CHANGE AND CONTINUITY IN THE PREHISTORIC ROCK ART OF EAST SIBERIA

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ABSTRACT

Four centuries of rock art exploration and research in Siberia resulted in considerable achievements in documentation, cultural and chronological attributions of style and traditions and learning about ancient ritual practices related to rock art. However, the range of interpretational frameworks has remained rather limited, and the active role rock art played in prehistoric ethno-cultural processes has been overlooked. Rock art motifs and styles have been by default considered as mere markers of ethno-cultural groupings and migrations. This thesis continues a long-established Soviet/Russian tradition of considering rock art sites in their archaeological context but poses and answers new questions which are relevant not only for Siberian but also global rock art research, namely, why rock art was created, why specific styles emerged and why changes in rock art production occurred. These questions are explored through anthropological perspectives on ethnicity, identity, community and symbolism.

Aiming to answer these questions, macro ethno-cultural and social processes that took place in East Siberia in the prehistoric period are reconsidered through the development of rock art styles and traditions. Importantly, this PhD is primarily fieldwork based because publications available for the rock art of East Siberia contain only black-and-white drawings and few low-quality black-and-white photographs. This research is focused on East Siberia which lies east of the Yenisey River, and specifically deals with the following regions: 1) Cis-Baikal, an area to the west from Lake Baikal; 2) Trans-Baikal, an area to the east from Lake Baikal which includes Zabaykalsky Krai and Buryatia; and 3) Sakha Republic (Yakutia). This project’s fieldwork was carried out in Sakha Republic (Yakutia) and Trans-Baikal. In total, 108 rock art sites with more than 6,000 designs were recorded. In addition, rock art sites in the Lower Amur River basin and Tomskaya Pisanitsa in West Siberia were surveyed during this fieldwork. Prior to this PhD project, rock art sites of the Upper Lena River in Cis-Baikal were visited by the author to gain better understanding of the area’s rock art.

This thesis is focused on three chronological rock art groups: 1) the earliest, possibly Paleolithic rock art, 2) Neolithic rock art, and 3) Bronze Age rock art styles and traditions. The concept of style is employed as an analytical tool to investigate diachronic and spatial patterns. Several rock art styles and traditions, such as Amur, Angara, Selenga and Kyakhta, were better defined, and their chronology was elaborated based on the archaeological record and analogues in art objects from archaeological contexts. Such an accurate placement of rock art in time and space allowed the exploration of the role rock
art played in constructing and reconstructing ethno-cultural identities, which contributes to the wider field of archaeology and cultural anthropology.

The most important observation made in this research addresses the questions of why rock art is created, why specific styles and traditions emerge and why changes in rock art occur. Rock art sites create and maintain a strong connection between people, their past and their land. Rock art does not just reflect group or individual identities but helps construct them through powerful emotional attachments. The emergence or change of rock art styles occurs in a situation of major cultural changes, the reasons and dynamics of which may vary. The important factor is that people had to protect their tradition, culture and well-being in a situation of threat to their ethno-cultural continuity. In protecting continuity, it is inevitable changes in a rock art tradition occur. It becomes highly important to mark rocks with symbols of now ‘hot’ identity thus expressing belongingness, and those marks remain there for millennia continuing to structure identities of those who claim their belongingness to these places afterward. Specific styles and motifs become these symbols which need to be threefold – exhibiting the connection with the past, expressing a new identity and being perceived by an outsider. Therefore, a rock art tradition/style simultaneously features continuity, change and similarity to other synchronous traditions/styles which is a shared field of interaction. This view explains why rock art styles do not fit into neat culture-historical frameworks and do not have clear-cut temporal and spatial limits. This explanatory framework can be applied elsewhere in any other study on rock art and identity.

This PhD thesis not only contributes to Siberian rock art research in a major new way but also shows many new directions for future rock art research globally.
STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Irina A. Ponomareva
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THE PAPERS INCLUDED ARE A MIX OF SOLE-AUTHORED AND CO-AUTHORED PAPERS

Included in this thesis is a paper in Chapter 6 of which I am the sole author.

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Included in the thesis is a paper in Chapter 7 which is co-authored with Paul Taçon. To include the article in the thesis, it was edited, some redundant parts and parts contributed by Paul S.C. Taçon were removed for the purpose of coherence of the thesis. This paper was submitted just before the start of this PhD fieldwork, a part of which was carried out in the Middle Lena River basin, one of the key areas considered in the article. Since observations made during the fieldwork complement the picture outlined in the analysis, they were added in the text. The bibliographic details for this paper including all authors, are:


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CHAPTER 1. INTRODUCTION

The rock art of Siberia has a long history of investigation. The first mention of pictures on rocks is dated to 1630 (Kovtun, 2011), and already in the 19th Century answers to key questions, such as who made them and when, were being attempted (Spassky, 1822). By the early 20th Century a large amount of data on East Siberian rock art had been accumulated and became known not only to national archaeologists, historians and antiquarians but also to foreign researchers and the wider public. During the Soviet period rock art research considerably accelerated and advanced. The focus was documentation, chronological attribution and interpretation in a context of prehistoric rituals and beliefs. Rock art in the Soviet Union and later Russia has been positioned within archaeological enquiry, and this had a positive consequence in that a great focus was put on studying rock art styles and traditions with subsequent correlation with archaeological periods and cultures. However, another characteristic is that the range of interpretational approaches and frameworks is rather limited.

Few approaches which were originally developed by early rock art researchers still dominate intellectual thinking when it comes to understanding the role which rock art played in ancient societies. In East Siberia, considering rock art sites as default open-air ancient sanctuaries has a long tradition in rock art research. This was established by Alexey Okladnikov and developed by his disciples and followers Alexandr Mazin, Nikolai Kochmar and Alexey Tivanenko (Mazin, 1994; Okladnikov & Zaporozhskaya, 1970, 1972; Tivanenko, 1989). These days the study of ancient sanctuaries is continued by Vasiliy Tashak and Yulia Antonova (Tashak & Antonova, 2019). Another common approach is interpreting or ‘reading’ rock art scenes and specific motifs with reference to Siberian ethnography and mythology. This is a rather controversial area of enquiry because contemporary ethnography needs to be employed with caution since there is a large time gap between rock art and the time when ethnographic data was collected. While traditional ways of looking at rock art still hold their position, some novel approaches have also found their ways to Siberian rock art, such as shamanism and animism (Brandisauskas, In press; Rozwadowski, 2017c).

This thesis continues the long-established Soviet/Russian tradition of considering rock art sites in their archaeological context and builds on considerable achievements made by Siberian rock art researchers and archaeologists. However, new questions are posed and will be answered in this research, namely, why rock art was created, why specific styles emerged and changes in rock art production occurred. This is possible to answer if looking into how rock art relates to the negotiation of ethno-cultural identity.
The phenomenon of ethnicity and ethno-cultural identity occupies an important position within anthropological enquiry, although few attempts have been made to apply relevant anthropological insights for the study of prehistoric societies. Contemporary anthropological thinking considers ethnicity as a dynamic, ever-changing and multi-componential phenomenon, while archaeological thinking is still dominated by a notion of bounded rigid entities in the past, and researchers pursue correlating genetics, linguistics, historiography if available and material culture assemblages to identify ethno-cultural groupings. While this research acknowledges the importance of such correlations, especially linking rock art styles to archaeological cultures to better define timeline for rock art, this is taken as an initial analytical stage for further interpretation through an anthropological perspective on ethnicity, identity, social practice, symbolism, and community.

