

ON MELTING GROUND

Arctic Archaeology

20th to 22nd October 2021
Chemnitz, Germany

ABSTRACTS



smac
staatliches
museum für
archäologie
chemnitz

Kindly supported by



The **smac** is an institution of:

LANDESAMT
FÜR ARCHÄOLOGIE



Freistaat
SACHSEN

TABLE OF CONTENTS	
SESSION 1 THE MYTH OF THE ARCTIC CIRCLE: EXPEDITIONS INTO THE ICE, COLONIZATION AND MISSIONARY WORK	4
SESSION 2 EXPLORING THE NATURAL ENVIRONMENT, THE CLIMATE AND ITS CHANGES	9
SESSION 3a OUTLINE OF CULTURAL HISTORY: CULTURES IN THE ICE	14
SESSION 3b ARCTIC CULTURE HERITAGE MANAGEMENT	19
SESSION 4 CURRENT ARCHAEOLOGICAL EXCAVATIONS	22
SESSION 5 THE ARCTIC IN MUSEUM COLLECTIONS	30
LIST OF CONTRIBUTORS	35
CHAIRS	39

SESSION 1 THE MYTH OF THE ARCTIC CIRCLE: EXPEDITIONS INTO THE ICE, COLONIZATION AND MISSIONARY WORK

Christian R. Salewski (Bremerhaven, Germany)

Russian-German Cooperation in Polar Research between the World Wars. Forgotten Episode or Historical Reference Point?

In the last third of the 19th century, the realisation spread among polar travellers and explorers that scientific engagement with polar regions was a task not only beyond the powers of individual explorers or interest groups, but even beyond the powers of individual nations. Therefore, sometimes on the initiative of scientists, sporadically towards the end of the 19th century, and increasingly then in the 20th and 21st century, European and North American nations sought international cooperation in polar research. Russia and Germany also made repeated efforts to intensify their cooperation in this field of research. However, the historical ruptures in the relationship between these countries sometimes during these times set repeatedly hard limits to this cooperation. This article will first take a critical look at the beginnings of Russian-German cooperation in research on the Polar Regions and regions with similar climatic conditions in the period between the world wars. To this end, a look is first taken at the prehistory of this cooperation in the 19th century and at the general political, science political and institutional conditions that also made renewed cooperation in polar research possible after the First World War. Then the development of German-Russian polar research cooperation is outlined using the example of the Alai-Pamir expedition of 1928, the polar voyage of the airship LZ 127 „Graf Zeppelin“ and the German participation in the Russian expeditions within the framework of the 2nd International Polar Year in 1932/33. In each case, the reasons for the development of these

undertakings, their course and their results are examined. Finally, the reasons for the failure of the cooperation in the early 1930s are discussed.

In addition, the text aims to determine, at least provisionally, the significance of the ventures in the interwar period for the history of German-Russian cooperation in the scientific examination of the Polar Regions under the influence of historical ruptures in the 20th century. For this purpose, the joint interwar ventures will be compared with the other phases in this history of cooperation in the 19th and early 20th centuries, but above all after the Second World War, and the question of their significance in the historical consciousness of polar researchers will be addressed. It should be taken into account how severely this scientific cooperation in polar research was affected by the historical disruptions of that time and how long it therefore took before a Russian-German cooperation in polar research was resumed.

Kirsten Hastrup (Copenhagen, Denmark)

Legacies of Thule. Knud Rasmussen in Inuit Landscapes

In this article, some of the legacies adhering to the name of Thule will be discussed. The name descended upon the Arctic region in early twentieth century thanks to Knud Rasmussen and his collaborators. It first emerged as the name of a trading station in Northwest Greenland, eventually embracing the entire region as seen from outside. Second, it became the brand of his seven Thule-expeditions that took place both in Greenland and in America, east and west. Third, it was accepted as a name for a prehistoric Pan-Arctic Thule Culture, emerging out of the permafrost during the Fifth Thule Expedition. Returning to these legacies will take us towards a discussion of heritage, not only as discovered but also as written. The paper ends with some reflections on anthropological nostalgia.

Kirstine Møller (Nuuk, Greenland)

Power and Agency in the Colonial Period in Kalaallit Nunaat.

The colonisation of Kalaallit Nunaat (Greenland) began with the arrival of Dano-Norwegian priest Hans Egede and his family in 1721 at the mouth of the Nuuk fjord. Throughout the 18th century, colonisation and missionisation efforts increased. Soon, the opposing ideologies of the Danish Trade and mission and the Moravian mission presented a challenge in the relational contact and interaction with Inuit.

The Danish Trade relied heavily on the effectiveness of the Inuit hunters and, as a result, encouraged Inuit to live as traditionally as possible, i.e., continue their nomadic lifestyle, where the availability and seasonality of animals dictated the placement of their settlements. The Moravian mission, however, encouraged their Inuit congregation to settle permanently at their mission sites.

This paper explores the discourse between the Danish and Moravian colonists and the conflicts that arose in their wake. The question of who exerted power and had agency is investigated within the contact zone of Inuit, Danes and Germans.

Andrei Golovnev (St. Petersburg, Russia)

Arctic Nomadography

For centuries the Arctic cultures have been better known for the sweeping migrations and communications than for the local density of population with the accompanying solid architecture. Mobility is the key characteristic of the people of the high latitudes. For the purposes of detailed study of nomadism technologies we use a method of movement recording conventionally labeled as the TMA (tracking–mapping–acting) and represented in the form of three documents: (a) a GPS-track of a person's

movements during a given day; (b) a map of migrations during a year/season; (c) a video/photo sequence of movements/actions. The TMA algorithm uncovers the features of Arctic nomadic mobility and mentality taken straight from reality. This method could be named nomadography, in contrast to philosophically distilled nomadology, and provides the vision of nomadic mobility via indigenous design.

