

Caring for Artifacts Found in Archival Collections

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For Connecting to Collections
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On Today's Agenda

- ❖ The Preservation Environment
- ❖ Safe Storage Materials
- ❖ Small Objects
- ❖ Larger Objects
- ❖ Framed Objects
- ❖ Textiles
- ❖ Hazardous Materials
- ❖ Handling Tips
- ❖ Questions?



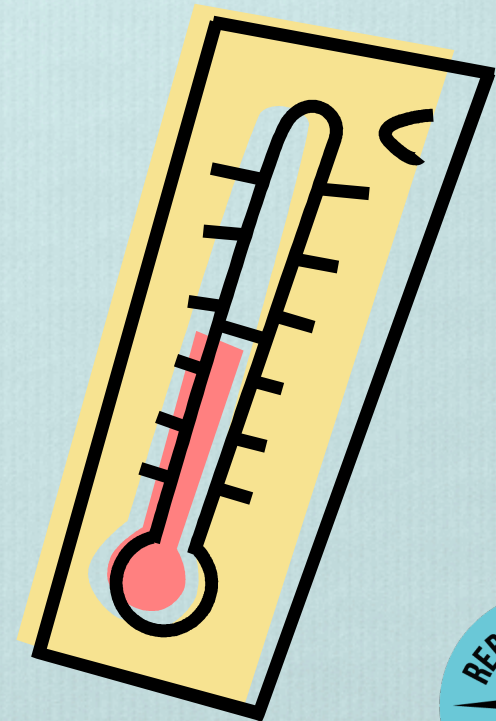
The Preservation Environment

- ❖ The most important thing you can do to care for your collections is maintain a cool, dry, stable environment.



The Preservation Environment

- ❖ Luckily, most objects found in collections are able to be stored at the same conditions at the rest of your archives.
- ❖ Temperature – 68-70°
- ❖ Relative Humidity 35-50%
- ❖ Minimal fluctuations



Safe Storage Materials

- ❖ Use of poor quality storage and repair supplies can cause irreparable damage to your treasures



Selecting Supplies

- ❖ Storage enclosures for artifacts should be made of materials that are durable and chemically stable.
- ❖ Just because something starts out acid-free doesn't mean it remains acid-free forever.
 - ❖ Storage materials may need to be replaced.



