

Spatial Analysis of Housing and Economic Complexes  
in the Upper Palaeolithic of Transbaikal





# **Spatial Analysis of Housing and Economic Complexes in the Upper Palaeolithic of Transbaikal (Southern Siberia)**

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## List of Abbreviations

AN SSSR	Academy of Sciences of the USSR
Cand. Sci.	Candidate of Sciences (Soviet/Russian scientific degree equal to Ph.D. and D.Phil.).
ChGPI	Chita State Pedagogical Institute
D.Sc.	Doctor of Sciences (Soviet/Russian scientific degree equal to <i>Dr. habil.</i> degree in Western Europe, and to Full Professor position in USA)
GAIMK	State Academy of the History of Material Culture
HEC	Housing and economic complex (in dwellings)
IA RAS	Institute of Archaeology RAS
IAET	Institute of Archaeology and Ethnography SO RAS
IGU	Irkutsk State University
IIMK	Institute of the History of Material Culture RAS
IrTU	Irkutsk Technical University
KICHP	Commission for Study the Quaternary Period RAS
KSIA	Short Communications of the Institute of Archaeology RAS
KSIIMK	Short Communications of the Institute of the History of Material Culture AN SSSR
MAE	Museum of Anthropology and Ethnography, Russian Academy of Sciences
MGU	Moscow State University
NGU	Novosibirsk State University
RAN, RAS	Russian Academy of Sciences
REM	Russian Ethnographic Museum
SO AN SSSR	Siberian Branch of the USSR Academy of Sciences
SO RAN	Siberian Branch of the Russian Academy of Sciences
SPbGU	St. Petersburg State University
WWII	World War II
ZabGPU	Transbaikal State Pedagogical University
ZabSU	Transbaikal State University

## Translators' Introduction

This book is about a subject that is rarely discussed in Siberian Palaeolithic archaeology – the dwellings. The study of these objects goes back to the end of the nineteenth century, but due to preservation and documentation issues it is not always easy to find out about even basic features of these dwellings – their size, way of construction, and purpose. The author of the book, Dr. Irina I. Razgildeeva, introduced the results of her works in the Transbaikal region of southern Siberia, and by meticulous analysis of the data collected during the excavations she was able to reconstruct several dwelling-like structures at the Studenoe 2 site. Although the general style of the book is quite ‘descriptive’ (as it is common in Russian archaeology; e.g., Kuzmin 2017), all details taken from primary excavation reports are fully presented. This makes the information about the Palaeolithic dwellings in Transbaikal indispensable for any student of spatial organisation of ancient habitats.

The issues related to the Upper Palaeolithic dwellings in Eastern Europe and Siberia have been discussed by several scholars (e.g., Praslov and Rogachev 1982; Sergin 1988; Soffer 1989, 2003; Soffer et al. 1997; Zheltova 2009; Gavrilov 2015; Iakovleva 2015; Konstantinov and Filatov 2019; Stepanchuk 2021). A classic example is the Kostenki 11 site in central Russia. It was excavated by A.N. Rogachev in the early 1960s (see section 1.1, Figures 1.2–1.3) (Praslov and Rogachev 1982, pp. 116–120), and now it is a part of the Kostenki Museum. Many years later (in 2015), during the rescue excavations before extending museum’s building, another large-scale circular structure made of mammoth bones ca. 12 m in diameter, was discovered (Figure 0.1). It was described in details by Pryor et al. (2020). The construction is dated to the Last Glacial Maximum, ca. 20,400–20,700 years BP.

The unique position of the Studenoe 2 site, as well as Ust-Menza cluster, on the ancient floodplain (which later turned into a terrace) resulted in preservation of the occupation surfaces because it was covered by sand and silt during the floods that regularly occurred in the Chikoi River valley. One of us (Y.K.) visited the Ust-Menza sites in 1986, and observed the geomorphology and alluvial sediments of the Chikoi River where numerous cultural layers are intercalated with sterile sands and silts. This made the Ust-Menza and Studenoe clusters a kind of polygon where the peculiarities of human activity can be established in detail, and spatial organisation of cultural horizons can be reconstructed with a high degree of accuracy. Such research is almost impossible at the majority of Siberian Upper Palaeolithic sites where the cultural layer is usually a palimpsest of different occupations not divided by sterile strata.

