

# **Skin Clothing from the North**

Abstracts from the seminar held at the National Museum of Denmark, November 26-27, 2009

Copyright © The National Museum of Denmark and all individual authors All rights reserved

Edited by Anne Lisbeth Schmidt and Karen Brynjolf Pedersen Designed by Anne Marie Brammer Printed in Denmark by Knudtzon Graphic

ISBN: 978-87-7602-134-4

Funded by Nordisk Kulturfond Augustinusfonden The National Museum of Denmark

You may freely copy articles from this publication but the authors must be acknowledged, no changes must be made and you may not sell any part of this work.

The digital version of this publication is at: http://nordligeverdener.natmus.dk/forsk-ningsinitiativer/samlet\_projektoversigt/skinddragter\_fra\_nord/

# Frontcover:

Woman's sealskin parka from West Greenland, late 19th century. Photo: Roberto Fortuna, The National Museum of Denmark.



# Skin Clothing from the North

Abstracts from the seminar at the National Museum of Denmark, November 26-27, 2009

Edited by Anne Lisbeth Schmidt and Karen Brynjolf Pedersen

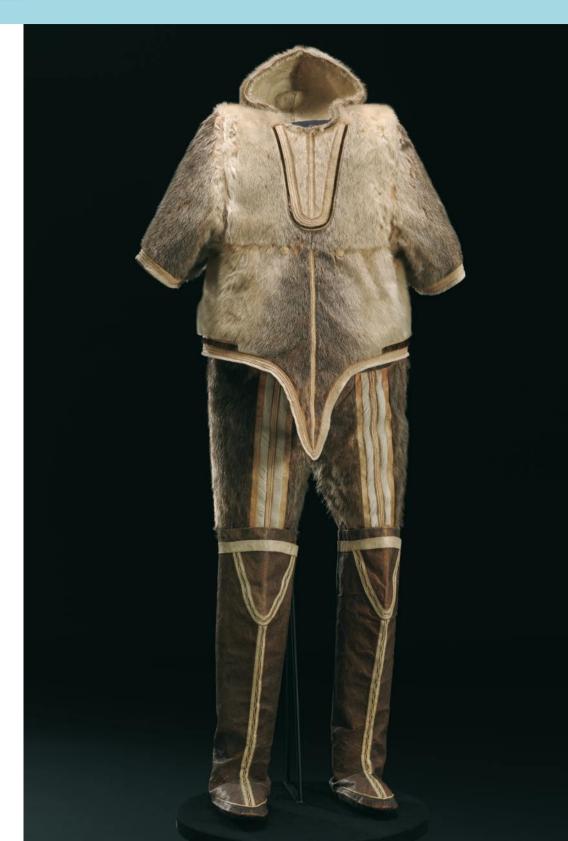
The National Museum of Denmark

Frederiksholms Kanal 12 DK-1220 Copenhagen K

Copenhagen 2010

Woman's sealskin clothing from West Greenland: parka, trousers and boots; inventory numbers Ld.32a, b and c. Front side.

Photo: Roberto Fortuna, The National Museum of Denmark





# **Preface**

It was with great pleasure and expectation that the National Museum was able to greet distinguished experts from Greenland, Norway, Sweden, Holland and Denmark at the seminar "Skin Clothing from the North" which was held at the National Museum on November 26-27, 2010.

The project Skin Clothing from the North forms part of the National Museum's main research program NORTHERN WORLDS, which was initiated in 2009 thanks to generous funding from the Augustinus Foundation. The seminar "Skin Clothing from the North" was specifically supported by the Nordic Culture Fund.

The intention of the seminar was to raise a mutual understanding among the participants of the basic idea of the project, which is to analyze and show connections between various sorts of traditional and historic skin clothing from the circumpolar areas. The project focuses on the National Museum's large distinctive collection of skin clothing from the Inuit, Yupiit and Aleut in Greenland, Canada and Alaska, as well as the Sami of North Scandinavia and Siberian people in Russia. The results of previous research on Danish bog skin finds from the Iron Age, performed in collaboration with CTR — Centre for Textile Research, University of Copenhagen starting in 2006, forms one of the inspiring ideas behind the project Skin Clothing from the North. Special interest will be taken in the use of different skin materials, visual communication and cultural values, the importance of female activity in the Arctic, and in the influence of trade and exchange on the manufacture and appearance of the costumes.

Examples of the innovative research involved in the project *Skin Clothing from the North* are summarized by the researchers themselves in short abstracts, which are grouped according to the program of the seminar *"Skin Clothing from the North"*, i.e., in a scientific and an anthropological session.

Per Kristian Madsen

**DIRECTOR GENERAL** 

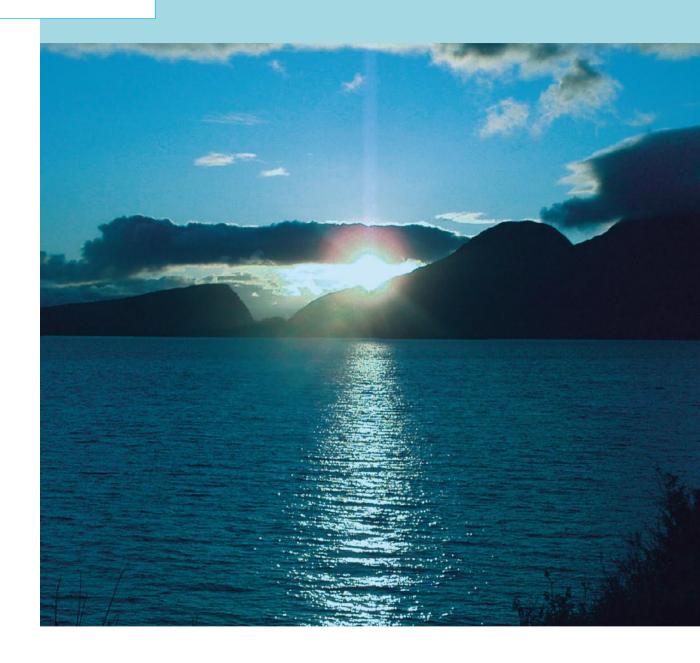
National Museum of Denmark

# Contents

•	The Research Venture "Northern Worlds"  Hans Christian Gulløv	6
•	Skin Clothing from the North   Anne Lisbeth Schmidt	10
•	Two Hatts and the Arctic Skin Clothing   Ditlev L. Mahler	12
•	DNA insights from ancient hair   Tom Gilbert	13
•	Mummified remains  Enrico Cappellini*   Isabella Mulhall   Matthew Collins	14
•	X-rays of organic materials   Birthe Gottlieb	15
•	Automated construction of sewing patterns   Karsten Jensen	16
•	Analysis of sewing techniques in Inuit skin clothing  Anette Hjelm Petersen	17
•	The analysis of skin processing technology   Torunn Klokkernes	18
•	Danish prehistoric skin costumes   Ulla Mannering	19
•	The National Museum of Denmark's Collection Management Ingegerd Marxen	20
•	Digital 360° surround photography   Roberto Fortuna	21
•	Exhibiting Inuit skin clothing on mannequins  Eva Lilja Jensen   Anette Hjelm Petersen	22