Terminology You Should Know

- ❖ Acid-Free
 - ❖ Items marked acid-free have a pH of 7.0 or higher

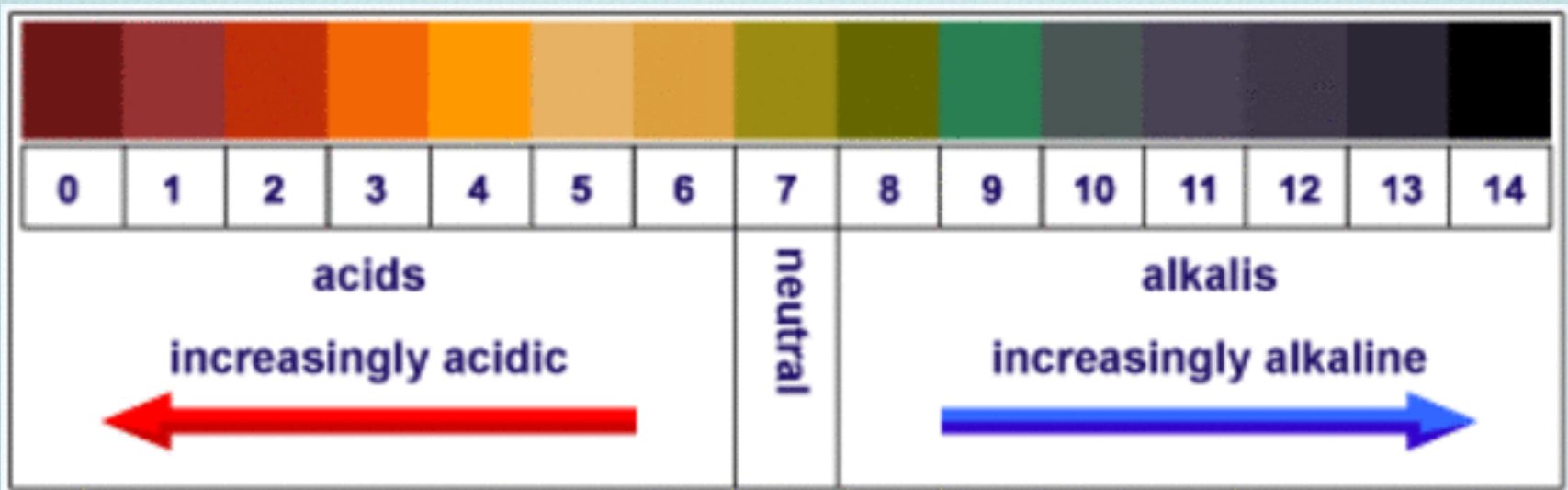


Image courtesy GoLabs.eu

Terminology You Should Know

❖ Lignin-Free

- ❖ Items marketed as lignin-free have lignin content of 1% or less



Terminology You Should Know

- ❖ Alkaline Buffered
 - ❖ Items marketed as alkaline buffered have a chemical reserve added to neutralize acids as they are created.
 - ❖ Great for most paper
 - ❖ Not suitable for
 - ❖ Blueprints
 - ❖ Color photographs
 - ❖ Silk
 - ❖ Wool
 - ❖ Artwork with dyes or pigments



Plastics

❖ Three Main Types to Use:

❖ Polyester

❖ Polypropylene

❖ Polyethylene

❖ Do Not Use **PVC** (Polyvinyl Chloride)

❖ Plasticizers migrate to the surface
& react with other materials

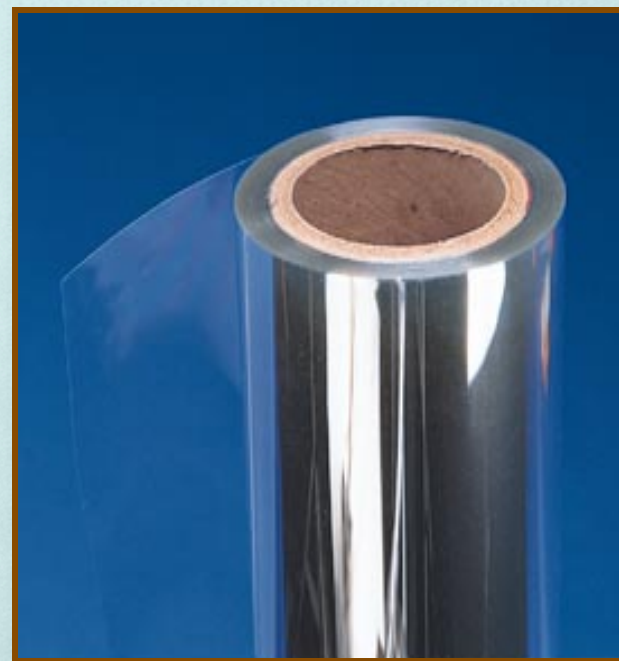


Image courtesy Hollinger Metal Edge



Packing Materials

Best Quality

- ❖ Acid-free tissue
- ❖ Polyethylene Plank (Ethafom)
- ❖ Polyethylene Sheet (Volara)

Poorer Quality

- ❖ Newsprint
- ❖ Brown paper
- ❖ Styrofoam
- ❖ Packing peanuts



Objects

- ❖ Questions to address when considering storage options include:
 - ❖ What materials are safe for this object?
 - ❖ Does it need to be stored flat or in a specific orientation?
 - ❖ Is it fragile or deteriorating?
 - ❖ Is it vulnerable to loss?



Storage of Small Objects

- ❖ The easiest way to keep small objects with a collection is to use a spacer to create a storage area in a document box
- ❖ Ideal for:
 - ❖ Medals
 - ❖ Cased photographs
 - ❖ Small books
 - ❖ Souvenirs and mementos
- ❖ Use Ethafoam plank to create an insert with a cavity to hold your object securely if it is fragile.



Photo courtesy Hollinger Metal Edge

Storage of Small Objects

- ❖ For larger amounts, flat boxes fitted with small trays or dividers are excellent storage
- ❖ If you take pictures of each object in the box and adhere them to the lid, you won't have to open the box to see what's inside



Photo courtesy Hollinger Metal Edge

Large Collections of Small Objects

- ❖ Large collections of fossils, coins, buttons, or similar small objects require a specialized solution.
- ❖ Put each example into a small polyethylene bag and store in specimen trays



Photo courtesy Gaylord

Storing Larger Objects

- ❖ If at all possible, objects should be boxed.
- ❖ If boxes are impractical, supports on open shelving are an excellent option.
- ❖ If you use packing material to protect your objects, you may place more than one in a box.
- ❖ Don't let the box get too heavy!