The aim of this project is to reconsider macro ethno-cultural and social processes that took place in East Siberia in the prehistoric period. A great majority of all rock art sites are related to this period, more precisely Neolithic-Bronze Ages, and such research implies a large geographic scope. Although much information and data on East Siberian rock art has been published, the quality of publications of rock art sites does not allow for reassessment of sites in order to make substantial progress in understanding Siberian prehistory. Therefore, this PhD is primarily fieldwork based. The goals of the fieldwork are: 1) since this project considers macro-history on a large territory, it is necessary to survey as large a region as possible covering different geographic areas; 2) since publications available for the rock art of Trans-Baikal and Yakutia contain only black-and-white drawings and few low-quality black-and-white photographs, another goal is to create a baseline recording for rock art sites examined in the fieldwork.

Siberia is an extensive geographical region which stretches from the Ural Mountains in the west to the watersheds of the Pacific Ocean in the east, and from the Arctic Ocean in the north to the national borders of Kazakhstan, Mongolia and China in the south. This research is focused on East Siberia which lies to the east from the Yenisey River, and specifically deals with the following regions: 1) Cis-Baikal, or Irkutsk Oblast, which lies to the west from Lake Baikal; 2) Trans-Baikal, an area to the east from Lake Baikal. Administratively, this area is constituted by the Republic of Buryatia which is geographically referred to as Western Trans-Baikal, and by Zabaykalsky Krai, or geographically Eastern Trans-Baikal. Eastern and western parts of Trans-Baikal are divided

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1 This thesis employs commonly used geographic definitions of various parts of Siberia rather than official administrative division which is being constantly reformed for unknown bureaucratic purposes (for instance, Trans-Baikal recently became a part of the Far East region).
by the Yablonovy Range; 3) South-Central Sakha Republic (Yakutia), which is also referred to as a part of North-East Asia.

Another definition, North Asia, in addition to geographic Siberia includes the region of the Russian Far East located along the coast of the Pacific Ocean and in the Amur River basin. Although a detailed consideration of this part of North Asia is beyond the scope of this thesis, a case study on the rock art of the Lower Amur River which has already been published is included in the dissertation (Ponomareva, 2018a). An area of the Lower Angara River which geographically belongs to East Siberia is not taken into consideration since it is culturally related to the Yenisey River basin which is beyond the scope of this research.

Yet another geographic division is South Siberia which includes an area from the West-Siberian plain in the west to the Zeya-Bureya plain in the east thus including Altai, Kuzbass, Minusinsk Basin and Trans-Baikal. However, when talking about rock art provinces, researchers usually refer to the rock art of the Middle Yenisey Basin/Minusinsk Basin. In addition to that, Trans-Baikal is also considered within the region of South-East Siberia; however, this definition will not be used in the thesis.

Siberia, especially its southern part, has been culturally and historically related to Central Asia. Although this region is not within the focus of the thesis, some references are impossible to escape. Here Central Asia is understood following established Russian archaeological tradition and UNESCO definition which includes “Afghanistan, northeastern Iran, northern and central Pakistan, northern India, western China, Mongolia and the former Soviet Central Asian republics” (Dani et al., 1992, p. 8).

In terms of chronology, the thesis is focused on three chronological rock art periods 1) the earliest, possibly Paleolithic rock art, 2) the Neolithic, and 3) Bronze Age
rock art styles and traditions. The first period is the most controversial since no solid evidence is available to prove the age of this art. However, there are other indications and some recent discoveries which need to be discussed. The Neolithic rock art is represented by the Taiga styles, and the most prominent is the Angara style that originated in the Cis-Baikal region and spread to the east and to the west. A detailed analysis of this style, its chronology and the role in the emergence of ethno-cultural identities has already been published (Ponomareva & Taçon, 2019), and this article is included as a section in Chapter 7. The Bronze Age is marked by the appearance of new motifs and styles. While the Early Bronze Age is better represented by the Taiga rock art in Cis-Baikal and South-Central Yakutia, in the Late Bronze Age a new, Selenga tradition, dominated in the Steppes of Trans-Baikal. To provide a historical context for the rock art considered, the archaeological record for the Paleolithic, Neolithic and Bronze Age-Early Iron Ages of Cis-Baikal, Yakutia and Trans-Baikal is reviewed. The next period in Siberian history is related to the rise of the nomadic state of Xiongnu, and this is outside of the scope of this thesis.

The novelty and relevance of this thesis can be shown through each stage of research. Firstly, the analysis is based on data collected in the field. The fieldwork took place in May-September 2017 in three subjects of Russia, Zabaykalsky Krai, Yakutia and Buryatia, and resulted in 108 rock art sites with more than 6,000 individual motifs recorded. No such extensive rock art research has been carried out in the region since the 1980s. It was important to personally visit as many sites as possible because the published data available is represented by black-and-white drawings and few black-and-white photographs which do not allow for a more accurate than previous analysis. Moreover, many of the drawings published when compared to actual rock art images turned out to be not quite accurate. Using modern non-invasive techniques of rock art recording and processing, better-quality data was collected. Secondly, a stylistic and spatial analysis of all motifs recorded led to better definitions of rock art styles and traditions. Thirdly, the chronology of rock art styles and traditions was elaborated based on extensive references to the archaeological record and analogues in art objects from archaeological contexts. Such accurate placement of rock art in time and space allows for the next level of investigation, which is exploring the role which rock art played in constructing and reconstructing of ethno-cultural identities. The observations made on the active engagement of rock art in social and ethno-cultural processes contribute to the wider field of archaeology and cultural anthropology.

The thesis consists of nine chapters. After outlining the research design here, the thesis goes on to review the history of rock art research in Siberia in Chapter 2. Chapter 3 discusses ethno-cultural studies in the Soviet Union-Russian Federation and Anglo-Saxon
social sciences to establish a theoretical framework for this research. Although Soviet social sciences did not produce anything fruitful for the ideas underlying the thesis, it is necessary to consider the dominant thinking at that time, especially in terms of concepts of ethnos and ethnicity. Indeed, the barrenness of Soviet ethnology emphasises the relevance and novelty of the thesis project’s theoretical framework for Siberian archaeological and rock art research. Chapter 4 is devoted to reviewing archaeological contributions made to the understanding of cultural history in the Baikal, Trans-Baikal regions and Yakutia. Chapter 5 describes the preparation and methods of fieldwork, primary data analysis and presents a brief outline of the data collected. Chapter 6 presents some discoveries made toward a re-opening of the discussion on the possibility of the Pleistocene Age rock art in Siberia. Sites discussed might be as early as the final stage of the Pleistocene, and in addition the styles and the usage of sites as social spaces exhibit evidence of their continual function over millennia. Chapter 7 reviews Neolithic rock art in terms of chronology and styles which allows for the discussion of the presence of various cultural groupings of people actively negotiating their differing identities through the means of rock art conventions. Chapter 8 explores the Bronze Age rock art and disentangles the complex relationships between several rock art traditions present at that time. Chapter 9 closes the thesis describing the main findings and avenues for future research.
CHAPTER 2. IN SEARCH OF ROCK ART IN SIBERIA. HISTORY.

