



HBCU Library Alliance  
Historically Black Colleges & Universities

# Building Capacity – HBCU

## Collections Care Basics



Image courtesy  
Trenholm State Community College  
and Conservation Center for Art  
& Historic Artifacts

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thanks to  
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FOUNDATION

# Topics this morning...

❖ Part 1: Fundamentals

❖ Part 2: Agents of Deterioration

❖ Part 3: Preservation Needs Assessments

# Part 1: Fundamentals

- ❖ Terminology
- ❖ Making the case
- ❖ Establishing a preservation program



# Terminology

## Preservation

- Refers to all those activities aimed at caring for your collection.

## Conservation

- Refers to those activities that stabilize collections chemically or strengthen them physically.



Image: NARA.gov

# Preservation

- ❖ Collections care
- ❖ Stabilize
- ❖ Maintain
- ❖ Slow Deterioration



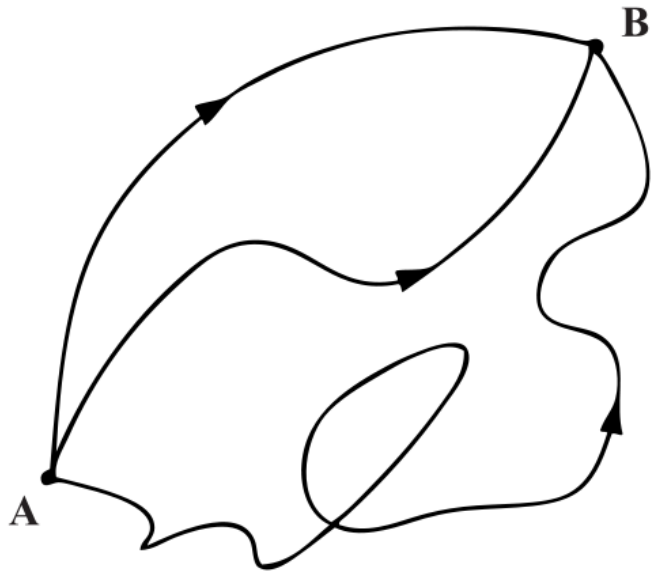
# Conservation

- ❖ Physical treatment
- ❖ Strengthen
- ❖ Repair
- ❖ Stabilize



# Preservation Program

Establish preservation goals and systems.



A preservation plan is a document that “defines and charts a course of action to meet an institution’s overall preservation needs for its collections.”

*Resource:* Minnesota Historical Society. "Long-Range Preservation Plan." Minnesota Historical Society: St Paul, MN, 2004, updated 2012.

<http://www.mnhs.org/preserve/conservation/reports/2012longrangeplan.pdf>



# Benefits of Planning

- ❖ Continues and fulfills mission
- ❖ Saves collections
- ❖ Good use of resources
- ❖ Systematic approach



# Who is Responsible for Preservation?

- Director
- Board
- Collections Staff
  - ❖ Librarians
  - ❖ Curators
  - ❖ Archivists
  - ❖ Registrars
- Exhibit Preparators
- Facility Staff
- Janitorial Staff
- Security Staff
- Patrons/Visitors



## Part 2: Ten Agents of Deterioration

- ❖ Physical forces
- ❖ Thieves, vandals, and displacers
- ❖ Fire
- ❖ Water
- ❖ Pests and mold
- ❖ Pollutants
- ❖ Light
- ❖ Incorrect temperature
- ❖ Incorrect relative humidity
- ❖ Custodial neglect and dissociation