•	Saga Furs   Anne Sofie Odgarrd Løvenstjerne	23
•	Production of 17th century skin dresses in Qasigiannguit  Anne Mette Olsvig	24
•	Conservation of the skin garments from Qilakitsoq – in retrospect   Anne Sommer-Larsen	25
•	Archaeologically retrieved Inuit Skin Clothing Claus Andreasen	26
•	Kalaallisuut – Women's festive costume   Aviâja Rosing Jakobsen	27
•	Fashion and clothing in colonial Greenland   Søren Thuesen	28
•	Today's skin outfits   Mette Kristensen	29
•	Greenlandic garments, viewed through the art   Birte Haagen	30
•	Arctic dress design with hoods and tails   Anne Bahnson	31
•	The body's disguise – Siberian fur clothing   Rane Willerslev	32
•	Sami Skin Clothing   Kajsa Kuoljok	33
•	Eurasian costumes   Rolf Gilberg	34
•	List of Contributers	36





The Research Venture Northern Worlds

Mankind has been attracted to the North since prehistoric times. Both Pytheas and Ptolemy searched for the so-called Thule. Boreas might be referred to by other cultures in later times

In this way, we can continue to our own time with the great explorers who travelled farther north in Tåkeheimen, as Fridtjof Nansen called the northern world.

The Northern Worlds are, in this way, a geographic concept that, throughout time, has attracted intermittent attention, which is in itself noteworthy. The Northern worlds are in other words the Arctic and neighbouring temperate zones. It is in this region that Denmark lies, and a large portion of Danish research has been aimed toward the northern hemisphere, to use yet another phrase.

From these regions comes a large portion, most likely the largest portion, of the museum's collections. These collections are at the center of the National Museum's collaborative research initiative, Northern Worlds. The collections, the supporting documentation and the continuing research shows, however, that the cultural context that is described refers to very different conditions - and that these conditions depend on the circumstances, which can only be understood in a larger context.

The border of the climate zones in the northern worlds has been in constant motion since the Upper Paleolithic and new studies into this historic perspective will, within this research initiative, be able to give us answers to questions about mankind's migration with respect to climate, adaptation and society formation.

The northern world is also a region where complex societies encounter nomadic hunting societies with completely different technological and cosmological assumptions.

To survey the activities along this imaginary boundary and to understand the creation of the networks which cross this boundary will be an effort that will foster research developments and shift boundaries.

With the new research, the Museum's scientific investigations will, for the first time, be able to present a reconstruction of the development of vegetation in



Hans Christian Gulløv

RESEARCH PROFESSOR Research & Exhibitions

National Museum of Denmark Frederiksholms Kanal 12 DK-1220 Copenhagen K Denmark



Denmark throughout the last glacial period. Studies of whether the land was forest-covered or not will imply the interpretation of fauna as well as hunting societies, hunting strategies and settlements. Supplemental investigations will come from select locations, for example Slotseng.

The study of the expansion of agrarian society and cultural contacts will start with the Danish Prehistory Department and involve the Scandinavian region in an exploration of the motivations behind and the extent to which the climate has been instrumental or detrimental to society formation and expansion.

The Danish Middle Ages and Renaissance Department has gained, with its long-standing commitment to the expansion of Norse societies to the west and the colonization of Greenland, a meaningful understanding of cultural adaptation. The Ethnographic Collections of the Museum has for a long time had as its primary research and education area the communities in the northern worlds to their complete circumpolar extent, from the Sami region in the west through Siberia and Mongolia to the North American Arctic in the east.

From more recent history, we recognize additional examples of the need for control over the climate, such as during the period 1940-45. The Danish governor ruled Greenland on behalf of the Danish government under American protection following a Jus necessitates. As part of the effort to maintain Danish sovereignty, the coast of East Greenland was patrolled and, jointly with the Americans, many German attempts to construct weather stations were discovered and defeated.





This research venture involves, therefore, archaeology, history, ethnography, ethnology, conservation and natural science with the main goal being to reposition man as an adaptive and strategic agent in a dynamic natural world — not least with regard to climactic changes. It is from the Northern worlds that we have our greatest knowledge, the largest collections and, thereby, the best possibility to uncover the strategies and choices that have resulted in innovation and cultural development.

Whether it concerns the Conservation Department's studies of selected materials or the Modern Danish History Department's investigations into the importance of seal and whale hunting for the economy and technology of Greenland and Europe, the Northern Worlds initiative opens the way for research breakthroughs that deal with the movable border separating society and climate.

The goal, in other words, is to uncover the mechanisms that made people and, therefore, society collectively shift focus and cross the boundaries that were set by the changing climate. The research will, with corroborating analogies, be able to contribute to the current discussion on man and climate — a subject the National Museum has gained a thorough knowledge of during its more than 100 years due to its collections and archives, and which with good research relationships within The Danish Commonwealth, the Nordic countries and collaborations in Europe and North America will become an internationally recognized area of strength.



All of this is built around three research areas:

- A Climate change and Society when the climactic boundaries changed
- **B** Land use on the boundary the northern cultural landscapes
- C Networks in the North communication, trade and cultural markers

Skin clothing from the North is part of this final section, since it can be understood as an important cultural marker, and the program of the seminar in the coming two days can only confirm this.

**Best of luck!** 

# Skin Clothing from the North



Anne Lisbeth Schmidt

CONSERVATOR M.SC.,
COORDINATOR
Conservation

National Museum of Denmark I. C. Modewegsvej, Brede DK-2800 Kgs. Lyngby Denmark 'Northern Worlds' is the theme of a new research program at the National Museum, which includes Skin Clothing from the North. Throughout the next four to five years, about 35 scholars from all departments of the museum will coordinate their research in order to explore the relationships between man, climate and environment from the late Paleolithic until the present in the circumpolar and northern temperate zones.

