

approaches of speakers from different countries (North America, Europe and Asia) and museological institutions, as well as the private sector, private collectors, and local and religious communities. The papers are accessible to ICOM-CC members only for 3 years. In 2012 the Postprints will become available and accessible to all registered ICOM-CC website users.

### Triennial Conference

We are now mid-way into the 2009-2011 triennial period, and the Call for Papers for the upcoming 16<sup>th</sup> ICOM-CC Triennial Conference in Lisbon, Portugal September 19-23, 2011, has just come out! The theme will be *Cultural Heritage /Cultural Identity: The Role of Conservation*. The selection of papers for publication in the Preprints – and presentation at the conference – will follow a two-step process. The Call for Abstracts of prospective papers and posters is the first step, followed by a preliminary selection of potential speakers/authors who will receive an invitation to submit full papers, or (short) poster abstracts. Abstracts must not exceed 1000 words in total and should be submitted via the conference website [www.icom-cc2011.org](http://www.icom-cc2011.org) beginning March 15, 2010, and no later than April 16, 2010.

I encourage all of you to consider submitting your work. Submissions that relate to our Working Group's Program at: <http://www.icom-cc.org/238/triennial%programme>, are especially welcome. Please do not hesitate to contact me to discuss any ideas or thoughts on a potential paper or poster. We hope to have a diverse and dynamic session in Lisbon in 2011 but this depends on your input and your contributions. Recall that the 2008 New Delhi Conference had over 600 delegates, and the same numbers are expected in Lisbon. This is a rare opportunity to exchange with a vast network of colleagues and learn through exposure to a large spectrum of viewpoints and experiences. For more details visit the conference website ([http://www.icom-cc.org/244/triennial-conferences/16<sup>th</sup>-triennial-conference.-lisbon.-portugal/](http://www.icom-cc.org/244/triennial-conferences/16th-triennial-conference.-lisbon.-portugal/)).

**Carole Dignard**, Coordinator  
Working Group on Ethnographic Collections and  
Objects Conservator, Canadian Conservation Institute  
[carole.dignard@pch.gc.ca](mailto:carole.dignard@pch.gc.ca)

## ARTICLES

### Evaluation of Methods to Identify Native-processed Gut in Alaskan Artifacts

In ethnographic collections, material attribution regarding artifacts from the Arctic region may be questionable, particularly those pertaining to sea mammal “gut,” defined here as native-processed intestinal membranes. In conservation literature, investigations on the physical characteristics of the gut were primarily carried out to determine suitable conservation treatments, and not to

identify the animal source of the membrane material itself (Schaffer 1974; Hill 1986; Morrison 1986). This current research evaluates whether methods for characterizing native-processed gut materials used by Alaskan cultural groups can be done by gleaned information obtained from ethnographic literature on gut manufacture and use, examining marine mammal geographic ranges, and distinguishing morphological traits of intestinal material. Text on mammalian biology and histology were also consulted to understand the gross anatomy, structural and morphological features of sea mammal intestines.

A review of ethnographic literature reveals that sourcing, processing and usage of gut are connected to the availability of different sea mammal species and the preferences of use by the local people (Wilder 1976; Hickman 1985; Isсенman 1997; Reed 2005). However, a cultural group's dependence on species' availability cannot be fully restricted to local sources owing to the possibility of a material obtained through trade. John J. Burns, a mammalogist studying Arctic sea mammals, writes that Aleut items labeled “bear” can be troublesome because bears do not occur west of Unimak Island, but do occur throughout most of the remainder of the region occupied by the Aleuts (Hickman 1985). Items from the Alaska Peninsula or Kodiak Island have a high possibility of being made from bear, but it was recorded that Aleuts traded with the peoples of mainland Alaska to obtain bear intestines, which is prized for its delicacy (Reed 2005). Furthermore, the cultural attribution of an artifact can further be confounded by the erroneous interpretations of native terminology. Since many native Alaskan terms have Russian origins, translation of material names from native language could also muddle their attribution to proper animal sources. For instance, Burns writes that, “[the material attributed as] ‘bear’ could be a reference to the sea bear, which was a common way of referring to fur seals, especially by the early Russians” (Hickman 1985:29).

