It is with great pleasure that we publish the first Newsletter under our new name ‘Objects from Indigenous and World Cultures Working Group!’

It was a long journey to get here, and we are very grateful to the support and tireless engagement of our membership. As you will remember, the ICOM-CC Working Group formerly known as ‘Ethnographic Collections’ conducted a lengthy consultation (2008-2011) with its members in order to assess whether the group’s name should be changed, and if so, what this name should be. The actual name reflects this consultation. It took a long time to find a common vision with the ICOM-CC Directory Board; however with the board’s renewal in 2014 and the continuous commitment of the group’s members to this issue, things started to evolve. During the 2015 Directory Board and Coordinators meetings in Paris, the topic was discussed and voted on 17 March 2015. We were delighted when it was approved with unanimous support from both the new Directory Board members and Working Group coordinators!

We apologise for the slight delay to publish this Newsletter. This was because we needed to apply for a new ISSN, which we will receive when we issue our second Newsletter under the new name.

Facebook and Linkedin Pages
Another exciting development of our WG is the creation of our Facebook Page (https://www.facebook.com/ObjectsfromIndigenousandWorldCultures/?ref=bookmarks) currently with around 650 ‘likes’ and an associated Linkedin Group (http://www.linkedin.com/groups/8280028). Please join us there as well!

New Team
Last but not least, here are the details of our new team. Please help me welcome our Assistant Coordinators (ACOs) Ana Carolina Delgado Vieira, Catherine Smith and Sabine Cotte.
Working Group Activities and Projects 2014–2017:
Here are the points we discussed during our Business Meeting in Melbourne September 2014.

• Discussions with the membership and Directory Board to decide the name-change proposal.
• Publication of annual issues of the Working Group Newsletter.
• Follow up on research of biocides in collections and update the Working Group’s Biocides webpage.
• Partnerships to build capacities in places without formal conservation training (possible partners being discussed).

Specific themes of research /investigations
The Working Group will investigate, research, and report on the following areas of interest. Many of the items may be explored concurrently.

A. Materials science, deterioration and conservation
• Investigation/technical study of objects, object materials and production methods
• Deterioration of materials found in objects
• Conservation case studies
• Exhibition and display methods

B. Ethics, values and decision-making
• Decision-making processes and preservation rationales
• Collaborations with diverse interest groups and assessments of their impact in conservation decision-making
• Reviews of historic practices in the preservation of ethnographic
collections
• Socio-political responsibilities, including continuing developments within international indigenous rights forums e.g. 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
• Local systems of knowledge and their roles in conservation

FEATURE ARTICLE

UPDATE ON PEPTIDE MASS FINGERPRINTING FOR IDENTIFICATION OF SKIN, SINEW AND INNER MEMBRANES: NCPTT GRANT PROJECT AT THE PEABODY MUSEUM OF ARCHAEOLOGY AND ETHNOLOGY, HARVARD UNIVERSITY, CAMBRIDGE, MA, USA

By Daniel P. Kirby, Madeline Corona, Ellen Promise, T. Rose Holdcraft, Judy Jungels, and Sunia Trauger

Introduction
This article provides an update on research funded under a 2013 National Center for Preservation Technology and Training (NCPTT) grant, which was implemented during 2014 and finalized in 2015. The project focused on the expanded use of peptide mass fingerprinting (PMF) for the identification of mammalian materials in cultural objects and was an outgrowth of an ongoing collaboration (2003-2012) between the Peabody Museum and Alutiiq consultants from Kodiak, Alaska.

PMF was used to survey a selection of late-18th – early-20th century hide, skin, inner membrane and gut-constructed objects from the Harvard Peabody Museum’s collection; two archaeological samples (800 BC – AD 400) from the Peabody Museum; and approximately 200 reference samples obtained from several different collections. In selecting samples, the project’s focus was primarily on the skin components of objects of Native peoples from coastal Alaska, the Northwest Coast, and the High Plains.