Among the scholars who have excavated Upper Palaeolithic sites in Western Transbaikal for decades are two brothers – Mikhail (older) and Aleksander (younger) Konstantinov. In the text citations, we do not include the initials for either of them because they do not overlap in terms of years of publications. In the references, the initials for both are given.



Figure 0.1. Large construction of mammoth bones at the back of the Kostenki Museum.

Russian letter	English letter	Russian letter	English letter	Russian letter	English letter
А	A	М	L	Ч	W
Б	B	Н	M	Ш	X
В	C	О	N	Щ	Y
Г	D	П	O	Ђ	Z
Д	E	Р	P	Ы	—
Е	F	С	Q	Ь	—
Ж	G	Т	R	Ә	—
З	H	Ү	S	҃	—
И	I	Ф	T	҄	—
К	J	Х	U		
Л	K	Ҕ	V		

In text and references, the letters “IA RAS” mean that this is the typewritten excavation report stored at the archive of the Institute of Archaeology, Russian Academy of Sciences (Moscow). The full archival information, necessary to find the reports, is also provided.

As for the grid (*kvadrat* [square] in Russian) numbering, some explanations are necessary. In terms of letters, we changed the original Russian lettering to Latin (see the table above). If there are not enough letters, they are added with an additional stroke (A'; B'; etc.). As for numerals, negative values (-1; -2; etc.) were introduced when the excavation pit was expanded. The words “planigraphy” and “planigraphic”, and “spatial analysis” are used interchangeably.

We have ‘created’ our own system of transliteration by combining the BGN (US Board of Geographic Names) with a slightly modified version of the LOC (Library of Congress). We have also settled on one ending for words, as the English language forces us to do, rather than providing the appropriate ending (masculine, feminine, neuter, plural/nominative, genitive, dative, accusative, instrumental, and prepositional) that can occur in Russian.

Some names and terms are ‘semi-formalised’ in English. We decided not to use an apostrophe (‘) to transliterate the Russian soft sign letter (‘ъ’), especially for site names which are now widely accepted like Malta (instead of Mal’ta) or Buret (instead of Buret’). For names that do not have an accepted English form we have tried consistently to use our system for transliterating. The Russian ‘-ский’ (‘-skii’) end of names we reduced to ‘-sky’. We generally give a (Russian) ‘и’ or ‘ы’ plural for plural words that are not translated. This is with the exception of ethnic names, which are given no ending in the plural (following one accepted form found in *Webster’s 3rd International Dictionary*, 1965). The common Russian term “archaeological culture” or simply “culture” we translated as “cultural complex”, “assemblage”, and “culture” interchangeably.

For published references, we give transliteration of the original title of a paper and/or a book and its translation, and for sources (such as edited volumes, collections of papers and/or abstracts, periodicals, and semi-periodicals) only transliteration is given. This, however, is sufficient enough to find the volumes in the LOC online catalogue or in Russian library resources. Because the editors of article collections are not indicated in the original book, we also did not include them into this volume; this, however, does not prevent scholars from finding the sources in library catalogues.

In the process of translation and preparation of this book for publication we followed *Concise Oxford Dictionary* (Oxford University Press, tenth edition, revised; ed. by J. Pearsall, 2001), and *The Chicago Manual of Style* (University of Chicago Press, fifteenth edition, 2003).

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Research of any archaeological site is always the result of collective efforts, both scientific specialists and selfless assistants – history students, schoolchildren and their teachers, and simply lovers of the outdoors and expeditions who provide constant assistance in excavations. Without their support and participation, it would have been impossible to carry out large-scale work. My thanks and deep appreciation go to the entire staff of the Chikoi Archaeological Expedition, with whom the author had the honour of working for more than 30 years. The hectic field life of an archaeologist is always a severe test for their loved ones. I cannot help but express my sincere and heartfelt gratitude for the patience, understanding, and unwavering support of my family and sons who have embraced and shared a passion for travel and fieldwork.

# Introduction

The development of methods of spatial analysis is closely related to the history of the discovery and study of Palaeolithic dwellings. It was the investigation of the structures of ancient settlements that required the development of criteria and identification of signs of artificially organised habitat areas, within whose boundaries the main activity processes of prehistoric people took place, to ensure various aspects of their life.

The object of study of Palaeolithic archaeology begins to be not just complexes of material evidence in the form of stone artefacts, collections of anthropological, faunal or other organic remains but also with their spatial organisation. The special nature of the sources determined the use of analytical methods not directly aimed at studying the material objects themselves. It became important to clarify the contexts of their appearance: how, when, why, under what circumstances this or that object took its shape and its corresponding place? What role did it play in the system of prehistoric society? Answers to these questions could only be obtained by expanding the field of research.

