

Textiles: Physical Properties and Proper Care



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What is a Textile?



Origins of Fibers

- Plant
- Animal
- Synthetic

Plant Fibers

- Seed fibers (cotton, kapoc, etc.)
- Bast fibers (linen, hemp, jute, etc.)
- Leaf fibers (raffia, banana, etc.)
- Bark cloth



Animal Fibers

- Wool (sheep, alpaca, angora, etc.)
- Hide
- Fur
- Hair
- Silk



Synthetics

- Polyester
- Acrylic
- Nylon
- Vinyl
- Fiberglass
- Rayon
- Kevlar



Fiber Composition

- Plant—Cellulose is the primary component of the cell walls of green plants.
- Animal—Protein is a large molecule composed of one or more chains of amino acids and are an essential part of all living organisms.
- Synthetic—a natural or chemically produced material processed into a staple fiber.

Fiber pH

- Plant—Cellulose—Basic
- Animal—Protein—Acidic
- Synthetic—Often neutral

Agents of Deterioration



Agents of Deterioration

- Use
- Soil
- Light
- Temperature/Relative Humidity
- Pests

Use

- Wear/Use
- Handling
- Display



Soil

- Body oils and perspiration
- Atmospheric pollution
- Dust, dirt and droppings
- Archaeological context



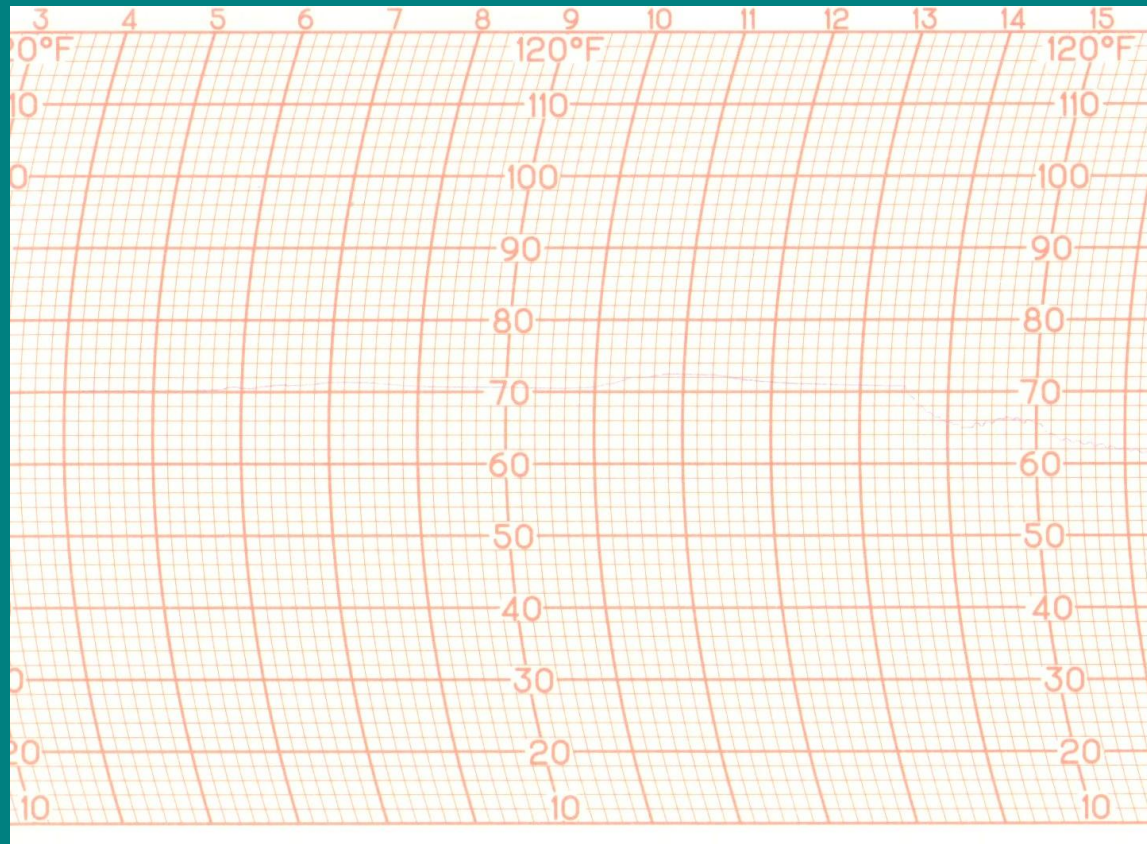
Light

- Both visible and UV
- Not just color change



Temperature & RH

- Fluctuations cause greatest damage



Pests

- Rodents
- Insects
- Microbial activity



Mitigating Agents of Deterioration

- Use
- Soil
- Light
- Temperature/Relative Humidity
- Pests

Use

- Never wear historic costume
- Minimize walking, sitting, etc.
- Display only stable items
- Rotate objects on display