Peptide Mass Fingerprinting
PMF uses enzymatic digestion of extracted collagen to cleave the protein at specific amino acid sites forming a peptide mixture. Each protein amino acid sequence is unique, thus the mixture of peptides is unique. Matrix Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry (MALDI)\(^1\) is used to analyze the mixture resulting in a mass spectrum containing characteristic marker peptides: a “peptide mass fingerprint.” Marker peptides are compared with those from known materials to determine the species from which they were derived. Since few mammalian collagen sequences are known, species identification by PMF requires a reference database. Buckley, et al\(^2\), have developed such a database for land and sea mammals, which uses multiple peptide markers as the basis of an identification scheme. In this work, both published markers\(^3,4,5\) and visual comparison with spectra from reference materials were used as the basis for identification.

Analyzed Samples
In total, 449 samples from 111 objects were analyzed, and only 38 samples (8.5%) were not identified (Table 1).

Overall Sample Analyses
• 89% identified to at least the family level; many to genus and species level.
• 8.5% not identified and most likely fish or bird, which are not in this database.
• 1.6% had NUSO (No Useable Spectrum Observed).
1% was not identified exactly because of sample/spectra quality (deer/sheep/goat or eared seal/walrus).

30 different mammalian sources were identified either exactly or to within a limited group, such as phocini seals within the family of earless seals.

19 samples (4.2%) were identified to at least family level by using new, provisional markers discovered in this project.

2 sets of archaeological skin fragments were identified.

**Sea and Land Mammals**

Of the 404 samples identified as sea or land mammals:

- 59% were sea mammals and 41% were land mammals, reflecting the focus on coastal areas for the sampled objects.
- Of the sea mammals, 78% were seals and 22% were walrus and cetaceans.
- Of the seals, 57% were earless or true seals (phocini or bearded) and 43% were eared seals (Steller sea lions or northern fur seals).
- Among the land mammals, 46% were caribou with the remaining 54% spread out over 11 different mammals.
- Caribou was very frequently used as a source of sinew.

**Project Outcomes**

The application of PMF to the study of collagen-based materials in the Peabody Museum’s collection was successfully demonstrated. The project’s focus was on skin-constructed objects from Alaskan coastal areas, the Northwest Coast, and the High Plains, but the focus could equally well have been on other geographical areas as the method would have been the same. The results of this study are being used to reach a more complete understanding of the many objects that were sampled, to corroborate and expand traditional knowledge, and to update existing, often limited museum documentation. This is the first time that PMF has been used in a large-scale survey of materials in any museum collection.

Significantly, over the course of the work, multiple researchers, most of whom were initially inexperienced with the technique, performed analyses independently and successfully after only a few days of instruction. Typically, samples were analyzed in batches of up to 25, and results were available in two to three days. Quick turnaround time for large numbers of samples opens up the possibility of extensive, collaborative studies of objects of similar type and provenance across collections in different institutions.

An important part of this project was the analysis of approximately 200 new reference materials and the discovery of provisional markers for several new mammalian families, which were immediately useful for data interpretation.

In the project’s final months, representatives of the Pueblo of Zuni, during the course of a tribal consultation, requested assistance with materials identification for a bow and arrows with sinew in the Peabody Museum’s collection. They asked that analysis be undertaken to determine whether the sinew was from deer or pronghorn antelope. PMF identified North American deer as the source of the sinew, an important piece of information to the representatives from the Pueblo toward their cultural understanding of these early-20th century objects. This outcome clearly
illustrates the significant value of PMF as a tool for material studies whether used alone or, more importantly, when used in concert with other techniques to provide a clear, accurate picture of material cultural heritage.

By far, however, the most important outcome of this project is the raising of an awareness of the potential of this relatively simple technique to curators, conservators, and cultural stakeholders through the wide dissemination of our results. Our goal is that museum professionals and cultural specialists see PMF as a powerful, stand-alone method in addition to being an excellent supplement to existing methods used for materials studies. This is an especially important consideration for historic materials, such as gut and tendon, which are generally difficult to assess with visual/tactile techniques, and archaeological materials, which may have lost all identifiable features.

