



Book of abstracts

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**XXXIX-1. Perspectives on the
Prehistory of Central Asia.**

Upper Palaeolithic Reseraches in Central Asia

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From Zagros to Altai, numerous new researches have indicated clear cultural tendencies across the earliest part of Upper Paleolithic. I shall begin with the Denisova chronology, and the appearance of osseous implement at the upper mots levels. In the Altai we also have Aurignacian dates, extending back to Uzbekistan, Afghanistan and Iran. On the other hand, we also face the long blades traditions, either in Obi-Rahmat or in Kara Bom, leading from eighty thousands to forty thousands, living a possibility for the emergence of Gravettian industries in the west. Many other industries will be briefly show, they indicate a huge potential of modern human and Neanderthal populations, as well as different cultural traditions in which they were linked. This very dense region, in any part of the UP is now to be involved for a sound understanding of the origins and dispersion of modern humanity into Pleistocene Europe.

Keywords: Central Asia, Upper Palaeolithic Modern man Neandertal

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PIGMENTS AND PIGMENT-CONTAINING MATERIALS IN THE PALEOLITHIC CULTURES OF SIBERIA

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Early facts of the use of pigment are known from the materials of European and African complexes of the Early Paleolithic (300 000 - 100 000 years BP). The use of pigments of different colors becomes a stable component of the culture during the Middle Paleolithic - initial stage of the Upper Paleolithic. The earliest evidence of the use of pigments in Siberia is presented in paleolithic complexes with dates of 40 000 - 50 000 years BP, most of which are associated with modern human's culture and blade technologies. Mineral pigments are used as antiseptic materials, skin softeners, as mastic (glue), the basis for paints in the creation of drawings on the walls of caves, combat and ritual coloring of the body or objects, and the burial of the deceased, etc.

We have tested the method of determining the elemental composition (SEM-EDX method) of pigments of various colors (red, pink, purple, yellow, white, blue, green). There were analyzed as pigment-containing natural materials, colored structures of the cultural layer, compositions of artificial pigments, as well as traces of paint on mobile art objects (Siberian sites: Kara-Bom, Malaya Siya, Khotyk, Kamenka, Malta).

Determination of pigment-containing natural minerals indicates a range of possible deposits based on petrographic and mineralogical comparisons, which plays an important role in the investigation of resource strategies for population adaptation and use raw materials in different areas of Southern Siberia. Microscopic determination of combination, artificial, composition of pigments from the spectrum characterizes the technology of pigment formation, as well as options for its utilization (use).

This study is supported by the Russian Foundation for Basic Research, project No. 17-56-16016.

Keywords: pigments, natural raw materials, SEM, EDX method, spectrum, adaptation strategies, Paleolithic, Siberia

*Speaker

Seasonal changes of environment around Chagyrskaya Cave (Altai) during Neanderthal occupation – insight from carbon and oxygen isotopic signal recorded in animal teeth

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Archaeological investigation of Paleolithic sites offers only a fragmentary insight into the life and culture of the ancient people. Lithic and bone artifacts, together with animal remains, can tell us about the activities undertaken around the site: area of penetration, raw material procurement, hunting methods and the preferred prey. But when we start rising important questions about wider paleoenvironmental context – such as landscape or climate, additional methods need to be involved.

In this paper we present an attempt of insight into seasonal changes in the environment of Central Asiatic Neanderthals through the isotopic analysis. The research method included the decoding of carbon and oxygen isotopic signature ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$) preserved in ungulate teeth, excavated from Neanderthal layers of Chagyrskaya Cave (Russian Federation, northwestern Altai, Charysh River valley). This method, used in paleoecological studies, is based on well-established physiological and geochemical principles. The enamel of mammal tooth starts to grow from the tip of the crown and continues to the neck. During its formation, the elements are built-in the enamel apatite with isotopic ratio which is altered in relation to environmental signature by metabolic fractionation, but in a quantitatively predictable way, and reflects the isotopic composition of the environment. Teeth with long period of crown growth may record several seasons or even years of animal life, and are therefore particularly welcomed in paleoecological research. The high-resolution sequential isotopic sampling can reveal the changes in Paleolithic environment month by month. The oxygen isotopic composition, which is temperature-sensitive, may be used to decipher the seasonal and annual changes in weather (climate), while carbon, derived by herbivores from plant food, may be used to reconstruct the type of vegetation that served as a food source in particular seasons. The combined use of carbon and oxygen, analyzed

*Speaker

parallel in the same samples, serves as an indicator of animal migration patterns.

In our study we used cheek teeth of wild horse and steppe bison, which are abundant in Neanderthal layers of Chagyrskaya Cave. To set our interpretations in a seasonal time scale, we supported the isotopic results with the analysis of the season of death, established for the same animal specimens. This allowed us to indicate the season of Neanderthal activity around the cave, and calculate the mean air paleotemperatures and vegetation type for the seasons, when Neanderthal moved in the vicinity of the Chagyrskaya Cave. We also propose the preliminary pattern of annual migrations of horse and bison herds in Altai during the studied interval of Pleistocene.

Keywords: Central Asia, stable isotopes, paleoenvironment, Late Pleistocene, seasonality

Raw material procurement as a crucial factor determining knapping technology in Katta Sai- Middle Palaeolithic sites complex in western Tian Shan piedmonts (Uzbekistan)

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This paper presents partial results of a large-scale fieldwork project of interdisciplinary studies on Middle Paleolithic settlement in the western Tian Shan piedmont. Within the project, a complex of newly discovered open-air, loess sites named Katta Sai was excavated. The Katta Sai complex of archaeological sites is comprised of two main sites of Middle Palaeolithic: Katta Sai 1, and Katta Sai 2, both recognized by excavations, and a number of surface findings in the vicinity. The surrounding landscapes are mid- to high-mountains- the most western part of Chatkal Ridge, representing the north-western piedmont of Tian Shan mountains. The excavations allowed to identify a new variant of human adaptation in the regional Middle Paleolithic. What is particularly interesting in Katta Sai assemblage, the use of rounded river pebbles restricted the manufacturing process heavily. In majority the river pebbles of effusive rocks brought from the nearby river gorges were used for knapping. The technological analyses shown that we deal here with predetermined flake technology in Levallois type, focused on obtaining thin triangular flakes or even blades. However, the manufacturing scheme was adjusted to the poor quality of raw material. The use of very hard, poorly silicified rock, did not allow to derive the sequences of small, precise removals. In a consequence the predetermination of blanks' shape had to be designed more by a careful intensive preparation of a striking surface.

