CARE AND CURATION OF ARCHAEOLOGICAL COLLECTIONS FOR MUSEUMS

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Nicolette B. Meister
James E. Lockwood Jr. Director, Logan Museum of Anthropology, Beloit College
Instructor, Museum Studies Program
Faculty Director, Center for Collections Care

Connecting to Collections Care
LOGAN MUSEUM OF ANTHROPOLOGY
BRIEF HISTORY OF ARCHAEOLOGICAL CURATION IN THE US

- Late 19th and early 20th century archaeology aligned with museums
- Beginning of 20th century archaeology moves to the academy
- Antiquities Act of 1906
- 1930s-70s large-scale federal archaeology programs; “salvage archaeology”
- National Historic Preservation Act of 1966 and development of CRM archaeology
- Archaeological Resource Protection Act of 1979
- Curation of Federally-Owned and Administered Archaeological Collections (36 CFR 79), 1990
LEGACY COLLECTIONS AND THE CURATION CRISIS
OVERVIEW OF WEBINAR

- Preventive Conservation and Agents of Deterioration
- Mitigating the Agents of Deterioration in Storage
- How Should Archaeological Collections be Organized?
- How Should Archaeological Collections be Stored?
  - Archaeological Lots
  - Special Storage for Fragile Objects
  - Cost-saving Box and Tray Techniques
  - Special Storage for Basketry and Textile Fragments
  - Silica Gel Storage for Archaeological Metals
- How Should Archaeological Collections Be Curated/Managed?
- Collections Management Software
- Ongoing Challenge: Unprovenienced Archaeological Collections
PREVENTIVE CONSERVATION/CARE

The Agents of Deterioration

- Physical force
- Water
- Light
- Incorrect RH
- Incorrect Temperature
- Pests
- Contaminants
- Fire
- Theft & Vandalism
- Dissociation & Curatorial Neglect

http://myjetpack.tumblr.com/post/28902995826
PHYSICAL FORCE

Edge wear from overcrowding.

Ceramic figurine with broken legs.

Pigment abrasions from use wear.
WATER: NATURAL AND MECHANICAL FORCES

Art Museum of South Texas, Hurricane Hannah storm surge, July 2020.

Leaking roof.

Iridescence on archaeological glass.

INCORRECT RELATIVE HUMIDITY (RH) AND INCORRECT TEMPERATURE

Copper alloy and iron corrosion. Split wood on feast bowl. Split rawhide on drum.
SALT EFFLORESCENCE

Spalling clay body due to salt efflorescence.
PESTS: MOLD, INSECTS, RODENTS

Archaeological records “rescued” from retired professor’s garage.
CONTAMINANTS

Fingerprints etched onto metal.
Ellen Carrlee Conservation.
https://ellencarrlee.wordpress.com/tag/metal-polishing/

Surface cleaning dust from a basket.

Old glue bonds; yellowing and shrinking.

Catalog numbers applied with nail polished flaked off lithics.
FIRE, THEFT, AND VANDALISM

A museum worker sifts through the rubble to salvage items. The museum has recovered 2,000 to 3,000 items from the ash. 

Looting of archaeological sites in the Middle East. 
https://ancientart.as.ua.edu/looting-the-ancient-middle-east/

Photo by SANA/Reuters. https://www.rand.org/blog/2019/05/were-just-beginning-to-grasp-the-toll-of-the-islamic.html
A misplaced object has lost virtually all value. © Canadian Museum of Nature.

Archaeological objects found in storage without catalog numbers.

Archaeological collections and records found stored in this garage are a good example of neglect.
MITIGATING THE AGENTS OF DETERIORATION

HOW SHOULD ARCHAEOLOGICAL COLLECTIONS BE ORGANIZED?
HOW SHOULD ARCHAEOLOGICAL COLLECTIONS BE STORED?
ARCHAEOLOGICAL LOTS

Pollen and soil samples consume valuable storage space.

Rim sherds in 4 mil poly bags; catalog number on outside and inside.

Mixed materials in a drawer can be problematic.
SPECIAL STORAGE FOR FRAGILE OBJECTS

Copper bells in custom tri-rod box.

Lithic artifacts in recessed Volara mounts.

Recessed mount carved from Ethafoam, lined with polyester batting and Tyvek soft wrap.
Polyethylene backer rod ring mounts.

Melted from overheating

Ring mount joints adhered with heat gun; two person task.

