

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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ARCHAEOPRESS ARCHAEOLOGY



ARCHAEOPRESS PUBLISHING LTD

First and Second Floors

13-14 Market Square

Bicester

OX26 6AD

www.archaeopress.com

ISBN 978-1-80327-979-4

ISBN 978-1-80327-980-0 (e-Pdf)

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Contents

List of Figures	iii
List of Tables	v
List of Abbreviations	vi
Translators' Introduction	vii
Acknowledgements	x
Chapter 1 : Development of methods of planigraphic analysis in Russia.....	4
The emergence of spatial analysis methods in the context of the study of Palaeolithic dwellings.....	4
Directions of research in the field of application of planigraphic analysis methods.....	12
Problems of reconstruction and analysis of habitat spaces and cyclicity in the structure of the cultural layer....	15
Chapter 2: Studies of the planigraphy of Palaeolithic dwellings and economic complexes in Transbaikal ...	25
History of the discovery of dwellings.....	25
Research of dwellings in Western Transbaikal.....	33
Planigraphy of economic structures in the context of settlements.....	40
Chapter 3: Methods, concepts, approaches	45
Methodology for field research of Palaeolithic complexes in Transbaikal.....	45
Terms and concepts.....	46
Approaches and methods of spatial analysis.....	48
Analysis of the internal layout of dwellings.....	49
Dwellings of northern peoples from the archives of the Russian Ethnographic Museum.....	52
Chapter 4: History of research and geomorphology of ancient settlements in the Studenoe cluster	57
Chapter 5: Spatial analysis and reconstruction of the Studenoe 2 complexes.....	65
Cultural horizons 8, 7/2, and 7/1.....	65
Cultural horizon 6.....	74
Cultural horizon 5.....	81
Cultural horizon 4/5.....	98
Cultural horizon 4/4.....	117
Cultural horizon 3.....	127
Chapter 6: Conclusion	133
References	137
Index	157

List of Figures

Translators' Introduction

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

Chapter 1

Figure 1.1. Plan of the Upper Palaeolithic living space, Kostenki 1 site.....	9
Figure 1.2. Kostenki 11, plan of the southern dwelling and pits. Black spots are skulls of mammoths.....	11
Figure 1.3. Kostenki 11, photo of dwelling in the museum	12

Chapter 2

Figure 2.1. Sannyi Mys. Horizon 6. Photo of dwelling.....	26
Figure 2.2. Tolbaga. Excavations of complexes of residential sites of the main Palaeolithic layer	28
Figure 2.3. Sukhotino 4. Excavation 8. Lower ash layer. Layout of hearths and stone linings.....	29
Figure 2.4. Sukhotino 4. Excavation 8. Lower ash layer. Depth 155–160 cm. Plan of location of finds.....	30
Figure 2.5. Sukhotino 4. Excavation 9. Layer 2. Plan and sections of stone lining and hearths	30
Figure 2.6. Sukhotino 4. Excavation 9. Layer 2. Plan of location of finds. Depth 90–100 cm.....	31
Figure 2.7. Sukhotino 4. Layer 8. Fragment of a settlement in the northeastern part of the site	32
Figure 2.8. Ust-Menza 1. “Classical” complex of a single-hearth dwelling in cultural horizon 14	34
Figure 2.9. Encampment of modern Evenki in the north of the Transbaikali: dwelling and external “kitchen” hearth.....	37
Figure 2.10. Studenoe 1. Cultural horizon 17. Planigraphy of complexes.....	38
Figure 2.11. Studenoe 1. Cultural horizon 17. An example of identifying “hidden” connections	38
Figure 2.12. Red deer; parts of the skeleton presented in collections of osteological materials from ancient settlements are in red colour	39
Figure 2.13. Kamenka. General planigraphic situation of Complex A	41
Figure 2.14. Podzvonkaya. Eastern complex. Plan of hearth No. 1	42

Chapter 3

Figure 3.1. Scheme of constructing a circular model of a single-hearth complex.	50
Figure 3.2. Scheme of constructing a circular model of a multi-hearth dwelling	51
Figure 3.3. Housing. Graphic copy of the photo by N.P. Sokolnikov, 1912. Far Eastern Region, Kamchatka Province, Anadyr County, villages of Eropol and Novo-Mariinsky. Chukchi	52
Figure 3.4. The frame of the Chukotka yurt	53
Figure 3.5. The frame of a dwelling. Graphic copy of the photo by N.P. Sokolnikov, 1912. Far Eastern Region, Kamchatka Province, Anadyr County, villages of Tumayuk and Penzhino. Koryaks.....	54
Figure 3.6. Encampment of Chukchi nomads	55
Figure 3.7. Encampment of Chukchi nomads	55
Figure 3.8. Huts covered with birch bark (tundra), summer home of the Kunovat Ostyaks	55