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Keywords: Central Asia, Middle Palaeolithic, Late Middle Palaeolithic, raw material procurement, Levallois technology, loess site

Lithic technology and dates of the Initial Upper Paleolithic in northern Mongolia: the case of the Bayan-gol 1 site

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The emergence of modern humans in North Asia is one of important topics in anthropological and archaeological research of Siberia and Mongolia. Recently, much attention has been focused on the lithic assemblages characterized by the reduction process that combines elements of Levallois method (faceted platforms, hard hammer percussion, flat-faced cores) with Upper Paleolithic technological and typological features, in order to understand the geographical expansion of modern humans in North Asia. The archaeological records belonging to such lithic assemblages termed Initial Upper Paleolithic (IUP) have been obtained from the Russian Altai Mountains, southwestern Trans-Baikal, Mongolia, and northern China. However, the scarcity of reliable radiocarbon dates and inter-regional comparison of techno-typological features has made it difficult to elucidate whether they show a unified cultural phenomenon associated with the expansion of modern humans or not. In this paper, we present the results of the archaeological excavation carried out by the Mongol-Japan joint expedition team at the Bayan-gol 1 site. This site is located on a terrace of the Eg River, which flows into the Serenga River, in Bulgan prefecture, North Mongolia (N 49°26'30", E 103°38'50"). We provide the techno-typological features of the IUP and the radiocarbon dates from the Bayan-gol 1 site, and discuss its implications for the expansion of modern humans in northern Mongolia.

Keywords: Initial Upper Paleolithic

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Small steps, giant leaps: Pleistocene migration corridors through Central Asia

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The dispersal of modern humans and their interaction with other hominins remains a key topic of investigation in human evolutionary studies. Due to its ecological variability, the Central Asian foothills have been a focal point for human occupation and movements from the Late Pleistocene and the Last Glacial Maximum to historical periods. However, archaeological attempts to study early humans in this region have been hindered by political situations, and well as environmental constraints, such as permafrost conditions, wind deflation, and low rates of sedimentation. The large number of surface sites provides a good indication of the regional extent of human presence, but better chronologies are needed to address occupation history and adaptations. Future use of palaeolandscape models will help identify key localities for human migrations. This colonization of the world is highly dependent on large population levels of humans and animals, which followed resource rich swaths through river valleys or along littoral zones. Many of the high altitude and foothill regions of Central Asia with localities near lacustrine and alluvial systems provided ample opportunities for human populations, but these regions also present geographic boundaries, notably large bodies of water, deserts, and mountain ranges. Fortunately, they usually provide archaeological sites with good stratigraphic contexts and preservation. By discovering these palaeocorridors, we can filter, determine, and selectively target important regions that will give us insights into prehistoric movements and human behaviour. Most importantly, this holistic analysis can help us understand the degree of variability in occupation density across time and space, especially towards the LGM with a large reduction in the amount of prime habitable regions. More landscape based analyses can bridge the gaps in our knowledge about the role of Central Asia in Out of Africa dispersal models.

Keywords: migration, corridors, landscape analysis, palaeolakes, Pleistocene, dispersals

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The new data on variability of Middle Paleolithic in Central Asia: the Sel'Ungurian industry

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Since the beginning of 21 century a new stage in investigation of human cultures existed in western Central Asia in the Stone Age has begun. The main concern to re-study regional key-sites was to apply a complex of modern excavation techniques and up-to-date laboratory methods (namely absolute dating) in order to clarify the rationale and chronology of local cultural sequences. As a result of this research some crucial corrections dealing with chronological and cultural interpretations of "classical" for western Central Asia lithic industries were made. This paper presents the first results obtained after re-excavations of presumably one of the oldest in Central Asia Paleolithic site classified in late 80th of the XX century by investigators as belonging to early Acheulian technocomplex - Sel'Ungur cave. Among other described as to be Early Paleolithic sites of western Central Asia Sel'Ungur cave is considered to be the most informative one to study the Pleistocene inhabitants of Central Asia due to the fact that it yielded not only rich lithic collection found in a reliable stratigraphic context but numerous fauna and representative hominin remains as well. Re-started at 2014 excavations at the site have provided evidences to refuse an Acheulian interpretation of site's cultural complexes. Based on detailed technological and typological analyses of the new lithic collection it was assumed that Sel'ungurian complexes could be better fitted into the early stages of regional Middle Paleolithic cultural variability. The only available absolute date in about 126 kyr (albeit without a reliable stratigraphic and spatial context), paleontological analyses of newly obtained material as well as a result of re-examination of available information on macro- and microfauna remains dug out in course of earlier excavations, and re-study of anthropological finds likely support this new assessment

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Keywords: Central Asia, Lower Paleolithic, Middle Palaeolithic, variability, reassessment

The New Investigation Results of the Denisova Cave Paleolithic Complexes in the Altai Mountains

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The Paleolithic complexes in the Altai Mountains provide the most complete information about ancient history of Northern Asia. Currently, the interesting results have been obtained in the course of studying Denisova Cave in the Anui River valley in the northwestern Altai. The archaeological and natural research data have been obtained from the Main Chamber and the entryway zone of the cave published in full. The investigations in the recent decade are conducted in the Eastern Chamber. Excavation in the Eastern Chamber revealed deposits, which were subdivided into 17 major lithological strata. The upper portion of the profile represents Holocene deposits (layers 1-8). Pleistocene deposits represent strata 9 to 17, which in general correspond to the layers 9-22 in the Main Chamber. Within the layers 17 and 16 archaeological materials were not found. Lithic artefacts attributable to the Middle Paleolithic were recovered in association with strata 15-11.3. Stratum 11.2-11.1 yielded artifacts belonging to the Early Upper Paleolithic. Stratum 10 is archaeologically sterile. Archaeological materials of the Upper Paleolithic period were recovered from stratum 9. Two different complexes can be quite clearly recognized within the Middle Paleolithic assemblage identified in the Eastern Gallery. The first one which combines material from layers 15 and 14 can be characterized by primary flaking performed exceptionally within the radial system. The tool collection is dominated by denticulate and notched forms. The second one includes evidence from layers 13-11.3 revealing mainly such diagnostic techniques as the plane-parallel and semi-prismatic flaking with elaborately treated cores. The category of tools is dominated by side scrapers. Primary flaking in the industry from layers 11.2-11.1 was carried out mostly through the parallel technique, in few cases radial and semi-prismatic cores were also noted. The nearly equal proportions of the Middle Paleolithic (Mousterian points, side scrapers) and the Upper Paleolithic (end scrapers, burins, perforators, retouched blades) like tool groups in the tool kit represent the major characteristic feature of this industry. The bone implement set includes eyed needles, borers, pendants made of animal teeth and stone, cylindrical beads etc. The category of cores from layer 9 comprises plane-parallel, radial and semi-prismatic cores. Specific feature of this industry is a high percentage of blades including microblades set being a basic type of tool. The research was carried out with the support of the Russian Science Foundation (project no. 14-50-00036).

