Do We Still Need an Exhibition of Siberian Clothing in the Museum in the Age of Globalization?

About a loan of ethnographic objects from animal materials and the issue of their contaminant loads

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Abstract:
For the exhibition "Esthétiques de l'Amour" in 2015 some fish skin objects from the Staatliche Kunstsammlungen Dresden were lent to the Musée du Quai Branly in Paris to present the beauty and diversity of Siberian craftsmanship and culture.
The fragile objects are up to more than 100 years old, but nevertheless they are in a surprisingly good state of preservation. A reason is the early treatment with pesticides, such as arsenic compounds, which are nowadays considered poisons. In the context of the loan initial testing with an X-ray fluorescence device confirmed contamination. Unfortunately, at the moment there is no effective decontamination method.
This article demonstrates how we can still display these contaminated garments and protect the health of people.

Content:

Foreword

This paper is about an issue that all museums are confronted with: housing organic collections and managing loan requests. Particularly objects that were treated with preservation agents in the past are known to be hazardous today.

The Ethnographic Collections of Saxony as part of the State Art Collections Dresden are represented in Leipzig, Dresden and Herrnhut in Germany. These museums hold objects from all continents – also from Asia. In Leipzig and Herrnhut there are permanent exhibitions, but in Dresden they are working on a new one. As the permanent exhibition in Dresden is closed at the moment, the museum has been confronted with intensified interest for worldwide loans during the last few years. The impact of hazardous historical preservation materials frequently used in the past, has been taken into account within loan transaction presented in the following.

In autumn 2015 a few fish skin objects were loaned to the Musée du Quai Branly in Paris for an exhibition of cultural and everyday objects from several Amur tribes in Siberia and the Hokkaido region in Japan. These little-known objects blend aesthetic elegance and high ethnographic interest for the Ainu, Nivkh, and Nanai. Their way of life was based on the relation to the river by fishing for salmonids and hunting.

True highlights of this exhibition were the rare protective robes made of fish skin decorated with ritual accessories and symbolic ornaments. Most of the objects in our collection had been made at the end of the 19th century.

Fish skin objects

Fig. 1:
Two fish skin robes.

Fish skin is the dried and tanned skin of fish from river Amur – salmon and carp. Carp scales are larger in size than those of salmon. The people produced cloths, bags and ritual things from these materials. (Information by Marita Andó)