Chapter 4

Figure 4.1. Scheme of the study area. A. Russia; B. Transbaikali Region; C. View of the Studenoe cluster from the southeast; the Studenoe 2 site is marked with an asterisk.....	57
Figure 4.2. Scheme of the geological structure of the right bank of the Chikoi River (at the mouth of the valley of the Studeny Creek).....	58
Figure 4.3. Topographic plan of the location of the Studenoe 1 and Studenoe 2 sites	60
Figure 4.4. Scheme of development of the excavated parts of Studenoe 2 site	61
Figure 4.5. Stratigraphic section of Studenoe 2 site	62

Chapter 5

Figure 5.1. Studenoe 1 and 2 sites. View from the southwest of the Studenoe cluster	65
Figure 5.2. Stratigraphic profiles of the Studenoe 2 sections	66
Figure 5.3. Studenoe 2. Layout of complexes of cultural horizon 8	67
Figure 5.4. Studenoe 2. Cultural horizon 8. Single-hearth dwelling complex.....	68
Figure 5.5. Artistic reconstruction of a dwelling – tent in cultural horizon 8, Studenoe 2 site	70
Figure 5.6. An Evenki summer camp on a beach of Nizhnyaya Tunguska River, Eastern Siberia	72
Figure 5.7. Studenoe 2. Layout of complexes of the cultural horizon 6	74
Figure 5.8. Studenoe 2. Cultural horizon 6. Southern complex: group of large cobbles.....	75
Figure 5.9. Studenoe 2. Fragment of the plan for cultural horizon 6. Complex 1.....	75
Figure 5.10. Studenoe 2. Cultural horizon 6. Burins	76
Figure 5.11. Studenoe 2. Complex 2, cultural horizon 6. Stones for the contour of the outer lining.....	77
Figure 5.12. Studenoe 2. Fragment of the plan of cultural horizon 6. Complex 2	77
Figure 5.13. Studenoe 2. Cultural horizon 6. Zone of carbonaceous (near-hearth) spot, complex 2.....	78
Figure 5.14. Studenoe 2. Cultural horizon 6. Lithics.....	79
Figure 5.15. Studenoe 2. Cultural horizon 6. Bone tools.	80
Figure 5.16. Studenoe 2. Cultural horizon 6. Antler tool	80
Figure 5.17. Studenoe 2. Layout of complexes in cultural horizon 5.	81