Keywords: Altai Mountains, Denisova Cave, Pleistocene deposits, Paleolithic complexes

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New data on Initial Upper Paleolithic in Central Asia: Ushbulak 1 site (Kazakhstan)

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Initial Upper Paleolithic assemblages were initially identified on the basis of the archaeological materials from the sites of Boker Tachtit and Ksar Akil in the Levant. Nowadays, such assemblages have been reported from many regions of Eurasia including Central Asia, the Near East, the Altai Mountains, Trans-Baikal, Mongolia, and North China. A typical IUP assemblage has been recently found in Kazakhstan (Ushbulak-1). Ushbulak-1 (the northeastern part of the Shilikty Valley) is a stratified site (8 layers). According to the recovered lithics and their features, as well as the stratigraphic position, and associated faunal remains, three major cultural and chronological units have been tentatively established, including the Holocene assemblage (layer 1), the UP assemblage (layers 2–4), and the IUP assemblage (layers 6–7). The assemblage from the lowermost layers 6 and 7 (8000 objects) contains blade cores with the opposite semi-tourné platforms, numerous core trimming elements, end scrapers on large blades, including those with ventral hewing of the base, truncated-faceted tools, truncated blades, burins and a tanged point. Core trimming elements correspond well to the available cores. The majority of core trimming elements (crested and semi-crested, plunging, and marginal laminar spalls) illustrate laminar volumetric and semi-volumetric reduction. Based on the composition of the lithic industry, layers 6 and 7 can be defined as a lithic workshop at the outcrops of raw material. In terms of tool types, the Ushbulak lithic industry is similar to the stratified assemblages attributed to the IUP in Southern Siberia (the Kara-Bom site and others) and Northern Mongolia (the Tolbor-4 site and others).

Keywords: Kazakhstan, Initial Upper Palaeolithic, blades, endscrapers

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Basic lithic reduction methods in the Middle Paleolithic through Early Upper Paleolithic of southern Siberia and eastern Central Asia: chronology and geographical dispersion

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To determine both general and local trends in the transmission and attenuation of flaking technologies as defining characteristics of lithic industries, the chronology and geographical dispersion of basic reduction methods and strategies were traced in the Terminal Middle through Initial and Early Upper Paleolithic of southern Siberia and eastern Central Asia. By identifying distinctive technological reduction sequences, it is possible to study the transmission of these methods to industries of other cultural contexts and chronological stages of the Middle through Early Upper Paleolithic. Analysis and identification of specific characteristics of reduction technologies rest upon reference sites supported by chronometric dates and the refitting of lithic artifacts and/or lithic analyses following the attributive technological approach. The results of this study allow the reconstruction of basic reduction methods in the Middle through Early Upper Paleolithic as well as their geographical and chronological parameters. The most continuous linkages can be identified between the Terminal Middle and Initial Upper Paleolithic; corresponding connections between the Initial and Early Upper Paleolithic seem weaker, as are those linking the Terminal Middle through Early Middle Paleolithic. The chronology of the origin and transmission of lithic technology preliminarily indicates both cultural connections and chronological transgressions existed between the western and eastern areas of this region. This study was supported by Russian Science Foundation (Project 14-50-00036)

Keywords: Southern Siberia, Central Asia, Middle Paleolithic, Initial Upper Paleolithic, reduction methods

*Speaker

Neanderthal occupation of Altai Mountains in the Late Middle Paleolithic.

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In recent years, the Altai Mountains became a focus area for prehistory, as it was shown that several groups of hominins such as the Denisovans, Neanderthals and anatomically modern humans coexisted in the Late Pleistocene. However, so far there is no archaeological, palaeontological or palaeoanthropological evidence for the character of the possible interactions between these groups. Neither do we have clear evidence for possible consequent or phased occupation by the same human populations of different contemporary sites in the Altai. Our latest investigations have focused on filling this gap, and to correlate different occupation events at several sites likely settled by the same population of Neanderthals during MIS4 to MIS3 transition. To do this we conducted a comprehensive study of raw material procurement, hunting strategies, and tool manufacturing technologies at Chagyrskaya and Strashnaya caves, located in adjoining river valleys. The lithic industry from Chagyrskaya cave were interpreted to be a part of the "Sibiryachikha" variant of the Middle Paleolithic that is very similar to the European Eastern Micoquian technocomplex and unlike any other Middle Paleolithic sites in Siberia. The Middle Paleolithic industries from Strashnaya cave were initially interpreted as a homogenous complex similar to one better known from the middle section of Denisova cave cultural sequence (Levalloisian). Our detailed techno-typological and spatial analyses of the Middle Paleolithic lithics from Strashnaya cave show that a short-term but obvious occupation of "Sibiryachikha" Neanderthals can be defined in the upper part of MP sequence of the cave. New data on Neanderthal contacts between Chagyrskaya and Strashnaya caves, combined with information from the Sibiryachikha (Okladnikov) cave excavated earlier, makes it now possible to address questions dealing with mobility patterns, landscape exploitation models, and subsistence strategies of the Altai Neanderthals. This study was supported by Russian Science Foundation (Project 14-50-00036)

*Speaker

Keywords: Altay, Middle Paleolithic, Neanderthals, tool technology, raw material procurement, hunting strategy

Predation at Denisova cave during the Middle Paleolithic: a story of men and beasts...

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The Altai region has become a major laboratory for studying the subsistence strategies developed by different human species for the exploitation of the same environment. Denisova cave occupies a specific place in this topic with its stratigraphy yielding occupations attributed to Neanderthals and Denisovians species.

At Denisova cave, previous analyses underlined the existence of numerous large carnivores in the identified species suggesting an intense competition for the access to the cave by the different carnivores and human predators. The objectives of this communication is to discuss the respective role played by the different accumulators in the origin of the faunal remains and discuss the ecology of the different human species that occupied the cave.

Zooarchaeological and taphonomic analyses were conducted on the macrofaunal remains of the Eastern Chamber from Denisova cave. Then, the seasonality of occupation for the different accumulators was established through a cementochronological approach. The results identify a relatively large and constant impact of the carnivores on every stratigraphic units and most of the taxa seem to have been concerned. On the opposite, the human carcass exploitations evolved through time and seems to be preferentially centered on some specific species. Interestingly, the competition to the access to the cavity was more complex than previously though since cut marks on several carnivores remains attest of their exploitation and possibly their predation by the human groups who occupied the site.

While the cementum analysis is still in progress, the first results suggest a complex seasonal alternation in the site occupation but several direct evidence sustain that humans and carnivores closely followed one another in Denisova cave.

At the end, we have a unique understanding of the cave occupation. This study offers a renewed understanding of the strong interactions between Neanderthals and Denisovians and their faunal

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environment and it brings new insights to human ecology at the sunset of the Middle Paleolithic in the Siberian Altai region.