In this chapter the history of advances in Siberian rock art studies will be discussed at length from the first mention to the last trends. The three-century history is divided into two major periods: the Russian Empire period, when the accumulation of knowledge mostly occurred, and the Soviet/Russian period, when main advancements took place. The latter is divided further into nominal periods for the ease of narration: the 1920s-1930s, the 1940s-1970s, the 1970s-1980s and the 1990s-2000s. Although some subperiods can be defined in the regions of Siberia, it is difficult to clearly separate smaller intervals in the history of rock art research when considering them altogether, as attempted below, because some scholar’s careers crosscut defined subdivisions. However, the specific characteristic of the time periods will be marked.

Siberia is an extensive geographical region, and it should be clarified that the focus of the review will be on the areas where the fieldwork was undertaken – Trans-Baikal and Yakutia. However, other regions, such as South Siberia, the Baikal region and the Far East will be discussed, since the rock art of these territories will be also considered in the research.

2.1. Russian Empire period

The first information about Siberian rock art sites was anonymous and has been dated back to 1630; it was the Tom rock art site that was reported (Kovtun, 2011; Okladnikov, 1959b). Later rock art was mentioned again in the road diary of Russian diplomat Nikolai Spathari, who was sent to China as an ambassador in 1675. While travelling across Siberia he saw some “writings” and pictures of people with weapons on a coastal cliff of the Yenisey River (see Zaika, 2013). Yenisey rock art was later studied by Daniel Gottlieb Messerschmidt – the first naturalist who made a scientific survey of Siberia in 1720-1728. The result of Messerschmidt’s expedition was that more information about Yenisey rock art was collected, and moreover, Messerschmidt discovered Orkhon-Yenisey script in the Yenisey Basin. Rock art sites were not only visited and briefly described, but drawings were also made. During the expedition, other important discoveries were made such as the Tom rock art site on the Tom River (now in Kemerovskaya Oblast) which was surveyed and redrawn, and petroglyphs of the Angara River (near the village Klimovaya, Irkutskaya Oblast) which were described in detail (Martynov, 1968; Okladnikov, 1959b, 1966; Okladnikov & Martynov, 1972; Sher, 1980; Zaika, 2013).

The next milestone in the archaeological investigation of Siberia was the survey undertaken by the academic component of the Great Northern Expedition (1733-1743). The road diaries of the leader of the academic group, Gerhard Friedrich Müller, contained information about the Tom rock art site and another drawing of its art. Müller also
continued studying the Orkhon-Yenisey script discovered by Messerschmidt and burial mounds in the Middle Yenisey Basin. The aforementioned Angara petroglyphs were also visited by another expedition participant, Johann Georg Gmelin, who also described a rock art site on the Biryusa River, a tributary of the Yenisey River. Another significant outcome of the expedition was that the Shishkino rock art site was discovered and first documented. Müller also mentioned some rock art sites at the Temnik and Dzhida Rivers, the tributaries of the Selenga River in the Trans-Baikal region, although they were not visited then (Okladnikov, 1959b, 1966; Okladnikov & Zaporozhskaya, 1969; Radlov, 1894; Sher, 1980).

In the 19th Century an attempt to synthesise collected data on Siberian rock art and to interpret it in a broader archaeological and historical context was undertaken by Grigory I. Spassky, although similar to many early rock art researchers he considered rock art as a kind of prehistoric writing. In 1822, Spassky collected all the information on Siberian rock art, which was previously published in his journal the “Siberian Bulletin”. This synthesis was translated into Latin, published, and sent out to prominent researchers of that time such as: Jean-Pierre Abel-Rémusat, Dietrich Christoph von Rommel and Alexander von Humboldt, who answered with critical reviews and expressed their viewpoints (Spassky, 1822). Thus, the first scientific debate on Siberian rock art and its meaning occurred in the 1820s. Spassky saw similarities between Siberian depictions and American ones published by Humboldt and suggested that Siberia and America were populated by a single people who produced this art in prehistoric times - this idea was further developed by Rommel. However, in the 1850s, after the petroglyphs of Onega Lake had been discovered by Grewingk in 1948, Spassky compared them with those in Siberia and inferred their similarity. Another Spassky idea that rock pictures served a commemorative function was criticised by Abel-Rémusat who did not regard rock art as worthy of attention. Spassky also questioned the age of the rock art and suggested that it was produced by the Huns because they occupied a large part of Eurasia and this could explain the similarities between such distant sites (Kononchuk, 2013; Kovtun, 2011; Martynov, 1968; Okladnikov & Martynov, 1972). It may be concluded that in the first half of the 19th Century an attempt was made to relate rock art with past ethnic groups and to understand the role which rock art played in past societies.

In the 1840s, Finnish ethnologist and philologist Matthias A. Castrén undertook an expedition in Siberia in search of Finnish origins. His main focus was on linguistic and ethnographic research, although he also attempted archaeological surveys and excavations. Along with archaeological observations Castrén also mentioned some rock art sites. Thus, in his road diary, while in South Siberia, he reported seeing petroglyphs on headstones on the Upper Uibat River (Castrén, 1999, p. 216), and copied petroglyphs of
human faces in the Sagay steppe (Castrén, 1999, p. 239). Castrén noted a few times that he copied many “Minusinsk writings”, probably meaning rock art sites (Castrén, 1999, pp. 250, 253). When describing his journey from Abakan to the village Aznachennoye, Castrén also mentioned seeing many petroglyphs along the banks of the Yenisey River (Castrén, 1999, pp. 228-229), and Sher believed that it was the Ogklakhty rock art site (Sher, 1980, p. 155). Then, Castrén continued his journey to the east, and when he was travelling in the Trans-Baikal region, he also mentioned a rock art site in the Khorinsky district, probably the Khotogoy-Khabsagay on the Ona River, where he also undertook excavations under the rock surface (Castrén, 1999, p. 293; Okladnikov & Zaporozhskaya, 1970, p. 13). Generally, Castrén was not very interested in rock art and understanding it because he did not believe it was of Finnish origin which was his main research focus. In a few places he suggested the people which the production of rock art could be related to, for instance, Yenisey petroglyphs were executed by the Kyrgyz (Castrén, 1999, pp. 228-229), but in total he spent only a few paragraphs on rock art.

Another attempt to synthesise knowledge about Siberian rock art and provide interpretations was made by local historian Nikolai Popov (N. I. Popov, 1872, 1873, 1875, 1876), although he focused on the known rock art sites of the Minusinsk Basin. Popov did not conduct any field surveys but drew on published material and data collected by the officer of the head-office of East Siberia L. O. Titov in the 1840s. Some of his copies of petroglyphs were previously published by Spassky, such as Tepsey, Ogklakhty, Maidashinskaya pisanitsa and Moiseikha (Potroshilovskaya pisanitsa). Using Titov’s materials, Popov described twelve rock art sites on the Yenisey River, among them those published by Spassky as well as Bechishchenskaya, Biryusinskaya, Karaul’naya, Trifonovskaya, Novosyelovskaya, Sisimskaya, Tesinskaya and Shalabolino rock art sites. Popov also mentioned three more sites which he considered hieroglyphic: Kopenskaya, Izykskaya and Arbatskaya (N. I. Popov, 1873). Summing up the achieved level of knowledge about the rock art of the Minusinsk Basin, Popov concluded that 45 sites were known and six had been published (N. I. Popov, 1875).