Michael Bravo (Cambridge, United Kingdom)

Excavating the North Pole and the Arctic Circle: Is There a Past That Can Be Decolonised?

Polar concepts like the North Pole and the Arctic Circle have been at the core of the globe's geographical infrastructure for many centuries in Ptolemaic cosmology. Lines of latitude and meridians, poles, and tropics - this vocabulary of polarity was taught to geography and cosmography students in early modern Europe. They present us with a paradox however: they have provided colonizing powers with the essential geographical vocabulary and logic for imposing spatial order and standardization on the Arctic necessary for regimes of political and economic control, and yet, so important are they for everyday western thinking about the globe, they seem almost invisible and apolitical. What then might it mean to speak of 'decolonizing the pole' and similar Euclidean polar spaces? My argument is by restoring historicity and temporality to this infrastructure, 'decolonizing talk' can begin to make sense. The North Pole's histories point towards multiple kinds of narratives – mythological, navigational, imperial, stratigraphic, sacred, and even racial – from which it is possible to read temporalities that are steeped in visions of empire and colonial fantasy. In my book, *North Pole: Nature and Culture*, I asked how one might dig deeper and excavate narratives of polarity so as to read against the colonizing grain, so as to restore a more

layered reading attentive to marginalized voices, such as those of women and minoritized peoples. Excavating hidden voices has however a second-order intersectional significance; namely that historical practice and an attentiveness to hidden depths has simultaneously been integral to the imperial visions and self-understanding and scholarship of many of the most important writers on the poles and polarity.

SESSION 2 EXPLORING THE NATURAL ENVIRONMENT, THE CLIMATE AND ITS CHANGES

Sari Stark (Rovaniemi, Finland)

Arctic Ecology and Archaeology Combined – Historical Legacies of Reindeer on Vegetation and Soils in Boreal and Tundra Ecosystems

It has been increasingly recognized that land-use history exerts lasting legacies on present-day ecosystem structure and processes. These legacies are an integral part of the natural environment and an agent for increased heterogeneity and diversity across the landscape. They also form a determinant for ecosystems' responses to ongoing climate warming; understanding the past is thus essential for predicting the future. To better understand ecosystem dynamics at long time-scales, a research tradition has emerged where ecological investigations on plants and soil microorganisms are combined with archaeological evidence on past land-use. I present examples of such studies from northernmost Fennoscandia, where reindeer herding has been practiced for several centuries. Plant and soil analyses in historical reindeer milking grounds and corrals demonstrated that the vegetation transitions induced by reindeer grazing create long lasting legacies on vegetation and soil carbon and nutrient cycles. As the soil carbon cycle in the Arctic is very slow, past grazing intensities still influence soil properties even a century after the land-use has stopped, and therefore also likely govern ecosystem responses to global changes. Studies also revealed that the past rather than the present vegetation governed the soil microbial potential for carbon degradation. These findings that revealed novel insights into Arctic ecosystem ecology could not have been obtained without collaboration with archaeologists. Sites with demonstrated historical ecosystem transitions, identified in collaboration with archaeologists, could provide a

powerful tool for testing ecological predictions on the long-term consequences of ecosystem change across long timescales and improving understanding on their main drivers. Increased communication between archaeologists and ecologists could thus substantially aid understanding on how short-term changes observable for scientists transmit into longer time-scales, which in turn would improve chances for accurately predict how Arctic ecosystems may change in response to global changes.

Otto Habeck (Hamburg, Germany)

What is It Like to Live with/without Permafrost? Cattle, Sheep, Horses, Reindeer and Their Herders in Sub-Polar and Inner-Asian Regions

Thawing permafrost has received large media coverage over the last decade. Numerous reports speak of permafrost degradation and its consequences, in particular for indigenous peoples in the circumpolar North. Such reports, however, seldom discuss how humans came to "live with" permafrost, utilised the environmental conditions of permafrost landscapes and occasionally modified these landscapes. Pastoralism (animal husbandry and reindeer herding) is of key importance here. Based on three examples (Central Yakutia, northern Mongolia, and the tundra areas near the Polar Urals), this paper will show how different types of pastoralism interact with permafrost landscape dynamics. We will see that "melting ground" is just one among the manifold processes that should be taken into account when assessing the consequences of past, current and future environmental and socio-economic changes.

Gerrit Lohmann (Bremerhaven, Germany)

Climate of the Past, Present, Future Arctic Realm

As a result of global warming caused by greenhouse gases, dramatic climate changes are currently observed in the Arctic. The air temperature near the ground has increased by 1.4 °C during the last 30 years, and an increase of as much as 2.1 °C was recorded for the last 10 years. Thus, Arctic warming exceeded global warming by a factor of 2.5 during this 10-year period. Furthermore, the summer sea ice cover of the Arctic Ocean decreased by more than half between 1970 and 2020. Greenland's ice sheet has also decreased drastically, and a resulting further rise in sea level can be expected in the future. Clear impacts of these climate changes on the environment and living conditions in the Arctic can already be observed today. The climate changes currently observed in the Polar Regions are already having a strong impact on the way of life of the population in higher latitudes. Furthermore, these climate changes may also affect living conditions specifically in Germany and around the world. For these reasons, the Polar Regions are of outstanding social relevance as a "hotspot" of global climate research.

The increased climate changes in higher latitudes (especially in the Arctic) are caused by the so-called polar amplification. Here, global warming and its influences on numerous climate parameters are positively amplified by special processes and feedbacks that act more effectively in the Polar Regions than in other areas of the Earth. The comprehensive elucidation of the causes of the polar climate changes, some of which are dramatic and unexpected in their strength, has not yet been fully achieved.