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Keywords: Zooarchaeology Cementochronology, Seasonality, Neanderthal, Denisovian, Denisova cave, Altai, Subsistence strategies

Re-envisioning the Central Asian Epipaleolithic: changing interpretations and paradigms

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Bracketed by the Zagros, Hindukush, Altai, and Himalaya Mountains, Central Asia was a likely migration route for early peoples moving into North and East Asia. Because of its central geographic setting, the area also channeled cultural and technological influence and exchange between adjoining regions in early prehistory. Early studies of the technocomplexes of the Late Pleistocene – Early Holocene carried out in Central Asia during the 20th century suffer greatly from the absence of absolute dates. Soviet-era scholars relied primarily on typological reconstruction, classifying all sites from this period into supposedly synchronous Mesolithic (with geometric microliths) and Epipaleolithic (without geometric microliths) assemblages.

Our study reveals key similarities, suggesting that the Tutkaul, Obi-Kiik, Darai-Shur, Shugnou (l. 0), and Istikskaya cave (l. 3–4) techno-complexes belong to a single Epipaleolithic culture – which we refer to as the Tutkaulian – split into a three-stage developmental sequence. We argue that the Tutkaulian, defined by bladelet technology and an abundance of geometric microliths, with a chronological progression from rectangle to lunate forms, has its origins in the local Upper Paleolithic culture (Kulbulakian) and emerged through repeated episodes of cultural exchange with earlier or synchronous Levantine and Zagros industries. Based on a series of radiocarbon ages from Istikskaya cave (l. 3–4), Kulbulakian culture, we presume chronological frame for Tutkaulian to be 20–13 ka BP.

The analysis of the Obishir-5, 1, Oshhona, Istikskaya cave (l. 2–1), Aygirjal-2, and Alamishik show the similar characteristics. Consequently, we define these industries as belonging to Obishirian culture. The dominance of narrow-faced and prismatic cores focused on manufacturing bladelets using pressure technique is noticeable. The tool assemblage is dominated by microblades retouched on ventral side as well as by a variety of end-scrapers the presence of borers points with unifacial and bifacial retouch made on flakes, and isolated specimens of backed bladelets is also observed. Based on a series of radiocarbon ages from the sites existed within a time span ranging from 13 ka BP to 7 ka BP.

*Speaker

Here we propose to define two chronologically sequential Epipaleolithic cultures in Central Asia, between which there are no technological or typological similarities. It is evidenced for alternately occupation of the area by different human groups or gradual displacement of Tutkaulian by the Obishirian inhabitants in the Epipaleolithic. In both cases the previous Epipaleolithic model describing cohabitation of the region by two human groups must be rejected.

Our research was supported by grants of Russian Science Foundation (RSF) 14-50-00036, President of the Russian Federation D-2845.2017.6

Keywords: Central Asia, Epipaleolithic, cultural process, Tutkaulian, Obishirian, geometric microlith

Some Results of Technological and Use-Wear Research of Ostrich eggshell Beads of Ust-Kyakhta (Transbaikal region)

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The Ust-Kyakhta 3 (excavated in 1976 and 1978) and Ust-Kyakhta 17 (excavated in 1990-1992) sites in the western Transbaikal region represent a single final Pleistocene archaeological culture known as Selenginskaya. A few ostrich eggshell beads were recovered during excavations.

The most likely technological sequences of bead production have been revealed based upon experimental and use-wear/traceological research. We studied eight ostrich eggshell beads, one preform and additional eggshell fragments exhibiting no discernible traces of artificial modification.

The following technological sequence is suggested as optimal for obtaining specific morphological features, determined on the basis of beads excavated from Ust-Kyakhta 17: 1 - fragmentation of eggshell to obtain small pieces, then 2 - perforation by means of hafted pointed stone tools and, finally, 3 - grinding and polishing to shape bead preforms.

Keywords: Transbaikalia, Final Pleistocene, ostrich eggshell beads, technological sequence, experiment, usewear

*Speaker

Before the Obirakhmatian? New data from Kulbulak site.

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Kulbulak located on the southeastern slope of the Chatkal Ridge in the Western Tien Shan (Uzbekistan) is among the most important multilayer open-air Paleolithic sites in western Central Asia, because the stratigraphic sequence of the site was considered to be the most complete in this region. The new excavations are particularly interesting due to the presence of an early industry with blade and bladelet technology at the depth of 13.5 m in layer 23, which is a loamy-sandy sediments of mostly an proluvial genesis. The assemblage from the layer (more than 25 000 stone artifacts) is mostly marked by the production blades and points from Levallois (in most cases) and parallel flat-face cores, in combination with radial and truncated-faceted cores for flakes, along with prismatic and narrow-face cores (some with triangular shape) for bladelets prepared on blanks and small nodules. The tool kit (more than 300 items) mostly contains extensively retouched blades (with one or two working edges), pointed blades, thick elongated points (including Levallois), scrapers (including convergent and dejeté types), few end-scrapers (including some of carinated shape), few uni- and bifacial tools, along with great number of blanks with irregular retouch. Assemblages with similar features have been reported from western Central Asia, notably at Obi Rakhmat Grotto (also in Uzbekistan). But Levallois technology plays a secondary role in this industry. Taking into account the results of geomorphological, sedimentological, and stratigraphic studies, Kulbulak is now providing new data showing the presence of an earlier development of blade industry in the region (based on Levallois technology). Previously the emergence of Obirakhmatian industries in the region were recognized as a result of cultural influence from the Middle East. This study was supported by Russian Science Foundation (Project 14-50-00036)

Keywords: Western Tien Shan, Middle Paleolithic, new excavations, Obirakhmatian, Levallois technology

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Upper Palaeolithic Bone Tools and Ornaments from the South Chamber of Denisova cave

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Personal ornaments and bone tools from Denisova cave are one of the oldest and most expressive elements of modern human behavior, known in the Palaeolithic of Northern and Central Asia. These items are considered an element of cultural identity and a chronological marker of the Initial and Early Upper Palaeolithic societies in Altay region. In 2017, during the study focused on the Pleistocene deposits in layer 11.1 from the South Chamber of Denisova Cave, excavations revealed a mammoth ivory point fragment, as well as 15 ornaments made of different materials. All bone tools and personal ornaments come from stratified and well-dated archaeological contexts. The complex of lithological and biostratigraphy data, as well as results of absolute dating, show that the formation of layers 11.1 in the South Chamber of Denisova cave occurred at 40–50 kyrs ago.

The Palaeolithic mammoth ivory point was made by planing. The personal ornaments include pendants produced from animal teeth, soft stone, a mollusk shell, and mammoth ivory and long beads made from mammal bones. In addition, bone beads and a decorated object made of the rib from a mammal are also found to be present in the record. Manufacturing technology for producing the ornaments appears to have involved a few stages, such as raw material selection, blank production, dressing, scraping, grinding, sawing, drilling and polishing. A unique specimen in the collection is a fragment of a bracelet made of mammoth ivory, the first artifact of such kind found in the Altai region. The major stages in the manufacturing of this bracelet have been reconstructed, such as blank production based on the longitudinal flaking or knapping of moistened ivory; dressing with the use of a stone tool to ensure a necessary form of the artifact; bending the moistened blank in order to provide a characteristic shape.

