history of the collection, review its strengths and weaknesses, and set guidelines for the responsible growth of the collection. By defining its collections' scope, the Frank H. McClung Museum focuses on accepting artifacts that support the museum's areas of emphasis, which include archaeology, history, ethnology, paleoethnobotany, malacology, paleontology, and geology. For USAM, scope allows for focus to be placed on prehistoric and historic archaeological sites from around Southern Alabama and the north-central Gulf region of the United States. The emphasis of the MSC's collections is natural history, largely of the Southeastern United States. The scope of the MSC allows for growth in the areas of geology, anthropology, archaeology, ethnography, biology, physics, and astronomy, life and health sciences, technology, and arts related to science. In this way MSC ensures that its collections are comprehensive. Scope also allows these museums to provide for that the space and resources needed for their areas of emphasis. In addition, collections already in each museum's possession benefit as stress is placed on making them more comprehensive instead of squandering resources collecting and caring for collections not within their scope.

(4) Access to Collections

AAM (2012: 6) states, "Museums must give the public reasonable access to collections and collections records." Policies detailing the access to collections and records are necessary for safeguarding them while meeting the requirement for public access. Access-to-collections policies of the Frank H. McClung Museum, MSC, and USAM outline the reasons for restrictions, including protecting collections from improper handling, damage, and theft. These policies provide information about how museums determine who will be granted access, the resources to be provided to visitors, and the degree of access permitted. Each museum establishes its own terms for how much access both the public and staff will have and how access measures will be carried out. At MSC, for example, access to the collections facility is permitted to general museum staff when collections staff is present and the reason for their presence made apparent. At the Frank H. McClung Museum, the vault is never accessible to visitors. If a visitor is granted permission to examine an object in the vault, the object will be moved to an approved area of research for the visitor. Through explicit access policies, USAM, MSC, and Frank H. McClung Museum ensure that the collections will be available for scholarly research for years to come.

(5) Acquisition Policies

The AAM fuses the acquisitions and accessions sections together, explaining that these policies are developed with the museum's mission in mind. AAM (2012) defines acquisition as the act of acquiring an object; acquisitions should benefit and strengthen the museum's

collections. Acquisition policies are the means by which museums detail the conditions and criteria collections must meet in order to be accepted. The acquisition section of a CMP is where each of the three museums reviewed addressed legal issues by making explicit their refusal to accept collections, specimens, and artifacts that were illegally acquired or were haphazardly collected resulting in damage of their scientific value. A collections committee is another element which safeguards the collections mission, scope, and integrity of collections. MSC and the Frank H. McClung Museum developed detailed procedures which include deliberation by a collections committee for authorizing acquisitions that fall under specific criteria (often concerning objects with estimated values over a certain amount, objects requiring special storage conditions, or objects that do not meet the goals or scope of the museum). Both museums recognize that not all objects necessitate authorization by a collections committee and have measures to facilitate prompt and responsible decisions made by either the collections manager or museum director in concert with the curator. At USAM all acquisitions decisions are made by the director, who must take into consideration the center's ability to provide long-term care in addition to determining if objects meet the following criteria: provenience, title, documentation, and ethical considerations. While each museum may differ in specifics, they all have acquisition policies and procedures that ensure they are cultivating their collections according to the established museum standards and ethics.

(6) Accessions Policies

Accessioning, as defined by AAM, is the legal and formal acceptance of objects into the museum's permanent collection. In its CMP, MSC also defines accessioning as the formal process of accepting and recording objects into the Permanent Collection. In their CMPs, museums can outline their policies and procedures for accessioning, both of which can differ from one institution to the next. All three institutions recognize that accessioning artifacts into permanent collections provides a unique level of protection which only the act of deaccession can reverse. There is not a standard for how to accession objects, artifact lots, or collections. At USAM, assemblages of artifacts are accessioned in their entirety before they are catalogued or analyzed. In this way everything brought in from the field to USAM will receive the protection of accessioning until a time when it may be recognized as extraneous and applicable for deaccessioning. At the Frank H. McClung Museum only items destined for the permanent collection will be formally accessioned, which is handled by the registrar. MSC has a policy where non-accessioned acquisitions, which are the legal property of the museum, are never considered part of the permanent collection. These objects are registered into the inventory, can be used for educational activities, and do not have to be deaccessioned before being disposed. Accessioning provides an additional layer of protection to collections.

