Feathers On and Off the Bird: Documenting and Caring for Featherwork

Ellen Pearlstein
University of CA-Los Angeles
January 1996, the Native American Graves Protection and Repatriation Act was amended to reflect the problem of pesticide residues. It now reads:

“The museum official or Federal agency official must inform the recipients of repatriations of any presently known treatment of the human remains, funerary objects, sacred objects or objects of cultural patrimony with pesticides, preservatives or other substance that present a potential hazard to the objects or to the persons handling the objects.”
Tribal use of certain feathers can also reflect which birds were dominant in a given area, says Candace Greene (above). (Donny Bajohr)
Feather modification techniques

Split
Stripped
Shaft notched

Serrated

Feather modification techniques
Feathers suffer from four major types of damage:

- **Dirt**
- **Breakage or mechanical damage**
- **Damage from light and ultraviolet energy**
- **Insect damage**
Cleaning depends on use, type and purpose of item:

- Is featherwork still in use/worn/danced?
- Are feathers strong and stable?
- Are feathers smooth or downy?
- Can you access feathers individually: front and back?
- Might there be pigment or material traces on feathers to preserve?
If you feel able to clean featherwork, there are two important steps....

1. Take photos before beginning
2. Figure out how to safely support featherwork

Courtesy Metropolitan Museum of Art
If pesticides are suspected, feathers should be supported on a disposable soft liner of tissue or Tyvek, as flat as possible...

Three dimensional items with feathers should be supported safely, with feathers supported separately with blotting paper for cleaning.
HEPA filtered vacuum made for computer printer and copier toner: Captures fine pesticide particulates instead of exhausting them into work atmosphere!

Flat sable brushes available at art supply store
Label and use brushes only for pesticide suspected items
HEPA vacuum with fine mesh over the nozzle
Vacuuming, or dry cleaning of feathers, is the gentlest method...

- Use nitrile gloves and a dust mask or respirator to protect yourself
- Support separate feathers with blotter paper where possible
- With smooth feathers brush parallel to the barbs
Also useful for dry cleaning:

- Microfiber cloths—50% nylon and 50% polyester, these soft cloths are exceptionally good at trapping dirt particles!
- These are commercially available as cleaning clothes, blankets, etc.
- Wash before using on collections, and wash when soiled
- Use dry instead of netting over vacuum cleaner nozzle
Dry cleaning

Can also be performed with pharmacy-available Latex-free cosmetic sponges

- Sponges can be trimmed and used to clean in the direction of feather barbs
- Discard when soiled
Dirt removal requiring more than dry cleaning should be brought to a conservator.

Using water or solvents on feathers requires that you know:

• Is feather coloration natural, dyed, or painted?
• Which solutions best remove present soiling?
A conservation intern at the Oxford University Natural History Museum removes tenacious soiling from a Secretary Bird using a mixture of water and ethanol.

Courtesy Oxford University Natural History Museum
Images taken from a conservation cleaning of soot damaged downy feathers on an important Plains Indian war bonnet. Left, during cleaning, and right, showing soiled cotton cosmetic pads after solvent cleaning. Courtesy AncientArtways.com
Insect damage, typically visible as missing parallel sections of barbs, surface grazing, and frass particles, are often the result of webbing clothes moths or varied carpet beetles.
Classes of materials susceptible to pest damage include protein-containing substances; i.e. quill, feather, wool, silk, hair, fur, baleen, horn, claw, binders and adhesives based on animal glues, blood.
Different forms of insect damage on feathers
Where active pests are suspected:

- Featherwork should be enclosed in two layers of well-sealed polyethylene bags with date labelled on exterior.
- Continued checking for insect activity monthly is crucial.
- Active pests should be monitored through implementation of an Integrated Pest Management Program.
- Featherwork with active pests are candidates for freezing or anoxia treatments.
There are methods available to conservators for the repair and reconstruction of broken feathers and missing sections! The choice of materials and methods depends upon cultural sensitivity and presentation goals.

Relaxing feather damage is performed with applying warm cotton compresses or mist, and splints are adhered to repair breaks and bends.
Damage from light and ultraviolet energy

Protection from excess light and ultraviolet energy is possible for all collections!

• Unfiltered light from windows has been proven to be damaging!

• All featherwork should be stored and displayed with UV filtration.
Safe storage for featherwork collections:

Most important for featherwork is that it is stored well supported and under conditions that exclude light and UV:

Good materials include:

- Acid-free tissue
- Acid-free boxes
- Tyvek (spun bonded polyethylene found in mailing envelopes and building insulation)
- Ethafoam and Volara (carveable expanded polyethylene foams)
Collection images courtesy NMNH top, top right, and Yurok Nation right
Courtesy of NMNH
Amazonian feather headdresses, housed and stored in cabinets to protect them from dust and light.
Courtesy Southwest Museum, left, Victoria & Albert, center, Boston MFA, right
Thanks!
epearl@ucla.edu