



# National Park Service Museum Management Program

[www.nps.gov/museum](http://www.nps.gov/museum)



# Overview



- NPS Museum Management Program
- NPS collection size & types
- NPS museum policies & procedures
  - *NPS Museum Handbook*
  - *NPS Conserve O Gram* technical leaflets

National Park Service

# Museum Management Program



- Preservation & Protection
- Documentation
- Access & Use



# Preservation & Protection

# Museum Documentation



# Access and Use



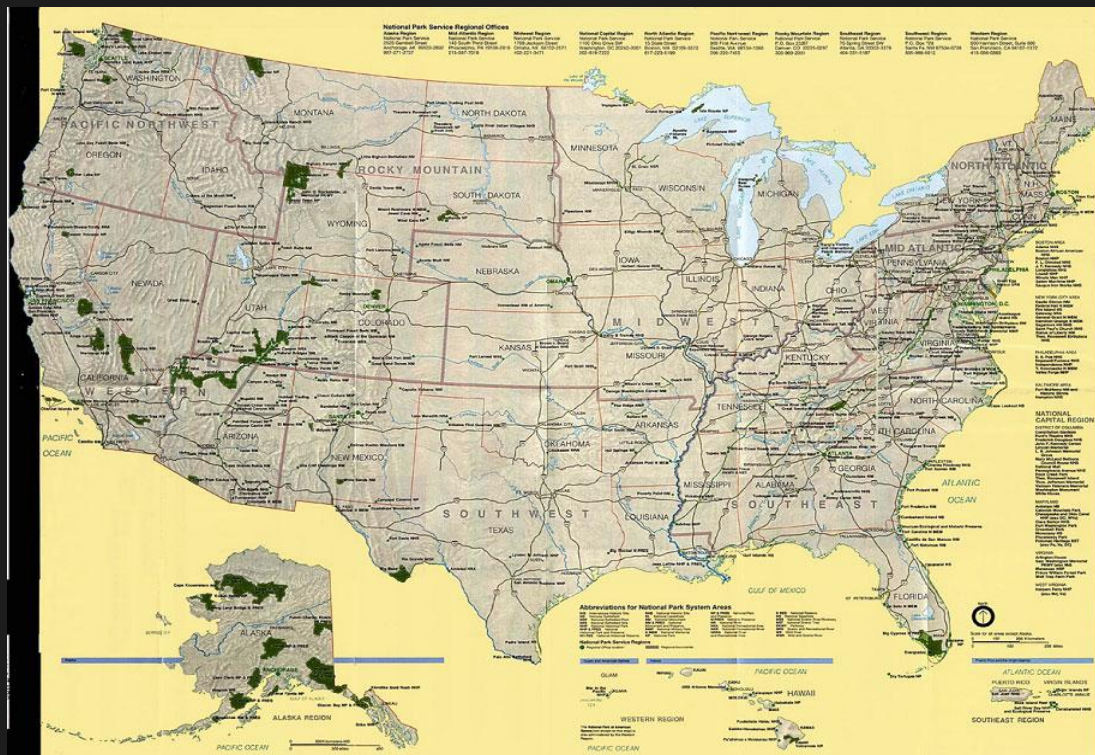
# Size of NPS Collections

401 NPS units nationwide -- 360 with collections

45+ million objects & specimens

64,800+ linear feet of archives





## 400+ NPS units & associated collections honor

- Ancient peoples of America, eminent Americans including presidents, & diverse communities
- Events that shaped the nation such as the Revolutionary War, Civil War to Civil Rights
- Natural & cultural resources at Yosemite & Yellowstone, Dinosaur NM to Death Valley to Hawaii Volcanoes & Gates of the Arctic
- & many, many more units located throughout the USA



# NPS collections include Archeology





# Ethnography

# History & archival collections



# Fine and decorative arts



# Natural history





**Collections on exhibit in museums & visitor centers & online**



**in historic house museums**



**in storage**





Housed in purpose-built,  
adapted & historic  
structures located in all  
US climate zones





# **National Park Service Museum Policies & Procedures**

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MUSEUM  
HANDBOOK



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[www.nps.gov/museum](http://www.nps.gov/museum)

PART I  
MUSEUM COLLECTIONS

# NPS *Museum Handbook Part I, Museum Collection* topics include

- Strategic planning [collections policy]
- Museum environment
- Biological infestations [IPM]
- Handling, packing & shipping
- Storage
- Security & fire protection
- Emergency preparedness & planning
- Curatorial health & safety
- Conservation treatments
- Museum housekeeping
- Preventive conservation & curatorial care of different materials

# *Museum Handbook, Part II, Museum Documentation*

- Accessioning
- Cataloging
- Inventory
- Loans
- Deaccessioning
- Lot cataloging
- Marking
- & other topics

# ***NPS Museum Handbook, Part III***

## **Museum Collections Use**

- Evaluating and documenting collection use
- Legal issues, including copyright
- Publications
- Reproductions
- Collections on exhibit in museums & historic structures
- Planning research space
- & more

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CONSERVE O GRAM



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**Technical guidance**  
**[www.nps.gov/museum](http://www.nps.gov/museum)**

## 182 *Conserve O Gram* “how to” technical leaflets on:

- Preservation
- Security, fire & curatorial health & safety
- Agents of deterioration
- Preventive conservation for different material types:  
*ceramics, wood, leather, metal, natural history, paintings, paper, photos, digital media, stone, textiles, archives, etc.*
- Care & storage of digital materials





# Conserve O Gram

August 2008

Number 3/11

## Identifying Museum Insect Pest Damage

Museum collections are very susceptible to pest damage. The cumulative affects of this damage can ultimately destroy a museum object. Therefore, it is important to constantly monitor collections for evidence of pest activity.

