Lending a Helping Hand
The PRM Conservator’s Role in the Blackfoot Shirts Project

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I have worked at the Pitt Rivers Museum as an ethnographic conservator since 2001. In 2000, as an Andrew W. Mellon fellow at the Smithsonian’s National Museum of the American Indian (NMAI), I conserved five hide shirts for the exhibition Beauty, Honor, and Tradition: The Legacy of Plains Indian Shirts (Horse Capture and Horse Capture 2001). This experience trained me in the idea of conservators collaborating with originating communities and acting as caretakers of their material culture.

In the early stages of the Blackfoot Shirts Project, Laura Peers and I had an in-depth look at each shirt, on the basis of which I prepared condition reports and treatment plans. The actual work of conservation was shared between the three PRM conservators: Kate Jackson, Jeremy Uden, and myself.

All five shirts presented similar signs of wear and tear. Having been displayed in Edward Hopkins’s homes before entering the museum, they were soiled with coal soot and had nail and tack holes from display. The trailing sections of thin hide had grown very brittle and torn, while, at the neck openings, damage to the seams and tears to the hide had occurred. The quillwork had been damaged by insects, abrasion, and temperature and humidity change, which had caused quills to break, pop up, or be lost altogether.

All of the shirts show evidence of past repairs. Some of these repairs are beautifully executed, using fine sinew thread, and are believed to have been made by the Blackfoot themselves prior to Hopkins’s acquisition of the shirts. Others had been very poorly executed using rough cotton stitches. These perhaps were carried out in the PRM, before conservation records began in 1973.

Before the conservation team began any physical treatment, we met with ceremonial leader Allan Pard and his wife, Charlene Wolfe, in Oxford. We demonstrated the method of strengthening and stabilizing the damaged hide areas using a heat-activated adhesive and how we hoped to remove the soot using smoke sponges. We discussed the different types of repairs on the shirts
Figure 41. Damaged quills on rosette, shirt with replaced quillwork (1893.674). Image courtesy of Pitt Rivers Museum, University of Oxford.
FIGURE 42. Cleaning soot from rosette on shirt with layers of paint (1893.67.2), showing cleaned and uncleaned sections. Image courtesy of Pitt Rivers Museum, University of Oxford.
and when they might have been made, plus the seams in the sleeves of the three sacred shirts, which seemed uncharacteristic for shirts of this period. Allan blessed and painted the project team to protect them while they were working on the sacred shirts. Female staff members also voluntarily agreed not to handle the sacred shirts while they were menstruating. We were aware that this observance might delay the preparation of the shirts, but the decision was one of ethics.

The cleaning of each shirt with smoke sponges to remove the soot was very time consuming. We had to moisten each sponge lightly by breathing on it and then roll it gently across the hide to pick up the soot without damaging the hide. It took about a week’s full-time work just to clean each one of the five shirts. The decision to remove the soot went beyond our usual approach of leaving all traces of former use on an object, but the soot was disfiguring and easily transferred during handling. Removing it was considered appropriate given the nature of the project. The shirts had been away from Blackfoot territory for 170 years and Blackfoot advisers and the conservation team unanimously felt it was disrespectful to return sacred objects covered with black soot. One area inside the shirt for formal occasions (1893.673) was left uncleaned to document the original condition of the shirts. It took one conservator about 146 hours to clean, stabilize, and prepare this shirt for shipping, handling during study workshops, and display.

No pigments or staining from use were removed during this cleaning process; all of the red ochre paint first noticed by Frank Weasel Head and Andy Blackwater during their 2004 visit still remains on the shirts.

We also needed to stabilize vulnerable areas of hide and quillwork to withstand the transportation to Canada, the handling sessions and the manipulation required to display the shirts on torso mounts for the two exhibitions. Tears or holes in the hide were backed for support by applying Reemay (a spunbonded polyester fabric). This was colour-matched to the hide using powdered pigments in an acrylic medium. The coloured material was then attached to a film of heat-activated adhesive using a heated spatula. All work is easily reversible when heat is reapplied. As well, areas of the hide distorted by old tack holes were humidified before being gently manipulated to ease out the distortion as much as possible. Broken and bent quills were also eased back into place and attached to
other quills where possible with tiny amounts of conservation adhesive so they
would not be further damaged by handling. Quillwork was cleaned using dis-
tilled water on cotton wool swabs. The swabs were barely wetted, and then rolled
over the quill to lift the soot. The hairlocks were also cleaned using dampened
tissue that was gently eased through the hair to remove the soot. Other than
cleaning, no conservation work was carried out for aesthetic reasons, although
some gap-filling of missing hide or quills was carried out for structural reasons.