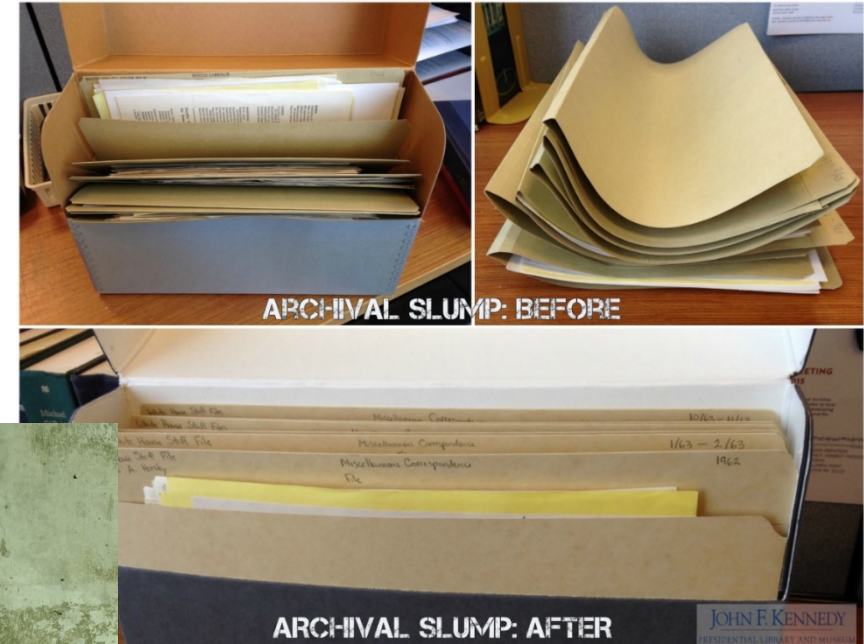
# Deterioration of Collections

- Deterioration may be put into 3 categories:
  - Physical Deterioration
    - Tears, abrasion, compaction, losses, folds, creases, planar distortions, etc.
  - Chemical Deterioration
    - Staining, discoloration, degraded adhesive residues, degrading media, etc.
  - Biological Deterioration
    - Digestion by mold, bacteria, and insects

# 1. Physical Force

- Impact, shock, vibration, pressure, and abrasion.
- Immediate damage through direct physical force.
  - Handling and transportation of collection objects
  - Emergency situations
- Accumulative damage from a
  - continuous force over a period of
  - time.
    - Vibrations from surroundings, causing movement or fatigue
    - Stress of over-packing or overloading objects in storage

## Physical Deterioration



## Physical and Chemical Deterioration

## 2. Vandals & Thieves

**Theft**— the premeditated or opportunistic removal of collection objects from an institution; or embezzlement of funds by staff.

- Stolen objects are no longer available to the public.

**Vandalism**—purposeful defacement of collection objects.

- Vandalized objects sustain damage that may be irreversible or difficult to address with conservation treatment.



# 3. Fire

May cause quick and catastrophic loss of collections, buildings, and personnel.

Causes of fire:

- External sources (wild fires, lightning, etc.)
- Electrical sources
- Flammable materials near sources of heat
- Exposed flames (candles, fireplaces etc.)
- Construction/ renovation activities
- Improper use, storage, or disposal of flammable materials
- Gas leaks
- Arson

**Chemical  
Deterioration**



Fire damage at the University of New Mexico Library

## Physical and Chemical Deterioration

### 4. Water

- Natural events, technological and mechanical failure, and accidents.
- One of the most common forms of damage in an institution - the potential for water incidents is underestimated and storage areas are often made in areas that are more susceptible to water infiltration, like attics and basements.





## Biological Deterioration

# 5. Pests & Mold

- Pests are living organism that cause harm to collections and buildings because they serve as food sources or housing materials for pests.
- Pest categories include:
  - Microorganisms—  
mold, bacteria
  - Insects
  - Rodents
  - Birds and Bats