<table>
<thead>
<tr>
<th>Identification</th>
<th># Samples</th>
<th>% Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eared seal</td>
<td>81</td>
<td>18.0</td>
</tr>
<tr>
<td>Caribou</td>
<td>76</td>
<td>16.9</td>
</tr>
<tr>
<td>Phocini Seal</td>
<td>42</td>
<td>9.4</td>
</tr>
<tr>
<td>Cetacean</td>
<td>40</td>
<td>8.9</td>
</tr>
<tr>
<td>Ringed seal</td>
<td>40</td>
<td>8.9</td>
</tr>
<tr>
<td>Unidentified</td>
<td>38</td>
<td>8.5</td>
</tr>
<tr>
<td>Bearded seal</td>
<td>24</td>
<td>5.3</td>
</tr>
<tr>
<td>Cattle/bison</td>
<td>22</td>
<td>4.9</td>
</tr>
<tr>
<td>North American Deer</td>
<td>17</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Bear</td>
<td>11</td>
<td>2.4</td>
</tr>
<tr>
<td>Walrus</td>
<td>11</td>
<td>2.4</td>
</tr>
<tr>
<td>Mustelidae</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Sciuridae</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Canine</td>
<td>8</td>
<td>1.8</td>
</tr>
<tr>
<td>NUSO</td>
<td>7</td>
<td>1.6</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>449</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1 Summary of samples identified from objects.

Unidentified: PMF spectrum obtained but did not match any reference in the database (probably fish or bird). NUSO: No Useable Spectrum Observed, digest was unsuccessful for unknown reasons. Other includes the following samples: Deer/sheep/goat, not determined exactly (3); elk (3); sheep (3); eared seal/walrus, not determined exactly (2); goat (2); muskrat (1).

Two case studies
The identification of collagen-based components in 111 objects from the Peabody Museum has significantly enhanced the collection records for these objects. Little documented information about material origins had previously been available. The following case studies illustrate the unique capabilities of PMF for obtaining accurate material information quickly and reliably in a museum or university laboratory.

Woman’s embroidered sewing bag
Figure 1 Woman’s embroidered sewing bag showing sampling locations. Dimensions 44.5 x 22.6 x 0.8 cm. Gift of Dr. William McM. Woodworth ©2015 President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 11-2-10/83860 (digital file# 75720080)

Background
A coastal Alutiiq/Sugpiag skin sewer created this intricately decorated late-19th century kakiwik. It was donated to the Peabody Museum in 1911 by Dr. William McM. Woodworth (Harvard Class of 1889), who had earlier collected it on Woody Island (Tangirnaq) located about three miles east of Kodiak Island, Alaska. The kakiwik is constructed of skin and esophagus and sewn with sinew. Alutiiq consultants to the Peabody in 2012 informed us that it was most likely made of wiinaq, or sea lion (an eared seal). The bag is constructed with a rounded upper flap and two separate front pieces positioned thus to function as two distinct pouches. Four stitched sections of unpainted skin form the rear side of the bag. The face side features painted strips appliquéd and embroidered with various materials including caribou hair. The long braided cord at the top is constructed of either sinew or twisted gut. This cord was used to hold and tie the bag in a rolled up state for compact storage and for keeping the inside contents secure.

PMF results
The main body of this woman’s sewing bag (D) is eared seal; the top edge of the closure (B) is phocini seal; the sinew stitching and strap (A) is blue whale; and the black painted skin on the inside of the closure (E) is caribou. Two red-painted elements, the inner red band of the edge binding (B) and the bright red skin around the black horizontal stripes (F), are different, unknown materials that are likely not mammalian but possibly avian or fish.
Figure 2 PMF from the woman’s embroidered sewing bag, location D: eared seal.

The figure above is the PMF from the main body material of the woman’s embroidered sewing bag (location D) and identifies that material as otariidae, the so-called eared seals. Steller sea lions and northern fur seals represent eared seals in the database, and these are not distinguishable by PMF.
Background
The child’s waterproof garment is described in the museum object record as a “coat, intestine, small, red and blue yarn trim, and hairs at seams” and perhaps of Caribou Eskimo origin. The parka is made from strips of tan translucent mammalian intestine, sewn together using sinew. Alutiiq skin sewer Susan Malutin pointed out during an on-site consultation that the stitch is a lace stitch and that the seams are folded in a particular way for waterproofing. Women from different regions in Alaska have specific ways of constructing the seams, making provenance identification possible. Blue and red wool yarns, as well as human hair, were stitched into the seams of this small parka for the purpose of wicking away water. For dance and other ceremonial gutskin garments, there was often elaborate fur and bird skin embellishments.

PMF results
The main gut material (A) is bear and the sinew (B) is caribou.