Packing for Larger Objects

- ❖ Options include:
 - ❖ Acid-free tissue snakes and pads
 - ❖ Volara wraps
 - ❖ Creating custom supports out of acid-free corrugated board, Ethafoam plank or other materials



Image courtesy South East Museum Development Programme

Custom Support for Damaged Baskets

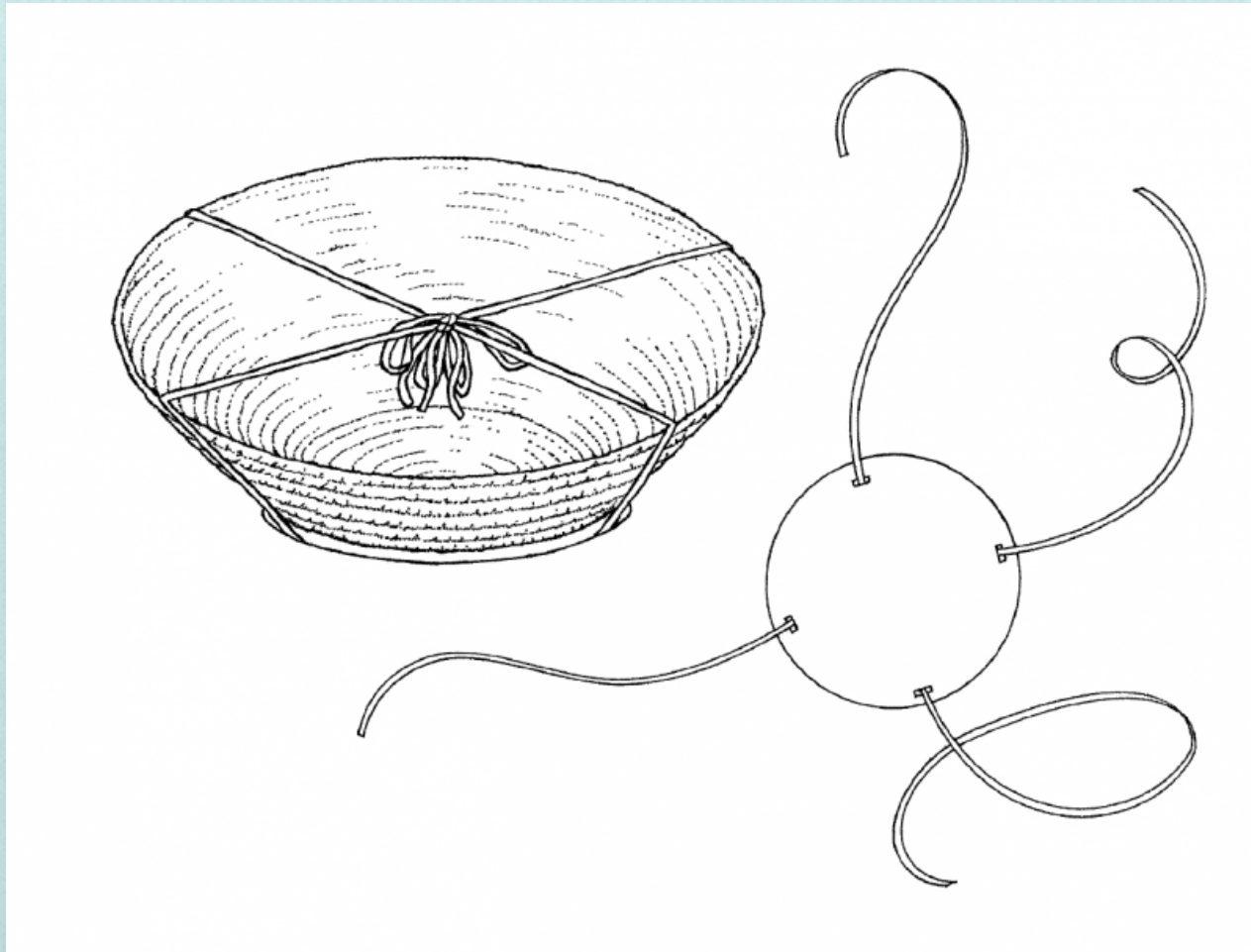


Image courtesy STASH-C

Framed Objects

- ❖ Remove inexpensive frames that can damage its contents.
- ❖ If a painting is fragile or damaged, store it flat in a box, drawer or on a shelf.