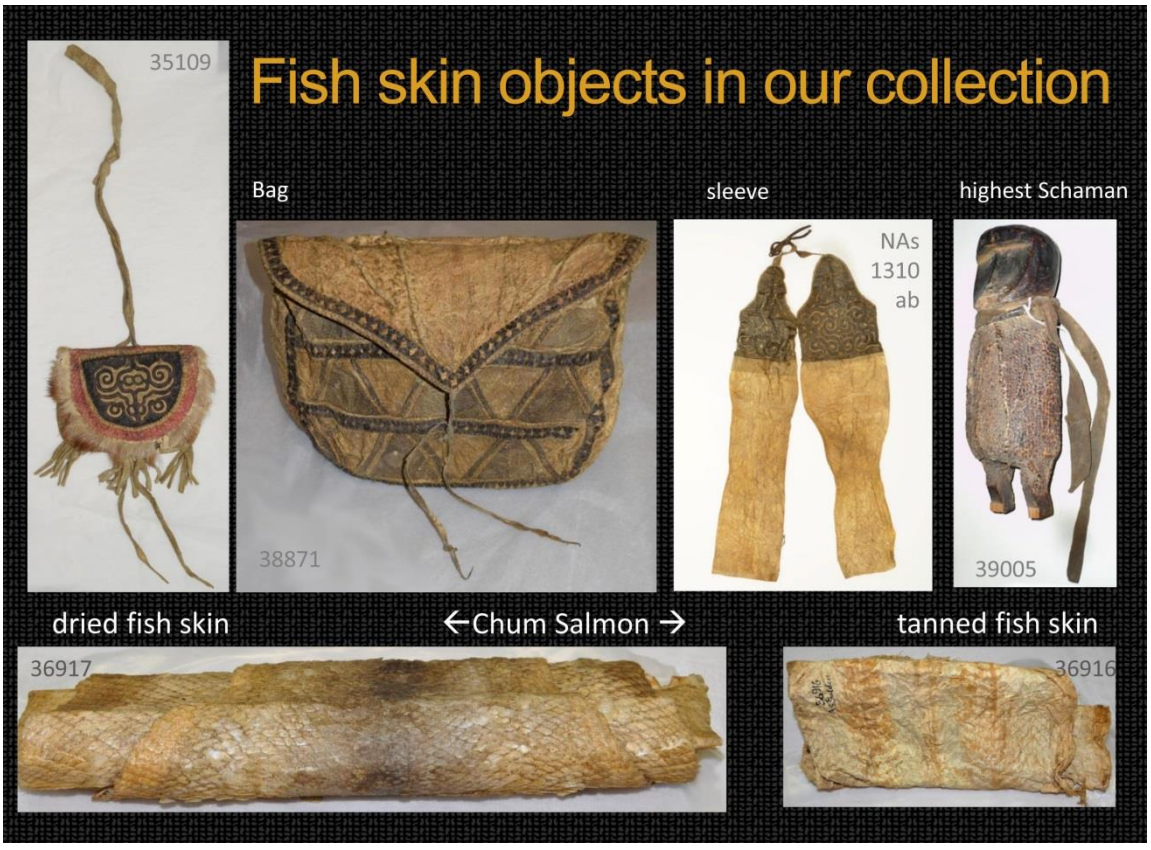

Fig. 2:
Some fish skin objects in the ethnographic collections of Leipzig and Dresden.

In the book “Menschen in der Welt” by Hans Findeisen from 1934, a black-and-white picture is reproduced. It shows the production of fish skin for robes in the late 19th century. And a hundred years later a coloured image published on the former website of the Fischledermuseum in Viechtach in Bavaria/Germany demonstrates the same tool for the production in this way.
Above there is a close-up view of the dried fish skin in the left and tanned fish skin in the right corner.

Raw salmon skin has no epidermis but a layered tissue structure of horizontally running collagen fibres. This structure and therefore the object material is highly endangered when treated with acids or alkalis but also enzymes, even more by using detergents which decrease the shrinkage temperature by affecting the hydroxyproline content in the amino acid structure of the collagen.
The shrinkage temperature of fish collagen is considerably lower than other mammalian fibres, so care has to be taken in handling and storage within the correct temperature and humidity range to keep the collagen stable and avoid destructive breaks. (Information by Ute Werner)

But how were fish skin materials preserved in the past?

Arsenic contaminations

Looking back in the history of the collection: the ethnological museum in Dresden was established in 1875 as „Königliches Zoologisches und Anthropologisch-Ethnographisches Museum” (Royal Zoological and Anthropological-Ethnographical Museum). Probably until 1945 they used equal conservation techniques for ethnological items as were common in taxidermy in the museum: arsenic soaps, as can be deduced from our historic inventory books, e.g. the red capital „A“ stands for Arsenic or Arsenic compounds. “Eulan" was used for selected conservation treatments later. („E” =“Eulan” in the inventory book.)
Could this be the reason for the good state of preservation of the sensitive objects about 100 years after their production?
Today Arsenic compounds, among other chemicals used in collection preservation, are considered as poisons. The in-house research on conservation history and hazardous substances used for preservation treatments focused on relevant conservation documents and delivery notes but also consulted colleagues as "eyewitnesses". Certainly this will not reveal a complete list of all substances ever applied, but it can give an idea what to look for when analyzing objects.

In 2011 the Ainu robe was loaned to an exhibition in Japan. Unfortunately at that time we were not aware of the risk of the toxic effect of arsenic treated objects – in great contrast to our knowledge today – and so our colleague as courier and two Japanese Ainu specialists were handling the object with bare hands during discussion.

Arsenic tests

How can the content of arsenic in the object materials be proved?
A simple color test is supplied by the chemical industry with mercury bromide papers. The application is quite simple but reveals only a hint as a spot test result. Depending on the tested area more or less or even no heavy metal content will detected. This happened with the loaned robe for the Japanese exhibition. Unfortunately this will also have to be taken into account when using other analyzing techniques, like x-ray fluorescence analysis.
Do the records give information of arsenic compounds used? Not everything was written in the inventory book, so we analyzed the loans requested from the Musée du Quai Branly with x-ray fluorescence in 2015.

In fig. 3 the equipment used for the investigation of the fish skin robe from the Ainu tribe can be seen in our textile laboratory. We used the portable hand-held XRF spectrometer with

radiation protection to measure several points on the outer surface. For safety reasons it is very important that the exposure is directed into free space. The connected display reveals the elements that have been measured.