During the conservation period, discussions were ongoing between Laura,
Alison, and me about how the handling sessions would actually work. At the Pitt
Rivers Museum we work with a wide range of source community members and
local audiences. We tailor handling to each group: overall it is minimized, but
those who really need to pick things up to learn from them can do so.

We normally require researchers to wear gloves during handling, and
this issue was discussed at length. There are two reasons why gloves are worn
for handling: one is to protect the objects from acidic skin oils and the dirt and
insects they can attract; the other is to protect people from the residues of pesti-
cides, including arsenic and mercury, that were used historically by museums to
prevent collections being destroyed by insects. With an old collection, the chance
of pesticide residues remaining on objects is high, and these are poisons that
enter the body through skin contact. We performed some spot tests for arsenic
in the conservation lab and also borrowed a portable XRF unit—an X-ray fluores-
cence spectrometer, a tool for determining the inorganic elemental composition
of materials—to analyze each shirt for traces of heavy metal pesticide residues.
Fortunately, the tests showed very low levels of arsenic, mercury, lead, and bro-
mel. We considered the risk of damage to the shirts from skin oil and felt that
it was outweighed by the benefits to Blackfoot people of being able to touch the
shirts directly. We therefore made the decision that Blackfoot people, as well
as ourselves, could handle the shirts without gloves if they washed their hands
before and after doing so, although we did have gloves available for those who
preferred to wear them. We also agreed to monitor the shirts during the hand-
ling sessions and to watch for any signs of damage.

During the conservation period, I traced the shirt with painted war hon-
ours, and made a dressmaker’s pattern from Tyvek (a spunbonded high-density
polyethylene fabric with many uses in construction and museums) with seam-
ing instructions. This was used by Sylvia Weasel Head to make a replica shirt in polysuede (a synthetic material resembling hide in texture) that could be tried on in the handling sessions (Sylvia and her husband, Frank, also made a replica from elk hide that was used in the sessions). Laura’s students at the University of Oxford made further copies of this pattern to send to Blackfoot seamstresses and community colleges.

We asked leather conservator Yvette Fletcher to attempt microscopic analysis of the hides to determine what animals the shirts were made from. The results were not conclusive, as traditional tanning methods largely destroy the follicle patterns used for identification. The easiest to identify with certainty was the unadorned shirt (1893.67.5), as the poor quality of the tanning meant that some of the follicle pattern of the deer remained. The size of the hides was also taken into consideration, along with the type of hair found occasionally on the fringe edges. The identification of the hides subsequently provoked considerable discussion during the handling sessions.

The “warrior” shirt (1893.67.1) has painted motifs on both sides showing the owner’s war deeds. To make the motifs clearer, work placement student Samantha Jenkins digitally enhanced detailed photographs (see figs. 17 and 18). These images proved invaluable during the handling sessions, particularly for participants with failing eyesight.

Detailed work with the shirts allowed the conservators to learn many things that were not immediately obvious. Where the quill wrappings had been partially lost around the top of the hairlocks, a binding material that appeared to be a membrane could be seen (see fig. 29). Its purpose was to hold the clump of hairs securely to the hide thong, which then passed through the body of the shirt to be knotted on the inside. It is presumed that the membrane was applied while moist and flexible, and would then contract as it dried to form a tight binding and base for the quill wrapping. Workshop participants later suggested that this membrane might be pericardium, from the heart, or possibly veins.

We also noted that some of the “quillwork” was in fact a brown plant fibre in place of porcupine quills (see figs. 25 and 26). The use of the plant fibre was inconsistent and was used interchangeably with dyed brown quills on the same
panel. Both findings proved interesting discussion topics during the handling sessions. After the shirts were returned to Oxford, Laura and I decided to ask for permission from the museum’s director to remove small samples of this material for identification. These were sent to the curator of the University of Oxford herbaria, Stephen Harris, who identified them in his lab as being from the bulrush (*Typha latifolia*).