(7) Deaccession Policies

According to AAM (2012: 4), deaccessioning is "the permanent removal of an object from a museum's collections." Deaccession policies are crucial for the continued protection of

permanent collections as well as ensuring that the museum is meeting its professional and public responsibilities. McWane Science Center outlines its deaccessioning process by recognizing the ethical restraints it faces, assigning authority to the collections committee for deaccessioning, defining the criteria for determining the applicability of an object for deaccession, and detailing the disposal of deaccessioned objects. At USAM, deaccession decisions are made by the laboratory supervisor or the director and are usually done during the analysis phase. If an object is deaccessioned, descriptive records will be made and stored as part of the permanent collection. Deaccessioned objects then become part of the educational or exhibit collections and are not to become personal property of a staff member. The Frank H. McClung Museum has a process where the museum director determines the deaccessioning of objects using a list of criteria and advice from the curator or registrar. The decision to deaccession is then reviewed by the collections committee. Some of the criteria the museum director must consider include: 1. The object is not relevant to the collections of the museum. 2. The object cannot be properly cared for due to demanding storage and conservation requirements. 3. The object is a forgery. These criteria, along with others, help guarantee that objects are deaccessioned in a responsible and ethical manner.

(8) Loans

AAM (2012) explains that loans allow museums to explain the conditions covering an object's transfer either to or from its physical (not legal) possession. This topic includes both incoming and outgoing loans. Incoming loans are objects or collections that are borrowed by the

museum. Outgoing loans are objects or collections borrowed by other museums. Policies regarding how both kinds of loans are handled help safeguard collections from loss or damage as well as hold each invested party to professional standards. The Frank H. McClung Museum ensures that the lender of incoming loans will receive credit if the loans are on exhibit. In addition, any publication of information about a loan will have to have the approval of the lender. Therefore, the museum recognizes the property rights of the lender. USAM provides a list of conditions that all of their outgoing loans are subject to. Conditions include that borrowers provide proof of insurance for the amount determined by USAM, transportation to and from the museum, and that artifacts cannot be altered or treated in any way without the written consent of the director. MSC outlines the authority for loans by differentiating between normal-period and long-term loans. For normal-period loans that are incoming, the collections committee is in charge of approval. All outgoing loans are approved by the collections manager and are reviewed by the collections committee. For long-term loans both incoming and outgoing loans that exceed a normal loan period require the approval of the president and chief executive officer. Borrowing and loaning objects allow museums and other institutions to benefit from their scientific and cultural value and are essential to the museum's duty of fostering research and educational relationships. Guidelines for how loans should be handled ensure that these transactions are professional and beneficial to both parties.

(9) Care of Collections

According to AAM (2012), collections care is where the museum addresses the measures it takes to protect its collections from deterioration. The AAM (2012) wrote that this requires the museum address of the following: temperature, storage, pest control, humidity, conservation, inventories, handling of objects, and disaster planning. In essence, all of the policies from scope to loans are about the care of collections, and thus each museum approaches this aspect in their collections management polices uniquely. When discussing the care of its collections, the Frank H. McClung Museum explains how all objects in the collection and on loan will be stored, displayed, and maintained in environments that conform to professional museum standards. This provides an explanation in writing for all of the storage, packaging, lighting, pest control, curation, and climate measures that the museum undertakes to guarantee that their collections are preserved. MSC provides a detailed section about the care and control of collections that includes information about conservation, safety, and security. Similarly, MSC requires that its collections will be safely stored in a stable environment. The physical implementations of this standard can be seen in the museum's climate and pest controls, security measures, and packaging and storage procedures. In their Accession and Catalog Procedures section of the CMP, USAM outlines how artifacts will be cleaned, labeled, packaged, and stored. In this section they detail how artifacts of differing materials will be treated and handled. Whether the museum explicitly details their curation and storage procedures or succinctly states that professional museum standards will be adhered to, the care of the collection should be formally addressed by the museum in its CMP.