By the beginning of the twentieth century the substantiation of the idea of the existence of a more complex social organisation of ancient communities than previously imagined was based on archaeological materials. This was facilitated by the discovery of reliable remains of Palaeolithic dwellings and the entire settlements with a clear spatial layout. Visual perception of the clusters of artefacts that characterise them was accompanied by the intuitive implementation of methods of the natural sciences – mathematical and statistical analyses.

The formation of the cultural-historical direction aroused interest in ethnoarchaeological research and contributed to the development of new approaches, including reconstructive and experimental directions. At the same time, there was a process of integration into archaeology of data from the natural sciences, which objectively increased the level of understanding a whole complex of problems related to issues of ancient history. A peculiar denominator of all this was the origin and development of spatial analysis, which achieved its scientific formalisation in the second half of the twentieth century in Russian archaeology (Shovkopyas 1956, 1977; Leonova 1977a, 1983, 1994).

This monograph, in the context of research into Palaeolithic housing and economic complexes, examines the history of the development of this trend in Russia.

The presented brief excursion into planigraphic research covers the period from the end of the nineteenth century to the present. It was based on an analysis of materials from field reports (archive of the Field Research Department, Institute of the Archaeology of the Russian Academy of Sciences, Moscow), dissertations (archives of the Institute of History of Material Culture of the Russian Academy of Sciences, St. Petersburg; Russian State Library, Moscow; Palaeoecology Laboratory of Transbaikal State University, Chita), and a large number of scientific publications. It was not possible to cover the entire range of known materials due to their vastness, so primary attention was paid to works, in the author's opinion, that reveal the sequence of development of spatial analysis as an independent scientific direction, reflecting the evolution of views and approaches in the study of planigraphy of ancient settlements and dwellings of the Palaeolithic period.

It should be noted that the study of works of the first half of the twentieth century exhibited an interesting pattern. The birth of essentially similar ideas and scientific theories, and the practical implementation of methods aimed at analysing the spatial organisation of Stone Age sites, occurred during this period virtually in parallel and completely independently in the scientific community of Siberia and the European part of Russia. The main goal was to strengthen the existing evidence and increase the level of information coming from archaeological sources.

The discovery of the remains of Palaeolithic dwellings and the recognition of the fact of their existence caused not only the introduction of complex methods of analysis but also identified other problems: the multi-layered nature of sites; the content of the concept of a cultural layer and its components; and differentiating features of open and closed type structures. The increasing complexity of the information obtained during excavations and the expansion of methods for processing it have generally led to a change in scientific priorities.

In the second half of the twentieth century, researchers moved away from typology and classification of architectural elements into the reconstruction of forms of production and economic activity and sociocultural models. At this time, the habitat begins to be considered as an interconnected phenomenon that has both anthropogenically modified features (dwellings; workshops; sanctuaries; and burial complexes) and natural characteristics.

Spatial observations have acquired particular importance during large-scale excavations of the last quarter of the twentieth and early twenty-first centuries in Siberia (and in Transbaikal in particular), where at this time a whole series of sites was discovered whose cultural horizons contained remains of Palaeolithic dwellings. A separate chapter is devoted to the history of their research. In addition to published works, the author turned directly to the materials of field reports of numerous researchers, including M.P. Aksenov, M.M. Gerasimov, I.I. Kirillov, M.V. Konstantinov, G.I. Medvedev, A.P. Okladnikov, and S.A. Vasil'ev, who in different years carried out excavations of sites with residential structures in Siberia.

The basis of the methodological part of this book was the development by leading Russian specialists of different aspects in the field of planigraphy of ancient settlements and other branches of archaeological knowledge. A separate chapter contains ethnographic information from the archives of the Department of Ethnography of the Peoples of Siberia and the Far East, Russian Ethnographic Museum (St. Petersburg). The work uses excerpts from field notes and photographs of ethnographers and collectors of the early twentieth century: A.A. Makarenko, S.I. Rudenko, and N.P. Sokolnikov. Information is provided on the sizes of structural elements of the dwellings of the northern peoples according to ethnographic collections gathered in 1905–1910 by G.A. Borisov, F.Y. Kon, K.D. Loginovsky, A.I. Popov, N.P. Sokolnikov, P. Sleptsov, and V.N. Vasiliev, as well as in the 1950s – 1980s by V.V. Gorbacheva, I.A. Karapetova, E.P. Orlova, M.S. Popova, and T.Y. Sem.