Figure 5.18. . Studenoe 2. Plan of the HEC in cultural horizon 5	83
Figure 5.19. Studenoe 2. Cultural horizon 5. Plan and profiles of hearths Nos. 2–3.....	84
Figure 5.20. Studenoe 2. Cultural horizon 5. The amount of split stone per 1 m ² grid in the residential area	85
Figure 5.21. Studenoe 2. Cultural horizon 5. Layout of microdebitage clusters and refitting connections.....	86
Figure 5.22. Studenoe 2. Cultural horizon 5. Cores.....	86
Figure 5.23. Studenoe 2. Cultural horizon 5. Burins	87
Figure 5.24. . Studenoe 2. Cultural horizon 5. Lithics.....	88
Figure 5.25. Studenoe 2. Cultural horizon 5. Lithics.....	89
Figure 5.26. Studenoe 2. Cultural horizon 5. A fragment of an ornamented antler – “ <i>bâtons de commandement</i> ”.....	90
Figure 5.27. Studenoe 2. Cultural horizon 5. Beads.....	91
Figure 5.28. Studenoe 2. Cultural horizon 5. Heel bone of argali	91
Figure 5.29. Studenoe 2. Cultural horizon 5. Scheme of the presence of bone remains at the site of the HEC	92
Figure 5.30. Studenoe 2. Cultural horizon 5. Circular model of the HEC.....	92
Figure 5.31. Studenoe 2. Cultural horizon 5. Implement distribution diagram with functional definition.....	93
Figure 5.32. Studenoe 2. Refitting links for lithic artefacts. Distribution of beads and needle fragments.....	94
Figure 5.33. Studenoe 2. Diagram. Surface level of the HEC section of cultural horizon 5.	95
Figure 5.34. Reconstruction of the above-ground structure of a dwelling based on material from cultural horizon 5 of the Studenoe 2 site.	97
Figure 5.35. Photomontage: location of the dwelling at the level of cultural horizon 5 in the landscape of the Studenoe area. ..	97
Figure 5.36. Studenoe 2. Layout of complexes of cultural horizon 4/5	98
Figure 5.37. Studenoe 2. Fragment of cultural horizon 4/5 with the HEC	100
Figure 5.39. Studenoe 2. Cultural horizon 4/5. Hearth No. 2	100
Figure 5.40. Studenoe 2. Cultural horizon 4/5. Hearth No. 3	101
Figure 5.41. Studenoe 2. Cultural horizon 4/5. Hearth No. 4	101
Figure 5.42. Studenoe 2. Cultural horizon 4/5. Hearth No. 5	102
Figure 5.43. Studenoe 2. Cultural horizon 4/5. Hearth No. 6	102
Figure 5.44. Studenoe 2. Cultural horizon 4/5. Section of hearth No. 6, view from the southwest.....	103
Figure 5.45. Studenoe 2. Cultural horizon 4/5. Lithics.....	104
Figure 5.46. Studenoe 2. Cultural horizon 4/5. Lithics.....	105
Figure 5.47. Studenoe 2. Cultural horizon 4/5. Refitting block.	106
Figure 5.48. Studenoe 2. Cultural horizon 4/5. Beads and needles	107
Figure 5.49. Studenoe 2. Cultural horizon 4/5. Diagram of the HEC (including artefacts and faunal remains).	107
Figure 5.50. Studenoe 2. Cultural horizon 4/5. Diagram. Clusters of artefacts and faunal remains.....	108
Figure 5.51. Circular model of the HEC in cultural horizon 4/5 of the Studenoe 2 site.....	109
Figure 5.52. Studenoe 2. Cultural horizon 4/5. Clusters of microblades.....	109
Figure 5.53. Studenoe 2. Cultural horizon 4/5. Clusters of flakes (for explanations, see Figure 5.50).	111
Figure 5.54. Studenoe 2. Cultural horizon 4/5. Clusters of scales (for explanations, see Figure 5.50).	111
Figure 5.55. Studenoe 2. Cultural horizon 4/5. Scheme of refitting connections for stone tools.....	112
Figure 5.56. Studenoe 2. Cultural horizon 4/5. Chisel-shaped tools.....	113
Figure 5.57. Chronological sequence based on the results of AMS ¹⁴ C dates (cal BP) for the HEC of cultural horizon 4/5 at the settlement of Studenoe 2.....	116
Figure 5.58. Chronology of functioning of hearths of cultural horizon 4/5 at the Studenoe 2 site	116
Figure 5.59. Studenoe 2. Location of the complexes in cultural horizon 4/4	118
Figure 5.60. . Studenoe 2. Cultural horizon 4/4. Fragment of the plan with a layout of stones.....	119
Figure 5.61. Studenoe 2. Fragment of cultural horizon 4/4	120
Figure 5.62. Studenoe 2. Fragment of cultural horizon 4/4. Complex with fire pit 1 and hearth.....	121
Figure 5.63. Studenoe 2. Cultural horizon 4/4. Photo of the hearth section, view from the west	122
Figure 5.64. Studenoe 2. Fragment of the plan of cultural horizon 4/4. Fire pits 2–3	123
Figure 5.65. Studenoe 2. Lithics of cultural horizon 4/4.....	124
Figure 5.66. Studenoe 2. Diagram. Distribution of lithic artefacts in cultural horizon 4/4.	125
Figure 5.67. Studenoe 2. Layout of the complex in cultural horizon 4/4.....	125
Figure 5.68. Studenoe 2. Layout of the complex cultural horizon 3.....	127
Figure 5.69. Studenoe 2. Dwelling in cultural horizon 3	128
Figure 5.70. Studenoe 2. Photo of the stones structuring the area of the residential site in cultural horizon 3 after studying the cultural deposits (view from the southwest).....	129
Figure 5.71. Studenoe 2. Circular model of the dwelling in cultural horizon 3 with a diagram of the presence of stone tools. ..	130

Chapter 6

Figure 6.1. Deer antlers on a grave. Graphic copy of the photo by N.P. Sokolnikov, 1912. Far Eastern Region, Kamchatka Province, Chukotka area. Tungus	135
--	-----