Popov was influenced by the works of Edward Tylor and considered Siberian rock art as the evolution of writing systems. The first stage was named “figurative writing” which included depictions of animals, humans, weapons and battle scenes. The next stage was symbolic, or hieroglyphic writing, and here Popov included symbolic signs which, for instance, could refer to ownership, such as tamga. Finally, the third stage was literal writing, known as runic inscriptions, which had been discovered by Messerschmidt.

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2 A tamga is an abstract emblem of a tribe, clan or family used by Eurasian nomadic peoples.
However, Popov did not believe that all three stages were consistent and were passed one by one. Thus, he thought that painted rock art could not be of great age, and, therefore painted “figurative writing” was more recent than incised runic inscriptions. Popov concluded that a more advanced civilization previously existed in South Siberia (N. I. Popov, 1872, 1875). Concerning “figurative writing”, Popov attempted to interpret some scenes and depictions based on available ethnographic data, for instance, about bear worship and shamanic rituals, although he treated the data quiet freely when applying it to rock art (N. I. Popov, 1876).

In the 1880s the investigation of Yenisey rock art was continued by Ivan T. Savenkov who was a pioneer in studying the Stone Age of Siberia and made the first archaeological map of the Yenisey Basin. Influenced by books on prehistoric archaeology, which appeared in the early 1880s, and especially by Alexey Uvarov’s “The Stone Age”, Savenkov undertook a number of archaeological surveys and excavations in the Yenisey Basin and also paid attention to rock art sites, although he had already visited some rock art sites at the Mana River in 1875. After he became a member of the East-Siberian department of the Russian Geographical Society, in 1884 he again visited the Mana River and in 1885 conducted an extensive field survey along the Yenisey River which resulted in many archaeological discoveries as well as in rock art data (M. A. Devlet, 1989). In 1885, when inspecting the sites mentioned by Popov, Savenkov discovered some new sites and surfaces with depictions and made their drawings, which, however, were not of high accuracy.

In this survey report, Savenkov (1886) expressed some novel ideas on the rock art, for instance, he suggested that some figures of animals, where an ancient artist meticulously depicted an anatomic detail such as the upper lip of elk, could be dated to the Stone Age. This was based on the recent finding of horn figurines from the burial of Bazaikha dated to the Stone Age where no metal artefacts had been found (Savenkov, 1886, p. 55). Savenkov also suggested that pictures and petroglyphs on a rock surface could have been executed during different periods of time, and the analysis of superimpositions could give a clue for their chronology (Savenkov, 1886, p. 74). Arguing with Popov, Savenkov believed that “figurative writings” were the beginning of art rather than writing, and some rock art pictures were related to an animistic worldview (Savenkov, 1886, p. 100). Savenkov was the first to publish a monograph fully devoted to Siberian rock art (Savenkov, 1910), although ideas expressed appeared to be rather naïve in a light of archaeological achievements of that time and the illustrations were inaccurate drawings made 25 years before which in the beginning of the 20th Century looked awkward compared to those made by Alexander V. Adrianov (M. A. Devlet, 1989; Sher, 1980).
Alexander V. Adrianov was an outstanding student of Siberian antiquities and is highly appreciated for his accurate methods of excavation and especially of recording rock art. While Savenkov published his free hand drawings, Adrianov had already applied photography, a method of stamping for copying petroglyphs and the use of plotting paper to accurately draw paintings. Adrianov’s exact copies are now valuable sources for studying Siberian rock art because many rock art surfaces have been destroyed since then (M. A. Devlet, 2004a; Sher, 1980).

In his early career, Adrianov was influenced by distinguished Russian travellers and scholars Nikolai Yadrintsev and Grigory Potanin. The latter invited Adrianov to participate as a photographer in the second Mongolian-Tuvinian expedition (1879-1880). In subsequent years, Adrianov undertook numerous surveys and expeditions in the Altai, the Minusinsk Basin, the Vasyugan Basin, Semipalatinsk and Tuva during which he collected ethnographical data, excavated archaeological sites and documented rock art sites. In 1881, 1883 and 1900, he visited some sites in Tuva and in the Yenisey Basin (Bizhiktig-Khaya, Khaya-Bazhi, Bidelik, Maly Bayankol, Arbaty, Kantegir, Sosnovka). However, it was not until after 1902 that his rock art studies reached great scope and were upgraded with more accurate methods. In 1902, Adrianov surveyed the Mana and the Kolba Rivers where he made photographs and accurate drawings of rock paintings. In 1904, Adrianov did extensive work in surveying and copying many of the Yenisey Basin petroglyphs using the stamping method (Potroshilovskaya, L'nishchenskaya, Tepsey, Sukhanikha, Kunya, Bidzha, Krasny Yar, Oglakhty, Turanskaya, Maidashinskaya, Sydinskaya, Boyarskaya, Abakanskaya). Adrianov provided detailed descriptions, location maps and references to the stamping copies. In 1907, he continued his survey of the Oglakhty and the Kunya rock art sites, on the Abakan and the Tuba Rivers (Shalabolino rock art sites). In 1909, Adrianov studied rock art sites in the basins of the Cherny Iyus and the Bely Iyus Rivers. In 1915, Adrianov travelled to Tuva where he investigated rock art sites on the Ulug-Khem River and documented many sites which have been partly or completely destroyed (M. A. Devlet, 2004a).

Adrianov gathered an enormous amount of data but, unfortunately, he could not accomplish its analysis and publish the results. In 1920 he was executed by firing squad, and during many decades his name was forbidden to be mentioned (M. A. Devlet, 2004a).

Extensive archaeological investigation of the Yenisey River, which led to numerous discoveries, also influenced the growth of interest in the prehistoric sites, including rock art sites in other regions of Siberia, such as the Angara River Basin and the Baikal lake. Rock art sites on the Oka River, a tributary of the Angara River, were discovered in 1810 by geologist Yakovlev, although the information was not published until
In 1874 (Okladnikov, 1966; Polesskikh, 1955; Zaika, 2013). In 1881 N. N. Agapitov studied rock art sites on the coast of the Baikal Lake – in the Sagan-Zaba Bay, the Aya Bay and near the village Kurtun (Agapitov, 1881). He also observed and described Buryat rituals which were undertaken near the rock in Sagan-Zaba. The site was re-examined in 1913 by Timofey I. Savenkov (see Okladnikov, 1974, pp. 12-13). In 1882, a Polish convict and self-educated archaeologist Nikolai Witkowsky undertook a scientific survey of the Angara River from its mouth to the mouth of the Taseeva River. While travelling down the river, he discovered petroglyphs of the 2nd Kamenny Island and visited the rock art site near the Klimova village, which had been discovered by Messerschmidt (Okladnikov, 1966; Witkowsky, 1889; Zaika, 2013). In 1888, Kadinskaya pisanitsa on the Oka River was reported by Plaskovitsky who visited the site in 1887 and provided detailed descriptions and three tables of drawings (Plaskovitsky, 1888). In 1889, another convict Dmitri Klemets, who became an ethnographer and archaeologist in exile, surveyed the Angara River with geologist Innokenty A. Lopatin. They discovered two sites near the village Rybnoye, although this information was only found in the Klements’s report to the Imperial Archaeological Commission (Okladnikov, 1966; Zaika, 2013). Again the Angara rock art sites were mentioned in 1901 in Yadrintsev’s journal the “Siberian collection” and in 1916 by archaeologist and archivist Mikhail P. Ovchinnikov (Okladnikov, 1966). Within the period between 1910 and 1930 works of influential archaeologist and anthropologist Berynard Petri occurred in the Baikal region. While working at Irkutsk University, he trained such well-known researchers as Alexey P. Okladnikov and Mikhail M. Gerasimov. In the 1910 - early 1920 period, he studied three rock art sites on the Western coast of the Baikal Lake – on the mountains Orso and Sakhyurte (Petri, 1914, 1916, 1922).