Skin Clothing from the North focuses on the National Museum of Denmark's unique circumpolar collection of historic skin artifacts from the Inuit, Yupiit and Aleut in Greenland, Canada and Alaska, the Sami in Scandinavia and Siberian people in Russia.

This interdisciplinary research program studies the skin materials, and methods of sewing, cutting and design from both technological and anthropological viewpoints. Starting with Gudmund Hatt's 1914 thesis on Arctic Skin Clothing in Eurasia and America, the project's focus is on the geographical use of skin materials, cultural values including visual communication, women's importance in circumpolar cultures and commerce's influence on the appearance and manufacture of the skin clothing. The major purpose is to investigate whether there are connections between skin types, manufacture, sewing and design while also studying the circumpolar peoples' lifestyles, geographical alliances, interaction and the influence of trade.

The National Museum's circumpolar collection comprises around 2000 pieces of clothing made from various mammal, bird and fish skins. The collection, which was acquired between 1800 and 1950, consists of all kinds of clothing for men, women and children from top to toe, from headdresses to parkas, trousers, mittens and several kinds of footwear. The skins were cured according to traditional tanning methods and occur with and without fur. The clothing is, as a rule, meticulously cut and sewn.

Skin Clothing from the North introduces a line of new research. By means of recently applied techniques, the animal species will be identified through



genetic analyses of skin material and by examining the hair structure under the microscope. Pattern design will be automatically reconstructed by means of a total station, an instrument normally used for measuring land. Sewing methods will be scrutinized by means of x-radiography and recorded digitally. High quality digital images will document the components of each artifact together with a precise data registration, including information about related documentation.

A network of international scientists and skin experts is being established. The preliminary work of the collaborators is presented here in this book of abstracts. A discussion forum, as well as current publications, will be maintained on the internet. A catalogue of the circumpolar skin clothing and an anthology will be published, hopefully in connection with the final conference in 2012.



Drawing of a family going visiting made by the young woman Eqatliôq in 1922 for the Danish explorer Knud Rasmussen at Fifth Thule Expedition. The women are dressed in caribou amauti, parkas with an immense hood and broad shoulders designed to carry small children in.

The women wear baggy trousers or leggings, while the men, both young and old, are dressed in closer-fitting parkas and trousers of caribou skins. The parkas worn by both genders are edged with fringes.

© The National Museum of Denmark

The project has chosen a logo for Skin Clothing from the North which aims to acknowledge the ability to recognize people in skin clothing from far away. From far away – in the Arctic wilderness – the contours of the two people, a boy and a man dressed in skin clothing, reveal that these people belong to the Netsilik Inuit.

Designed to be eye-catching on a piece of paper, it is our aim to identify Skin Clothing from the North. The logo was pulled from the drawing above.

# Two Hatts and the Arctic Skin Clothing



Ditlev L. Mahler

PROJECT RESEARCHER
Department of
Danish Prehistory

National Museum of Denmark Frederiksholms Kanal 12 DK-1220 Copenhagen K Denmark Even though Gudmund Hatt (1884-1960) was born in Denmark it was in USA his interest in ethnology was aroused as a result of a stay with the Cherokee Indians in Oklahoma. After Oklahoma he went to Harvard University to study ethnology for a year. Back in Copenhagen he became a student under professor Steensby. Steensby wrote his dissertation about the origin of the Eskimo culture, which later inspired Hatt to write his own dissertation on "Arctic Skin Clothing in Eurasia and America" (1914). Hatt's scientific theory was mainly based on the Kulturkreis School and his analysis resulted in two dress complexes: "the sandal dress complex" (A), the other "the moccasin dress complex" (B). The A dress complex was distributed in Northeastern, Northwestern Siberia and Greenland and considered the older, and B was distributed in between the Eurasian area and considered the younger.

In 1911 he married the painter, Emile Demant (1873-1958), who had met the wolf hunter Johan Turi and inspired him to write about the Samis in Sami, which was then quite revolutionary. During 1912-1914 Gudmund and Emile Hatt went several times to Northern Sweden collecting ethnographic artifacts and information about the Samis incising the collections of the Danish National Museum. Gudmund Hatt considers one of the founders of the Danish ethnology, and

Emilie Hatt one of the first to practice participant observation and a great inspiration for the preservation of the Sami culture



Photo of Emilie Demant and Gudmund Hatt.Picture from mid 1950'ies. Photo: The National Museum of Denmark





# DNA insights from ancient hair

Hair shaft, whether freshly sampled, or ancient was once viewed as a very poor source of DNA. However in recent years a number of studies have demonstrated not only that DNA survives in this tissue, but that its survival is often better, and in a more purer form, than in other tissues. Using such DNA, we have undertaken a number of recent studies on topics as diverse as the population diversity of Pleistocene mammoth, the resolution of the family placement of the extinct woolly rhinoceros, and on the genetic characterization of the Saqqaq — Greenland's first known inhabitants.

Some of the advantages of using hair shaft in genetic studies include, the ease with which samples can be taken, and subsequently stored, plus the limited damage that hair shaft sampling does to the overall form of the source item.

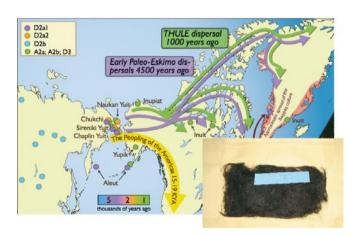
In a recent study hair has helped place the origin of the Saqqaq, Greenland's first known human culture.

By genetic analyses of hair material found in the mid 1980s at Disko Bay, it has been demonstrated in 2007 that the Saqqaqs were genetically most closely related to modern day Koryaks, Chukchi and Yukaghirs, refuting prior hypotheses that their ancestors were directly shared with either modern Native American, or Greenlandic Inuit populations.

# Tom Gilbert

ASSOCIATE PROFESSOR Ancient DNA-SNM

Natural History Museum of Denmark Universitetsparken 15 DK-2100 Copenhagen Denmark



Reconstruction of the migration route of the Saqqaq into Greenland. The reconstruction was made through comparisons of complete mitochondrial genomes from modern human populations of the far North, against a mitochondrial genome sequenced from a 4,000 year old Saqqaq hair sample (inset). Reproduced with permission from Gilbert et al. 2008.



# Mummified remains

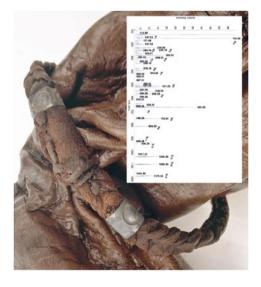
Enrico Cappellini\*
Isabella Mulhall
Matthew Collins

\*MARIE CURIE POST DOCTORAL RESEARCH FELLOW Centre for GeoGenetics.