A separate chapter is devoted to the spatial analysis of the Palaeolithic cultural horizons of the multi-layered Studenoe 2 site in Western Transbaikal. This site received independent status in 1976, but its study was carried out by a team of the Chikoi Archaeological Expedition in 1980–2004 under the guidance of Prof. M.V. Konstantinov, who was the holder of the permits and the author and organiser of the field research. As part of the scientific team, the author also worked along with A.V. Konstantinov and L.V. Ekimova.

Several specialists took part in both field and laboratory research of the site, including geologists D.-D.B. Bazarov, A.B. Imetkhenov, S.M. Tseitlin, I.N. Rezanov, A.K. Tulokhonov, A.F. Yamskikh, L.D. Bazarova, V.V. Karasev, V.B. Popov, V.A. Krivenko, M.R. Waters, and I. Buvit; archaeologists T. Goebel, M. Izuho, M.N. Meshcherin, and K. Terry; palynologists S.A. Reshetova and V.V. Savinova; and palaeontologists F.I. Khenzykhenova, A.M. Klementiev, and N.D. Ovodov. T. Goebel, I. Buvit, and Y.V. Kuzmin performed radiocarbon dating.

The result of the research of the Studenoe 2 site was the identification of 16 cultural horizons. Eight of them contained traces of a Palaeolithic settlement with remains of housing and economic structures (Konstantinov 1994; Konstantinov et al. 2003, 2007, 2011). A.V. Konstantinov (2001) carried out an analysis of the structural elements of dwellings as part of a D.Sc. dissertation. The internal planigraphy of dwellings becomes the object of the author's research; an analysis of the complexes of the four cultural horizons of Studenoe 2 was included in the Ph.D. dissertation (Razgildeeva 2002, 2003). Certain sections of this thesis were published but were not fully introduced into scientific circulation. At the same time, the materials obtained during the field research of Studenoe 2, presented in scattered form in field reports and preliminary publications, contained unique information about the systems of spatial organisation of Palaeolithic sites. Their spatial analysis revealed a change in settlement strategies at different stages of development within the boundaries of the Studenoe cluster, and expanded our understanding of the way of life of the ancient population of Transbaikal.

The full introduction into scientific circulation of the results of the spatial analysis for the Studenoe 2 complexes was one of the objectives of this book. Using this site as an example, the author sought to show the levels of latent information in materials from cultural horizons of short-term occupation sites, and data from ethnographic sources.

It is important to note that this work is devoted specifically to the planigraphic analysis of housing and economic structures in the context of cultural horizons. All other aspects of research on the site fall within the exclusive scientific priorities of the authors of the excavations.

The source base for performing a spatial analysis of the cultural horizons of Studenoe 2 was made up of collections of artefacts stored in the Palaeoecology Laboratory of Transbaikal State University and materials from field reports by M.V. Konstantinov for 1977, 1980, 1981, 1988, 1989, and 1996–2004 (see IA RAS, F. 1, R.-1, Nos. 8517, 8188, 8802, 13334, 14614, 19956, 23009, 22236, 25162, 25822, 27373, 33763, and 31403). The author had the fortunate opportunity to participate in the excavations of all the complexes analysed in the work, as well as in the preparation and compilation of scientific reports. The author completed a significant part of the field graphic documentation and statistical processing of collections from 1996–2004.

When describing the materials of cultural horizons in Chapter 5, elements of primary data were deliberately

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preserved, including the characteristics of not just the complexes of stone tools and faunal collections but also of unmodified stones that form various kinds of economic structures. Preservation of this technical information, which is unnecessary at first glance, seems important in our opinion. The desire to present generalised characteristics often leads to the loss of specific information that underlies conclusions and reconstructive models, and most often it turns out to be excluded from the sphere of scientific circulation.

In general, the author sought, using the example of the complexes of the Studenoe 2 settlement, to show the degree of significance of spatial analysis from the position of the contextual approach, the functionality of its use as a multicomponent filter, showing various sections of information. The author hopes that the work will be interesting and useful to all kinds of archaeologists (undergraduate and graduate students, and academics) and other specialists (such as Quaternary geologists and palaeogeographers).