In the 2nd half of the 19th Century, newly discovered rock art sites were reported in Trans-Baikal. In 1856, the site Khotogoi-Khabsagai in the Uda River Basin was re-examined by D. P Davydov who also uncovered deer stones while excavating slab graves on the Ivolga and Uda Rivers in 1953 (Davydov, 1856, pp. 90, 94). In 1865, during his expedition in the Eastern Sayan Mountains, Peter A. Kropotkin discovered pictures on the rock Mongol’ddzhin. In 1895, a rock art site at the mouth of the Temnik River was reported by A. P. Mostits (V. A. Tsybiktarov, 2011, pp. 21-22). In 1897, N.V. Kirillov published descriptions and drawings of two sites in the vicinity of the village Bichura (Khaisagar and Maly Gutay). He suggested that the pictures were not of great age and were painted by shamans a few centuries previous (N. V. Kirillov, 1897, p. 138). Commenting on Kirillov’s report, V. A. Obruchev mentioned seeing a rock art site near the village Ganzurino (N. V. Kirillov, 1897, p. 141), probably, the Beshegtuu site (Okladnikov & Zaporozhskaya, 1969, p. 4).
In the late 19th Century, the first information about rock art in Yakutia appeared; in 1888 pictures near Olyokminsk and in 1893 on the Maya River were reported (Kochmar, 1994; Okladnikov & Zaporozhskaya, 1972). Soon after, in 1894, the rock art site on the rock Kyllakh, also on the Maya River, were visited by Yakov V. Stefanovich who was a participant of the Ayanskaya expedition aiming to examine the Ayan post road. Stefanovich found the images similar to those found in the Minusinsk Basin and published by Popov. Discussing the kind of paint applied to the rocks, he mentioned that in 1867 the analysis of the paint from the Oka River rock art sites showed that it was made from iron oxide and lime. This fact proves that scientific methods were applied to Siberian rock art in the third quarter of the 19th Century (Stefanovich, 1896, pp. 64-65). In 1895, giving a speech at the session of Troitskosavsko-Kyakhtinsky division of Primorsky department of Imperial Russian Geographical Society, Klemets informed about the presence of runic inscriptions in Yakutia, although he did not provide any details (Kochmar, 1994). However, the first detailed publication of Yakutian rock art was made by Nikolai A. Vitashevsky (Vitashevsky, 1897), who visited, thoroughly described and accurately redrew two sites on the Olyokma River: Krestyakh and Basynay. Local Tungus informants, who provided the information about the sites to Vitashevsky, also told him about two more sites – on the Nyukzga River and on the Tungurchakan River, but Vitashevsky could not find them. Vitashevsky did not attempt to interpret or analyse the rock art but reported the Tungus' beliefs that the pictures were made by the mountain spirit Khaya Ichchite. They also believed that some images had appeared while others had disappeared from the rocks, and the spirit was responsible for that. Another student of Yakutia, Ivan I. Mainov, reported seeing a rock art site on the Amga River (Onneoyu) while surveying the Tungus people. He also conveyed information about rock art on the Sinyaya River, a tributary of the Lena River, and mentioned being shown signs on a rock on the Bordakh River in the Indigirka River Basin (Mainov, 1898, pp. 204-206). More Yakutian rock art sites were reported in the beginning of the 20th Century: in 1900 near the Elanskaya station on the Lena river by P. S. Alekseev; in 1912-1913 on the Nyuya River; in 1915 on the Olyokma river, near the mouth of Oyulakh spring, by A. A. Gaiduk; and in 1915 on the Lena River by M. P. Ovchinnikov (Kochmar, 1994, p. 12; Okladnikov & Zaporozhskaya, 1972, p. 6). It may be concluded that,

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3 Kochmar stated that it was the same site that was reported by Vasily Mal’tsev on the Maya River in 1893 and now it has a name “Staraya Tsypanda I” (Kochmar, 1994, p. 10).

4 Although Vitashevsky reported information given him by the Tungus, Khaya Ichchite is Yakutian name of the mountain spirit.

5 According to Kochmar, the localisation of the mentioned sites on the Nyuya River is unknown (Kochmar, 1994, p. 12).
although the rock art of Yakutia became known much later than the rock art of other areas such as the Yenisey River Basin, the data on Yakutian sites grew rapidly almost every year.

The first publication with drawings of Amur petroglyphs was released in 1894; it was the Sheremetyevo rock art site, which was first visited in 1859 by Richard K. Maack, student of Siberia. Information about the Sheremetyevo petroglyphs also appeared in the Siberian press in 1860, and in 1894 a lieutenant colonel of the General Staff, N. Alftan, inspected the site and made drawings of the petroglyphs. The following year, in 1895, another major rock art site, the Sikachi-Alyan, was reported in a local newspaper, the “Priamurskiye Vedomosti”. The report’s author, P. Vetlitsyn, provided a detailed description of the petroglyphs and, moreover, a Nanai legend explaining their origin: “once upon a time there were three suns in the sky, and stones were so soft, that pictures could be easily made with fingers”. (Okladnikov, 1971, pp. 5-7). This legend appeared in more detail in Berthold Laufer’s article (1899) on the Sikachi-Alyan petroglyphs which he visited, and made accurate drawings of, during his participation in the Jesup North Pacific expedition (1898-1899). In 1906, a location with petroglyphs near the village Sofiisk was reported by Gerard Fowke (1906, p. 290), who carried out the research of the Lower Amur Basin in 1898 for American Museum of Natural History of New York. Then, in 1908, the Sikachi-Alyan rock art site was visited by explorer Vladimir K. Arsenyev, in 1910 by ethnographer Lev Sternberg and in 1919 by Japanese anthropologist Torii Ryuzo. Sternberg stated that he could not overlook the Amur petroglyphs due to intense rock art studies elsewhere in Siberia, and while visiting them, he heard the same story about three suns from a local guide. In addition, Sternberg reported another legend related to the origin of rock art, this being that the pictures belonged to a legendary people, Kha. Locals believed that they had found remains of their cultures. Sternberg also noted that the Sikachi-Alyan petroglyphs were quite different from those found in Siberia (Okladnikov, 1971, pp. 10-11).

It may be concluded, that by the first decades of the 20th Century, a huge amount of data on Siberian rock art was collected, became known to the wider public and even attracted international interest. All the major rock art areas were touched by investigations in some way since the beginning of the 18th Century, however, the degree of the rock art knowledge differed from region to region. Among the earliest reported sites were those located on the Yenisey River, and they received much scientific attention which led to the first fundamental synthesis of Siberian rock art. Other sites, such as the Shishkino rock art site and rock art of the Temnik and Dzhida Rivers, were forgotten for many decades after their first discovery and report. Obviously, exploration of the more remote areas, such as

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6 According to A.P. Okladnikov, it was the Kalinovka stone (Okladnikov, 1971, pp. 9, 63).
Yakutia and the Far East, took place much later, and rock art sites were not reported until the end of the 19th Century but, when it happened, the studies enormously accelerated, which resulted in improvement of recording techniques, appreciation of the great age and cultural significance.