Figure 3 Child’s waterproof garment showing sampling locations. Gift of Dr. William McM. Woodworth ©2015 President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 08-8-10/73025.1 (digital file# 75720082).
Figure 4 PMF from the garment’s main gut material, location A: bear.

Figure 5 PMF from the garment’s sinew, location B: caribou.

The work described in this update was supported by a grant from the National Center for Preservation Technology and Training (NCPTT Grant No. P13AP00078). Its contents are solely the responsibility of the authors and do not necessarily represent the official position or policies of the National Park Service or the National Center for Preservation Technology and Training. The authors and project team are most appreciative and grateful for the support of numerous colleagues and cultural institutions through their ongoing assistance, technical advice and/or access to
reference specimen samples for the project’s planning and implementation. We extend our sincere appreciation to our Alutiiq colleagues: Susan Malutin, Alfred Naumoff and Sven Haakanson. We are equally grateful for partial funding from the Institute of Museum and Library Services in 2010 when an initial pilot project using PMF was initiated.


References:
6. On-site verbal consultation with Alutiiq skin sewer Susan Malutin (March 2012).

**QUILL WORKSHOP**

**Quill Workshop 2016 at the German Leather Museum Offenbach**

Manufacturing techniques and conservation of porcupine quill embroidery
A meeting of the German Association of Conservators-Restorers (Verband der Restauratoren e.V.) in cooperation with the German Leather Museum in Offenbach (Germany) Authors: Nancy Fonicello and Diana Gabler

The three-day workshop with the speaker Nancy Fonicello gives an insight into the techniques of porcupine quill decorations of Native Americans. The workshop’s focus lies on the study of manufacturing details and the reworking of the techniques with the original materials as well as considering the main conservation issues and questions. It will take place from 14th to 16th April 2016 at the German Leather Museum Offenbach. This workshop is an extended repetition of the VDR Quill Workshops 2014 in Berlin

Long before glass beads from Europe were exported to America, a large number of natural materials were used for the production of traditional commodities. Particularly in North America up to the Arctic porcupine quills from the North American porcupine (*Erethizon dorsatum*) were processed among other things to elaborate ornaments. Different techniques can be found on clothing, bags, belts or shoes, such as

![Fig. 1 porcupine quill wrapping](Image)

*Photo: Diana Gabler*
simple wrappings of flattened and dyed quills or embroidery on leather or birch bark.

The focus of the workshop lies on the reworking of the basic quillwork embroidery techniques with dyed porcupine quills and brain tanned leather that many conservators are likely to encounter in working with Native American collections. To develop a deeper understanding of the typical decorations of Native American artifacts, the techniques of porcupine quill embroideries are reconstructed on the basis of original objects from the collection of the German Leather Museum Offenbach. Degradation symptoms and damage causes will be considered in more detail and approaches to conservation treatments will be discussed with the participants.

Nancy Fonicello is a private practice objects conservator, specializing in Native American ethnographic material. With her widely known expertise in the traditional techniques of porcupine quillwork she lectured seminars at the Anchorage Museum (Alaska, USA) in 2013 and at the Ethnological Museum Berlin (Germany) in 2014.

**Date:** 14\textsuperscript{th} - 16\textsuperscript{th} April 2016

**Venue:** German Leather Museum in Offenbach (Germany)

**Workshop language:** English

**Participation and Registration:**

The number of participants is limited. For the realization of the workshop an early registration is urgently needed.

E-Mail registration:

**VDR_Quillworkshop2016@mail.de**

**Registration Fees:**

- 365 € reduced fee for members of the German Association of Conservators-Restorers (VDR members)
- 440 € regular fee (non-members)
- 320 € students / interns (VDR members)
- 340 € students / interns (non-members)

**Contact:**

**VDR_Quillworkshop2016@mail.de**
Skin Costumes Online
Anne Lisbeth Schmidt, Conservator, M.Sc., National Museum of Denmark, Conservation and Natural Sciences, I.C. Modewegsvej, DK-2800 Kgs. Lyngby, email: anne.lisbeth.schmidt@natmus.dk

In October 2014 The Danish National Museum, in collaboration with the National Museum of Greenland and the Museum of Cultural History, Oslo, published the website Skin Costumes Online at http://skinddragter.natmus.dk/.