Natural History Museum of Denmark, University of Copenhagen, Øster Voldgade 5-7, DK-1350 Copenhagen, Denmark In most cases, proteins are the most abundant organic material surviving in mummified tissues in the form of collagen present in bone and skin, and keratins in hair. In the last twenty years sequencing of ancient DNA has developed while ancient protein research has languished, arguably due to the lack of an adequate technology equivalent to the polymerase chain reaction. In the past few years however, protein sequencing by mass spectrometry has been successfully applied to paleontological, archaeological and artistic materials.

We used a soft-ionization mass spectrometry approach to analyse a small leather sample from a plaited Iron Age armband. The armband was found on an Irish human bog body (362-175 BC) conventionally denominated Oldcroghan Man, found during drain clearance operations in the townland of Oldcroghan, Co. Offaly, Ireland. Peptide sequencing allowed confident attribution of several collagen peptides consistent with bovine skin collagen, revealing that the plaited armband was made from bovine leather.

Despite the presence of interfering compounds present in the bog, it was possible to successfully sequence collagen from an Iron Age sample and identify its origin. Thus, while DNA recovery in contexts like this is limited due to diagenetic processes, protein mass spectrometry can provide useful information about exploitation of natural resources by ancient human communities. Investigation on other skin, hair and mummified tissues is in progress at the moment, to better characterise the biomolecular preservation of the proteinaceous remains.



The bog man (362-175 BC) from the National Museum of Ireland. Inserted is a mass spectrum attributed to bovine collagen.

© The National Museum of Ireland



# X-rays of organic materials



X-ray of the stitching in a skin. Photo: Birthe Gottlieb

In this part of the project the clothing will be examined by means of x-ray radiography. This will reveal the structure of the clothing material and in this way contribute to the identification of it. The sewing techniques and foreign materials are also made visible

For the x-rays, equipment for digital radiography will be applied. The high dynamic range and high resolution of digital radiography allows for easy image enhancement by means of digital image processing. As a starting point, x-rays of known reference materials (skin, gut etc.) will be made, and their applicability for material identification will be evaluated.

Also sewing techniques can be studied in details with x-rays. By acquiring x-rays from two directions, a three-dimensional stereo image is obtained. This allows for observing the path of the thread through different layers of the clothing. A further advantage of x-rays is that the wrong side of clothing can be studied without turning it outward.



Birthe Gottlieb

CONSERVATOR Conservation

National Museum of Denmark I. C. Modewegsvej, Brede DK-2800 Kgs. Lyngby Denmark

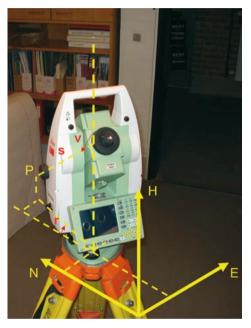


# Automated construction of sewing patterns

# Karsten Jensen

ASSOCIATE PROFESSOR Laboratory for Geoinformatics Department of Development and Planning

Aalborg University Fibigerstræde 11 DK-9220 Aalborg Øst Denmark



Polar measurement with a total station.

Photo: Karsten Jensen

The Laboratory for Geoinformatics is engaged in developing an automated technique which converts a three-dimensional model of costume part elements to a two-dimensional model — a sewing pattern — mathematically.

The three-dimensional model may comprise the entire surface of the costume (total model) or the borders of all part elements of the costume (edge model). Whether it is a total model or an edge model, all edges (seams and similar) must be identified and form part of the model. It is very important that each element is first constructed from a flat skin piece as a starting point and that the costume is stable during construction of the three-dimensional model.

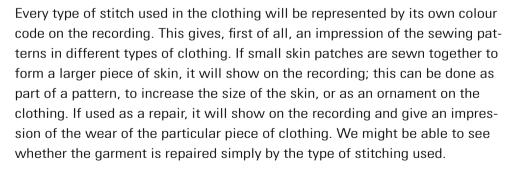
The two-dimensional model is based on the three-dimensional model through calculation using a program called f3t2.m. Input for the program comprises three-dimensional edge models, one for each element. The edge models are developed via a detailed procedure which involves an automated survey.



Output from the program is two-dimensional models, one for each element. Each element is represented by a polygon which describes the edges of the element and from which the area is calculated. The resulting computer file can be manipulated with CAD software to produce illustrations, sewing patterns, etc.

# Analysis of sewing techniques in Inuit skin clothing

A recording in 2D of every garment is an important tool when describing the sewing techniques used in Inuit skin clothing. Until today, we have used photographs and drawings when recording stitching in other garments. We hope to be able to use a new technique when we record the patterns and sewing of the Inuit skin clothing. Because the skin clothing is 3-dimensional, it is very difficult to register all of the seams in a photograph. When looking at a photo, a lot of sewing details will be hidden by, for instance, a sleeve or a crease in the garment. The fur of the skin presents another problem when recording stitching; the sewing is invisible on the fur side of the garment. The 2-D documentation will enable us to look at the garment as a whole, but at the same time split it up into pieces as if it was a sewing pattern.



Will we see the same stitching used in, for instance, all sleeve or side seams, or does it differ from one garment to another? Does it differ from one region to another? When combining the results we will see if the stitching is distinctive, and, in addition, perhaps be able to determine the origin of the skin clothing.





Anette Hjelm Petersen

CONSERVATOR Conservation

National Museum of Denmark I. C. Modewegsvej, Brede DK-2800 Kgs. Lyngby Denmark

A kamik from the Conservation Department's study collection. The stitching was done with dental floss. Photo: Anette Hjelm Petersen

Torunn Klokkernes

**CONSERVATOR PHD** 

TK Conservation, Kystvænget 8, DK-5900 Rudkøbing Denmark

# The analysis of skin processing technology

Skin processing technology in northern cultures represents an important skill and one which is essentially a female activity. From the basic technological principles, one can deduce that there is a circumpolar methodology, inspired by the idea of and the need for functionality, dependent upon local resources for material and tanning substances. Following the tradition for skin processing, each generation adds elements or changes features which may be justified as improvements, or necessitated by availability, needs for modernization, intercultural exchange or simply individual preference. The basic principles of skin processing are associated with treating the fresh skin, physical manipulation of skin, achieving durability and water repellent properties. Information is initially sought from literature, the study of climatic conditions, flora and fauna, communication with tradition bearers (if possible), and through the examination of the artefact material itself. Examination and the subsequent use of

specific analytical methods provide information about the various steps in the process. Skin processing leaves traces or characteristic features on an artifact including indicators of slaughter, depilation, tanning, and mechanical action. Learning to interpret these features demands a prior knowledge of the technology and an understanding of the material properties.