Framed Objects

- ❖ Framed objects can be hung on walls or support screens
- ❖ Storage bins are also common
- ❖ If using bins, separate paintings with acid-free cardboard or foam board to prevent scratching



Photo courtesy Southwest Solutions

Textiles

- ❖ Storage possibilities include:
 - ❖ Flat in drawers
 - ❖ Flat in boxes
 - ❖ Rolled around tubes
 - ❖ Hung in wardrobe cabinets

Flat Storage of Textiles

- ❖ Small textiles should be stored flat
- ❖ Sturdy textiles can be stored between pieces of acid-free tissue
- ❖ Fragile textiles may require a support to prevent damage during handling
- ❖ Candidates for flat storage
 - ❖ Velvets and fabrics with pile
 - ❖ Fragile or deteriorated surfaces or decorations
 - ❖ Brittle or stiff textiles
 - ❖ Heavily embroidered or beaded pieces

Rolled Storage of Textiles

- ❖ Large textiles like quilts and rugs are too big to store flat, so must be rolled
- ❖ Roll around acid-free core
 - ❖ 2" is suitable for thin textiles
 - ❖ 3" is suitable for thicker
- ❖ Use tissue between layers
- ❖ Wrap in muslin and tie at ends



Image courtesy National Park Service



Storage of Costumes

- ❖ Fitted, constructed clothing in good condition can be stored in a wardrobe cabinet or on a rack
- ❖ Unconstructed clothing or fragile clothing should be stored flat
- ❖ Other candidates for flat storage:
 - ❖ Heavy, beaded textiles
 - ❖ Bias cut dresses
 - ❖ Men's pants



Hanging Storage

- ❖ Use padded hangers
- ❖ Place each item in a closed dust cover
- ❖ Hang with space between each object

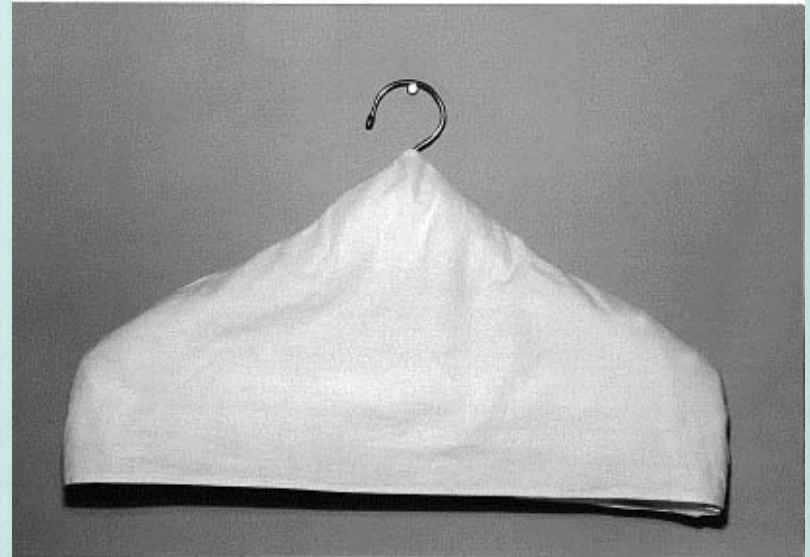


Photo courtesy STASH-C

Flat Storage of Costumes

- ❖ Store in flat files or costume boxes
- ❖ Aim for as few folds as possible.
- ❖ Pad folds, shoulders and sleeves with rolls and pads of acid-free tissue
- ❖ Use a muslin sling to facilitate safe handling and transport



Image courtesy Victoria and Albert Museum

Accessories

- ❖ Think about appropriate support
- ❖ Use acid-free tissue, muslin, cotton stockinette around polyester batting



Image courtesy Minnesota Historical Society

What are hazardous collection materials?

- ❖ Any material that has the potential to cause injury, illness, or death; cause damage or loss; or inhibit operations

http://www.conservation-wiki.com/w/images/a/af/H%26S_Presentation-Controlling_Hazardous_Collection_Materials_Presentation.pdf

- ❖ We can break that down into two categories
 - ❖ Inherent hazards
 - ❖ Acquired hazards



Inherent Hazards

- ❖ These are hazardous at the time of manufacture, and remain so over time.
- ❖ Examples are
 - ❖ Arsenic in taxidermy mounts
 - ❖ Poison tips on arrowheads or weapons
 - ❖ Carbon tetrachloride in early fire extinguishing equipment
 - ❖ Mercury in thermometers or 18th century mirrors
 - ❖ Lead in bullets, stained glass or glazed ceramics
 - ❖ Pathogens or poisons in medical equipment and old medicines
 - ❖ Physical characteristics, such as sharp knives or blades
 - ❖ Etc-- The list goes on and on and on