Museum pests are biological agents that can cause damage to museum collections. Pests are organisms that interfere with the management objective of the site. Pests come in a variety of forms: insects, rodents, bats, birds and mold. For insects, often the first evidence of their presence is the resultant damage, cast skins, or fecal spots rather than the pest itself.

Insect pests that cause the most damage to museum collections can be arranged into the following groups based on the types of food sources they seek:

- Textile or Fabrics Pests
- Wood Pests
- Stored Product Pests
- Paper Pests
- General Pests

The nests of mice, rats, birds and bats also affect museum collections because they can attract insects that may then move into collections seeking a food source.

### Evidence of Pest Activity

Evidence of insect activity includes:

- the presence of the actual insect, alive or

- dead, at various stages of its development
- cast skins or other body parts
- chewing marks
- exit holes in surfaces of wood
- hair, fur or feather loss
- webbing
- "grazed" surfaces
- frass (debris or excrement produced by insects, usually a soft powdery material)
- fecal pellets, dried stains or fecal spots

It is usually these signs, rather than the actual pest, that are detected first. Be familiar with the signs and inspect for pest evidence to determine activity and locate the source of the infestation.

### Textile Pests

Also known as protein feeders, textile and fabric pests are among the very few animals that can digest keratin, the primary protein found in animal hair and horn (Fig. 1) or chitin which forms insect bodies (Fig. 2). Fabric pests are divided into three distinct groups: carpet beetles, hide beetles, and clothes moths.

Both carpet and hide beetles belong to the family Dermestidae. Dermestids are primary scavengers that feed on a large variety of plant and animal by-products, including leather, feathers, skin, mounted museum specimens, woolen and silk textiles, floor coverings, stored foods and carrion.

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### Clothes Moths

The term "clothes moth" can refer to three species of moths, the webbing clothes moth, case making clothes moth and carpet or tapestry moth. In museums, they often damage woolen clothes (Fig. 5), feather hats, dolls and toys, bristle brushes, weavings, and fabric wall hangings.

While many other moths are attracted to lights, these moths prefer dark closets, attics or other areas. The larvae tend to live and feed in dark corners in the folds of fabrics. Typically, the larva bites off a fiber, chews on it and moves on to the next fiber, resulting in a trail of damaged fibers. The clothes moth larvae may spin a feeding tube made of the fabric they are feeding on. Some spin small scattered silken patches and graze as they go along using the tube as protection. Look for feeding damage such as holes in woolen fabrics and hair falling from hides or pelts (Fig. 6). The color of the excreta usually takes on the color of the material on which it is feeding. Use these clues to locate infested collections.



Figure 5. Civil War hat with damage from clothes moths and carpet beetles. (Barbara Cumberland, NPS)



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## Monitoring Insect Pests With Sticky Traps

Effective insect pest management relies on the early detection of insect pests, hopefully before they become established and cause damage. Regular visual inspection of valuable and suspect areas is valuable despite obvious limitations. Due to the secretive nature of most museum pests and the difficulty of locating their hiding places, monitoring efforts should not rely solely on visual inspections. Trapping should also be used. Visual inspection, however, is an essential part of an Integrated Pest Management (IPM) strategy. Pest detection through trapping is just one part of an IPM program. For more information see *Museum Handbook, Part I, Chapter 5, Biological Infestations*.

Detection and monitoring with insect traps is an essential long-term adjunct to inspection, in the perennial battle against insect infestation of museum buildings and their contents. Insect traps are a continuous monitoring device. They catch a wide variety of pest species in their mobile stages of larvae and adult. Both crawling and flying insects can be caught. The glue from the catches can be used to solve

problems coated with a non-toxic, non-drying sticky substance. There is usually no form of attractant, so insects walk onto the sticky surface and are caught. Larger versions are commonly sold as cockroach traps (Hoy-Hoy trap, Roach Motel etc.) sometimes incorporating a general food attractant that may encourage cockroaches but is unlikely to interest other insects.



Figure 1. Example of one kind of sticky trap

There are a number of different versions of the sticky traps to catch insects (light, fly paper, sticky traps) which are useful in certain



Figure 6. Webbing clothes moth damage. (Patrick Kelley, Insects Limited, Inc.)

### Wood Pests

Museum objects made of wood are susceptible to attack by a number of wood-infesting pests. In museums, the culprits are usually wood-boring/powderpost beetles and drywood termites. Both can severely damage valuable artifacts while remaining invisible to the untrained eye.



Figure 7. Canteen damaged by powderpost beetles. (Barbara Cumberland, NPS)

### Wood-boring/Powderpost Beetles

The term powderpost beetle applies to any of three closely related families: Lyctidae (true powderpost beetles that cannot digest cellulose

such as funnel traps and sticky traps do not normally have a baiting program. Hanging test traps to catch insects and contents act as light covers, diffusers, and should be inspected once of insects.



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