List of Tables

Chapter 4

Table 1: Description of the stratigraphic section of the Studenoe 2 site	62
--	----

Chapter 5

Table 2: Characteristics of the outer lining stones of the cultural horizon 8, Studenoe 2 site.....	69
Table 3: Distribution of artefacts in cultural horizon 8, Studenoe 2 site	71
Table 4: Studenoe 2. Fragment from cultural horizon 7/2: distribution of identified artefacts	73
Table 5: Scheme of distribution of artefacts in cultural horizon 6 at Studenoe 2 site.....	80
Table 6: Studenoe 2. Scheme of artefact distribution in cultural horizon 5.....	82
Table 7: Composition of tools in cultural horizon 4/5 of the Studenoe 2 site	106
Table 8: Studenoe 2. Cultural horizon 4/5. Distribution of microblades and small blades.	108
Table 9: Studenoe 2. Cultural horizon 4/5. Distribution of scales and flakes.	110
Table 10: Studenoe 2. Cultural horizon 4/5. Distribution of typologically identified artefacts.	112
Table 11: Radiocarbon dates of cultural horizon 4/5 at the Studenoe 2 site.	115
Table 12: Studenoe 2. Cultural horizon 4/4. Artefact distribution.	119
Table 13: Studenoe 2. Cultural horizon 3. Distribution of artefacts	129

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	Ъ	Z
Д	E	Р	P	Ы	—
Е	F	С	Q	Ь	—
Ж	G	Т	R	Э	—
З	H	У	S	Ю	—
И	I	Ф	T	Я	—
К	J	Х	U		
Л	K	Ц	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 (‘ь’), 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) ‘i’ or ‘y’ 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).

We are grateful to author of original Russian book, Irina I. Razgildeeva, for her cooperation in preparation of this volume. As always, *Archaeopress* and personally D. Davison and R. Makjanić enthusiastically supported its publication.

Yaroslav V. Kuzmin (Novosibirsk, Russia)

Richard L. Bland (Eugene, OR, USA)

July 2024

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Acknowledgements

This monograph is based on materials from several generations of researchers, people who are passionate and dedicated to their work. Their way of life, scientific passion, broad erudition, and human charisma have always attracted and delighted the author.

My deepest respect and most sincere gratitude go to my teacher, scientific supervisor, outstanding researcher of the ancient history of Transbaikial, permanent leader of the Chikoi Archaeological Expedition, Prof. M.V. Konstantinov. It was under the influence of the scientific views and works of this scientist and his colleagues, A.V. Konstantinov and L.V. Ekimova (née Semina), that the scientific interests and research experience of the author took shape.

Special thanks to Prof. N.B. Leonova (Moscow State University), for scientific advice and questions, whose search for answers forced me to cross the boundaries of scientific stereotypes at one time. Sincere gratitude also goes for the active and friendly cooperation to use-wear specialists V.E. Shchelinsky and E.Y. Giryа (IIMK RAS, St. Petersburg), palynologist S.A. Reshetova (Institute of Natural Resources SO RAN, Chita), geologist V.B. Popov (Vostokgeology), palaeontologist A.M. Klementev (Institute of the Earth's Crust SO RAN, Irkutsk), and archaeologist E.M. Ineshin (IrTU). Deep gratitude and fond memory go to palaeontologist N.D. Ovodov, who, complaining about the poverty of osteological collections, nevertheless looked at and analysed them all. My thanks go to fellow archaeologists who took part in the discussion of the working version of the texts. Their scientific advice, criticism, questions, and friendly support were invaluable.

Special thanks go to the artist S.V. Tukmachev (Children's Art School, Biysk), who took an active part in developing options for the reconstruction of ancient dwellings and their graphic design, and also to V.V. Selin (studio "Ekran," Chita) for help in making and processing the drawings.

In addition, I express my deep gratitude to the participants of the Tver Scientific Seminars, their organiser I.N. Chernykh, and the staff of the Palaeolithic Department, IIMK RAS. It was during the seminar sessions and discussions of reports at this department that the importance of writing such a book became clear.

The author thanks the V.M. Grusman, Director of the Russian Ethnographic Museum, for the permission to publish photographic materials from the archives of the Department of Ethnography of the Peoples of Siberia and the Far East. My gratitude goes for the attention and help to the employees of this department and its head, N.N. Prokopyeva.

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 (Shovkoplyas 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 Transbaikalia 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 Transbaikalia. 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 Transbaikalia.

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 Transbaikalia 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

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).