Late Quaternary permafrost deposits and ground ice provide quantitative and qualitative proxy data that reflect glacial-interglacial climate variations and related permafrost aggradation and degradation over time. The permafrost-preserved organic matter is furthermore studied for its carbon stocks and carbon vulnerability to estimate its degradability upon thaw. In contrast

to glacial ice core records that commonly integrate annual climate signals, the permafrost archive preserves both summer-specific floral and faunal fossil records and winter-specific ice-wedge records.

Sean Desjardins (Groningen, Netherlands) with Peter D. Jordan & T. Max Friesen

Long-Term Perspectives on Circumpolar Social-Ecological Systems

The International Arctic Science Committee's (IASC) 3rd International Conference on Arctic Research Planning (ICARP III) highlighted the importance of "observing and predicting" climate dynamics and their effects on ecosystems. Partly in response to this, we recently (2020) edited a special issue of *Quaternary International* organized broadly around a fundamental question in the archaeology of human-environment relations: Can well-established human responses to past warming and cooling episodes inform on current and future responses? While a definitive answer remains elusive, the volume illustrated well how archaeology—through its focus on human-scale and high-resolution data—is uniquely situated to addressing such questions. In this paper, we reflect on the four "action points" for polar archaeologists we raised: 1) finding new ways to work more effectively with, and communicate research to, Indigenous rights-holders and researchers from other disciplines; 2) initiating badly-needed archaeological research in the world's sensitive subarctic and subantarctic regions; 3) better coordinating use of multidisciplinary "big data" and social-ecological baselines; and 4) when appropriate — and in cooperation with descendant communities — finding new and innovative ways to draw attention to the climate-related loss of past material culture at the national and international levels.

Vladimir Davydov (St. Petersburg, Russia)

Energy Regimes of the Arctic: Indigenous People in the Context of Socio-Economic and Ecological Change

The proposed presentation aims to stress poignant ethnic, cultural and social, as well as energy problems that have arisen among indigenous populations in the Arctic and acquired a systemic character within the process of globalization. Until now, the study of energy processes and the analysis of the use of natural resources by indigenous people were considered as two distinct areas of research, barely intersecting each other. This presentation aims to deconstruct the border between them and to discuss the exploitation of resources by the local population of the Arctic in the context of socio-economic and climate change.

Stephan Dudeck (St. Petersburg, Russia)

Siberian Perspectivism – Sharing the Environment with Human and Non-Human Beings

The paper aims to challenge widespread exoticizing concepts of extreme living conditions in the North by presenting local perspectives on the environment and its inhabitants. It will introduce to the concept of perspectivism based on mutuality and sharing between humans and non-humans in the environment. On the example of the circumpolar bear ceremonial complex and in particular Western Siberian bear hunting and feasting traditions it will demonstrate the principles of a shared environment in local indigenous communities. These principles of social relatedness and reciprocity are enacted in ritual form in diverse feasting traditions among circumpolar cultures and reflected in folklore and material culture as well. Perspectivist ideas inform not only human-animal relations and religious concepts, but also political and economic relations between different human actors and communities.

SESSION 3a OUTLINE OF CULTURAL HISTORY: CULTURES IN THE ICE

Victor Moreno-Mayar (Copenhagen, Denmark)

The Genetic Prehistory of the New World Arctic

Vladimir Pitulko (St. Petersburg, Russia)

Cultural History of Northeastern Siberia since the Pleistocene

Environmental changes largely predetermine human population distribution and cultural development in the Arctic, where environmental conditions were often too extreme for human survival. Not that long ago the only evidence of human presence here was the Berelekh site in the lower reaches of the Indighirka River. This landmark dates to 13,000-12,000 years ago but it was widely accepted as documentation of the earliest stage of human dispersal in the Arctic. New research discussed here, shows that humans began colonizing the Siberian Arctic at least by the end of the early stage of MIS3 at around 45,000 years ago. For now, this earliest known stage of human occupation in the arctic regions is documented by the evidence of human hunting. The archaeological record of continued human occupation is fragmentary; nevertheless, evidence exists for each significant phase including the Last Glacial Maximum (LGM). Siberian Arctic human populations were likely supported by the local mammoth population, which provided humans with food and raw material in the form of mammoth tusks. Processing of mammoth ivory is recognized widely as one of the most important peculiarities of the material culture of ancient humans. In fact, ivory tool manufacturing is one of the most important innovations of the Upper Palaeolithic in northern Eurasia. Technology that allowed manufacturing of long ivory shafts e long points and full-size spears - was critical in the tree-less open landscapes of Eurasian mammoth steppe belt.

These technological skills reach their greatest extent and development shortly before the Last Glacial Maximum but are recognizable until the Pleistocene-Holocene boundary across Northern Eurasia in all areas populated by mammoths and humans. Loss of this stable source of raw material due to the late Pleistocene mammoth extinction may have provoked a shift in post-LGM Siberia to the Beringian microblade tradition. Development of the local late Stone Age (Neolithic) cultures took place in the Holocene is largely due to human migrations in the northerly direction which is seen in genetic influx from the south.

This research is supported by the Russian Science Foundation, project No. 16-18-10265P RNF and 21-18-00457 RNF

Olga Tupakhina, Daniil Tupakhin (Salekhard, Russia)
Ancient Fishers and Hunters of the Yamal Peninsula

The region of the Yamal Arctic traditionally belongs to the area of a foraging subsistence strategy. Variable natural conditions of this region require a wide variability of subsistence tasks. The performance of these tasks formed communities that were united not only by kinship ties, but also by joint activities. These activities were aimed at ensuring livelihood in accordance with the chosen adaptation strategy. In the V–III millennia BC with sedentary fishers, semi-sedentary hunter-fishers and reindeer hunters, three groups of communities differing from each other by cultural traditions and type of subsistence are known in the region. In this talk we consider two groups of these past communities: Sedentary fishers with the Gorny Samotnel 1 settlement as a reference site for this group and reindeer hunters of the Yorkutinskaya site. The speakers conducted comprehensive studies at these sites from 2009 to 2021.