The usage of gut in artifacts, according to cultural preferences, is manifested in several ways. It is well documented in ethnographic literature that native Alaskan peoples select gut materials from different genera of pinnipeds for their unique physical properties when made into artifacts (Hickman 1987; Isсенman 1997). Pinnipeds are aquatic carnivores (suborder *Pinnipedia*), which have a gastrointestinal tract similar to vertebrate animals. Different processing methods (i.e. summer- vs. winter-tanning) that alter physical properties and visual appearance of gut are also relevant to the intended function of the finished artifacts. For example, the Siberian Yup'ik of St. Lawrence Island [known as Sivuqaq in the Yup'ik language] preferred coats to be made of winter-tanned gut because the opaque, parchment-like appearance was more aesthetically pleasing to them (Oakes and Riewe, 1998). Contrarily, inhabitants of the Diomed Islands [located in the middle of the Bering Strait, between mainland Alaska and Siberia, Russia] maintained that the white garments did not stand up very well against weathering because “all of the oil has been removed” (Hickman 1985:29).

In spite of its richness, there are issues associated with the characterization of materials based on information gleaned from ethnographic literature. In some ethnographic accounts, qualitative descriptions of processed gut materials infer that there are inherent characteristics that can be used to assess which part of the gastrointestinal tract the material originated from (Wilder 1976). However, the subtle nuances of material properties and choices may reflect single practices observed by individual authors, which may not readily translate to large numbers of comparable artifacts.

In this light, texts on mammalian biology and histology were consulted to see whether the intestinal tracts of different pinniped families have distinct anatomical, structural and morphological features that can be directly related to the processed gut incorporated into artifacts. In the case of adult gut parkas, ethnographers have reported on the value placed on long intestinal strips which provide sufficient yardage for a parka, and many examples of parka have been reported to include a continuous, slit but otherwise untrimmed intestinal membrane. This raised the question about whether comparing dimensional differences in the processed gut membrane might aid in distinguishing the animal source. Although pinnipeds have a gastrointestinal tract similar to vertebrate animals, measurements of the gastrointestinal tract of different pinniped species do vary (Mead 2002, Ridgeway and Harrison 1981, Hickman 1985, Issenman 1997). The dimensions of processed gut strips are also affected by the size of individual specimen within a particular pinniped species (Hickman 1985). In addition, it is uncertain to what extent the measurements of the gastrointestinal tract of a specimen provided in zoological literature corresponds to the actual length of the native-processed gut. Measuring the length of the continuous gut strips used in parkas constructed horizontally cannot accurately determine the original intestine length because the gastrointestinal tract's length and volume can double or triple after the muscles lose their tonus [the continual and partial contraction of the muscle] soon after the animal's death (Mead 2002), and the intensive handling during the preparation procedures may further induce dimensional changes in the processed membrane. As Hickman writes, "when wet, a parka changed shape, even got considerably longer" (Hickman 1985:7). The processed gut membrane is hygroscopic and the dimensions of a finished gut parka are influenced by moisture; therefore, the dimensions of an artifact containing or entirely made of gut membrane may initially be subject to changes resulting from the original use context, and by subsequent relative humidity changes in the storage environment.

In summary, the author's research on evaluating methods to identify processed gut materials in native Alaskan artifacts was met with several challenges, the foremost of which is that artifacts in ethnographic collections have a likelihood of being broadly labeled or mislabeled with regard to cultural attribution. Identification of materials based on information extrapolated from ethnographic accounts can only be meaningful when the artifact is firmly attributed to

a certain cultural group. Artifacts containing sea mammal internal membranes are often loosely labeled as "Inuit," which has now become the blanket term to refer to Arctic cultural groups east of Alaska, e.g. Canada and beyond. Alaskan cultural groups prefer to be called "Eskimo" as a blanket term, although each cultural group should be referred to by its ethnic name, i.e. Yupik, Inupiaq, etc. (Smith 2009). Although valuable for comparison, ethnographic accounts record individual observations that can have a wide variation according to local practices, the time period in which the account was documented, also native versus ethnographers' perspectives. Furthermore, determining the availability of particular sea mammal species to native groups is complicated by the overlapping of sea mammals' natural habitats and their seasonal migration routes in the Arctic region (Ridgeway and Harrison 1981). Using the gross measurements of intestinal tract from biological texts are not conclusive in distinguishing the membrane's animal source since the material easily undergoes dimensional changes from handling and processing before being made into artifacts.