(10) Records

As AAM (2012: 5) explains, "Documentation captures an object's condition, history, use and value. It is how a museum maintains physical and intellectual control over its collection. Without documentation, an object has no identity." Records and documentation, therefore, are issues that museums should address. Records can be administrative or descriptive and can include field notes, accession logs, documentation of curation methods, receipts of gift, maps, et cetera. USAM has a section devoted to the curation of associated documentation in their "Accession and Catalog Procedures" chapter. This section explains how photographs, slides, audiotapes, field notes, field forms, artifact inventories, and final reports are to be curated. Both electronic and paper records are to be stored in fire-proof cabinets and containers. The museum requires that duplications of paper records be made and stored at an offsite location. MSC also stipulates that primary records will be protected from hazards such as fire, water, smoke, and loss. Duplicates of the primary records will also be maintained offsite. At the Frank H. McClung Museum, the registrar is responsible for compiling and maintaining the records about an object's legal status as well as descriptive, research, condition, and location information. Curators at the museum are responsible for cataloging information that deals with the object's history, provenience, cultural context, date, et cetera. Just as with the care and curation of a collection, the issue of records is vast and nuanced. Museums may only address issues specifically concerning recordkeeping in their collections-management policy. Despite how explicit or brief the museum chooses to be about its records, addressing the topic in some aspect in the CMP is

necessary for establishing the museum's policies about the kinds of records kept and how curation of records will be done.

To ensure that they are comprehensive, effective, and appropriate for each institution, CMPs have to be created with the history and goals of the institution and its collections in mind. Not every CMP will address all of the same issues or be structured in the same way. AAM describes common policies, and the CMPs from Frank H. McClung, McWane Science Center, and USAM all share policies concerning ethics, scope, accession, acquisition, deaccession, collections care, access, records and documentation, and loans. AAM (2012) recommends that policies should be interrelated to ensure of the museum's mission is achieved in a consistent and cohesive manner. Indeed these policies inform each other, and each concerns aspects of collections curation and care that are equally necessary. The AAM's (2012: 7) stance is that a CMP is "a living, breathing document that should always be practiced." A CMP that is comprehensive of and tailored to the needs of a museum will be an actively functioning document that can be effectively practiced.

DISCUSSION

The Current State of the UAB Josselyn Archaeological Collection and Recommendations

The UAB Josselyn Archaeological Collection at this time does not meet federal or professional standards of curation, and is not governed by a collections management policy. Since the collection was moved to Heritage Hall, it has remained in the state in which it was moved. Its current state of disorganization does not lend itself to research and makes the collection susceptible to damage and loss of information. The following recommendations assume that the Department of Anthropology intends to keep and properly curate the collection. Although this is the solution discussed in further detail, there is another solution available for the Josselyn Collection. The department may decide that curation of the Josselyn Collection may not be financially feasible or within the goals of the department. The Josselyn Collection could be transferred to an approved museum or conservation facility.

Collections Management Policy

Currently the UAB Josselyn Archaeological Collection does not have a collections management policy or formal lab procedures for governing and processing specimens and artifacts. The UAB Department of Anthropology currently has one professor, Sharyn Jones, who conducts field work resulting in artifacts or specimens that need processing and curation. These artifacts and specimens are kept separate from the rest of the Josselyn Collection and are processed and analyzed by students under Jones's supervision. The department does not currently take in new collections or accept donations or transfers from outside sources such as other museums, universities, or individuals. The Josselyn Collection is currently overseen by the

department chair and archaeologist. The Josselyn Collection is occasionally utilized by students and researchers as a resource for southeastern archaeological materials. Portions of the collection have been used for public outreach programs such as the "Whispers from the Past: A Native American Experience" event at Aldridge Gardens and occasionally for teaching. Portions of the collection have been used for teaching in introductory archaeology classes to introduce students to artifacts and artifact types. A small portion of the collection is also on display in the lobby of Heritage Hall.