Owen Mason (Boulder, USA)

The Last Five Millennia: The Deep History of Whaling, Warfare and Inequality in Siberia and Alaska

No larger caloric surplus exists beyond that offered by the bowhead whale; surplus is often considered the precondition to social complexity. The development of whaling remains mysterious; whaling is inherently a dangerous act, dependent on a combination of technology, skill and luck. Location near upwelled nutrient hotspots and ruptures in sea ice also were critical, within a core area around Bering Strait. A successful crew gained status and the ability to attract followers and allies. The development of whaling presupposes a series of social and technological developments; primarily in boats and spears, but in social capital as well. Cold climates and intercontinental trade exerted powerful influences on the development of whaling. Walrus-hunting was also critical: its skin serving as the membrane for the watercraft and as trade offerings for caribou fur. Recent data indicate walrus-taking occurred >5000 years ago in southern Alaska while whaling may be over 3000 years old in Chukotka. Long-noticed is the co-occurrence of fabulous art traditions—Old Bering Sea and Punuk—engraved with iron tools on walrus ivory. Grave goods confirm the deep roots of inequality as status display and in shamanism, reflecting the role of trade and feasting in producing the Old Bering Sea cosmic vision. Warfare was associated with the spread of the first whaling cultures. A second expansion of whaling occurred among Punuk and Birnirk peoples ca. AD 1150-1200 partially co-occurring with a trade in metals and by innovations in nautical and atlatl technology.

Max Friesen (Toronto, Canada)

The Cultural History of Inuit Nunangat (the Canadian Arctic), as Seen from its Western Margin

The history of Inuit Nunangat (Inuit regions of the Canadian Arctic) is becoming well known in its broadest outlines, though many specific aspects remain unresolved or mysterious. It consists of two main traditions, Paleo-Inuit (also known as Tuniiit, Paleo-Eskimo, or Arctic Small Tool) and Inuit (also known as Northern Maritime, Thule, or Neo-Eskimo), which together span around 5,000 years. This paper will present a very brief overview of the major events, trends and processes that define the archaeological record in Inuit Nunangat. It will be framed from the perspective of the western part of the region near Cambridge Bay, Nunavut, which has yielded distinctive archaeological sites dating to all major periods.

Kirstine Møller (Nuuk, Greenland)

Cultural History of Greenland

The cultural history of Kalaallit Nunaat (Greenland) is shaped by ice and began some 4500 years ago. As soon as the ice allowed, cultures have made the island their home. The Saqqaq, Independence, Greenlandic Dorset, Late Dorset and Norse cultures are archaeological cultures whose remains are visible to the naked eye in the landscape. The Inuit culture, which arrived around 1150 AD, are the ancestors of the present-day Kalaallit. We have traditional oral accounts of encounters between Tunit (Late Dorset people), Norse and Inuit. Encounters with European whalers and later the Dano-Norwegian colonisation of Kalaallit Nunaat were also shaped by ice, and now with climate change, the melting grounds are posing challenges for the archaeology of all these encounters.

In this paper, I present a concise overview of the different cultu-

res that have inhabited Kalaallit Nunaat and some of the challenges the archaeological remains face today.

Christian Koch Madsen (Nuuk, Greenland)

Is One Man's Loss Another Man's Gain? Perspectives on Social Archaeology and Inequality in Medieval Norse Greenland

The Viking Age farmer-hunters that settled the North Atlantic and Greenland in the 8th to 10th centuries AD formed hierarchical societies mirroring those in their Scandinavian lands of origin. Innate differences in power, status, and wealth created unequal opportunities for the settlers in their new homelands. Thus, initial and lasting social inequality should be considered an important human factor in affecting long-term social-ecological development and change in the medieval North Atlantic. Reviewing the latest research on the medieval Norse settlements in Greenland and their abandonment by AD 1450 as a case study, this pilot study considers how complex, and potentially cascading, social drivers of societal change and transformation may be explored through the concepts of Human Securities and Qualitative Comparative Analysis (QCA). It is argued here that such an approach may help researchers tune in on the lived human experience of the past—asking “for whom” rather than just “why” or “how”—when considering change, resilience and sustainability of past societies—and not at least the ultimate fate of the Norse settlements in Greenland.

SESSION 3b ARCTIC CULTURE HERITAGE MANAGEMENT

Martin Callanan (Trondheim, Norway)

Melting Arctic – Disappearing Past. Climate Change and Arctic Archaeology Today

The Arctic is a vast region, both geographically, environmentally and archaeologically. There is great variation across this vast area. But there are also clear discernible commonalities that bind the region together both as a lived-in space for humans, as well as in our concepts and understanding. The ongoing transformation of global weather and climate affects the Arctic at both regional and local levels simultaneously.

In this presentation we shall look at some of the effects of unstable weather and climate change on archaeological sites and landscapes across the arctic. We shall also highlight some regional characteristics that might be amplifying the negative effects of current climatic change. In closing, we will also look ahead to see what the future might hold for Arctic archaeology in the short to medium term.

Henny Piezonka (Kiel, Germany)

The Archaeological Heritage of Arctic and Sub-Arctic Siberia: Challenges of Preservation and Interpretation

In Arctic and Sub-Arctic Siberia, the northern conditions have favoured wetland and permafrost preservation of archaeological artefacts and environmental evidence, including organic remains. In addition to low mean temperatures, factors such as slow natural erosion, low levels of bioturbation and the lack of ploughing agriculture have enabled the archaeological remains to be preserved even in the surface relief for millennia. A unique unstudied archive has thus formed, and in the vast expanses of

northern Siberia, this archive has as yet remained largely unstudied, with a few, partly spectacular exceptions.