Despite many hundreds of hours of remedial conservation, there was still concern over the fragility of the shirts. Under normal loan circumstances, as the PRM’s head conservator, I would have withdrawn the shirt with the finest quill-work (1893.67.4) from the loan owing to the brittleness of the hide fringes and trailers, but because we wanted Blackfoot quillworkers to see it, we agreed that it could travel. As part of the decision-making involved in rotating the shirts across the sessions to spread the wear on them it was decided to bring it out only for quillworkers and other artists.

Extensive condition reports were prepared using digitally annotated photographs with acetate overlays to mark any changes in the shirts’ condition using coloured permanent markers. Shirts were checked against these images when first unpacked, at the end of the handling sessions when we were preparing for exhibition, and at the end of the loan when repacking the shirts to return to Oxford: this is normal practice for museum loans, so that we can tell whether fragile objects are being subjected to too much stress. We also had the images on a laptop to zoom in on details for clarification during the handling sessions.

For the journey to Canada the shirts travelled in a packing crate with five drawers. Each drawer was lined with plastazote, an inert polyethylene foam suitable for cushioning objects. Two wooden dowels covered with Tyvek anchored the shirt within the drawer: one dowel through the sleeves to keep the quillwork flat and the other to anchor the mid-way point of the body of the shirt. The shirts were further supported in the drawers using Tyvek cushions filled with polystyrene beads and Tyvek duvets containing polyester wadding, which cushioned the shirts for transport. The density of the packing materials provided some buffering for the shirts against the temperature and humidity fluctuations in the aircraft hold during the nine hour flight from London to Calgary.
Figure 43. Digitally annotated condition report, back of shirt with replaced quillwork (1893.67.4). Image courtesy of Pitt Rivers Museum, University of Oxford.
Customs issues are important for all artifacts crossing international borders, but the sacred and culturally sensitive nature of the shirts heightens the issue. We had agreed not to handle the shirts when menstruating, and we wanted to avoid breaches of protocol when shipping. We therefore undertook training to gain Known Consignor Status, a procedure in the UK that enabled us to pack the crate under secure conditions and seal the closed crate with individually numbered seals. Following this procedure meant the crate would not be opened by customs inspectors at the airport prior to departure. At the end of the project two Canadian customs officers visited the Galt Museum to inspect the crate, and to witness the shirts being packed and the crate being closed.

It was always anticipated that some remedial conservation would be required while the shirts were in Canada, and this proved to be the case with the shirt with replaced quillwork (1893.67.4) in particular, which was the only shirt to sustain any damage in transit: one small fringe became detached. Minor damage (such as “popped” quills) was inevitable during the handling sessions and while mounting the shirts for display, but this was not considered to be evidence of bad handling or poor conservation work. From the early stages of the project I had worked with the conservator at the Glenbow Museum, Heather Dumka. Heather kindly put together a kit of conservation materials I would need to make repairs so they did not need to be brought from the UK.

It was richly rewarding for me to work on the project; it was the embodiment of the reason I trained as an ethnographic conservator. Although working with an originating community was not new to me, having worked at the NMAI and previously at the Royal British Columbia Museum in Victoria, it was good to be able to work in this way outside of North America. Working on the remedial conservation of the shirts in Oxford was a privilege; as was being able to use some of my existing knowledge of working with this type of material and share it with my colleagues Kate Jackson and Jeremy Uden. All three of us had worked with originating communities before, but this was different in that Allan and Charlene came to our conservation lab and were generous with their knowledge and guidance. All three conservators chose to work with ethnographic material for the intangible elements they embody as well as the tangible nature of the materials, so hearing Allan talk about these shirts reinforced for us their importance.
Figure 44. Shirt in crate drawer. Photograph by Heather Richardson.
Figure 45. Shirts crate in transit. Photograph by Heather Richardson.
While the preparation work in the UK was a good experience for all of us, it was important for me to travel with the shirts to Canada for the handling sessions and exhibitions. By travelling with the shirts and helping facilitate the handling I had the opportunity to present the work of an ethnographic conservator, and to be the face of those caring for important pieces of Blackfoot heritage located in another country. Speaking to one of the Blackfoot people involved with the project I learned that although she had been to many museums to study historic Blackfoot material, she had never met a conservator and had negative ideas about their work. I hope that my involvement in the project and that of the other conservators will have helped to dispel these ideas and to enable originating communities to view conservators in a more positive light.