Afanasieva Tatiana Stepanovna applying brown rot larch wood mixed with water to reindeer leg skin. Settlement north of Kharyyalach, Sakha Republic, Russia, 2001. Photo: T. Klokkernes.



# Danish prehistoric skin costumes

Danish museums' collections contain more than 60 skin items from more than 30 different peat bogs from the Jutland peninsula dated to the Late Bronze Age, Pre-Roman and Roman Iron Age (900 BC-AD 400). The skin items were discovered either as single finds or together with mummified human remains and textiles. Most of these items belong to the National Museum of Denmark, though some belong to local museums in Jutland.

Based on their function, skin artefacts can be divided into several costume groups including capes, tunics, wrap-around garments, wrapping skins, shoes, caps, bags, cords, straps and belts. These demonstrate the broad range of use of skin material at that time. The craftsmanship and design also show that the production of skin items was based on a long and specialised costume tradition. The materials used for the skin items primarily come from domesticated animals such as cattle, sheep and goat.

# Ulla Mannering

ASSOCIATE PROFESSOR

The Danish National Research Foundation's Centre for Textile Research, SAXO-institute, University of Copenhagen, DK-2300 Copenhagen S Denmark





# Ingegerd Marxen

HEAD OF STORAGE AND LOGISTICS Conservation

National Museum of Denmark I. C. Modewegsvej, Brede DK-2800 Kgs. Lyngby Denmark

A peek into one of the National Museum of Denmark's stores. Photo: The National Museum of Denmark



# The National Museum of Denmark's Collection Management

The National Museum of Denmark has been planning the renovation and construction of new facilities for the storage of the museum's collections since the late 1980s. In 1987, in connection with the conversion of the Museum's main building, Prince's Palace, a specialist group for managing the Museums' collections was created. Since January 2003, Storage and Logistics have been part of the Conservation Department, with the aim of strengthening work into preventive conservation and administering the practical part of the Museum's lending activities.

Storage and Logistics is responsible for managing the National Museum's object collections. The group is also in charge of packing objects for storage and transport. Since 2008, the group has also started to document by photography objects prior to their loan to other museum.



The National Museum has approximately 28,000 square meters available for storage of the collections which comprise 264 stores spread over 7 sites. The group also collaborates with other departments at the museum, in particular regarding the preventive conservation aspects of storage.

The National Museum has worked determinedly to raise the conservation status of the collections, while maintaining a high degree of accessibility, and is currently planning the construction of a further 12,000 square meters of new storage space.



# Digital 360° surround photography

Since 2001, the Conservation Department of the Danish National Museum has used digital photography to document artifacts. A Hasselblad high-end 4-shots camera with 39 billion pixels is used to produce advanced images of high quality.

The photographers have extensive experience photographing objects made from skin. Their technique has been developed over the past several years through the examination of prehistoric skin capes from Danish bog finds in collaboration with the Centre for Textile Research at Copenhagen University.

In connection with the re-opening of the Danish Prehistory exhibition in 2007, a new technique was used to illustrate objects on the National Museum's website. Apart from photographing the front and back of all of the pieces of a costume, a selection of costumes was photographed whole. The whole costume, put on a mannequin, is placed on a carousel that automatically turns slowly in front of the camera. In the photo database. Cumulus, the pictures can be viewed and turned around, resulting in a virtual, movable film of the object. With this technique, it is also possible to zoom in on all parts of the object allowing even the smallest details to be studied without handling the object.

# Roberto Fortuna

PHOTOGRAPHER
Conservation
National Museum
of Denmark
I. C. Modewegsvej, Brede
DK-2800 Kgs. Lyngby
Denmark



Eva Lilja Jensen (left) and Vivian Harwart put a Western Greenlandic women's costume on a rotatable mannequin before Roberto Fortuna photographs it. Photo: Roberto Fortuna.

# Exhibiting Inuit skin clothing on mannequins



When you exhibit skin clothing, the most important things to consider is that the mannequin is made from inert materials, and must provide sufficient support where the skin clothing is strong enough to oppose the strain of the often very heavy skin material.

Eva Lilja Jensen Anette Hjelm Petersen

CONSERVATORS
Conservation

National Museum of Denmark I. C. Modewegsvej, Brede DK-2800 Kgs. Lyngby Denmark Some skin clothing can be very stiff and difficult to place on a mount without harming the material. The mannequin we use has the qualities to prevent this. It is a very simple stand made of stainless steel. A body is made of wadding and jersey, sewn especially to each garment and can with slight alterations be



used by many different types of skin clothing.
Often the clothing is so stiff that it does not need support in sleeves and hood. If support is needed for the hood it is made of stainless steel. The sleeves are made of the same material as the body. The mannequin has a supporting stick that can be attached to the floor to prevent it from falling.



Mannequin displaying a girl's skin outfit from East Greenland. The mannequin is made of stainless steel. A body is made of wadding and jersey fabric. The kamiks are filled with acidfree tissue paper, if necessary. Photo: Anette Hjelm Petersen.

# Saga Furs

Saga Furs was founded in 1954 when the Nordic fur breeders decided to form a common sales and marketing platform for their products. Branding was an unknown term back then, but that is exactly what we accomplished.

The Nordic auction houses became the sales platform and today all Sagalabeled mink, fox and fin raccoon skins are sold exclusively at Finnish Fur Sales in cooperation with Oslo Fur Auctions







Saga Design Centre is Saga Furs administrative headquarters and the heart of creative innovation in fur. Saga Design Centre's team of designers and furriers have continually developed bold new uses for fur — and have shared this knowledge with designers from around the world. At Saga Design Centre furriers and designers test the limits of creativity to extend the potential of fur.

Saga Furs has welcomed more than 25,000 guests from all over the world to Saga Design Centre since it opened in 1988.

The historic manor was built at the start of the 20th century as the country residence of a renowned Danish opera singer.

The residential wing of the manor house is where guests of Saga Furs stay when visiting Saga Design Centre. Administration offices and the Saga Workshop are located in other sections of the building.

Our prime goal is to forge friendships and collaborations with our guests. That's how we expand Saga Design Centre's creative network — and yours.