The anthropology department needs to develop a collections management policy in order to professionally and ethically protect, govern, and maintain the collection and ensure it is legally managed. The CMP should outline the mission and scope of the collection. Guidelines concerning issues such as ethics, scope, access, security, loans, acquisitions, accessions, deaccessions, records, and collections care must also be addressed. The department needs to create a collections manager position or assign the responsibility to a faculty member, providing guidelines and resources and following best practices in museum curation (Warhurst 1992). This requires the department to decide who will oversee access and visiting researchers' needs, who will ensure that administrative paperwork is completed, and that there is compliance with the standards. The creation of a collections manager position may not be economically feasible at this time; therefore the department will need to assign the care of the collection and the tasks above to departmental staff. The scope of the collection should be defined by the department, including decisions about whether individual professors' research collections should be made part of UAB's archaeological collection. If individual professors' research collections are

accepted into the collection, how will the process be handled, how will these collections be accessioned, and how will ethical issues (such as conflict of interest) be addressed.

Legal and ethical issues must be addressed about the collection, including a policy detailing how artifacts subject to NAGPRA will be handled, accessed, protected, and stored. The department has sought legal guidance for how to proceed with NAGPRA and a memorandum has been drafted by UAB's lawyers as funerary objects or human remains require a higher level of care and security than the rest of the collection. An inventory of records and collections projects has been started, and completion is necessary for the department to know exactly what is in the Josselyn Collection. This inventory is also required for complying with NAGPRA since inventories of both culturally identified and culturally unidentified objects to be made available for publication in the Federal Register (National Parks Service 1990). The department will need to define the different kinds of collections, whether permanent or teaching, and define the purpose and use of the collections. Creating a hierarchy within the collection is crucial for establishing the amount of security and management necessary for collections and artifacts of varying importance. The department should develop a loan procedure to ensure the care of both incoming and outgoing collections while fulfilling the goals of access and research. Guidelines for access to the collections will be necessary and useful, as the department can outline how it decides to grant access, how researchers or visitors may move through the collection space, if visitors will be accompanied, whether and where a research space will be assigned.

Security

 The Department of Anthropology's Archaeology Lab, located in room 224 of Heritage Hall, has code key access that is available only to the professors in the department and research assistants tasked with working there. The room in which the collection is stored is also secured by lock and key, which allows access only to the department professors and authorized research assistants.

Security measures should be formally addressed in the CMP and, to ensure NAGPRA compliance, special measures should be adopted for any funerary or human remains that are discovered in the collection during inventory. A necessary security measure is to develop a hierarchy of importance for the collections within the Josselyn Collection. The collections should be separated by the levels of security and care that they need. These levels should include NAGPRA, Permanent Collections, Catalogued, and a Teaching Collection for artifacts with no associated records (see Table 1). The NAGPRA level should receive the highest security. This includes developing procedures that restrict access and outline the department's responsibilities. Funerary and human remains may still be housed in the collections room, but should be under the security and protection of a locked cabinet or safe that will be accessible only to the person authorized to handle NAGPRA specimens. Currently, human remains are being separated from other parts of the Josselyn Collection and noted in the site inventory that research assistants are developing. The identification of NAGPRA objects and the provisioning of more secure and restricted storage are the next steps. This inventory should include the contents of the Department of Anthropology's Osteology Laboratory in room 226 of Heritage Hall. Many objects in this room, including the human remains, may have once been part of the original

collection. In addition, the human remains may be subject to NAGPRA, therefore an inventory and identification of these objects is necessary. Until a time when this inventory and identification project can be completed, the human remains must be secured and accessible only to authorized members of staff (i.e. collections manager or department member assigned to oversee the collection).