Soil

- Regular housekeeping
- Proper display and storage
- Understand your collection
- Appreciate patina



Light

- Minimize light exposure
- Keep things away from windows
- Use UV filtration



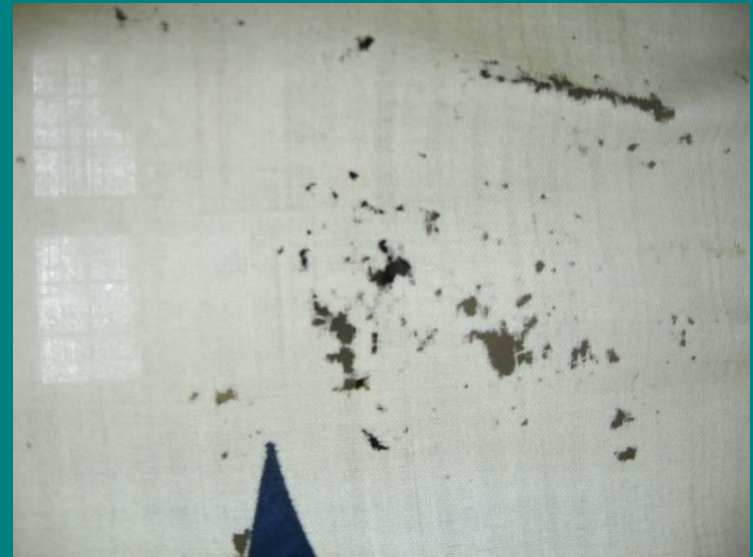
Temperature & RH

- Don't store objects in attics or basements
- Get rid of highs and lows
- Monitor and evaluate
- Avoid stagnant air



Pests

- Control access from outside
- Stable environment
- Housekeeping
- Proper Storage



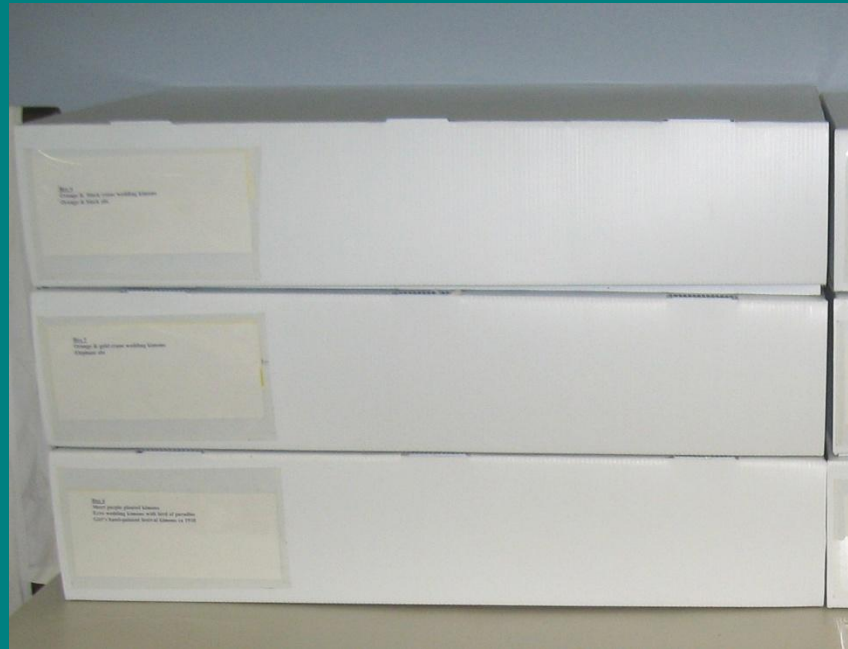
Caring for Textiles

- Establish policies and practices
- Do nothing until you know what to do
- Prioritize care over exhibition
- Use proper storage materials and methods



Conservation Materials

- Board vs. Polypropylene boxes



Conservation Materials

- Buffered & Unbuffered tissue



Conservation Materials

- Barrier materials



Conservation Materials



- Padding and packing materials

Conclusions