Hanne Kathrine
Andersen\*
Susanne Falkencrone
Mølholm\*\*
Anne Sofie Odgaard
Løvenstjerne\*

- \*FURRIER
- \*\*FUR TECHNICIAN

Saga Furs Sandbjergvei 26 DK-2950 Vedbaek Denmark

# Production of 17th century skin dresses in Qasigiannguit

# Anne Mette Olsvig

CURATOR Qasigiannguit Katersugaasiviat

Qasigiannguit Museum, Box 130 DK-3951 Qasigiannguit Greenland

Greenland

Seamstresses Varla Lybert (in the costume) and, from left, Ida Jeremiassen, Johanne Grønvold and Karen Grønvold from the living project's volunteer skins group test part of a women's outfit sewn from traditionally-prepared ringed seal (netside) skins. Photo: Qasigiannguit Katersugaasiviat. 2009.



The project Nunagarfik Uumassusilik initiates an open air museum, where a living settlement of the Thule culture in the 17th century is on display. The project was started by local enthusiasts and politicians of the previous municipality council in Qasigiannguit during the 1990s.

The project is based on a relationship between scientific and traditional knowledge. The making of artifacts and clothing are arranged as production courses to re-establish knowledge of skills, techniques and craftsmanship. The project has three focuses: i) research and documentation, ii) public teaching sessions and iii) public arrangements including school visits. Archaeological, ethnographical and documentary research has resulted in the descriptions and patterns of the Qilakitsoq mummies clothing nr. ED 28 (parka) and nr. ED 78 (parka), nr. ED 12 (trousers) and nr. ED 4 (boots).



Based on Greenlandic knowledge of preparation and sewing skills, four women's dresses have been produced in similar skins and similar styles as those used in the Qilakitsormiut clothing but adapted to fit a modern woman. Research for men clothing started up by taking photos of museum collections. Plans have been made to learn techniques for preparing bird skin, caribou skin and intestine as well as making erisaat for clothing. The goal is to make accurate copies of earlier skin preparation and sewing methods as well as collecting anthropological knowledge on traditions or religion related to hunting methods, skin and clothing construction.

# Conservation of the skin garments from Qilakitsoq — in retrospect

In 1978-79, the unique grave finds from Qilakitsoq in Greenland arrived at the National Museum of Denmark in Copenhagen. Eight mummified bodies comprising six women and two children, dressed in skin-clothing, together with additional skins and clothing were examined and conserved during a three year period. The clothing was not removed from the bodies, but softened, cleaned and examined in situ. The cleaning process used made it possible to unfold the garments and remove the fungal layer covering the find.

During the 500 years of burial, some parts of the garments had been damaged by humidity and fungi. In order to handle and examine the 25 additional garments from the graves, they were treated with an alum-tawing process after cleaning using Lutan F which conserved the skin and avoided fibre shrinkage.

Unfortunately, the areas damaged by fungal damage were lost during the tawing process. This loss of skin fibres induced weakness in the garments and, prior to exhibiting the objects, it was necessary to restore and stabilize missing areas. This was carried out by adhering shaped, leather patches onto the inside of the garments. Special care was taken to match the colour and shape to the garments. The patches gave support to the fragile skin while reconstructing the shape. Conservation materials were chosen because of their pH-values and long term stabilities. Twenty five years after the conservation work was carried out, the reconstructed areas still remain intact, while supporting the garments, which are on exhibition in Nuuk.



Anne Sommer-Larsen

HEAD OF DEPARTMENT Konserveringsseksjonen

Universitetet i Oslo, Kulturhistorisk Museum Frederiks gate 3, Postboks 6762 St. Olavs Plass N-0130 Oslo Norway



Anorak from the Qilakitsoq find after conservation. Collection of the Greenland National Museum.
Photo: John Lee, The National Museum of Denmark.

# Archaeologically retrieved Inuit Skin Clothing

Greenland's prehistory goes back almost 4,400 years. Only a few pieces of skin clothing have been found from the Paleo-Eskimo period c. 2.400 BC — 1300 AD. The most famous site is the Saqqaq-culture site of Qeqertassusuk, which is the only Paleo-Eskimo site in Greenland to yield both a few human bones, some skins from different animals with traces of sewing and part of a kamik stocking. The find is currently on exhibition in Qasigiannguit.

The Thule-culture people arrived late 12th C. AD and they soon started burying their dead. Fragments of gut-skin anoraks from the 13th -14th C. AD as well as parts of clothing made of bird skin were found in the winter-houses at Nuulliit (northwest Greenland). The most famous find is the oldest dated grave, namely the Qilakitsoq graves from the Uummannaq area dating from the mid 15th C. AD. Apart from the 8 dead and fully dressed persons, the two graves also turned up a large number of parts of skin clothing.



The back of a pair of sealskin trousers for women dated to ca. 1475 AD. Each half of these trousers is made from 10 pieces of sealskin. From Qilakitsoq in Northwest-Greenland. Photo: Lennart Larsen © Greenland National Museum and Archives

Several archaeological collections have fragments of skin clothing from west Greenland and we have parts of clothes and a few dressed, mummified persons from the 16th — 17th C. AD from the graves in the caves at Pisissarfik. While there is no problem in researching skin clothing, examination of clothing on mummified bodies requires ethical discussion.



Claus Andreasen

FORMER HEAD AND DEPUTY
OF GREENLAND NATIONAL
MUSEUM AND ARCHIVES

Mosevej 72B, Ørting DK-8300 Odder Denmark





# Kalaallisuut Women's festive costume

Kalaallisuut, women's festive costume is a relatively new tradition which came into being from around the middle of the 1800s. With the colonization of Greenland a new life was introduced to the Greenlanders. European influence and the implementation of Royal Greenland Trade are presumably the main causes for the transition from traditional fur clothing to combined fur and textile clothing. Greenlandic women were given the opportunity to buy fabrics, beads and many other materials. A transition from traditional clothing to festive costume also took place.

Why was women's fur clothing exchanged for festive costume? Presumably Greenlandic women were inspired by Danish women. The Danish wore dresses decorated with laces or embroideries, and tablecloths and curtains were decorated with bobbin laces. These may have been sources of inspiration.

The appearance of festive costumes today is not that from 100 years ago. Additions of embroidery to white cotton and crocheted white lace or lace ribbon are distinct signs of the modernisation. As well as strips of leather embroidery called avittat, de-haired bleached and painted sealskin can be found. Another new accessory is the bead collar. Knitted wool wristlets decorated with glass beads are another sign of modernisation. Originally wristlets were knitted for the men as accessories to hunting clothes

who ornamented the wristlets with

beads.