Permanent collections will include all collections and artifacts that are accessioned and that are the most unique or important. Factors useful in determining importance of collections and artifacts include issues of scope, whether it is representative of a rare typology or sample, and if it is from a site that has been destroyed. Permanent collections should have accession and deaccession policies to ensure that collections cannot be arbitrarily discarded. Artifacts and collections that are part of the Permanent Collection are not to be used for teaching and cannot be discarded or transferred unless they have been deaccessioned. Deaccessioning should occur only in rare cases such as repatriation or disintegration of the object that affects the collection's integrity (Jun Ebersole, 2013, pers. comm.). The Permanent Collection should include collections and artifacts from sites that no longer exist. Catalogued Collections include artifacts and artifact lots that are not accessioned, but still require protection. Catalogued Collections will be the largest portion of the collection and will contain collections that are important and have records, but are not as rare as those in the Permanent Collection. Examples include collections from sites that have not been destroyed and that are not under the threat of destruction. Artifacts and collections with no associated records will be designated as part of the Teaching Collection. The Teaching Collection may be used by faculty and students for teaching.

Developing a hierarchy in the collection will require that the current site inventory project be completed. Research assistants working for the Department of Anthropology have started to create the site inventory, which describes the contents of drawers and boxes in the Josselyn Collection. In addition, the site inventory must be checked against the records associated with the collection to determine which collections have documentation. This process will also inform the department of collections that are missing as well as the presence of collections that do not belong to UAB. Furthermore, the records and collections in the Josselyn Collection must be checked with the Alabama State Site File to determine if sites from which these collections originated still exist. Collections from sites that have been destroyed will be made part of the Permanent Collection. Existing records and artifacts in the collection indicate that there was at one time an accession log. It must be assumed that these collections were accessioned because of their importance, therefore, artifacts and collections with accession numbers should be part of the permanent collection. Until more information is known, materials in the Josselyn Collection that have records but were not previously accessioned should be included in the catalogued collection. Collections and artifacts in the catalogued collection remain there until their provenience is determined, after which they may be accessioned or become part of the teaching collection. Comparing the records to the collections will also reveal what objects in the Josselyn Collection lack proper documentation. Security must also include levels of access to the collection and its contents (see Table 1). Access to NAGPRA objects must be strictly limited. A collections management policy must be developed to define access to Permanent, Catalogued, and Teaching Collections. For example, access to the Teaching

Collection should be controlled via a system where materials can be checked out by professors and research assistants to ensure they are not lost or misplaced. Reasons for access to Catalogued and Permanent Collections should be limited to research and curation projects, although special permission may be granted for the use of the Catalogue Collection for teaching. The CMP should address access by visiting researchers, staff, and students, as well as maintenance personnel and exterminators, providing criteria for granting access, strategies for implementing access and decisions about supervision during collection use. Access should be granted by one person, preferably the collections manager, curator, or department member that oversees the collections. Any request for access to the collections for research, loans, or teaching must be approved by the person in charge of the collections.

LEVEL	COLLECTION	USES/ACCESS
1	NAGPRA	Very strict and limited access. Cannot be displayed, used for teaching, loaned, or used for destructive research. Cannot be discarded or transferred. Non-destructive research and identification can be made under the discretion of the Collections Manager.
2	PERMANENT	Strict access. Can be used for research. Can be displayed in secure, controlled cases. Cannot be used for teaching. Cannot be discarded or transferred unless deaccessioned. Can be loaned to Universities and Museums for research.
3	CATALOGUED	Controlled access. Can be used for research. Can be used for teaching with special permission. Can be transferred or discarded under the discretion of the Collections Manager. Can be loaned to Universities and Museums for research and display.
4	TEACHING	Controlled access. Can be used for teaching. Can be used for monitored hands on display. Can be transferred or discarded under the discretion of the Collections Manager. Can be loaned to Universities and Museums for research and display.

Table 1 — Uses and access for levels of collections.