4-11-06 2006.4.37  
badly damaged by powder post beetles



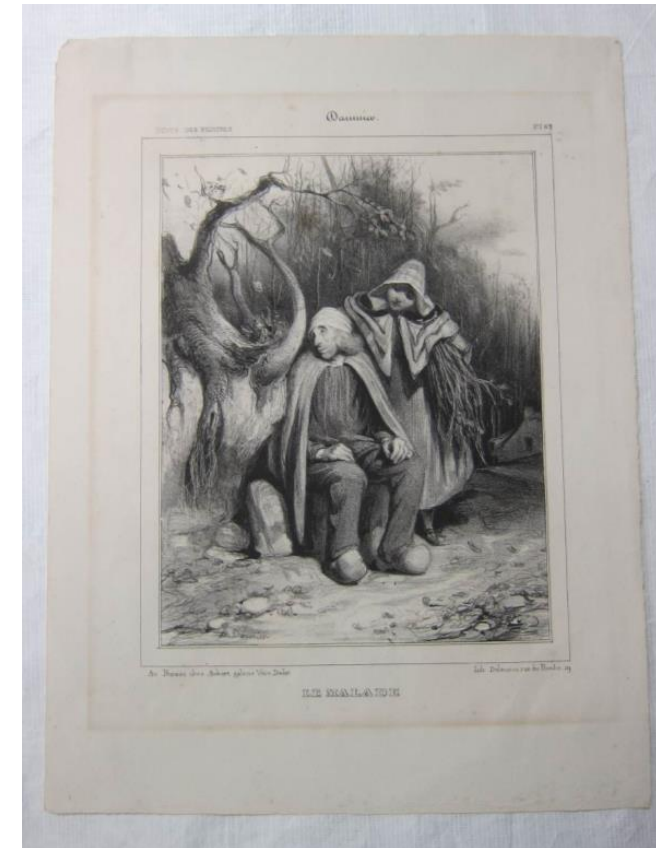
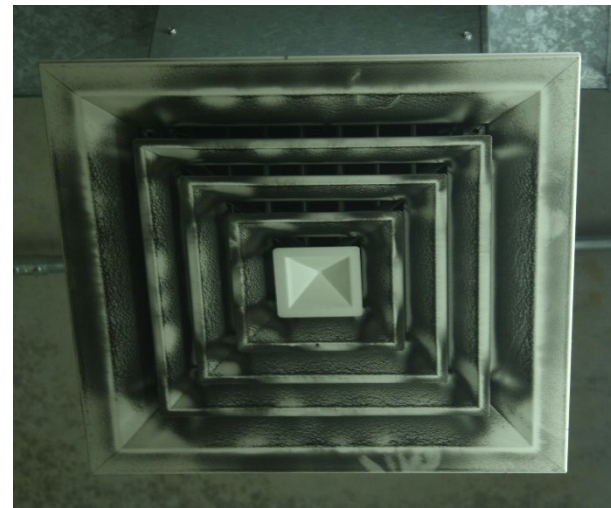
Infested donation to UMFA collection



Woodpecker damage

## 6. Pollutants

- Chemicals that cause chemical damage when they come into contact with cultural heritage materials.
- Airborne (often associated with urban areas)
- Transferred through points of contact
- Sources of pollution:  
combustion byproducts, cleaning products, paint, films, and sealers, and electronics like air conditioning units and some copying machines.



Mat burn on print from UMFA collection

## Chemical Deterioration

# 7. Light

Visible light and ultraviolet and infrared radiation are all forms of radiation energy that will cause damage by triggering or accelerating degradation processes in objects.



## Chemical Deterioration

# 8. Incorrect Temperature

- **Too High**—Instigates or accelerates chemical degradation processes, may also cause expansion of materials
- **Too Low**—Causes shrinking of objects resulting in physical damage
- **Extreme Fluctuations**—Objects continually expand and contract causing physical stress and periods of accelerated chemical degradation when temperatures are high.



# 9. Incorrect Relative Humidity

Relative humidity (RH) is the amount of moisture in the air related to temperature and pressure of a particular environment.

Organic materials contain moisture and will absorb or release moisture depending on the RH of an environment.

- **High RH:** promotes corrosion, mold growth, accelerated aging, and cause expansion of hygroscopic materials.
- **Low RH:** causes hygroscopic materials to release moisture causing shrinking and desiccation.
- **Extreme, Frequent, or Sudden Fluctuating RH:** objects expand and contract causing physical damage and general aging of objects

## Physical and Chemical Deterioration

Click to Solve for:

Temperature  % RH  Dew Point

75 66 63

Temperature Scale:  °F  °C

Preservation Evaluation

Type of Decay	Environment Rating	Preservation Metric
Natural Aging	RISK	PI 18
Mechanical Damage	OK	% EMC 12.1
Mold Risk	RISK	Days to Mold 763
Metal Corrosion	RISK	% EMC 12.1