In the 19th Century, the key issues of rock art studies, such as the time of production and the authorship, were challenged. Spassky explored the problem of ethnic attribution of rock art comparing it to the rock art of North America and North-Western Russia. Popov considered rock art as “writings” and proposed the sequence of writing systems evolution, in which he did not suggest great age for figurative images. In contrast, Savenkov dated realistic depictions to the Stone Age basing on the elk figurine from the Bazaikha burial. In the early 20th Century, Adrianov advanced recording technique by producing the exact stamping copies and making the high-quality photographs of rock art. In East Siberia, explorers also collected legends and stories related to the rock art thus attempting to uncover the meaning of images. Therefore, Soviet researchers, who further advanced Siberian rock art studies, did not come to Terra Incognita, but could build their studies on a prepared ground.

2.2. Soviet/Russian period

In this period, a major acceleration of rock art studies occurred which resulted in the documentation of hundreds of rock art sites, advancements in recording techniques, the defining of basic rock art provinces, the elaboration of chronologies, and the emergence of scientific schools which continue research today.

2.2.1. The 1920s-1930s

The 1920-1930s are characterised by a local history movement which intensified archaeological investigations all over Soviet Russia. This time was marked by a gradual replacement of the older generation of amateur archaeologists by professionally trained archaeologists and ethnographers. However, in the pre-World War II period, some previously stated issues continued to be developed which led to the accomplishment of regional archaeological periodizations, such as: the culture-chronological periodization of the Sayan-Altai region developed by S. A. Teploukhov (Teploukhov, 1929), S. V. Kiselyov (Kiselyov, 1951) and M. P. Gryaznov (Gryaznov, 1956; Gryaznov & Okladnikov, 1956); and Okladnikov’s periodization of the Neolithic and Bronze Age of the Baikal Region (Okladnikov, 1950, 1955a). Also new research issues, such as the origins of Siberian peoples and their ethnogenesis, were declared. All of this led to large-scale expeditions and resumptive monographs, which mostly happened after World War II. Such intensification also included advancements in the study of rock art which was regarded as an additional source for reconstructing the Siberian past (Matyushenko, 1999, p. 12).
In the Yenisey Basin, in the 1920s, many rock art sites were recorded by Sergey V. Kiselyov, who focused on excavations of burial mounds but believed that depictions on fence slabs of burial mounds were important for establishing a chronology of Minusinsk rock art (Kiselyov, 1930). In the early 1930s, Mikhail Gryaznov studied the famous rock art site Boyaskaya Pisanitsa which contained unique depictions of the Tagar culture village (1st Millennium BC) (Gryaznov, 1933). His view that the rock art sites were of religious value was debated by Kiselyov who considered the depictions as the illustration of mundane life (Kiselyov, 1933). According to Savinov (2003), this dispute was one of the earliest academic discussions marking two basic approaches to interpreting rock art, either from rational or mythological points of view.

In East Siberia, in this period, rock art studies continued the pace taken at the end of the 19th Century. In 1923, the investigations of the rock art of the Lena, Olyokma and Maya Rivers were led by Yefim D. Strelov, the first professional Yakutian archaeologist (Strelov, 1925). The importance of studying pictures and inscriptions on rocks was pointed out by Yakutian historian Grigory A. Popov (1924). In 1921-1923, ethnographer Gavriliy V. Ksenofontov undertook the archaeological exploration of the Middle Basin of the Lena River to study the problem of origins of the Yakuts. He paid a lot of attention to rock art sites which, as he believed, were not of great age and belonged to the immediate ancestors of the Yakuts. Ksenofontov recorded nine rock art sites on the left bank of the Middle Lena River and provided ten tables with drawings. In analysing this rock art, he relied upon the ethnographic data of the Yakuts, Buryats, Tungus and Uygurs (Kochmar, 1994, pp. 14-15; Ksenofontov, 1927; Okladnikov & Zaporozhskaya, 1972, p. 7). In general, his work differed considerably from previous brief reports in that it was an academic paper with grounded argumentation. In 1935, his materials were utilised in the studies of the development of Yakutian language by philologist Platon A. Oyunsky (Kochmar, 1994, p. 16). In 1926-1928, ethnographer Viktor N. Vasil’ev surveyed the Tungus of the Aldan-Maya Basin and the Ayan-Okhots area having enriched the knowledge of previously reported sites by adding information which was collected from local Tungus people. These people noticed that the pictures sometimes had become faint and sometimes bright which was explained by the activity of the “master of the mount” (Kochmar, 1994, pp. 15-16; V. N. Vasil’ev, 1930). In 1931, geologist N. B. Kyakshto reported on a rock art site, the Shaman-stone (now known as the Srednyaya Nyukzha) located at the Nyukzha River and provided a drawing of the art (Kyakshto, 1931). Some reports also appeared in a local newspaper, the “Avtonomnaya Yakutia”. These included rock art sites: at the Markhachan, Olyokma and Tokko Rivers in 1924; and the Amga and Markha Rivers in 1929 (Kochmar, 1994, pp. 13-15). Rock art sites of
the Olyokma, Nyukzha and Maya Rivers were also mentioned in E. R. Pekarsky’s Dictionary of the Yakutian language (Pekarsky, 1959 [1917], pp. 1806, 2368).

The next stage in the studies of Yakutian history started with the foundation of the Institute of Language and Culture of the Yakut Autonomous Soviet Republic in 1935. In 1939, the Institute sent local ethnographer A. A. Savin to explore the Basin of the Middle Lena River, from which in the early 1920s Ksenofontov reported nine rock art sites. Savin reported ten sites but only three of them were those recorded by Ksenofontov. Savin noted the poor state of preservation of the rock art and described many cases when local people destroyed sites either to use the paint as a cure for disease or to fight pagan beliefs. He pointed out that the limestone rocks constantly collapsed due to their fragile structure (Okladnikov & Zaporozhskaya, 1972, pp. 7-9). In 1940, Alexey P. Okladnikov commenced the Lena historic-archaeological expedition in the Lena River Basin, and his significant input in Siberian rock art studies will be discussed in length later.

In the 1920s-1930s, the studies of the Far East rock art were also continued. In the late 1920s, an archaeologist from Moscow, N. G. Kharlamov, worked in this area for a few years and surveyed the Sikachi-Alyan rock art site. He suggested that boulders with images were vestiges of an ancient city and religious centre. Kharlamov called the city “Gal’bu” and dated it from the 1st Millennium BC to the 1st Millennium AD. This view of the boulders being vestiges of architectural structures was shared by Soviet ethnographer Alexander M. Zolotaryov. He mentioned the Sikachi-Alyan in his study of the Ulch people, where he also described the Kalinovka stone. Zolotaryov suggested that the latter was a memorial site to mark an expedition of some ancient people, probably the Bolhae (Okladnikov, 1971, pp. 11-12).