This unique archaeological archive, preserving traces of lifeways and histories in the north from the deep past to recent times, is becoming increasingly endangered by the effects of current global and regional hazards. In northern Siberia, just like in other Arctic and Sub-Arctic regions, the effects of climatic fluctuations on the vulnerable equilibrium of human-environment systems are especially strong, with global warming leading to the melting, exposure and ultimate destruction of formerly frozen archives and also to increasing soil erosion. Fast-growing industrial activities including large-scale oil and gas extraction and mining enterprises increasingly impact the natural landscapes, exposing and also destroying archaeological remains along the way. These developments also contribute to accelerating changes in the lifeways of the Indigenous people of northern Siberia, making the up-keeping of traditional economies based on hunting, fishing and reindeer herding more and more difficult and at that also putting the preservation of traditional ecological knowledge but also the Indigenous identities themselves at danger.

Interdisciplinary research programmes bridging archaeology, cultural anthropology and environmental sciences are needed to document and interpret the archaeological heritage of northern Siberia and to develop strategies for its future protection. From an archaeological point of view, three aspects seem especially relevant in this respect in northern Siberia: (1) The archives in Siberia need to be explored in order to fill the still existing major gaps in our understanding of the cultural history of Northern Eurasia. (2) Lessons to be learned from past archives encompass climate-related socio-environmental hazards, their short-term effects and longue duree impacts, and the coping strategies developed by human societies. (3) The cultural heritage that is endangered by climate change and industrialization requires rapid and thorough action in order to address the resulting challenges of documentation and preservation (e.g. as officially protec-

ted heritage sites) and also to promote Indigenous interests. The aim is to better understand the mutual dependency between human societies and environmental changes, and through in-depth exploration and targeted mitigation create a matrix from which to tackle current and future challenges.

SESSION 4 CURRENT ARCHAEOLOGICAL EXCAVATIONS

Andrei Gusev and Natalia Fedorova (Salekhard, Russia)

Iron Age Tools from Ust'-Polui, Arctic Yamal Region

Everyday practices and economy of ancient communities are usually approached in a comprehensive way by researchers. The sacrifice and production site Ust'-Polui (III century BC–II century AD) provides great information about the vast spectrum of economic activities in the region. The collection of bone and horn artifacts from our excavations in the years 1993–1995 and 2006–2015 includes about 1.300 tool blanks, fragments and finished objects. In addition, at least 1.000 similar artifacts are included in the collections of the Peter the Great Museum of Anthropology and Ethnography (the Kunstkamera, Russia). This archaeological evidence allows to characterize hunting and fishing equipment (arrowheads, bow grips, hooks), household tools (knives, fish cleaning tools, chisels, needle cases), tools for processing hides (various end and side scrapers), reindeer harness parts (swivels, headgears, buttons), and weapons (armor plates). A separate field of study are elaborated artistic products of bone carving.

Andrei Plekhanov (Salekhard, Russia)

Excavations of Multiperiod Settlements in the Southern Yamal Peninsula

Two multi-period settlements, Ngarka-Yedetayakha 1 and 2, located at the Zyryanskaya Ob stream at the southern tip of the Yamal Peninsula in northwestern Siberia have been investigated during three field seasons. In Nenets language Ngarka-Yedetayakha means „Big Gut River”. According to the excavation results the area where the settlements are located were inhabited in the following periods:

1. Tazov culture (last quarter of the 2nd century BC – beginning of the first century AD);
 2. Kheiyakhin culture (10th–8th centuries BC);
 3. Kulay culture of Ust'-Polui period (4th century BC – 2nd century AD);
 4. Karym stage of Lower Ob culture (4th–6th centuries AD);
 5. Tiutei-Salin stage of Lower Ob culture (9th–12th centuries AD);
 6. Saigatinsk stage of Lower Ob culture (13th–14th centuries AD).
- In addition to the traditional hunting and fishing subsistence, traced at the osteological material, evidence of metal production was obtained which is northernmost for this region in the Middle Ages.

Vladimir Pitulko (St. Petersburg, Russia)

Current Archaeological Excavations in Zhokhov and Yana Sites, Arctic East Siberia

The two archaeological sites mentioned in the title are located in the East Siberian Arctic and in its Laptev Sea region which is the most remote and hard to access area of the Russian Arctic. Collections yielded by the excavations constitute the main part of the data corpus in the Stone Age archaeology of Western Beringia. Culture-bearing deposits at both sites have remained frozen for millennia and thus both of them provide diversity of organic artefacts of excellent preservation, and faunal remains.

The Zhokhov site is located under 76°N on the SW portion of the island of the same name. Its collection contains tens of thousands of objects, including more than 54,000 faunal elements, about 19,000 artefacts that characterise the lithic industry, more than 300 modified objects made of antler, mammoth ivory and bone, approximately 1000 objects made of wood including sled runners and other parts of sled frames, and a few woven and birch bark artefacts. Additionally, there are dog and human bones discovered; by genetics, human remains show broad

contacts with contemporary East Siberian populations. The age of the site is estimated by 9000 BP which is supported by multiple radiocarbon dates. Thus the Zhokhov island site is one of the northernmost archaeological sites in the world and the oldest one in the high Arctic area.

Importantly, the Zhokhov site demonstrates unusual adaptation such as using polar bear as a main food source. Additionally, the Zhokhov site yielded the earliest reliably documented evidence for the use of a land transportation system based on dogsleds. This element of adaptation allowed the early Holocene hunters of the Siberian Arctic and north-western North America to move quickly over vast areas, adapting to changes in resource availability. They would also have obtained the ability to develop long-distance exchange systems. Geochemical signatures of obsidian artefacts from the Zhokhov site demonstrate that the source stone came from ca. 1500 km east of the Zhokhov site, from Anadyr River in the Bering Strait area.