Miter edges of thick backer rod

Ceramic figure in custom restraint enclosure.
COST-SAVING BOX AND TRAY TECHNIQUES

Metal edge box: 4 ply mat board and metal edging; secure edging with mallet and anvil.

Boxes can be made with see through (Melinex) lids.

Cost comparison: in-house (white trays) vs archival vendor.

$4.45-$3.48

.40

.80
COST-SAVING BOX AND TRAY TECHNIQUES

Tools and supplies for making a box or tray.

Place artifact in lower right corner; visualize corner rectangle as base of box.

“Measure” height of artifact with divider; be generous, this will be height of box.

Poke holes in mat board based on height measurement; two sets on each side account for the all four sides of the box.
Hole pokes on each side account for all four sides of the box.

Cut excess mat board from outer holes.

Use “height dimension” on divider, score along all four edges of mat board.
Score inside base of box and cut through four corners with snap knife.

Lid: place base on another piece of mat board, corners must be flush with two sides.

Use pieces cut from corners to add thickness of lid; mark with pencil and repeat scoring and cutting process.
Cut triangular finger holds in two sides of lid.

Adhere sides with Filmoplast SH, line base with Ethafoam sheet, leave one flap open for ease of artifact removal.

Finished box with lid.
SPECIAL STORAGE FOR TEXTILE AND BASKETRY FRAGMENTS

Sink mats made from Foam core, Coroplast, 5 mil Melinex, and linen and Tyvek tape.

Design to be stackable in storage drawers.

Ellen Carrlee Conservation. 
https://ellencarrlee.wordpress.com/2013/12/16/artifact-storage-pallet-solutions/
SILICA GEL STORAGE FOR ARCHAEOLOGICAL METALS

RD desiccating silica gel (indicating).

Polypropylene and cotton stockinette sachets.

Snap lid polyethylene boxes in various sizes.

Humidity indicator cards.
CUSTOM ENCLOSURES

Bottom: Marvelseal 360; top: Filmpak 1193.

Peruvian copper alloy artifacts in snap lid polyethylene box; sachet of silica placed in bottom; ethafoam sheet between artifacts and sachet.
HOW SHOULD ARCHAEOLOGICAL COLLECTIONS BE CURATED/MANAGED?
HOW SHOULD ARCHAEOLOGICAL COLLECTIONS BE CURATED/MANAGED? (AND...WHEN TO CALL AN ARCHAEOLOGIST)

**CASE STUDY: WISCONSIN NORTHERN LAKES PROJECT (1965-1969)**

**Material Class re-cataloging:**

- 21372.1 Ceramics
- 21372.2 Pollen/Charcoal/Soil samples
- 21372.3 Faunal
- 21372.4 Historic
- 21372.5 Copper

Robinson site, hierarchy of intra-site proveniences.
<table>
<thead>
<tr>
<th>Inv. #</th>
<th>Unit</th>
<th>Square</th>
<th>Feature/Desc.</th>
<th>Vert. Prov.</th>
<th>Weight (g)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>21371</td>
<td>Unknown</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>120.7</td>
<td>mostly body sherds</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>165.4</td>
<td>mostly seen to represent one vessel</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F14</td>
<td>--</td>
<td>5.0</td>
<td>5 body sherds</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F16</td>
<td>--</td>
<td>0.5</td>
<td>4 body sherds</td>
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<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F17</td>
<td>--</td>
<td>0.3</td>
<td>1 body shed</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F18</td>
<td>--</td>
<td>0.2</td>
<td>1 body shed, and a flaxenary object, feature ?</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F20</td>
<td>--</td>
<td>0.7</td>
<td>1 body shed</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>--</td>
<td>F21</td>
<td>--</td>
<td>2.9</td>
<td>3 body sherds</td>
</tr>
</tbody>
</table>

Re-fitted pieces:

<table>
<thead>
<tr>
<th>Inv. #</th>
<th>Notes</th>
<th>UD/ID</th>
<th>Prov.</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21371</td>
<td>--</td>
<td>L/ID</td>
<td>MWD1</td>
<td>31.3</td>
</tr>
<tr>
<td>21371</td>
<td>--</td>
<td>4/29/17</td>
<td>MWD1</td>
<td>9.9</td>
</tr>
<tr>
<td>21371</td>
<td>TP42</td>
<td>--</td>
<td>F97/3</td>
<td>29.4</td>
</tr>
<tr>
<td>21371</td>
<td>TP42</td>
<td>--</td>
<td>F9</td>
<td>13.4</td>
</tr>
<tr>
<td>21371</td>
<td>TP42</td>
<td>9-4</td>
<td>F9a</td>
<td>33.6</td>
</tr>
<tr>
<td>21371</td>
<td>TP41</td>
<td>9-4</td>
<td>D1</td>
<td>113.1</td>
</tr>
</tbody>
</table>