Environmental and Pest Control

Environmental and pest-control measures should be introduced to the UAB Josselyn Archaeological Collection. A written policy concerning environmental and pest-control measures would help the department outline, enforce, and justify the measures adopted.

Contracted pest control for Heritage Hall is provided monthly and includes interior and exterior treatments for vermin and pests. In addition, Building Services will contact the pest-control company for spot checks during the month if an infestation or problem arises. Pest control services include spraying and setting bug traps (UAB Maintenance, 2013, pers. comm.). For the collections room, pest control is currently addressed with an unwritten policy that prohibits food or drinks in the space, and should introduce a pest-monitoring system in the future. The placement and inspection of bug traps would provide the department with valuable information about the kinds of pests present, facilitating the adoption of appropriate pest-control measures. Inspection of the traps should be regular and trap placement rotated around the room to ensure that pest control is comprehensive. Guidelines for the kinds of materials and pesticides allowed to be used in the collections space should be outlined in the CMP and should also address the situations in which access will be granted to maintenance personnel and exterminators, and how they will be supervised. If collections or artifacts begin to be accepted into the collection, measures for ensuring that they are pest-free should be adopted. This could include the adoption of a quarantine room like that at McWane Science Center or a freezer like that used by USAM.

Heritage Hall has a temperature control system for the entire building. This system allows for temperature control of the building remotely as well as temperature controls in classrooms and offices via individual thermostats. While building temperature is generally kept between 72-78°F, temperature will be changed to degrees outside of that range if it is requested (UAB Maintenance, 2013, pers. comm.). Both the lab and collections room share a thermostat for temperature control, but no formal policies and procedures exist to regulate them.

A hygrothermograph was set up in the Josselyn Collection room from January 29, 2013 to February 6, 2013 to measure the fluctuations in temperature and humidity for one full week. It showed that at Heritage Hall, temperature is ideal and stable for winter at 70°F and that humidity oscillated around 40%, which is below the ideal range of 45-55% (Singley 1981). These readings were taking during winter and do not inform on the environment in Heritage Hall during fall, spring, or summer. It is suggested that a hygrothermograph that provides daily monitoring be kept in the collections room to monitor temperature and humidity. A humidifier is needed to keep the humidity in the room up to acceptable levels. Hygrothermograph readings may show that in the summer humidity ranges above the range of 45-55%. If this is the case, a dehumidifier would be needed to bring the room back to acceptable humidity levels. To provide the temperature and humidity controls needed in the room, the department must obtain a hygrothermograph, humidifier, and dehumidifier. In addition, weather seals should be added to the window and door in order to keep the environment in the collection room stable.

There are no light control measures for the collection room. There is one exterior window in the collection space that is covered by blinds. The fluorescent lights in the room do not have

ultraviolet covers. Light is damaging to labels, records, maps, soil samples, and light-sensitive artifacts. Light control measures are necessary for safeguarding the collection. Measures should include covering the window in the room and placing UV filters on the lights to mitigate the damaging effects of light.

Collections Processing and Storage

There are no formal or written lab procedures detailing how existing and incoming collections should be handled. Written lab procedures should be developed to provide students, volunteers, or anyone employed in the lab with the proper steps to handle artifacts and materials as they are acquired, or materials in the collection that have not yet been processed. The lab procedures should include information about how artifacts will be stored, the information kept with them, and the kinds of archival products to be used. In addition to formal lab procedures, it is recommended that an emergency plan be developed for the UAB Josselyn Archaeological Collection. This emergency plan should be a separate document from the CMP outlining the procedures for dealing with the collection during and after an emergency, such as a fire or flood.

Equipment that may be necessary for collections processing include a washing station with sinks and sediment traps to deal with unwashed specimens. The department should consider the purchase of photography equipment (camera and lighting) to document artifacts and artifact lots. Photos may be added to many of the database programs discussed and would be useful for research. Processing of artifacts and collections should occur in a lab space and not in the collections storage room. The Department of Anthropology Archaeology Laboratory is located

next to the room where the collection is stored and is where artifacts and specimens should be processed.