# Aviâja Rosing Jakobsen

**CURATOR** Nunatta Katersugaasivia Allagaategarfialu

Greenland National Museum and Archives Hans Egedesvei 8 Postboks 145 DK-3900 Nuuk Greenland



From left to right:

- (1) Arnatuut costume from Avanersuag. Thule
- (2) Kalaallisuut costume from Western Greenland and
- (3) Amarnaut costume from Eastern Greenland, all from 1980s.

Photo: Greenland National Museum and Archives, 2006.

© Greenland National Museum and Archives

# Fashion and clothing in colonial Greenland

Primarily on the basis of written sources, the paper examines examples of change and innovation in women's and men's clothing in early-colonial West Greenland and discusses the influence of 'world fashion'. Based on descriptions of garments worn for festive occasions in the 19th century, it is suggested that elements of world fashion influenced women's and men's clothing guite differently. The paper also discusses the national costume, as it appeared in its

standardized version in the early 20th century, both as the result of a long, innovative fashion pro-

> of a genuinely modern 'ethnic dress'.



Søren T. Thuesen

ASSOCIATE PROFESSOR Eskimology and Arctic Studies Section Department of Cross-Cultural and Regional Studies

University of Copenhagen Strandgade 102, DK-1401 Copenhagen K Denmark



Students from the catechists' training college in Nuuk wearing coloured cotton anoraks. white shirts and caps. Although not visible in this photograph, they are probably also wearing sealskin trousers and boots. From the left: Pavia Chemnitz, Julius Motzfeldt, Eli Sivertsen and Johan Dahl.

Hand-coloured photograph by H. J. Rink from the late 1850s.

© The National Museum of Denmark



# Today's skin outfits

Clothing in cold areas must above all meet man's basic needs, when protecting from snow, frost, wind, rain as well as warmth and sunshine. In the Arctic seal skin is still a most convenient and popular material for clothing, meeting these requirements. Today skins from two species of seal are most used: the ringed seal and the harp seal.

When the modern seal skin is dyed, the colour will reflect the fashion industry's requirements. The basic colours of today's seal skin dresses are including black, navy blue and red.

In Greenland you use seal skin for all kind of clothing, including bikinis, coats, snow suits for children, furniture coverings and even Christmas decorations.

I have made the traditional anorak in seal skin. This pattern leaves you with a great feeling of comfort and gives you special freedom of movement when

you go hunting and fishing. The pattern I have worked on has been taken from the traditional white anorak for men. In particular the style wastes no skin and the side seams are straight and simple.

Today the working conditions for sewing are a lot better than in the old days with the oil lamps for lighting. You can choose between hundreds of skins and the styles are made to look good on the catwalk. Seal skin is a very strong material compared to fox and mink.

Today I follow fashion to create what looks best on the individual customer.





Mette Kristensen

**DESIGNER** 

Flintemarken 23, 1.th 2950 Vedbæk Denmark



# Greenlandic garments, viewed through the art

# Birte Haagen

**ANTHROPOLOGIST** 

Agernvej 41 DK-2830 Virum Denmark

Two women carved from driftwood by Johannes Kreutzmann ca. 1930. The woman in the blue anorak is pregnant so her stomach is uncovered and her undershirt is visible. Women in that time wore elaborate hairstyles, but these figures are both missing the hair that would be visible above their polka-dotted headscarves. Photo: Palle Kiærulff-Schmidt.



In several books I have published Greenlandic figures made by artists; figures wearing the dresses of their time or of former times.

It is interesting that the artist Johs. Kreutzmann who between 1916 and 1940 carved human figures in wood and painted them in bright colours, also showed the well worn dresses that were used for everyday purposes. Often he has shown where they have been reinforced using stronger animals' skin. He also showed the shabby ones, with rags about the knees and thighs and with turn-down kamiks. The women are often shown working with everyday occupations. He also depicts old women standing and waiting to get a bit of the meat from a seal that someone is flensing. The men are usually shown standing with their hands in their pockets!

Ole Kreutzmann, his cousin, was also interested in showing the dresses of former times in Greenland, and depicted these figures in tooth carvings. Ole



has explained that he always tried to imagine to himself what his figures told each other

The artist Esra Berthelsen — originally a cooper — has in his figures shown or thought of mythological images, I believe. But maybe he is just depicting the situation where a hunter is doing "eye-hole catching" and has a polar bear skin thrown over his head to hide him from the light sky. No doubt the artists have tried to imagine how the dresses of their forefathers looked, it has become a kind of iconography to us all today — and to the Greenlanders of today.

# Arctic dress design with hoods and tails

The material primarily used in shaping my analysis, is the impressive collection of arctic skin clothing brought to the Danish National Museum in Copenhagen by museum curators, civil servants stationed abroad and expedition participants in the last 200 years. In particular, the dress material from the 5th Thule Expedition will create the basis for the analysis of design and symbolism.

The arctic dress as a means of protection against the arctic cold has been a subject for previous research. The external conditions, such as ecology and climate have been described as the all-encompassing reason for the appearance of the outfit

I will provide a short overview of Gudmund Hatt's theories about the development of the styles in cut of arctic fur coats and describe the expansion of the distinct and special 5-branched back design, used both by Inuit in Canada and by women in West Greenland before Danish colonization resulted in a change in dress style.

The arctic dress is an important element in the collective description of the cultural identity of the Inuit. A complete picture of the society and its values can be attained, only after an analysis of design and symbolism is combined with the ecological analysis.

The communicative characteristics of the dress have especially been important amongst the groups with nomadic lifestyles in Northern Canada, in that it visually functioned both as an ethnic and social marker. As such the suit has had a particularly important nonverbal role in communicating both cultural identity and cultural values.





Anne Bahnson

**DIRECTOR** 

Sisimiut Katersugaasiviat Box 308 DK-3911 Sisimiut Greenland

Woman's fur coat from the Copper Eskimos collected in 1923 by Knud Rasmussen during the 5th Thule Expedition. In the collection of the National Museum of Denmark. Photo: The National Museum of Denmark.

©The National Museum of Denmark

# The body's disguise — Siberian fur clothing



Rane Willerslev

PHD. HEAD OF DEPARTMENT The Ethnographic Collections

Moesgård Museum Moesgård Allé 20 DK-8270 Højbjerg Denmark Traditional fur clothing and its capacity to transform the identities of both the hunter and his prey is, as we shall see, of paramount importance to this discussion, since garments can bring about powerful spiritual transformations of desire and seduction.

However, the hunter's body exposes more than just sameness in species identity; it also sets in motion an ideal reflection of the animal's own body and kicks off a kind of narcissistic desire in the animal, which cannot resist such self-reflection.





Yukaghir dressed in traditional hunting clothing. Photo: Rane Willerslev.