Analysis of the industry associated with layer 11.1 of the South Chamber indicates that some techniques specific for the Initial Upper Palaeolithic (grinding, drilling, polishing) were employed for both manufacturing bone and ivory artifacts and processing soft stone. The morphology of use-wear traces indicates the use of the pendants and bracelet as everyday items – personal wearable ornaments and elements of clothes decoration. In addition, evidence for repair of the ornaments and their modification has also been documented.

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Keywords: Altai Mountains, Denisova Cave, Initial Upper Palaeolithic, bone tools, personal ornaments, bracelets, experimental use, wear analysis, technological analysis

Crossroads of the Paleolithic world: evidence for overlapping waves of human migration in eastern Central Asia

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Situated between the Altai Mountains and the Chinese loess plateau, the current territory of Mongolia played a pivotal role in Pleistocene population dynamics in Northeast Asia. Archaeological evidence suggests cultural links were established between Mongolia and southern Siberia beginning in the Late Pleistocene. Terminal Middle – Initial Upper Paleolithic assemblages are known during MIS-3, the chronometric data for which indicate the co-existence of the assemblages' makers. Such population dynamics during the period > 50,000-37,000 beg important questions: what kind of model of continuity or discontinuity might best explain the archaeological record? How did people acquire and use local raw material? What kinds of mobility strategies and settlement patterns did Paleolithic populations in Mongolia employ? Recent evidence recovered from the Tolbor-4, Tolbor-21, and Kharganyn Gol-5 sites in the middle Selenga Valley in Mongolia indicates a complex evolution of lithic industries during all of MIS-3 and the beginning of MIS-2 until the LGM, when the region was probably depopulated. The clustered character of Paleolithic site locations is also important: the territories occupied by prehistoric humans exhibit a shared set of features, one key factor of which was the presence of specific siliceous raw material types, both in outcrops and in river alluvium. Most stratified Paleolithic sites coincide with such Permian sedimentary belts into and beyond Mongolia that provided high quality resources for knapping, especially large blade production. The current study targets the impact of this possible determinant on human migration routes. Such rocks are widespread in the Orkhon-Selenga Trough, whose geological deposits stretch throughout Central Asia from Uzbekistan through Kazakhstan to Mongolia. IUP industries constitute a single cultural entity in the Altai territory, the Transbaikal region, and northern Mongolia, a conclusion which is corroborated by radiocarbon dating. Human migrations through the Selenga Corridor have been studied in recent years, but an additional possible migration route stretches between central Mongolia and the Russian Altai, passing through the Mongolian Altai, Dzungaria (Xinjiang), and eastern Kazakhstan. The delineation of this route is supported by the presence of sites yielding industries typical of the IUP in these areas, such as Luotuoshi (China), Bayan Nuur Somon-13, Torgun, and Boguty (Russian Altai, bordering Mongolia), as well as the stratified Ushbulak site (Kazakhstan). Entering Mongolia from the Altai, the Transbaikal and China, following a belt of high quality knappable sedimentary rock, IUP populations spread throughout

*Speaker

the region, where they had co-existed with local MP populations for at least 7,000 years. This study was supported by Russian Science Foundation (Project 14-50-00036)

Keywords: Mongolia, Middle Paleolithic, Initial Upper Paleolithic, migration routes, raw material

The Early Upper Paleolithic in the Altai Mountains

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The Altai Paleolithic is the best-studied part of the Quaternary history of Central and Northern Asia. Archaeological research in the Anui River valley in the northwestern Altai has yielded stratified sites allowing for the construction of chronological sequences covering the Middle and Upper Pleistocene. This time span encompasses the development of human culture and environment from the Middle to the Upper Paleolithic. In the period of 50–40 ka BP in the territory of the Altai, a gradual formation of the cultural complex of the Early Upper Paleolithic on the basis of local traditions was taking place. The Altai assemblages of stone artifacts of the Early Upper Paleolithic testify to mass production of narrow thin blades that were used as a basis for various special tools. A tool set acquired a novel thing, microblades that serve as blades for composite tools. Tools and ornaments made of bone, mollusk shell and gem stones are yet another innovation. The set of adornments include: miniature needles with a bored eye, pendants made of animal teeth, bone cylindrical beads with symmetrical rows of deep and wide incisions, beads and rings made of mammoth tusk, flat bead-rings made of fossil ostrich egg-shell, mollusk shells with man-made holes, pendants made of soft minerals, ring made of marble and bangle made of chloritite. These artifacts were found in Early Upper Paleolithic layers of the Denisova Cave associated with the human fossils of a formerly unknown hominin type named as the Denisovan. The Denisovan population co-inhabited the Altai region with the easternmost Neanderthal population group. The Neanderthal fossils were discovered in the Chagyrskaya, Okladnikov and Denisova Cave. The lithic culture practiced by the Denisovans was rooted in the earliest strata in the Denisova sediment sequence. Subsistence strategy of the Denisovans was not inferior and even superior in some aspect to that of the anatomically modern humans who lived in other places during this period.

Keywords: Central and Northern Asia, Altai, Early Upper Palaeolithic, Denisovan, Neanderthal

*Speaker

A Neandertalian bone industry in the Siberian Alta'i

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The Anatomically Modern Human introduced in Western Eurasia a variety of artifacts made from bone material that were not only responding to technical needs but also incorporating a function of sign. Their functional and social specialization went hand in hand with a pronounced shaping and resulted in types that we may today, if not understand, at least individualize. The definition of what is a bone industry has long been based on this set of criteria seen as indissociable. This led to deny the existence of bone industry in the Middle Paleolithic. The identification of more than 1500 bone tools in the Mousterian site of Chagyrskaya, in the Siberian Altai, compels to reconsider the matter.

Excavated since 2008 by a team of the Institute of Archaeology and Ethnography (SB RAS), the cave of Chagyrskaya, a hundred km far from Denisova, has several dense Mousterian layers, dated around 50 000 - 45 000 BP, with Neandertal remains.

The rich lithic industry, from local raw material, does not show shortage which could justify a compensating use of bone blanks. While an abundance of bone retouchers is not surprising into a Mousterian assemblage where stone scrapers prevail, less common is the presence of borers, burnishers, intermediate tools and knives of different modules with a minimal shaping, by percussion, but taking profit of anatomical properties. Was this use of bone tools for several tasks on different materials a cultural specificity of the late local Mousterian, called the Sibiryachikha tradition, which resulted from some kind of regional adaptation in this most Eastern territory of Neandertal? Or are we facing a current technical practice not detected because of inappropriate criteria inherited from typological studies? A closer look at the empirical data is necessary for complementing larger scale investigations.