The Yana site is located in the low reaches of the Yana River under 71°N, some 120 km from the coast line. In fact, this is a complex of sites attached to the left river bank. It includes several localities; some of them are already destroyed by the river erosion. The site investigations have been focused on the area which includes Yana mass accumulation of mammoth (human-created concentration of mammoth remains resulted from systematic exploitation of local mammoth population performed over time), Yana/NP (Northern Point area, the living site used over summer), and Yana-B (Area B, which is presumably winter residence area). The site yielded enormous number of lithic, ivory, and bone artefacts, and fauna remains of the variety of species used as food. This includes hunting equipment, sewing kit, and personal adornments. Observations on worked mammoth ivory allow reconstruction of specific technology developed for manufacturing of long ivory shafts and points which is a crucial technology for habitation in open landscapes of the late Pleistocene Berin-

gia. The area remained populated by humans for thousands of years, with several well-recognizable cycles. The major habitation at Yana dates to 32,000 years ago. This unique site provides the most important information on the Upper Palaeolithic culture of East Siberia.

The Yana excavation project is a part of research supported by the Russian Science Foundation, project No. 16-18-10265P RNF and 21-18-00457 RNF.

Kirill Dneprovskiy (Moscow, Russia)

Recent Excavations at Ancient Eskimo Sites in Chukotka

The most striking and attractive items of ancient Eskimos in the collection of the State Museum of Oriental Art (Moscow) have been found at the Ekven cemetery excavated between 1987 and 1995. The later investigations on the Ekven settlement yielded a house, H-18, which was built in the Birnirk-Punuk period and dates to the middle of the first millennium AD. There were no traces of reconstruction of the house from other times. The items in the room fill belong to the same culture. The house seems to have been built on the ground surface rather than constructed as a subterranean building. In 2002-2020 the Oriental Art Museum investigated the Paipelghak settlement, located on the Chegitun River on the shore of the Arctic Ocean. According to the material it belongs to OBS and Birnirk-Punuk time. The Birnirk-Punuk dwelling in Paipelghak overlaid some structures of the Old Bering Sea culture. Ekven together with Naukan and Nunak settlements will be included in the UNESCO World Heritage List.

Liliana Janik (Cambridge, United Kingdom)

*Indexing Climate Change via Rock Art Imagery:
Ontological Security in the Past and the Present*

While scientific analyses and observations give us an 'objective' way of looking at climatic alterations in the past and present, rock art provides a window on the way surrounding environmental changes are captured by the communities they influence. The imagery left on the Fennoscandia rocks by prehistoric fisher-gatherer-hunter communities can be interpreted as environmental proxies of changing climate. These pre-agrarian rock art complexes on contemporary subarctic environmental zone span from the top of the European continent at Alta to the shore of White Sea near Belomorsk indexing the climate by the presence of particular mammal species and hunting activities pecked and carved into the rock surfaces. By following land uplift caused by isostatic movement it has been possible to establish the chronology of the images, tracing the depictions to the period c 7,000 years ago, c. 2,000 years ago to the cooler and wetter weather. Can we see these shifts in the rock art? Did species of birds or animals alter? Was elk been replaced by reindeer? Did marine mammals become more frequent, or did terrestrial and marine hunting strategies change as a response to the climate? As a result of answering such questions and by exploring the concept of ontological security as an epistemological resource of know-how I suggest we will be able to see the metastable aspect of the world around while dealing with changes brought by Anthropocene in the arctic, subarctic and beyond.

Clemens Pasda (Jena, Germany)

Archaeological Research on Prehistoric and Historic Caribou Hunting in West Greenland – An Example from the Nuussuaq Peninsula.

In Central West Greenland caribou were an important supplement to the subsistence of both Paleo- and Neo-Inuit. These hunters of sea mammals lived year-round by the coast to penetrate in summer the far inland caribou hunting grounds. Archaeological research in the inland has a focus on registration of stone-built features like remains of tent-houses, hunters' beds (where people spent the night in the open without a roof), used rock shelters, meat caches, graves as well as hunting features like drive-lanes with stone built inussuit, shooting blinds or fences. Archaeological research in the inland areas started in the late 1970s by Danish archaeologists to be expanded in the 21st century due to proposed commercial mining and damming activities. Starting in 2019, the investigation of the inland of the Nuussuaq Peninsula provides new data from a more northern region of West Greenland.

Anne Jensen (Alaska, USA)

Arctic archaeology as Seen from Utqiaġvik (Barrow), Alaska: Salvaging Vanishing Heritage

The area around Utqiaġvik, Alaska is home to many sites known for spectacular preservation. Long considered stable, these sites are now being obliterated. Thawing permafrost, sea ice retreat and longer ice-free seasons have increased erosion rates exponentially. Coastal erosion reveals structures and features, but they are often destroyed by storms before anything significant can be done.

While most of these sites had been tested or partially excavated in the past, techniques have changed. Over the past 25 years,

salvage archaeology has been done at many of these sites. This paper describes some of the findings from Nuvuk, Birnirk, Utqiagvik (the site) and Walakpa, as well as the overall situation for archaeological sites in the area.

Frigga Kruse (Kiel, Germany)

Re-Evaluating Svalbard's Human Past in View of Looming Social Change

Cobbler, stick to your last. This familiar proverb originates in ancient Greece and reminds us to stick to what we are good at and not to advise about or interfere with matters that we know nothing about. I have adopted its German equivalent as a mantra in my work, and I heed the implied warning whenever I am confronted by the challenging yet wholly justified question, how exactly “important lessons from [...] (pre)historical events can be used to better understand current transformation processes and build societal resilience.”