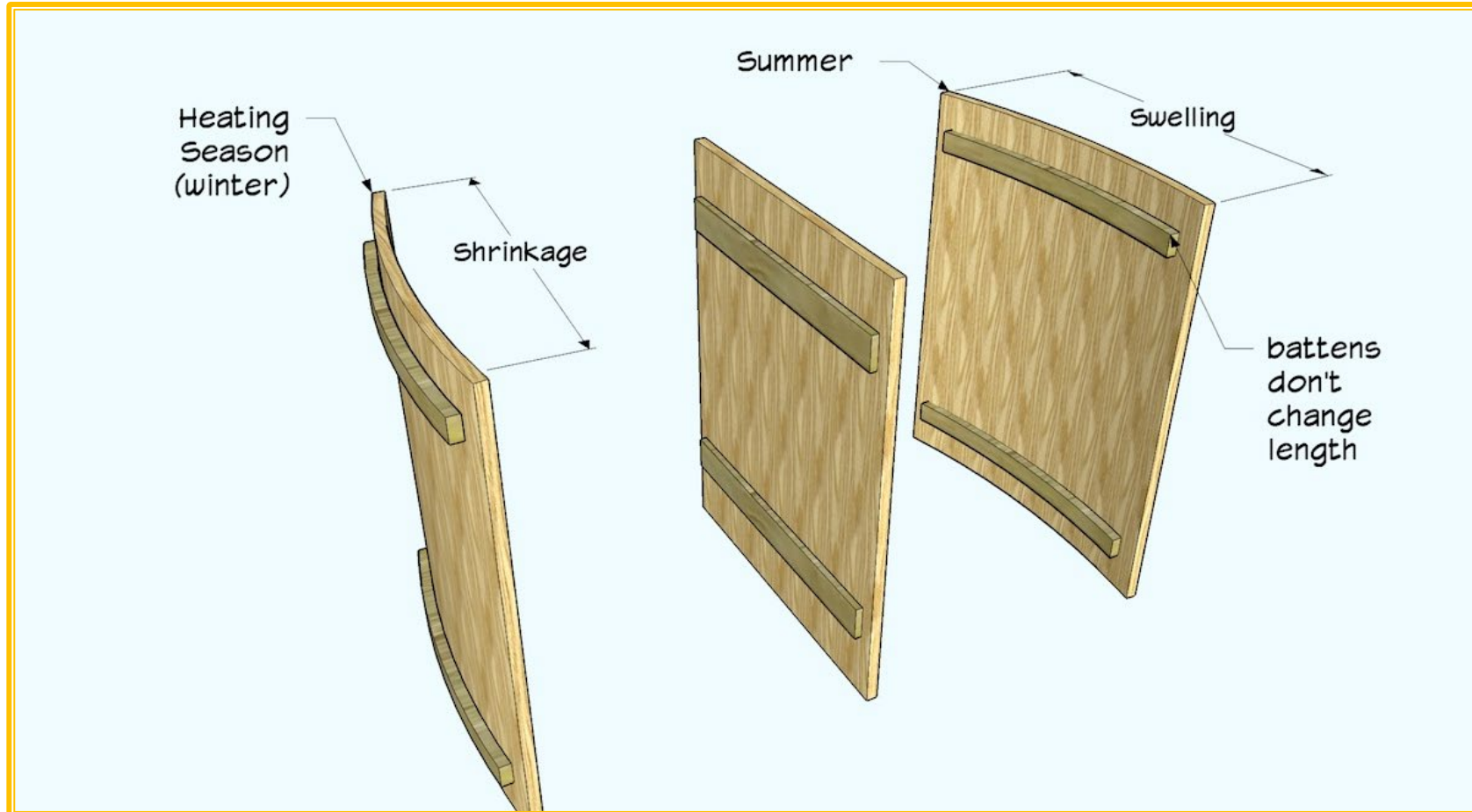
Record and Compare Values

T	RH	DP	PI	Days to Mold	EMC

Save Clear Export

IPI Dew Point Calculator  
<http://dpcalc.org/>

# Fluctuations



# 10. Custodial Neglect & Dissociation

## Loss of Intellectual Control

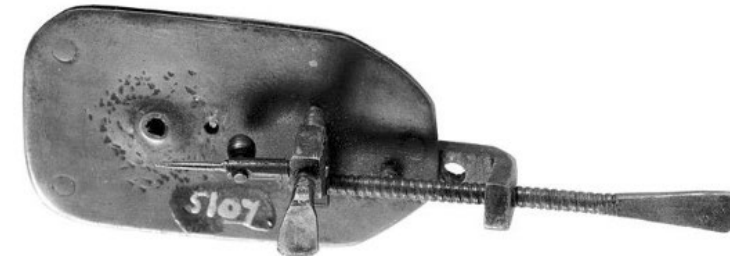
Dissociation may result in loss of objects, loss of data or information related to objects, or ability to retrieve or associate information to objects.