Keywords: Neandertal, Bone industry, Chagyrskaya, Altai, Siberia

*Speaker

New perspectives on the chronology of the Initial Upper Palaeolithic of the Transbaikal, Russia

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The Initial Upper Palaeolithic (IUP) is a term that has been generally used to describe early Upper Palaeolithic technocomplexes characterised by Levallois-like features observed in the methods used to produce blades (Kuhn and Zwyns (2014)). The geographical spread of the industries falling into this category is extremely wide, and covers vast areas of Eurasia. Whilst many work on the lithic aspects of this broad category we have been exploring the chronologies of these industries in different sites within this wide area. In this paper we will report new results from some of the key IUP sites in the Transbaikal of Russia. The sites include those of Kammenka and Khotyk (Lbova 2008). We applied rigorous pretreatment chemistry methods to bone samples from these, and other sites, which demonstrate an improved decontamination of the bone collagen, and thereby much more reliable AMS determinations. We show that previous determinations are substantially variable and, in the main, much too recent compared with the new determinations. We will describe the new chronometric Bayesian models we have produced and compare the results with other contexts on the wider scale.

Keywords: Radiocarbon AMS dating, pretreatment chemistry, Initial Upper Palaeolithic, PalaeoChron project

*Speaker

New archaeological investigations of Kara-Bom Palaeolithic site: spatial organization and lithic technology

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Multi-layered Kara-Bom site plays a pivotal role in the research of the most ancient Upper Palaeolithic industries in Northern Asia. Kara-Bom is located at one of Central Altai intermountain basins, it represents a small shelter at the foot of the rocky ledge near the source of spring water. The best in the Gorny Altai stone raw material, functional specificity and unique preservation of the deposits make Kara-Bom site a rich source of information about technological, adaptation and cultural processes, which occurred in the region at Initial Upper Palaeolithic (hereafter IUP).

The research of the spatial and taphonomic context of the lithic assemblages occurring in six Upper Paleolithic habitation levels made it possible to adjust the previously accepted stratification for the cultural deposits of the Kara-Bom site. In the sediments of lithological layers 4–6 from Excavation Area 4 we have identified two artifact-bearing levels – the uppermost Upper Palaeolithic horizon 1 (UP1) and the lowermost Upper Palaeolithic horizon 2 (UP2). The results of spatial analysis based on the integrated use of refitting studies and method of the raw material unit allowed us to attribute lithic artifacts according to separate two cultural units. We may conclude that the identified cultural horizons could be the evidence of two habitation phases at the site, separated by an interval of several thousand years.

Lithic techno-complexes of the UP2 cultural horizon are considered as a reference in determining the technological characteristics of the Kara-Bomian IUP cultural tradition of Altai. The UP2 stone industry was based on the production of the large blades with unique sizes (up to 30 cm) and bladelets from prismatic, bidirectional flat-faced cores and core-burins. The cultural markers were retouched point on blades with ventral base thinning, the retouched point on blades and bladelets, truncated-faceted pieces, leaf-shaped bifaces. The UP1 industry involves two main methods of reduction – production of large blades and bladelets from prismatic and subprismatic cores. Comparison of UP2 and UP1 stone industries determine the nature of changes in lithic technology in the Initial and Early Upper Palaeolithic of Altai.

New data allowed to determine the occupation dynamics of Kara-Bom site areas at the Beginning of the Upper Palaeolithic, to reconstruct a number of production processes, to identify specialized production areas and to study the pattern of spatial distribution of flaked stone artifacts from individual blocks of raw material.

This study was supported by Russian Science Foundation (Project 14-50-00036)

*Speaker

Keywords: Gorny Altai, The Initial Upper Paleolithic, stratigraphy sequence, spatial organization, stone knapping technique, Kara, Bomian cultural tradition

Identifying the variability of Levallois reduction sequences in Altai (Russia): a re-examination of the evidence

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The Altai range, in the South of the Russian Federation, has yielded an important series of prehistoric assemblages in various contexts (caves, shelters and open-air sites). Recent anthropological and archaeological studies have established the significance of this area, with complex peopling events involving at least three different human species, Neanderthals, Modern Humans and Denisovans, the latter being exclusively associated with Altai assemblages. However, if the cultural background of these hominins' occupation is well defined for the beginning of the Upper Palaeolithic, a better characterisation of the previous period's productions is yet to be undertaken. Levallois technology has been identified in many Altai sites, and is considered an important characteristic of the Middle Palaeolithic and, according to some authors, beginning of the Upper Palaeolithic of this region. Its presence is attested in all the caves and open-air sites related to these periods, except only Chagyrskaya – the lithic material of which displays very singular technological features. That is why Levallois is regarded as one of the defining cultural features of this region. However, if previous studies allowed the identification of the presence of Levallois in those sites, they only did so in terms of presence/absence through a typological approach. These kinds of studies focus on the aspect of the cores and final products, and do not allow us to deal with the complexity and variability of the Levallois reduction techniques. To address this issue, we have undertaken a review of material coming from some of the key Altai sequences, while trying to reconstruct the different *chaînes opératoires* implemented for the production of the desired products that had been previously recognized as Levallois. Results have shown that there is a greater variability than what was concluded with typological studies, both at inter and intra-sites scales. This challenges the dominant pattern of the Levallois reduction sequences and highlights the regional cultural specificities of this production.

Keywords: lithic technology, Levallois concept, chaîne opératoire, Altai mountains, Middle Palaeolithic, Neandertal

*Speaker

New research on the Paleolithic of Kazakhstan: introducing the PALAEOSILKROAD project

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Central Asia is a place of extreme environments and geography, featuring high mountains flanked by deserts. Several times during the Pleistocene, dramatic climate events exacerbated difficulties for animals and humans alike and may have influenced settlement patterns and dispersals. Beeton et al. (2014) proposed that continuous habitation in the steppe would have been virtually impossible during cold and dry periods, with people retreating to mountain foothills, whereas warmer and wetter periods would have led to population expansions. These ecological models suggest that the piedmont zone would lend itself to the most fruitful exploration for new sites. Moreover, it likely served as a dispersal pathway, much in the same way as during the time of the later Silk Road. We present here the research strategy and preliminary results of the 2017 campaign of the five year German-Kazakh PALAEOSILKROAD project. PALAEOSILKROAD aims to discover new sites in the Tian Shan, Dzungar, and southern Altai foothills in Kazakhstan and use them to examine if and how 1) humans were able to survive in the foothills throughout the last glacial cycle (ca. 110-11 500 years ago), with particular attention paid to the Last Glacial Maximum, and 2) how periodic advances of mountain glaciers in the Tian Shan, Dzungar, and Altai may have motivated dispersals, population segmentation, and behavioral adaptations. The first field campaign of 2017 focused on the reexcavation of the Upper Paleolithic site of Maibulak, as well as on survey in the Almaty province and in the East Kazakhstan province.