In this article, I provide a case study of what I am good at: archaeological field evaluations in Svalbard in the European High Arctic. More specifically, we will take a closer look into three small trenches at the former, extremely short-lived coal-mining settlement Advent City. I make the distinction between field evaluations and excavations on purpose because it has implications for the future of archaeological research in Svalbard, which I hope to move towards the state of the art in past human-animal-environment interactions.

The paper further explores whether Advent City has anything to offer to the discussions of rapid change, resilience and adaptation, trajectories to and from inequality, and scales of transformation, all of which are central themes at an upcoming archaeological conference in Norway. These themes mirror the common language used by initiatives like Future Earth, a global network of scientists, researchers, and innovators collaborating for a more

sustainable planet, which in turn reflect the 17 Sustainable Development Goals of the United Nations.

The step from little Advent City to the economic and social affairs of the United Nations is humongous. Yet, the reflection is necessary and informative. There is no reason why my team and I should not be among the researchers embracing sustainability and delivering the key messages from Arctic archaeology. We must, however, be quick to adopt the lingua franca of the resilience forums, or we may remain on thin ice in the global dialog that is currently re-centering on social change.

SESSION 5 THE ARCTIC IN MUSEUM COLLECTIONS

Natalia Alexashenko (St. Petersburg, Russia)

Siberian Arctic Archaeological Collections in the Kunstkamera: Museum and Scientific Potential

There are many archaeological collections from Siberian Arctic in the Peter the Great Museum of Anthropology and Ethnography (Kunstkamera) of the RAS. The most ancient of them is Bereleh site, was dated to 11-10 millennia BC. The latest collections were obtained from the ruins of Chukchi and Eskimos dwellings (XIX-XX century AD). Famous investigators, such as V.S. Adrianov, V.N. Chernetsov, S.I. Rudenko, S.A. Arutunov, D.A. Sergeev transferred materials from their expeditions to the Museum. The biggest collections include a few thousands of artefacts. They are also the most interesting for scientific research and spectacular for exhibition displays. Among them are the collections from the production and cult site Ust' Polui (Western Siberia), Uelen and Ekven cemeteries (Chukotka). The Ust' Polui collection gives the opportunity to explore the development of various industries in the Iron Age as well as the economy, including the origins of transport means, reindeer husbandry, sacred representations and ritual practices as well as trade relations. It remains important to study the daily life of a person in the Arctic (food, clothing, pottery, toys). The variety of finds allows us to show the individual (distinct) artworks or unusual objects as well as reconstructions of various aspects of ancient history which are based on the results of investigations at Ust' Polui. Ekven and Uelen burial grounds collections, as well as S.I. Rudenko's artefacts from the coastal settlements of Chukotka provide comprehensive material for investigations of the local inhabitant adaptation, such as maritime hunting. They also contain sources about land hunting, fishing and home activities. Studies of ivory objects have shown that they were works of art, hunting equipment or household

items and at the same time reflected people's ideas about themselves and the world around them. The existing experience of exhibitions and the new methods of scientific study of the collections in the Kunstkamera show a wide range of topics that will be of interest to museum visitors.

Irina Romanova (Anadyr, Russia)

Formation of the Collections of the Museum Center „Heritage of Chukotka“ (Anadyr), Archaeological and Ethnographic Collections of the Chukotka Heritage Museum: A Historical Review

The history of the archaeological and ethnographic collections of the Chukotka Heritage Museum began 90 years ago with the founding of the Bureau of Local History on November 14, 1931. The members of the Bureau started collecting objects with a reference to environmental and social history of the region. That was the beginning of a comprehensive assemblage of local history, which currently counts more than 37.000 museum objects. The ethnographic and archaeological collections represent a large part of the museum's assemblage.

This paper presents the key points and the main protagonists of the history of the museum's ethnographic collection, which consists of more than 850 objects. A brief overview is given of the main categories of objects illustrating the daily life of indigenous peoples of Chukotka – subsistence and transport tools, clothing, utensils, household items and ritual objects.

The paper also highlights the history of the archaeological collection, which has been constantly expanding since the 1950s by objects from archaeological surveys and excavations at Ekven, Paipelgak, Dezhnevo (Kaniskak) and other sites of the Chukotka region. At present the archeological collection of the Chukotka Heritage Museum counts more than 3.700 artifacts representing all the archeological cultures of the region.

Martin Appelt (Copenhagen, Denmark)

The Arctic Collection at the Danish National Museum

Founded in 1807, the NMDK houses one of the world's large collections of Inuit objects, in addition to sizeable collections from the Sámi and Siberian people, and from the Norse settlements in Greenland. The museum's collections are comprehensive and generally well-documented. The collections number around 21,500 ethnographical records, 100,000 archaeological records, 25,000 photographs, films, and a large number of diaries, drawings, maps, and others.

Following the establishment of the Greenland Home Rule in 1979 the national museums of Denmark and Greenland, during the period 1984 – 2000, conducted a large-scale repatriation process through which some 35,000 objects were returned to Greenland. All archaeologically recovered heritage sites and objects after 1982 have been the sole property of the Greenland Self Government.

During the paper a coarse overview of some of the most prominent archaeological and ethnographical Arctic collections housed at the National Museum of Denmark will be presented. These collections continuously play very important roles in the source communities, in Denmark and in our joint collaborative efforts, which will be exemplified.