The knowledge of Trans-Baikal rock art was considerably augmented as well. In 1925, the site Mekhanichikha was reported (Kuznetsov, 1925a), and in this year and also in 1927, extensive archaeological surveys were conducted by V. V. Popov who studied the rock art sites of Mukhorshibir, Gol-Tologoi and Zal’tira (Chenkirov & Popov, 1928, pp. 153, 157; Erbanov, Tsybikov, & Popov, 1927, p. 97). In 1927, Okladnikov reported a rock art site near the village Fofanovo (Okladnikov, 1927). In the early 1930s, rock art sites of the Uda River (Mukhorshibir and Angir) were visited by G. P. Sergeev and in 1935, E. R. Rygdylon discovered and recorded rock art pictures in the Basin of the Kudara River (Okladnikov & Zaporozhskaya, 1969; V. A. Tsybiktarov, 2011). Rygdylon and Sergeev suggested some relationship between rock art panels and burial grounds which were often found nearby, although, Sergeev associated them with those belonging to the slab grave culture (Late Bronze - Early Iron Ages) and Rygdylon - with those of the late nomadic culture (Late Middle Ages). Information from Rygdylon’s and Sergeev’s field reports of 1934-1935 was

Thus, in the 1920s-1930s rock art discoveries continued, and more sites were reported from East and South Siberia, although, in this transitional historical period, investigations were not very intense. However, some brief reviews of East Siberian rock art and attempts to analyse it on a higher level appeared. It became clear that rock art demanded thorough scientific study, comprehensive documentation and synthesis with chronological attribution and interpretation. These issues were faced by the new generation of professional Soviet archaeologists.

2.2.2. The 1940s-1970s

In this period, rock art studies further accelerated, and the collection of great amounts of new data was related to the works of major archaeological expeditions which took place in the areas of future Hydroelectric Power Stations on the Yenisey and Angara Rivers. In East Siberia, all the major expeditions were led by Alexey P. Okladnikov who paid a lot of attention to rock art recording and made a major contribution to Siberian rock art studies. These big expeditions, with their great resources, allowed not only the collection of data but also the education of a new generation of rock art researchers, and some of them are continuing their research today.

Alexey P. Okladnikov's archaeological career started in the 1920s when he explored Neolithic burial grounds of the Lena and Angara Rivers. Later his scientific interest included whole Siberia, Far East and Central Asia in all periods of human history (for full bibliography see Finashina & Voroshilova, 1981). In 1929, Okladnikov rediscovered the Shishkino rock art site which was studied again in 1941, 1947 and 1957 (Okladnikov, 1949, 1959b; Okladnikov & Zaporozhskaya, 1959). In 1940, he started his work in Yakutia and during several years, explored the basin of the Lena River from the source to the mouth. The result was a fundamental work on the prehistory of Yakutia in which the rock art of the Upper and Middle Lena River Basins was considered along with other archaeological data (Okladnikov, 1955b), although the rock art materials were completely published 20 years later (Okladnikov, 1977a; Okladnikov & Zaporozhskaya, 1972). In 1935, Okladnikov accomplished his first survey of the Amur River, although Amur petroglyphs were studied in-depth later – in 1958, 1963, 1968 and 1969 (Okladnikov, 1971). In 1947-1958 the systematic research of Trans-Baikal rock art was conducted by the Buryat-Mongol archaeological expedition which was led by Okladnikov (Okladnikov & Zaporozhskaya,
1969, 1970). He also recorded rock art sites of the Angara River in 1934-1937 and in 1951-1959 (Okladnikov, 1966). In 1968, 1971 and in 1973-1974, Okladnikov examined rock art sites on the Baikal Lake in the Sagan-Zaba and Aya Bays (Okladnikov, 1974), and in 1976, discovered new rock art sites in the Barguzin Valley (Okladnikov, Molodin, & Konopatskiy, 1980). Okladnikov also led expeditions in Mongolia and Altai where rock art recording was undertaken along with archaeological research. His explorations were so vast and intense that they unfortunately cannot be described in detail in this section. In his concern for future generations of archaeologists, Okladnikov sought to publish as much data as he could. The result of his rock art research was more than 20 monographs containing an enormous number of tables with drawings. Okladnikov also wrote a popular-science book on rock art “The deer with golden antlers” which inspired many young archaeologists (Okladnikov, 1964).

Okladnikov significantly advanced rock art research by bringing it into a prominent position within the broader field of archaeology and by providing the first reliable chronology of Siberian rock art which was originally developed based on the materials of the Shishkino rock art site (Okladnikov & Zaporozhskaya, 1959). He then applied this chronological framework to other rock art provinces (Okladnikov, 1966; Okladnikov & Martynov, 1972; Okladnikov & Zaporozhskaya, 1972). Okladnikov was the first Soviet archaeologist who used analogous depictions on artefacts from archaeological contexts to date rock images (Okladnikov, 1952; Sher, 1980). Although, some of his presumptions and conclusions were contested (Formozov, 1967; Mel'nikova, Nikolaev, & Dem'janovich, 2011), in general, Okladnikov’s chronological scheme is still relevant (Ponomareva, 2015). Okladnikov also collected all available ethnographic data to uncover the meaning of prehistoric pictures, even though this was done within the framework of Marxist theory, predominant at the time in Soviet humanities.

In the Yenisey Basin, the acceleration of rock art studies was related to the construction of the Krasnoyarsk and Sayan-Shushensk Hydroelectric Power Stations. In 1963-1970, Yakov A. Sher led the Kamensky party of the Krasnoyarsk archaeological expedition of the Leningrad branch of the Institute of Archaeology which focused specifically on recording rock art sites. The result was Sher’s influential synthesis on Central Asia rock art (Sher, 1980) which became a handbook for the next generation of rock art researchers. Since 1965, the Sayan-Tuvinian archaeological expedition, under the leadership of A. D. Grach, worked in the Sayan canyon of the Yenisey River, and many prominent Soviet rock art researchers were involved, such as M. A. Devlet, M. D. Khlobystina, V. P. Levashova, A. N. Lipsky, E. R. Rygdylon (Sovetova, 1997). Moreover, many current researchers of Siberian rock art began their careers on this expedition, such
as Vladimir A. Semyonov and Marina E. Kilunovskaya (personal communication, 2015) who have contributed to the study of rock art of South Siberia and Central Asia, enlarged a corpus of recorded rock art and advanced chronology of Scythian art tradition (e.g. Kilunovskaya, 2012; Kilunovskaya, Krasnienko, Semyonov, & Subbotin, 2000, 2003).

In the 1960s-1980s, Dmitry G. Savinov conducted field research in Siberia, and he has covered a broad spectrum of problems from the Bronze Age to the Middle Ages of Eurasia (bibliography see here Savinov, 2011). Prehistoric art has held a prominent position in his scientific interest, thus a considerable number of his works focused on rock art styles and traditions such as the Okunevo (Savinov, 1997, 2006), the Seima (Savinov, 2000) and the Karasuk traditions (Savinov, 1998), as well as the Scythian animalistic (Savinov, 1984) and the Tashtyk styles (Savinov, 1995). Savinov also put a lot of effort in studying stone slabs, deer stones and stone sculptures (Savinov, 2011, pp. 31-34). His works influenced many researchers and archaeologists currently working in South Siberia consider him as their teacher in one way or another (including the author).