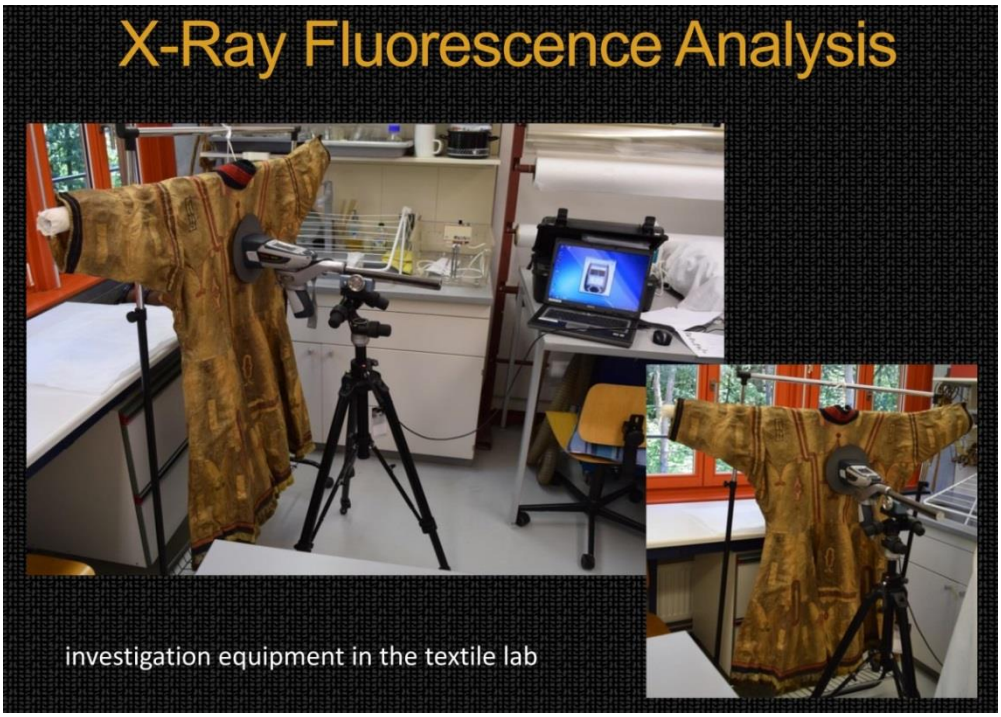

Fig. 3:
Investigation equipment in the lab

The lists of elements and concentrations in three specific measuring points differed significantly. Compared to the negative result of the color test we used earlier, one point indicated very low values for the element arsenic with 269 ppm. However the other spots indicated a highly contaminated area – provided that measurements up from 1000 ppm should be evaluated as high health risks.