Keywords: Paleolithic, survey, dispersal, paleoclimate, settlement

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Addressing the dearth of human fossil remains from Pleistocene Asia

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Pleistocene human fossils from Central and North Asia are extremely rare and when preserved are often too fragmentary to allow secure attribution. In 2010, a morphologically non-diagnostic finger bone from Siberia was assigned using DNA to a previously unknown human group, the Denisovans. A few years earlier DNA analysis confirmed the presence of Neanderthals in Central and North Asia, placing them 1500 km east of their then known geographic range. Denisovans interbred with both Asian Neanderthals and modern humans over the past 100,000 years; their geographic distribution is now thought to have stretched from the Siberian steppes to the tropical forests of SE Asia and Oceania. Despite their broad spatio-temporal range, the Denisovans are only known from 4 bones, all from the eponymous cave. While more Neanderthals remains have been discovered in Central and North Asia in recent years, hardly any modern humans have been found; overall the numbers of human fossils, whether archaic or modern, from this vast region is meagre.

This patchy knowledge of past human populations in Central and North Asia significantly limits our ability to test hypotheses regarding routes and timing of people movements across the continent, the nature and frequency of interaction between archaic indigenous groups and migratory modern humans, and the mechanisms leading to sole dominance of our species.

In 2017, the 5-year project "FINDER", funded by the European Research Council, was initiated. We apply a novel combination of analytical methods, namely collagen fingerprinting, also known as ZooMS, radiocarbon dating and ancient DNA analysis, designed to identify, date and genetically characterize human remains amongst thousand animal fragments excavated from Asian sites. The first results from this work are reviewed in this presentation.

Keywords: human fossils, Asia, zooarchaeology, archaeological science

*Speaker

Excavation at the Upper Paleolithic Site of Tarvagataiin Am, Khudel Sum, Selenge Aimag (Mongolia): A preliminary results

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Here I present preliminary result of our fieldworks at Tarvagataiin Am site in northeastern Mongolia (the Rashaanii Am South Site in previous publications). The Tarvagataiin Am site discovered in 2015 by our field survey is situated in a middle of the stable alluvial terrace at along the Tarvagatai Creek, a tributary of the Khudel river which conjoin to the Tsukh River (Chikoi River, in Russian) of the Selenge River valley system (N49. 48' 44", E107. 26' 19"). At fieldwork in 2017, we made five 2x1m test units, labeled GT01- 05 at the site. A total of 87 specimens was recovered from the test units, consist of chipped-stone artifacts (n=14) and faunal remains (n=70). The stone tools include several sidescraper on blades which has diagnostic characteristics those of the Initial Upper Paleolithic or Early Upper Paleolithic. Among the test units, a fragment of large herbivore rib bone and bone flakes (taxa miscellaneous yet) associated with tiny lithic flakes detached with side scraper edge retouch were found from the bedded fine sand and silt at 145 cm below the surface at a test units of GT01. The low energy deposition of site matrix at alluvial context and high preservation condition for the fossil specimens at the site provide us better geochronological control and reconstruction of human behavior for the earlier Upper Paleolithic in northeast Asia.

Keywords: Tarvagataiin Am site, IUP, EUP, northeastern Mongolia

*Speaker

Blade technology in the Early Upper Palaeolithic of Tolbor-16 (North Mongolia)

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The Tolbor valley (North Mongolia) has yielded a concentration of archaeological sites documenting multiple episodes of human occupation dated between the first half of the MIS3 and the Holocene. In the main stratified sites, two variants of Upper Paleolithic have been reported at the base of the cultural sequence. The lowermost archaeological assemblages are usually dated around 45 ka Cal BP. They are referred to as Initial Upper Palaeolithic (IUP) based on the associations of multiple technological attributes (e.g. asymmetric blade reduction and burin-core technology). Stratigraphically, the IUP is followed by another kind of assemblages named Early Upper Palaeolithic (EUP) - for the lack of better term and dated around 40 ka cal BP. Although considerable efforts have been devoted to the study of IUP in Mongolia and elsewhere, relatively little is known about the EUP and its variability. At Tolbor-4 (AH4) and Tolbor-15 (AH6-AH7), it shows a decrease in frequency of blade blanks, a switch toward unidirectional blade core reduction patterns and the appearance of bladelet technology. Here we present a detailed description of the laminar blank production in the EUP from Tolbor-16 with three main questions in mind: what characterizes the blade production? What are the relations between blade and bladelet reduction sequences? Finally, how consistent is the EUP technology in region? While a closer look at the blade technology should help to better understand what differentiates the two variants, improvements in their definition will allow for further discussions on evolutionary implications.

Keywords: Early Upper Palaeolithic, Initial Upper Paleolithic, Blade Technology, Mongolia, Central Asia

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Short-term occupations at the beginning of the Upper Paleolithic in Mongolia: new evidence from the site of Tolbor 34

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The Initial Upper Paleolithic (IUP) has been one the main focus of recent investigations in the Tolbor Valley (North MONGOLIA). Perhaps because it is recognized by the associations of multiple technological and typological attributes, the IUP is mostly known by large blade-assemblages from sites such as Tolbor-4, Tolbor-16 and Tolbor-21. Meanwhile, clear evidence for IUP short-term occupations is lacking raising questions regarding the visibility of such assemblages in the archeological record. Here, we present data collected at the newly excavated site of Tolbor-34. The site is located along a canyon on the eastern flank of the Sharkhad Mountain between two major sites, Tolbor-16 and Tolbor-17. It was first tested in 2015 with two 2x1m units excavated in arbitrary spits and then excavated in 2016 over two extra 2x1m units. A combustion feature has been uncovered surrounded by a low density of expedient lithic artifacts. Although it lacks diagnostic features, the lowermost assemblage dated to around 45 ka uncal BP chronologically overlaps with the IUP occupation of the Tolbor-16 neighboring site. The data hand suggests two main observations. First, the number of short term occupations in the IUP might be underestimated due to a lack of visibility, preservation bias and the difficulty to assign small – and apparently undiagnostic – short-term occupation to IUP. Implications are that a bias toward large accumulations of archaeological material would lead to a distorted reconstruction of settlement patterns by underestimating of logistic mobility. Second, the example

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of Tolbor-34 suggests that based a lithic assemblage alone, Upper Paleolithic occupation can be unnoticed (or even look older) as typology becomes misleading when variables such as sample size and site function are not factored in. In the present case, the Upper Paleolithic character is confirmed by a single piece of ornament that confirms the concomitant appearance of IUP and symbolic objects in the region.