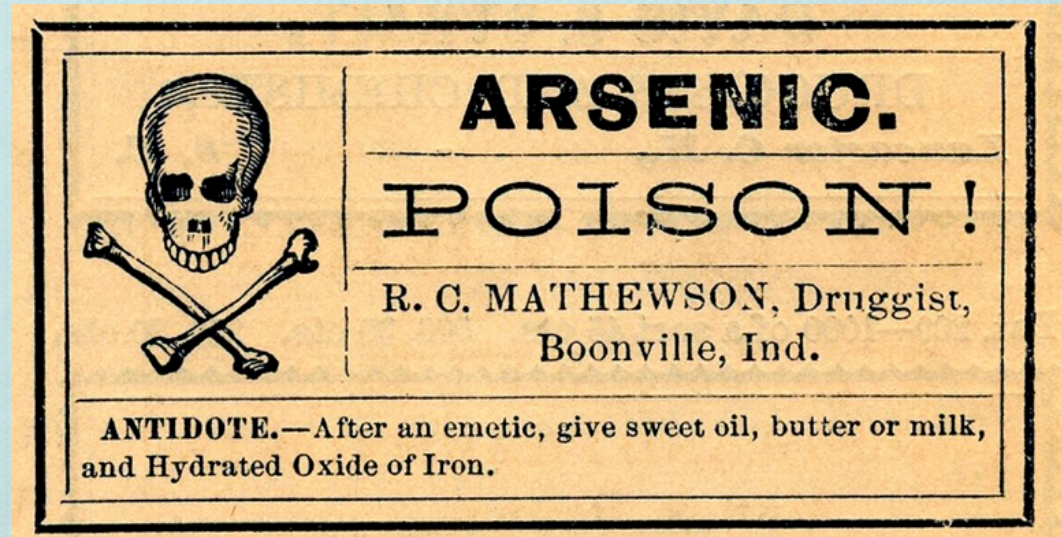
Acquired Hazards

- ❖ These become added to the object over time
 - ❖ Pesticides
 - ❖ Preservatives like formaldehyde and ethanol
 - ❖ Deterioration of object (cellulose nitrate film, for example)
 - ❖ Environmental contaminants like mold, frass, and bird droppings



How Does The Body Absorb Toxins?

- ❖ Skin Contact
- ❖ Inhalation
- ❖ Ingestion



How Do We Identify Hazards?

- ❖ Knowledge of the material
- ❖ Knowledge of the history



How Do We Identify Hazards?

- ❖ Chemical testing
 - ❖ Spot testing
 - ❖ Some require sophisticated equipment
- ❖ All testing should be performed by a trained conservator
 - ❖ MACC offers inexpensive arsenic testing



Signs of Pesticide Use

- ❖ Excellent condition compared to similar items of the same age, materials and storage conditions
- ❖ Marked or labeled with a poison tag
- ❖ Fine white dust
- ❖ Crystals or colored efflorescence
- ❖ Better safe than sorry– suspect anything you can't easily identify

--Caring for American Indian Objects – The Issue of Pesticide Contamination – Nancy Odegaard



Risk Management

- ❖ Remove the object and replace or substitute another
- ❖ Isolate the object
- ❖ Use safe work practices



Need Help?

- ❖ Local environmental safety agency
- ❖ OSHA's Small Business Consultation Service
 - ❖ <https://www.osha.gov/dcsp/smallbusiness/consult.html>



Remove and Replace

- ❖ Dispose of the contaminated object
- ❖ Remediate the contaminant
- ❖ Process quickly to lessen risk of cross-contamination
- ❖ Dispose of hazardous waste in accordance with local regulations



Isolate

- ❖ Use well-sealed bags or containers
- ❖ In drawers under acrylic



Handling of Objects

- ❖ Only handle objects when necessary
- ❖ Treat every object as if it were the most valuable piece in your collection
- ❖ Wear nitrile gloves to handle objects
- ❖ Do not wear dangling jewelry or loose sleeves
- ❖ Use both hands
- ❖ Handle the object at its strongest point and avoid vulnerabilities
 - ❖ Handles of cups and pitchers
 - ❖ Repaired areas
 - ❖ Protrusions



Moving Objects

- ❖ Does the object absolutely have to be moved?
- ❖ When moving objects know where you will set them before you pick them up
- ❖ Use trays, carts and other equipment to move objects
- ❖ If the object is large, heavy or awkward use two people to move it



Questions?

- ❖ What questions do you have about your collections?



Don't Forget

- ❖ Some of my favorite resources are posted for you to use!