Health protection and labels

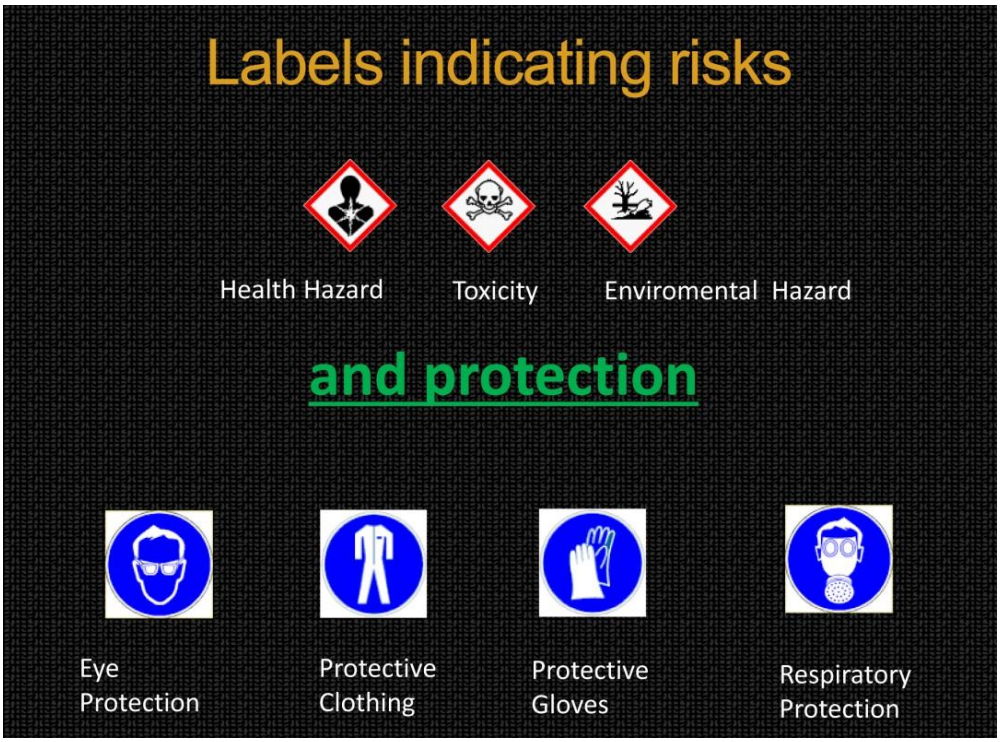

Fig. 4:
Labels indicating risks.

Handling contaminated objects

Fig. 5:
Single-use protective suits.

For more precise conclusions about the individual health risk personal exposure time but also the handling of the object have to be taken into account. Nevertheless to be safe you should wear body protection to avoid inhalation exposure but also dermal intake of the hazardous substances.

Our experience and knowledge have made us more responsible in handling our objects but also in labelling objects and informing everybody about the contamination.

After examination or even with the smallest proof of hazardous load we label every object properly to inform about the risks but also to give handling instructions for body protection.

Practicing this protection in the depot means separate storage of highly contaminated objects but also wearing special single-use overalls made out of Tyvek. Very important is the protection against smallest dust particles using the respirator FFP3.

In case of object movement within loan requests handling instructions for personal protection are to be followed but also information must be sent out to the colleagues in the respective institution. That is the only chance to display these contaminated but rare objects, which have survived in a few museum collections only and which illustrate the way of living adapted to the regional conditions in the Amur basin.

The preparation for the journey includes also:

- object transport by a special shipping company,
- the use of tight, single-use packaging materials and the proper disposal of all materials used,
- the existence of a disaster plan for the exhibition.

These arrangements entail additional costs but they are essential for personal protection and against the transmission of contaminant loads in the museum environment or to other artefacts.

Fig. 6:
Handling in Musée du Quai Branly in Paris.

Handling a contaminated loan from Berlin in 2013 to SKD

The first direct contact with the problem of dealing with contaminated objects that we have been aware of, were items on loan for exhibition "Tecumseh, Keokuk, Black Hawk" from the Ethnological Museum in Berlin in 2013. The show presented sculptures of important Native Americans by Ferdinand Pettrich from the Vatican Museums in Dresden. For dealing with the Bison robe appropriate information in the loan papers proved useful. The packing materials were considered hazardous waste and had to be disposed accordingly. Considerable tasks emerged for the transport from Berlin to Dresden. Since this was only within Germany, the problem was still low.

Reasons for the exhibition of contaminated objects

To conclude, it was a great honor that the nice and rare fish skin objects of our collections supported that special exhibition in Paris. In the age of globalization people are on the move and travel around the world. The number of loans increases but also the distances between museums.

In view of environmental crises we should discuss the balance between the educational outcome and pleasure of museum exhibitions but also the requirements for object transports to the respective event.
In case of the loan items for Paris we chose the procedure as described, because the originals only can show the individual, nicely worked materials and tell about people’s lives in the Amur region authenticity.

Bibliography

Findeisen, Hans. 1934. *Menschen in der Welt*. Stuttgart: Heinrich Plesken Verlag.

Homolka, Martina. 2015. *Eulan: ein Biozid gegen Keratin-Schädlinge und seine Relevanz in musealen Sammlungen.* Berlin. Deutsches Historisches Museum.

Lang, Andrea and Judith Zimmer (ed.). 2015. *Segen und Fluch: Biozide. Verwendung, Analytik, Bewertung.* Berlin: Deutsches Historisches Museum.

Sources

Andó, Marita, Custodian of the Northeast Asia collection (SKD, Grassimuseum für Völkerkunde zu Leipzig) – Information about the fish skin objects in the collection.

Fischer, Antje, Restorer (SKD, Rüstkammer) – Tests with hand-held XRF spectrometer.

Werner, Ute, Head of the collections (SKD, Museum für Völkerkunde Dresden) – Information about the fish skin structure.

www.mn-net.com -> Arsenic test paper-> Mercury Bromide Paper.

Picture credits

All photographs were taken by the author.