# Sami Skin Clothing

The Sámi costume reveals a lot about the person who wears it. It shows that you are a Sámi person and the area from which you come. Today the Sámi costume is mostly worn at festive and other important occasions. Previously it was used as everyday clothing. With time, the costume has followed the common trends of style, but the basic cut and decorations have been retained. The wearer's status, social position, sex and age are also shown with certain styles, colours and varied decorations on the costume.

The original costume was made of reindeer skin, finished with reindeer fur trimmed with dog pelt. Shoes, leggings and gloves are made from skin taken from reindeer legs. The warmest shoes are made from the skin from the head. In this kind of clothing people survive and are warm on the coldest winter days. Clothes from reindeer skin were sewn using reindeer sinews. Fur caps have a long tradition and are made in a modern style today. A cool summer tunic could be made of the bare hide. It kept out mosquito bites and summer rain.



In the 1960s many changes began to take place for the reindeer herders. Today reindeer herding basically exists to convert reindeer meat into money. Today fur is expensive material and poorly available. The tradition of making and using reindeer fur is slowly disappearing. However, at the same time details from the Sámi costume are an important symbol for the young Sámi today.

ElleMina wearing a traditional children's winter cap (mössa) from the Gällivare area. The cap is made of kid skin decorated with red cloth and ribbons. Photo: Kajsa Kuoljok

# Kajsa Kuoljok

**ETHNOGRAPHER** 

Ájtte Svenskt Fjäll och Samemuseum, Box 116, Kyrkogatan 3 S- 962 23 Jokkmokk Sweden



# Eurasian costumes

The costume collection in the Department of Ethnography at the National Museum of Denmark contains around 500 objects, with 200 from the Sami people and 300 from 9 Siberian peoples. From the Sami people the main objects are footwear (67), headwear (52), belts (30) and shoulder wear (18). From the Siberian people the main objects are shoulder wear (86), footwear (66), headwear (61) and belts (24).

The presentation will show examples of the objects and describe how the collection was created. A few objects came from both areas during the 1700 years and 1800 years, but since 1900 the collections has grown. A good part of the Sami collection was collected by Emilie Demant Hatt between 1915 and 1924. She often records the names of the producer and the user. A good part of the Siberian collection was bought by Knud Rasmussen from Eugene Alexander's widow and donated to the National Museum of Denmark. He wanted the Fifth Thule Expedition (1921-1924) to be driven by sledge through Siberia in 1924 back to Denmark, but he was not allowed to do so.

From 1938 the Eurasian collection was displayed in 6 rooms, which in 1966 were cleared to make room for temporary exhibitions. In 1982 the whole Sami collection was shown in these rooms for half a year. Since rebuilding the Department of Ethnography in 1988 only a few objects have been shown from the area.



The image shows Sami clothing for adults and children of both sexes. This photograph was found among Emilie Demant Hatt's papers after her death. She had written on the back: Lapland. Tråmsdalen. The Sami outside the turf dwelling (kåt) — assembled for photographing ca. 1900 (or a bit before) E.D.H. ©The National Museum of Denmark

# Rolf Gilberg

**ANTHROPOLOGIST** 

Stokholmsvej 43, DK-3060 Espergaerde, Denmark





Woman's sealskin clothing from West Greenland: parka, trousers and boots; inventory numbers Ld.32a, b and c. Back side.

Photo: Roberto Fortuna, The National Museum of Denmark

# Contributors

### **Hanne Kathrine Andersen**

**FURRIER** 

hka@sagafurs.com

## Claus Andreasen

FORMER HEAD AND DEPUTY OF GREENLAND NATIONAL MUSEUM AND ARCHIVES

claus.andreasen47@gmail.com

### **Anne Bahnson**

DIRECTOR anba@qeqqata.gl

# **Enrico Cappellini**

MARIE CURIE POST DOCTORAL RESEARCH FELLOW ecappellini@googlemail.com

## Susanne Falkencrone

FUR TECHNICIAN sf@sagafurs.com

### **Roberto Fortuna**

PHOTOGRAPHER roberto.fortuna@natmus.dk

## **Rolf Gilberg**

ANTHROPOLOGIST ilbe@os.dk



### **Tom Gilbert**

ASSOCIATE PROFESSOR mtpgilbert@gmail.com

### Birthe Gottlieb

CONSERVATOR birthe.gottlieb@natmus.dk

### Hans Christian Gulløv

RESEARCH PROFESSOR hans.christian.gullov@natmus.dk

# **Birte Haagen**

ANTHROPOLOGIST tinok.birte@mail.dk

# Aviâja Rosing Jakobsen

CURATOR aviaaja.rosing@natmus.gl

# **Eva Lilja Jensen**

CONSERVATOR eva.lilja.jensen@natmus.dk

# Karsten Jensen

ASSOCIATE PROFESSOR kj@land.aau.dk

## **Torunn Klokkernes**

CONSERVATOR PHD torunn.klokkernes@gmail.com

### **Mette Kristensen**

DESIGNER mettekristensendesign@gmail.com

# Kajsa Kuoljok

ETHNOGRAPHER kajsa.kuoljok@ajtte.com

# Anne Sofie Odgaard Løvenstjerne

FURRIER sol@sagafurs.com

### Per Kristian Madsen

DIRECTOR GENERAL per.kristian.madsen@natmus.dk

### Ditley L. Mahler

PROJECT RESEARCHER
Ditlev.L.Mahler@natmus.dk

## **Ulla Mannering**

ASSOCIATE PROFESSOR manner@hum.ku.dk

# **Ingegerd Marxen**

HEAD OF STORAGE AND LOGISTICS ingegerd.marxen@natmus.dk

# **Anne Mette Olsvig**

CURATOR qasmus@qaasuitsup.gl

# **Anette Hjelm Petersen**

CONSERVATOR anette.hjelm.petersen@natmus.dk

# **Anne Lisbeth Schmidt**

CONSERVATOR M.SC.,
COORDINATOR
anne.lisbeth.schmidt@natmus.dk

# **Anne Sommer-Larsen**

HEAD OF DEPARTMENT anne.sommer-larsen@khm.uio.no

# Søren T. Thuesen

ASSOCIATE PROFESSOR sthuesen@hum.ku.dk

# **Rane Willerslev**

PHD. HEAD OF DEPARTMENT etnorw@hum.au.dk

Backcover:
Same clothing as front cover seen from the back.
Photo Roberto Fortuna,
The National Museum of Denmark.



The project Skin Clothing from the North forms part of the National Museum's main research program NORTHERN WORLDS