Perhaps the greatest hindrance to species-specific identification of native-processed gut materials is the difficulty of procuring vouchered reference samples. Native-processed sea mammal gut is not commercially available, and certain materials are only available to native Alaskan tribal members. In spite of the difficulties in procuring native-processed gut, a preliminary investigation of the physical properties, structural and morphological traits of native-processed gut was carried out on reference samples attributed to the walrus (family *Odobenidae*) and seal (family *Phocidae*), generously provided by the conservation laboratory of the National Museum of Natural History (NMNH), the National Museum of American Indian (NMAI) and Fran Reed, an artist based in Alaska who worked with native Alaskan materials. With technical support from the Getty Conservation Institute, environmental scanning electron microscopy (ESEM) was used to examine the surface morphology of the reference samples, which revealed that the processed gut retains a multi-strata structure of compact and fibrous layers; however, characterization of these layers could not be made without the aid of a biologist, and was not included in the original scope of research owing to time constraints. ESEM images illustrating morphological and structural features of native-processed gut will be included in a forthcoming paper by the same author, "Evaluation of methods to identify Native-processed gut used in Alaskan artifacts."

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**Linda Y. Lin**, Student at the UCLA / Getty Master's Program in the Conservation of Archaeological and Ethnographic Materials

### **Anthropological Preventive Conservation: Fading Assessment on Works of Feathers**

UCLA and the Getty Conservation Institute (GCI) are continuing to collaborate to study the fading behavior of selected feathers in order to formulate display lighting guidelines for anthropological featherwork. The development of these guidelines will be based on an accurate understanding of feather color chemistry including pigments and structure, cultural use including color selection and exposure through prior use, and accelerated fading with and without ultraviolet radiation.

Since feather coloration varies considerably between species, and recent research has indicated difficulty in procuring unaged feather samples, work is being restricted to six species of birds: American Goldfinch, Great Horned Owl, Mallard Duck, Northern Flicker, Red-tailed Hawk and Western Scrub-Jay. These birds were selected because they are not endangered, are local to California, and have cultural significance as evidenced by their use in past and recent regalia and basketry.

During the next year, the project will be focused on procuring fresh feather samples, carrying out accelerated aging of samples using a microfadometer and aging chamber, surveying colleagues regarding observed fading in collections, and meeting with cultural experts to discuss the importance of color in feather selection and traditional use and care practices of feathered objects. The project team will also devise a document to use for recording detailed information about anatomy and condition of feathers used on cultural objects and will test this form by

visiting collections to examine Native California featherwork. Investigations will also include the evaluation of color loss that occurs from sources other than fading, i.e. abrasion, and the effectiveness of microfading technology (MFT) as a predictive tool for feather fading behavior. A longer-term goal of the project is to determine whether protein damage results from photochemical exposure of feathers.

**Ellen Pearlstein**, Associate Professor, Information Studies and UCLA/Getty Master's Program in Archaeological and Ethnographic Conservation

**Jim Druzik**, Senior Scientist, Getty Conservation Institute

**Christel Pesme**, Getty Conservation Institute

**Renée Riedler**, Getty Conservation Institute

**Molly Gleeson**, UCLA

### **Basket exhibition at the Southwest Museum of the American Indian at the Autry National Center**

The Art of Native American Basketry: A Living Tradition is a comprehensive exhibition that opened on November 6, 2009 and is running through November 2, 2010 at the Autry's Museum of the American West in Griffith Park. The show exhibits more than 300 baskets selected from the Southwest Museum's collection of 14,000 baskets and represents more than 100 cultural groups from eleven regions of North America. Baskets range in size from small Pomo feather baskets made for sale to tourists, to massive Apache olla baskets used for storing seeds in large quantities.



**Pomo feathered basket with string handle from the Edwin Greble Collection. Featured in the exhibit and on the website:**

[www.autrynationalcenter.org/basketry/](http://www.autrynationalcenter.org/basketry/)

**Photo credit: Angie McGrew.**

The Autry invited thirteen contemporary basket weavers to serve as consultants in research and planning. In addition, baskets purchased from each consultant were accessioned and included in the exhibit. The exhibit is intended to demonstrate how the materials, techniques, and designs of the baskets vary from region to region, reflecting different