Caused when ordered systems fall apart. May be a result of:

- Rare and catastrophic events
- Misplacing objects
- Removing objects from a collection or identifying labels/tags
- Removing objects and documentation in an illegible or ambiguous manner.
- Making errors in transcription.



Tourist image of skeleton at Natural History Museum, London



Leeuwenhoek Microscope facsimile in Utrecht University Wellcome M0005632

# Avenues of Deterioration

- Materials Composing the Objects
- Object Construction
- Use and Display
- Storage Methods
- Well-meaning attempts to treat damage

Environmental	Disasters or Emergencies	Institutional
<ul style="list-style-type: none"> <li>– Pests</li> <li>– Pollution</li> <li>– Light, Ultraviolet and Infrared Radiation</li> <li>– Incorrect Relative Humidity</li> <li>– Incorrect Temperature</li> </ul>	<ul style="list-style-type: none"> <li>– Water</li> <li>– Fire</li> <li>– Theft and Vandalism</li> <li>– *Disassociation</li> </ul>	<ul style="list-style-type: none"> <li>– Disassociation</li> <li>– Custodial Neglect</li> </ul>
<ul style="list-style-type: none"> <li>– Physical Force</li> </ul>		



# Part 3: Preservation Needs Assessments

## Definition:

*A general evaluation of the institution's preservation needs for the collections: environment (temperature, relative humidity, pollution, and light), housekeeping, pest control, fire protection, security and disaster preparedness, collection storage, handling, exhibition, and treatment. Interviews with relevant staff will be conducted to identify preservation needs. The final written report provides observations and recommendations to serve as guides for staff and Board members as they deal with collection care issues and engage in preservation planning.*

# A preservation needs assessment is not ...

- ❖ Archival assessment
- ❖ Preservation plan
- ❖ Material-specific collection conservation survey
- ❖ Item level survey

# Sample table of contents

- ▶ Introduction
  - ▶ Institutional History
  - ▶ About the Collections
- ▶ Abstract
- ▶ Executive Summary
- ▶ Prioritized Goals
- ▶ Collections Management
  - ▶ Preservation Planning
  - ▶ Funding
  - ▶ Staffing
  - ▶ Policies
  - ▶ Intellectual Control
  - ▶ Access
  - ▶ Space
- ▶ Building and Facilities
  - ▶ Building
  - ▶ Facilities
  - ▶ Renovations
  - ▶ Furnishings and Fixtures
- ▶ Environmental Management
  - ▶ HVAC
  - ▶ Temperature and Relative Humidity
  - ▶ Monitoring
  - ▶ Light
  - ▶ Pests
  - ▶ Mold
  - ▶ Housekeeping
- ▶ Security & Disaster
  - ▶ Security
  - ▶ Fire
  - ▶ Emergency Preparedness
- ▶ Collections Care by Format
- ▶ Appendix (outside resources)

# Uses for a preservation needs assessment

- ❖ Plan can direct and guide the ongoing care and management of the collections by outlining collections needs, ongoing projects, and the necessary staffing and funding needed to carry out the projects.
- ❖ First step in preservation planning efforts
- ❖ Helps communicate needs to other staff, administration, board, and even patrons
- ❖ Helps validate what collections staff may already know
- ❖ Often required by funders
- ❖ May help prioritize and allocate budget

# Assembling a Team

- ❖ Representation from every department with collections care responsibilities
- ❖ Outside consultant
- ❖ Administration or board representation



# Methods of Assessing Need

- Interviews with staff members and other constituents
  - Make sure a range of expertise, types of responsibilities, and influence is represented.
  - Departmental representation: facilities, housekeeping, security, etc.
  - Administration and board

# Methods of Assessing Need

- Analysis of past assessments and documents
  - Institutional history
  - Policy statements
  - Planning documents
  - Risk assessment
  - Emergency planning initiatives

Previous preservation efforts/initiatives

- What worked and what didn't?



# Methods of Assessing Need

- Observation
  - Even if it's your site, take a comprehensive tour. Try to look with fresh eyes!





# Internal Uses

- ❖ Gain administrative support
- ❖ Guide strategic planning
- ❖ Promote staff awareness
- ❖ Prioritize funding initiatives
- ❖ Keep on task
- ❖ Assign responsibility



# External Uses

- ❖ Fundraising
- ❖ Advocacy
- ❖ Public outreach





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## Questions?

Webinar Presenter

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