Dyeing, Curling, and Conservation Hairspray: Reproduction of Pink Ostrich Feathers on an Ann Lowe Gown

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Introduction

Knowledge from theater costume, fishing, millinery, and couture fashion communities was utilized to develop a treatment for restoring the original design intent of a 1960s pink silk faille dress designed by American designer **Ann Lowe**, a highly sought after African American designer of the 20th century. During her professional career, which started in the mid 1910s and continued through to the 1960s, Lowe specialized in women's formal wear. This project was atypical for textile conservation treatment, however fashion objects frequently present new challenges and materials that require learning in action.

Treatment Rationale

The original pink ostrich feathers had become **fragile**, brittle, and flat over time (Images 2, 5). Even with careful handling, pieces of the barbules would easily detach. This was likely due to aging of organic materials and storage conditions. Treatment of each of the feathers would have been prohibitively time consuming with minimal visual effect. In one existing photo of the dress (Image 1) from 1965, the profile of the feathers were originally very full and rounded. New curled feathers could honor the original artistic liveliness and **intent** of Ann Lowe's design.

The Feathers

Known as **plumulaceous** feathers, ostrich plume feathers lack interlocking barbules, making them very lightweight and airy. White ostrich feathers were purchased from a specialized feather supplier in New York City who supplies feathers for Broadway and the fashion industry.

Feather Dyeing

- Feathers soaked in a .01% bath of Orvus® WA paste at 40 ℃ for 30 minutes, gently circulated, rinsed, and towel-pressed.
  - **Cleaning** the feathers removes naturally occurring dust, dirt, and oils from the feathers which may prevent the dye from being evenly absorbed.
- **Dye solution:** Red G (50%), Yellow 4G (40%), and Blue 2R (10%) Lanaset® 1:2 metal complex dye solution based on weight of feathers + 5% acetic acid at ratio of 40 mL/gallon.
  - **Acid dyes**, typically used by textile conservators for dyeing proteinaceous fibers, were most suitable for coloring proteinaceous ostrich feathers.
  - Five feathers were dyed per 1 gallon of deionised water. This allowed for sufficient volume for the feathers to circulate undamaged.
- Feathers soaked in dye bath for 15 minutes at 70 ℃ with gentle circulation.
  - Shorter soaking tests resulted in lower depths of shade.
- The "cooking" stage was stopped by putting the feathers in cool water, followed by rinsing, towel-pressing, and blow drying with a **hair dryer**.

Feather Curling

- Feathers were trimmed to same size as originals, six inches in width.
- The feather spine was curled by first using **steam** to soften the spine and then a **dull knife** to make small crimps along the length of the spine, closer together near the tip.
- The front and back feather barbs were sprayed with a diluted **Aquazol® "conservation hairspray"** (1.5% in isopropyl alcohol), an adhesive not commonly used in textile conservation.
  - A **nebulizer** was used to the create the small particles so as not to over-moisten the barbs (Images 7, 8).
- The barbs of the feathers were next curled with a ¼ inch barrel **hair curler**, holding for up to 30 second at each segment (Image 9).
  - After 24 hours, the feathers unfurled slightly and some segments needed to be re-curled.

Reattaching the Feathers

- The feathers were reattached by tucking the top half underneath the original silk bows (Image 5).
- Feathers that needed to hang at an angle were stabilized with an additional magnet at the tip.
  - A small rectangular **magnet** was covered in silk habotai and stuck to the feather's spine with double-sided tape, with the complimentary magnet placed behind the dress fabric.

Image 4. Various stages of the feathers.

Image 5. An original feather, flat and fragile, held underneath a silk bow.

Image 6. Trialing the dyeing process with feather offcuts.

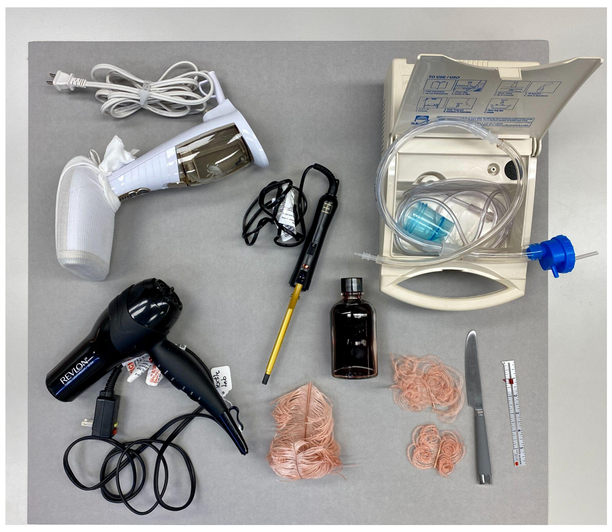

Image 7. The many tools and materials used for reproducing the pink feathers.

—Journal Photo in New York by James N. Meyer

Image 1. Ann Low's feather dress, worn in 1965 for a fashion show reported in the Milwaukee Journal.

Image 2. Before treatment, 2022. Photographed by Jim Shneck © Winterthur Museum.

Image 3. Profile of the feather dress on display at Winterthur Museum in 2023, with reproduced feathers.

Image 8. Spraying the feather barbules with the nebulizer.

Image 9. Curling the barbules with the curling iron.

Bibliography and Further Reading:

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