Keywords: Initial Upper Paleolithic, Settlement patterns, Short, tem occupation, Ornament, Mongolia, Central Asia

PALEOANTHROPOLOGICAL STUDY OF THE MESOLITHIC-NEOLITHIC POPULATION IN TRANSBAIKALIA

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We studied the skeletal remains of eight individuals from the following sites (Chita Oblast, Krasnochikoiisky District): Zhindo, Pad' Tokui and Ust-Menza-2. We managed to take certain measurements on five skeletons and examine three skulls. Despite of the small sample size all the information received is valuable and unique considering the antiquity and rarity of such paleoanthropological finds. Mongoloid features were found on the skulls from the Pad' Tokui and Zhindo. The reconstructed height of the studied individuals was slightly below the average category. Muscle relief development can be described as moderate-poor. The main pathology are associated with cold exposure. A few individuals have a blood disease indicators (possibly anemia) - cribra orbitalia. Some skeletal pathology are probably due to the blood mineral deficiency, lack of calcium in the food and water, endocrine disorders etc. It can be also noted that some individuals have shovel incisors, which are to some extent mongoloid traits.

Keywords: paleoanthropology, craniology, osteology, paleopathology, Chita region, Mesolithic – Neolith, ic population.

*Speaker

Afontova Gora in the 21st Century

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The first archaeological finds at Afontova Gora in the Yenisey River valley of Siberia near Krasnoyarsk in the Russian Federation, date back to 1884 and are rightly regarded as the "authentic beginning of research on the Northern Asian Stone Age" (Vasil'ev 2008: 11). Today, Afontova Gora comprises a suite of irregularly studied Paleolithic archaeological sites bound to superflation, colluvial, alluvial slope deposits "complicated by landslide processes" and flood-plain sediments of the modern Yenisey River's erosional and accumulative above flood-plain terrace. The Afontova Gora-II locality has become the main subject of research. The exact positions of the Afontova Gora sites are inexactly known due to their location within the Krasnoyarsk urban area and on private landholdings for a long time. Thus, field survey access has been greatly hampered, explaining why there exists only fragmentary data for these sites. This situation began to change dramatically at the beginning of the 21st Century as a result of extensive archaeological surveys conducted in conjunction with the construction of the "Fourth Bridge" across the Yenisey River and its associated traffic approaches. The geomorphological cross-section of the left bank of the Yenisey valley exhibits the following features:

- 1) The Yenisey second terrace above the floodplain (10-16 m above the river). The back of the terrace abuts with the front slope of the third terrace which is up to 26-30 m (Afontova Gora-II);
- 2) The erosional terraces slope up to 30-50 m, dissected by broad gullies leading to the Kacha River – the left tributary of the Yenisey (Afontova Gora-IV, Krutaya);
- 3) The upper part of the slope, 75-90 m (Afontova Gora-V). The area of archaeological excavations encompasses more than 20,000 square meters including Afontova Gora-II, IV, and V, as well as a new locality discovered in 2014 called the Krutaya site. In stratigraphic profiles, early Holocene paleosols associated with the climatic optimum "Afontova paleosol samples" and the Kargin'skiy paleosol were found. Paleontological faunal samples also indicate the chronological diversity of the paleoenvironment. The large excavation area has offered an opportunity to identify habitation structures. It has been determined that the cultural sediments are variable and depend on the topography and geomorphology of each site's specific territory. At Afontova Gora-II there are "intact layers" which are represented by traces of hearths, artificial diggings, and a mammoth butchering area. As a result of field work conducted at the Krutaya site in 2017, habitation structures were defined which are preliminarily dated to the Pleistocene-Holocene boundary.

Keywords: Afontova Gora, Siberia, Paleolithic, the Pleistocene, Holocene boundary

*Speaker

Similarly different: toward a quantification of the regional variability in the Initial Upper Paleolithic of Northeast Asia

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In Northeast Asia, assemblages termed as Initial Upper Paleolithic (IUP) are documented as early as 47 ka cal. BP in the Altai, around 44 ka cal. BP in the Transbaikal region and in Mongolia. Arguably, the IUP could represent a human dispersal event Northward from the Himalaya - or an independent evolution of similar kinds of technologies during a short time period. ‘Lumpers’ advocating for the former hypothesis would emphasize similarities between coeval assemblages from a different regions and interpreted them as signs of cultural proximity. Alternatively, ‘splitters’ would be inclined to focus on differences between regions and regional diachronic patterns to support scenarios of local continuity. Only a few analyses have addressed issues related to variations at the assemblage level using comprehensive models and quantitative data in addition to qualitative and discrete traits. The present paper is an attempt to compare the defining features of the Initial Upper Paleolithic assemblages between the Altai, the Transbaikal and Northern Mongolia and test the prediction of basic cultural transmission or convergence models. The results highlight traits that are particularly sensitive to equifinality, environment, site function or mobility patterns and can be considered as weak indicators of cultural proximity. Other traits are considered more stable and tend to support the existence of a Northeast Asian IUP techno-complex. The sudden appearance of the IUP technological package during the Greenland Interstadial 12 would imply movements/contact over long distances and along with recent advances in physical and molecular anthropology and support the notion of ‘Northern Route’ for human dispersals into Asia.

Keywords: Initial Upper Paleolithic, Lithic assemblage, Quantitative analyses, Northeast Asia, Human dispersals

*Speaker

Neolithisation process and new cultural geography in Central Asia

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In Central Asia, the time-span between the Final Pleistocene and the Early Holocene is marked by many sites, associated with various cultures, spread out all over the territory in different environmental contexts, from steppe areas in Kazakhstan to mountains valleys in Tajikistan, and through arid areas or plains in Uzbekistan and Turkmenistan. These sites are considered as "Mesolithic" or "Epipalaeolithic" according to their potential link with the previous Upper Palaeolithic traditions. Above all, they illustrate the emergence of a new cultural geography of Central Asia which will develop during the Neolithic and even the Eneolithic periods (7th-4th millennia BCE), as our research into the Neolithisation processes in Central Asia tends to demonstrate. Moreover, the technological analysis of lithic assemblages from these sites leads us to point out the crucial role of the appearance of new technics. The latter may arise from local innovation or proceed from different ways of acquisition (transmission, importation, imitation...). Two main networks of relationships can be identified – the Eastern-Western from the Far Eastern area to Central Asia, and the Northern-Southern within Central Asia and with some South Asian cultures – while significant cultural frontiers seem to appeared. The hypothesis of new peopling, as well as adjustment to new climatic change or environmental conditions, could be also discussed in the light of new studies. Central Asia is frequently viewed through the prism of two geo-cultural domains, the Steppes in the North and the Oases in the South, emphasizing two lifestyles: pastoral nomadism and sedentary farming respectively. We consider that this dichotomy took root during the Neolithisation processes, which emerged in Central Asia in different and original ways. The characterization of the new cultural geography of Central Asia, which takes place with Mesolithic and tends to stabilise with the development of Neolithic and Eneolithic complex societies, contributes to consider and explain this dichotomy from different angles, starting from Prehistory.

Keywords: Neolithisation, Central Asia, Lithic, Prehistory, Cultural geography

*Speaker