Test Pit 1 -- -- -- D 113.1 mostly body sherds

Test Pit 2 -- -- Unknown 0.6 1 body shed
Test Pit 2 -- -- F1 -- 37.6 probably all from same vessel.
Test Pit 2 -- -- F6 -- 2.2 2 body sherds
Test Pit 2 -- -- F14 -- 0.5 3 body sherds
Test Pit 3 -- -- -- A 5.6 5 body sherds
Test Pit 2 -- -- C -- 3.9 3 body sherds
Test Pit 2 -- -- C & D -- 41.7
Test Pit 2 -- -- -- D1 20.6
Test Pit 2 -- -- -- D2 20.2
Test Pit 2 -- -- -- S 36.5 2 rim, 3 body sherds

Test Pit 3 -- -- -- D 49.7 at least 3 vessels represented

Test Pit 4 -- -- -- F9 -- 32.5 1 rim shed, 2 body sherds
Test Pit 4 -- -- -- F9 50C 0.3 1 body shed
Test Pit 4 -- -- -- F9 A 0.1 1 effaced shed
Test Pit 4 -- -- -- F9 D 68.8

Test Pit 5 -- -- -- D 35.4 some are shell tempered
Test Pit 6 -- -- -- D1 1.1 1 body shed
Test Pit 5 -- -- -- D2 1.6 1 body shed

Test Pit 6 -- -- -- D 39.0 multiple vessels including shell tempered
Test Pit 6 -- -- -- D2 6.5 3 body sherds

Test Pit 7 -- -- -- D 8.4

Test Pit 8 -- -- -- D 44.1
Test Pit 8 -- -- -- D2 19.0

Test Pit 8 -- -- -- M 24.7
Test Pit 8 -- -- -- S 0.5

Test Pit 9 -- -- -- 50C 1.4 1 body shed
Test Pit 9 -- -- -- D1 31.9 rim, 3 body sherds
Test Pit 9 -- -- -- D2 25.4 4 body sherds, 1 rim shed (rim shed freund 1/304 308)
Test Pit 9 -- -- -- D3 40.7 include shell tempered
Test Pit 9 -- -- -- D4 20.8 include shell tempered

Tags placed inside bases for visual accessibility.
COLLECTIONS MANAGEMENT SOFTWARE (CMS)

Custom archaeology nomenclature loaded into CMS; three tiers; parent-child relationships.

Screen shot of Main Information tab from Logan Museum’s customized CMS, Re:discovery Proficio.
The Archaeology Module

The Module that handles all your Active Archaeological Site Management needs.
ONGOING CHALLENGE: UNPROVENIENCED ARCHAEOLOGICAL COLLECTIONS
The Center for Collections Care at Beloit College (C³) provides one-of-a-kind opportunities for hands-on learning and practice for museum, library, archive, and conservation professionals and emerging professionals.

SUMMER 2020 COURSES

Care of Metal, Glass, and Ceramic Objects
June 1-3

Care of Photographs
June 8-11

Mount Making: The Design and Fabrication of Archival Mounts
June 15-18

Introduction to Textile Conservation
June 15-18

Textile Stabilization and Display
June 19-22

Advanced Mount Making
June 21-23

Matting and Framing Works of Art on Paper
June 24-27

Grant Writing for Collections Care
July 6-8

Packing Artwork for Transit: Established Practices and Underlying Principles
July 6-8

Storage Solutions
July 13-15

Introduction to Paper Conservation
July 20-23

Integrated Pest Management
July 27-29

Rare Books Care and Structure
July 27-29

Nicolette B. Meister • Faculty Director • Phone: 608-363-2305 • Email: meister@beloit.edu

www.beloit.edu/ccc
Thank you!

Contact information:
Nicolette B. Meister, Logan Museum of Anthropology
meistern@beloit.edu
608-363-2305
Instagram: bcloganmuseum; centerforcollectionscare