In many cases the collections are still housed in the original field packing. Some collections appear to have been processed and packaged upon receipt from the field or as donations, whereas other collections may have been rehoused during the 1990s when the department first developed a project to bring the collection up to federal standards of curation. Other objects are stored in the room, including filing cabinets with administrative and descriptive records as well as field gear including field kits, shovels, a stadia rod, and a transit. When the collection was moved into Heritage Hall, movers simply stacked boxes and trays containing artifacts on the floor on top of each other, and students later placed the trays in custom shelves. These movements disturbed any previous organization in the collection. Boxes were stacked on each other on top of the custom shelves. These boxes mostly contain archaeological materials such as large stones and soil samples. There are, however, some boxes containing records and packing materials like bubble wrap. The height of the shelves, the weight of the boxes, and the manner in which they are stacked make it difficult and hazardous to get into the boxes.

The department needs to develop a system for storing the artifacts, preferably by site and county as it appears it was once organized. Shelves should have labels indicating the site or county content within them. A project to re-bag and re-box artifacts is needed and should include the rehousing of artifacts in archival quality materials along with archival tags containing pertinent information, including labels and notations that were on original bags and boxes. This project will require consistent lab procedures and that lab space is available. Boxes should not be

overloaded and stored on top of each other. Maps should be stored either in flat map cases or tubes to protect them from light and other damage. Extraneous materials such as field equipment should be stored elsewhere.

Database and Records Management

The UAB Josselyn Archaeological Collection does not have a master inventory or database. There are artifact inventories for some sites available—for example, Hatcher's report about the Josselyn Collection. There is evidence that an accession file once existed that contained information including accession number, accession date, and collection type—such as whether a specific collection was donated or collected as the result of a survey, the collection source (who it came from), and the title of the project with which it was associated. The actual accession file (paper or electronic) has not been located. The objective of this file, along with the curation project of 1996, was to restore and maintain the collection. However, no further documentation or evidence of progress has been found. The absence or loss of this information highlights the deficient state of the collection and the importance of addressing it.

An inventory of the drawers and their contents is currently being conducted by research assistants, and is referred to as the site inventory. At this stage, the inventory provides information about the number of boxes in each drawer along with the contents of the boxes and any information labeled on them. It does not provide an artifact count for each bag or box encountered. A database of the records available in the collection has been started. Both of these inventory projects includes a procedure for backing up the data, which is entered into an Excel

spreadsheet and backed up on both a flash drive and cloud service. Further security measures, such as offsite backup through the UAB's server, should be considered in addition to the current backup procedure.

Although there does not appear to be an existing database, accession record, or artifact catalogue, the collection is by no means devoid of important records. There are three filing cabinets of records associated with the collection. These records include personnel files from the 1990s, site files, photographs, student papers, field notes, and more. There is paper evidence that an electronic accession file existed at one time. Further evidence includes a three-page print out of the accession file along with handwritten notes indicating that some type of disk (which has not been located) was used to house this information.

The collection records are organized by site and county. While many of these files contain Alabama State Site File forms, artifact forms, field notes, and catalogue cards, information included on these forms varies from extensive to minimal. Unfortunately, not all files contain each kind of record; many only have catalogue cards and Alabama State Site File forms in various states of completion, while other files include all of the previously mentioned records as well as reports and photographs. A database and digitization project of the records has been started by research assistants working for the department. The database lists the folders by site or other designation and lists the kinds of forms and records present in each folder. This database is checked against the inventory project to ensure that records match the contents of the drawers. The records that have been digitized have been backed up on one of the department's computers and on a cloud service.