Skin Costumes Online shows high-resolution photos and detailed information of outstanding and historic skin costumes from the indigenous peoples in Greenland, North America, North Scandinavia and Siberia.

Indigenous people and researchers, among others, are now given easy access to this rich cultural heritage, which is normally hidden in museums' storage. By means of the new digital platform rare and fragile items of clothing which are not present in one museum might be identified and studied through the internet. The physical distribution of items and their preservation state will thus have minor importance.

Museums with similar collections, small or large, are hereby kindly invited to join the website and the scientific database behind. The database can be easily accessed by an interface program. Please contact anne.lisbeth.schmidt@natmus.dk for further information.

The project was supported by The Nordic Culture Fund, Augustinus Fonden, Knud Rasmussen Fonden and the National Museum of Denmark through the research program Northern Worlds 2009-2013.

The website is further described in the following literature


2013, Anne Lisbeth Schmidt, “Skin Clothing from the North: Research, Documentation and Preventive Conservation”, in POSTPRINTS of the 10th Interim Meeting of the ICOM-CC Leather and Related Materials
CONFERENCES AND WORKSHOPS

The 18th Triennial Conference will be held in Copenhagen, Denmark from 4-8 September 2017. The Conference theme is "Linking Past and Future".

In close collaboration with the ICOM-CC Directory Board, the Danish National Organizing Committee and its Danish partners will develop an appealing plenary programme as well as a full social programme.

The deadline for the call for papers is April 15, 2016

ICOM-CC is inviting contributions for the 18th Triennial Conference. This two-phase process consists of a call for abstracts of prospective papers, followed by an invitation to submit full papers for publication. A call for posters will be issued separately at a later date. Authors wishing to present papers should complete the abstract template provided. Please refer to the selection criteria for guidance. Contributions from ICOM members and non-members are welcome.

ICOM-CC Triennial Conference presents an overview of the current state of conservation research and practice. Papers that address the aims and programs of the ICOM-CC Working Groups are encouraged. For information about the Working Groups, please consult the ICOM-CC website: www.icom-cc.org

Work submitted must be original and must not have been published or presented elsewhere or be under consideration by another publication. At least one author of each selected paper must attend the conference to present and discuss the work. All contributions must be submitted and delivered in English.

Contributions will be evaluated and graded by the relevant Working Group coordinator and a peer reviewer assigned to that group. A Selection Committee (composed of current and past Directory Board members plus the Managing Editor) will review the grades and make a provisional selection of authors who will be invited to submit full papers. Full papers and poster abstracts will undergo this same review process. The final choice of contributions will be made by the Selection Committee.
Key Dates (Phase One):

- **1 April 2016**: Conference website available for uploading of abstracts
- **15 April 2016**: Deadline for submission of abstracts
- **13 – 15 July 2016**: Selection Committee meets
- **Late July**: Authors informed of results
- **18 November 2016**: Deadline for submission of papers and poster abstracts

GET TO KNOW YOUR WORKING GROUP

**Dr Renata F. Peters**

Dr. Renata F. Peters is a lecturer in conservation at the Institute of Archaeology, University College London. She has worked in South and North America, Europe and Africa. Currently, she is working on a project about the Tupinambá of Olivença (Brazil). She is also involved in a large archaeological conservation project in Olduvai Gorge (Tanzania) where she engages with local Maasai women through the practice of beadworking. You can see more about her work here: [http://www.ucl.ac.uk/archaeology/people/staff/peters](http://www.ucl.ac.uk/archaeology/people/staff/peters)

FROM THE EDITORS

We’d like to thank all of those who contributed to the Newsletter, and for your understanding of the delay. We’d also like to invite all members to contribute to the newsletter, and ask that any submissions be made in word document format without any embedded footnotes or images – please provide figures and tables as referred to in text listed and numbered in a separate document. We’ve introduced a new section to introduce members of your working group – we hope you all enjoy seeing a picture and some information about Renata’s work, and over the next few issues you’ll get to know other members. Also please send us any information you might have about workshops and upcoming events – we are all very interested to hear about what is going on.

All the best, Sabine Cotte and Catherine Smith (sabinec@ozemail.com.au, catherine.smith@otago.ac.nz)