Karen Ryan (Gatineau, Canada)

Diamond Jenness and the Arctic Collections at the Canadian Museum of History

Diamond Jenness' involvement in the Arctic began in 1913 when, at the behest of Edward Sapir, head of anthropology at the Victoria Memorial Museum (predecessor to the Canadian Museum of History), he left New Zealand to take part in the Canadian Arctic Expedition (CAE). The CAE was a multiyear scien-

tific voyage to the Western North American Arctic and Jenness was to be one of its two anthropologists, responsible for physical anthropology and archaeology. However, his counterpart's death meant Jenness' duties expanded to include cultural and linguistic studies. It is notable, given these tasks were not initially his that Jenness' ethnographic work is so well respected. But Jenness' contributions to archaeology cannot be overlooked. He conducted the first scientific excavations in the North American Arctic in 1914 at Barter Island, Alaska. A decade later at the Victoria Memorial Museum, Jenness recognised an archaeologically unknown culture in a mixed artefact collection from Cape Dorset, Baffin Island and correctly concluded that "Cape Dorset" people occupied much of the Eastern Arctic before the arrival of the Inuit. Jenness returned to Alaska for his third archaeological contribution, recognising Old Bering Sea culture and expanding the region's cultural sequence. This presentation focuses on Jenness' archaeological work and the collections at the Canadian Museum of History used by him.

Aron L. Crowell (Anchorage, USA)

Circumpolar Research at the Smithsonian National Museum of National History

The Human Ecology of Glacial Retreat in a Subarctic Alaskan Fjord Since 800 CE

Coastal glaciers carved Yakutat fiord in southeastern Alaska and continue to influence its marine and terrestrial ecosystems. Glacial discharges support a thriving marine food web, ice floes are platforms for a seal rookery, and biodiverse coastal forests grow near the ice. Na-Dene peoples (Eyak, Ahtna, and Tlingit) settled in this highly productive biome as the glaciers underwent climate-congruent retreat during the Little Ice Age. Collaborative research in archaeology, oral tradition, and traditional ecological knowledge demonstrate cultural niche construction at Yakutat since 800 CE, including the correlation of human settlement and foraging patterns with the complex biogeography of the fiord.

LIST OF CONTRIBUTORS

Appelt, Martin

National Museum of Denmark, Copenhagen, Denmark.

Alexashenko, Natalia

Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), St. Petersburg, Russia.

Bravo, Michael

Scott Polar Research Institute, University of Cambridge, UK.

Callanan, Martin

Dept. of Historical and Classical Studies, Norwegian University of Science and Technology (NTNU), Trondheim, Norway.

Crowell, Aron L.

Alaska Director of the Arctic Studies Center, Smithsonian Institution/ Department of Anthropology, University of Alaska Anchorage, US.

Davydov, Vladimir

Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), St. Petersburg, Russia.

Desjardins, Sean

Arctic Centre, University of Groningen, Netherlands.

Dneprovskiy, Kirill

State Museum for Oriental Art, Moscow, Russia.

Dudeck, Stephan

Centre for Arctic Social Studies, European University at St. Petersburg, Russia/Arctic Centre, University of Lapland, Rovaniemi, Finland.

Fedorova, Natalia
Scientific Research Center of the Arctic, Salekhard, Russia.

Friesen, Max
Department of Anthropology, University of Toronto, Canada.

Golovnev, Andrei
Peter the Great Museum of Anthropology and Ethnography
(Kunstkamera), St. Petersburg, Russia.

Gusev, Andrei
Scientific Research Center of the Arctic, Salekhard, Russia.

Habeck, Otto
Institute of Social and Cultural Anthropology, University of Ham-
burg, Germany.

Hastrup, Kirsten
Department of Anthropology, University of Copenhagen, Den-
mark.

Janik, Liliana
Department of Archaeology, University of Cambridge, UK.

Jensen, Anne
University of Alaska, Museum of the North & Bryn Mawr College,
Alaska, USA.

Kruse, Frigga
Institute for Ecosystem Research, Christian-Albrechts-University
Kiel, Germany.

Lohmann, Gerrit

Paleoclimate Dynamics, Alfred Wegener Institute, Bremerhaven, Germany/Department of Physics of the Climate System, University of Bremen, Germany.

Madsen, Christian Koch

Greenland National Museum & Archives, Nuuk, Greenland.

Mason, Owen

Institute of Arctic and Alpine Research, University of Colorado, Boulder, USA.

Møller, Kirstine

Institute of Culture, Language & History, Ilisimatusarfik – the University of Greenland, Nuuk, Greenland.

Moreno-Mayar, Victor

Centre for GeoGenetics, University of Copenhagen, Denmark.

Pasda, Clemens

Institute for Pre- and Protohistoric Archaeology, Friedrich-Schiller-University Jena, Germany.

Piezonka, Henny

Institute for Pre- and Protohistoric Archaeology, Christian-Albrechts-University Kiel, Germany.

Pitulko, Vladimir

Institute for the History of Material Culture, the Russian Academy of Sciences, St. Petersburg, Russia.

Plekhanov, Andrei

Scientific Research Center of the Arctic, Salekhard, Russia.

Romanova, Irina
Museum Center „Heritage of Chukotka“, Anadyr, Russia.

Ryan, Karen
Canadian Museum of History, Gatineau, Canada.

Salewski, Christian R.
Archive for German Polar Research, Alfred Wegener Institute,
Bremerhaven, Germany.

Stark, Sari
Arctic Centre, University of Lapland, Rovaniemi, Finland.

Tupakhin, Daniil
Scientific Research Center of the Arctic, Salekhard, Russia.

Tupakhina, Olga
Scientific Research Center of the Arctic, Salekhard, Russia.

CHAIRS

Hansen, Svend

Eurasia Dept., German Archaeological Institute.

Heit, Ilija

Eurasia Dept., German Archaeological Institute.

Kraft, Ingo

Saxon Archaeological Heritage Office.

Michel, Christina

State Museum of Archaeology Chemnitz (smac).

Reinhold, Sabine

Eurasia Dept., German Archaeological Institute.

Wolfram, Sabine

State Museum of Archaeology Chemnitz (smac).