The records database and digitization projects should be continued. A comparison between the records and a complete site inventory is needed to discover which sites have records, which collections are missing, and which collection do not belong to UAB. This inventory is necessary for determining the hierarchy of collections. Secure offsite backup of records and databases should be done through either the university's server or an external company that provides these services. Elaine Hoagland (1994) explains that until the records have been completely digitized and are securely backed up offsite, the physical records should be stored apart from the collection following best practices in curation. Storage of physical records separate from the collections protects against damage or the loss of information as a result of disasters like fire or flood. Forms for incoming and outgoing loans, deed of gift, collections access forms, et cetera, should be drafted so the department can develop institutional records for future documentation of the care and projects undertaken in the collection. A plan should be developed to ensure newly generated records pertaining to the collection have digital copies backed up offsite. This plan should also include measures for regular inventories of the collection ensure that up-to-date information is available.

The department needs access to the Office of Archaeological Research's Alabama State Site File in order to match the Josselyn Collection and its records to further site documentation. Access to the Alabama State Site File is critical for completing the site records that are in the collection. Once access is gained, a project to link the files and collections in the Josselyn Collection with information in the Alabama State Site File should be implemented and could be conducted by research assistants. While database systems like PastPerfect, Rediscovery, or Luna

Insight are great for large collections and public access, Excel is sufficient for smaller

collections. If it is decided that a database system is needed for the collection, then the purchase

and implementation should be explored with budget, utility, and the mission of the collection in

mind. A computer would need to be designated among those in the department or purchased

specifically for the database projects. The database system access and any Excel data entry must

be controlled and guidelines developed about who may enter, delete, or update data. It is

suggested that data entry into the database system be under the management of one to two

people, as it is at USAM and MSC, to ensure that data is entered consistently and correctly.

CONCLUSIONS

The UAB Josselyn Archaeological Collection is a rare archaeological resource for the Southeast, and particularly for Alabama. The Josselyn Collection contains artifacts and information from sites that no longer exist. It also has human remains and cultural items that are subject to NAGPRA and must be properly curated. Currently, the Josselyn Collection is disorganized and therefore difficult for utilization as a research tool or teaching resource, and is not compliant with federal regulations. In order to be a federally compliant and viable research and teaching resource, the Josselyn Collection must be properly curated. An investigation into Museum Best Practices and the implementation of policies and procedures at five institutions with collections similar either in size or scope to the UAB Josselyn Archaeological Collection revealed what curation measures must be taken as well as the variety of ways to implement curation measures. Each institution visited had collections management policies; addressed issues of database procedures, records storage and backup, pest controls, environmental controls, security measures, laboratory space, curation quality storage procedures, and instituted NAGPRA compliance. Despite sharing the same curation concerns, each institution uniquely implemented and tailored their approach to the curation of their collections. The Department of Anthropology at UAB will also need to address the same curation issues in ways that are most beneficial and practical for the UAB Josselyn Archaeological Collection. This research finds that the following measures must be taken to bring the collection up to federal standards:

1. A collections management policy must be developed for the UAB Josselyn Archaeological Collection. The CMP must address ethics, scope, access, security, loans, acquisitions, accessions, deaccessions, records, and collections care.

2. The Anthropology Department must develop a collections manager position or assign the care of the collection to faculty member. The collections manager or faculty member must ensure that the guidelines outlined in the CMP are followed.

3. Security of the collection, which includes NAGPRA compliance and the creation of a collections hierarchy, must be addressed. Security policies should also include outlining who grants access, how access will be granted, and how access will be handled (i.e. physically supervised access).

4. Environmental and pest control measures should be adopted to protect the collection. This includes purchasing equipment such as a hygrothermograph, humidifier, and dehumidifier to control temperature and humidity in the collection room. In addition, pest control measures should include documenting presence of pests and implementing a response tailored to any specific pest problems present.

5. Lab procedures should be developed to outline the processing of artifacts and materials coming into the collection, as well as those already in the collection that need processing or deaccessioning.

6. Current storage issues, such as improper packaging and precarious stacking of boxes, must be remedied. The collection needs to be organized and many of the artifacts re-bagged and re-boxed.

7. Records and Documentation in the collection must continue to be reviewed. This includes completion of the site inventory, records inventory, and records digitization projects. It also includes obtaining offsite backup for records. In addition, the development of current institutional records for the collection should be developed to ensure it has proper documentation for the future.

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