Okladnikov was not the only one who explored rock art in East Siberia in the Soviet period. In the Trans-Baikal region, in the 1940s-1960s, the exploration of rock art and the search of interpretations were conducted by the head (1946-1978) of the Kyakhtinsk Local History Museum, Rodion F. Tugutov, and local researcher Galdan L. Lenkhoboev. They also participated in Okladnikov's Buryat-Mongol archaeological expedition and provided him with information on rock art sites (Lenkhoboev, 1955; Okladnikov & Zaporozhskaya, 1969, 1970; Tugutov, 1951).

Since the late 1950s, the studies of Yakutian rock art has been continued by local researchers and a new generation of archaeologists. In the 1950s-1960s, new rock art sites were discovered on the Amga, Maya (Fedoseeva, 1960, 1975) and Olyokma Rivers (Kochmar, 1994, p. 22). In 1958 and 1965, the outstanding sites of Krestyakh (Timofeev, 1965) and Basynai (Nikolaev, 1966) on the Olyokma River were re-examined, and in 1955, the most northern Yakutian rock art site, Tomtorskaya, on the Indigirka river was reported by G. A. Pytlyakov (Kochmar, 1994, p. 21). The works of this period differed from brief reports published before. All of them attempted to provide rock art with dates, for instance, Svetlana A. Fedoseeva compared the sites discovered at the Amga River with those found elsewhere and suggested their Neolithic age (Fedoseeva, 1960). Geologist V. Frolov dated the site which he discovered on the Upper section of the Olyokma River to the end of the Paleolithic epoch because one of the depicted figures was an aurochs (after Kochmar, 1994, p. 22). Yakutian rock art was also engaged in the studies of ancient Turkic inscriptions (Bernshtam, 1951) and the art traditions of indigenous peoples of Siberia (Ivanov, 1954). In 1969 – 1978, Yakutian archaeologist Nikita D. Arkhipov re-examined
many outstanding sites such as Krestyakh and Basynay, where he revealed new panels and discovered two sites on the Olenyok River (Arkhipov, 1971, 1972, 1975; Arkhipov & Romanov, 1977; Kochmar, 1994). He purposefully searched and studied sacred places with offerings near rock art sites, and this became an important part of the further studies of Yakutian rock art.

Thus, in this period, the exploration and the documentation of rock art intensified on the account of large archaeological expeditions in South and East Siberia. The data gathered was synthesised in a number of monographs which explored the previously stated issues, such as cultural attribution, chronology and meaning. As a consequence, all the major rock art provinces of East and South Siberia were outlined and the reliable chronologies of rock art traditions were established.

2.2.3. The 1970s-1980s

According to Sovetova (1997), in the 1970s, a new period in the study of the rock art in South Siberia started. This was due to the acceleration of field investigations, the development of diverse approaches in rock art studies, and the salience of the problem of rock art preservation. This can be also said about East Siberia where a new generation of archaeologists appeared. Another feature of this time was that several scientific schools in rock art studies emerged (Sher, 1980; Tivanenko, 1982).

The Kemerovo school of rock art researchers started to form in the 1970s, with the involvement in 1976 of Boris N. Pyatkin in the work of the Department of Archaeology of Kemerovo State University. Since then and up to 1995, he led the Petroglyphic party of the South-Siberian archaeological expedition which studied such outstanding rock art sites as Shalabolino, Ogklakhty, Sukhanikha, Bychikha and Tepsey (Sovetova, 2014), although only Shalabolino materials were published then (Pyatkin & Martynov, 1985). Under his supervision, researchers Olga S. Sovetova and Elena A. Miklashevich, who are currently among leading Siberian rock art scholars, were trained. In 1985, Sher joined the Department and during ten years led field surveys in the Yenisey Basin as well as in Republic Tuva and Kirgizia (Sovetova, 2014). In cooperation with French colleagues, specifically with Henri-Paul Francfort, Sher published a corpus of collected materials on Yenisey and Altai rock art (Blednova, Francfort, & Cher, 1995; Cher, Blednova, Legchilo, & Smirnov, 1994; Francfort, Jacobson, Kubarev, & Cher, 1996). Sher was an initiator of the Siberian Association of Prehistoric Art Researchers (SAPAR) which was founded in 1997 and since then, has organised a number of conferences on rock art and has been publishing A Bulletin of SAPAR and Occasional publications of SAPAR (Sovetova, 2014).

The Kemerovo researchers have been focusing on such problems as the chronology of rock art and the improvement of recording techniques. The first issue has
been resolved through the relation of depictions found on rocks with those on slabs and steles uncovered from burial mounds. Such correlations allowed elaborating the sequence of rock art traditions of the Minusinsk Basin (Kovaleva, 2011; Pyatkin & Martynov, 1985; Sher, 1980; Sovietova & Miklashevich, 1999). The improvement of recording technique has been achieved through many experiments with different materials by the Pyatkin’s expedition (Sovetova, 2014), and this has been of high importance since then (Sovetova, Abolonkova, Talyagina, & Shishkina, 2015).

Another scientific school of rock art research was considered to be founded by Okladnikov (Sher, 1980). His exploration was continued by his students, and one of them was Alexander I. Mazin, who in the 1970s-1980s recorded many rock art sites in Eastern Trans-Baikal, South Yakutia and in the Upper Amur Basin. Mazin paid a lot of attention to the excavations under rock art panels aiming to relate the pictures with datable cultural remains and to investigate the religious role of the sites. Although the relationship between the pictures on rocks and the culture deposits underneath is difficult to prove, Mazin’s presumption about religious actions allowed him to correlate groups of similar pictures defined on a panel (stylistically or made by the paint of the same colour) with stratified cultural deposits. The chronological sequence further elaborated on the Okladnikov’s framework (Mazin, 1986, 1994; Okladnikov & Mazin, 1976, 1979).

The study of Trans-Baikal rock art was continued in the 1970s by Alexey V. Tivanenko who in 1972 reported to Okladnikov about finding several rock art sites and in 1975 he wrote him about 51 recorded sites. In 1977-1978, Tivanenko led the archaeological expedition of the Ethnological Museum of Peoples of Trans-Baikal which focused on searching and recording of rock art sites in the Republic of Buryatia (Tivanenko, 1978, 1979b; Tivanenko & Tsybiktarov, 1979; V. A. Tsybiktarov, 2011, p. 48). Tivanenko made some valuable observations on the methods for the searching of new sites: he stated that all ancient rock art sites coincided with modern sacred places of the Buryat and the Evenk and pointed out to the long tradition of worshipping these places. As many other rock art researchers of East Siberia of that time, Tivanenko also conducted excavations at rock art sites in order to provide age and to study religious activities. According to him, he intentionally chose to excavate places which were inconvenient for habitat. There he uncovered hearths, broken pots and other artefacts which could have been left there as offerings (Tivanenko, 1979a, 1982, 1990). These materials later became the basis for more detailed study on so called sanctuaries of East Siberia (Tivanenko, 1989).

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7 The Archive of The Russian Academy of Sciences St. Petersburg Branch, Fund 1099, Inventory 3, File 756; The Archive of The Russian Academy of Sciences St. Petersburg Branch, Fund 1099, Inventory 1, File 357.
In Yakutia studies were continued by Nikolai N. Kochmar, who was not a student of Okladnikov, but his research developed in the direction established by him. Kochmar started his works in 1977 with the initiation of the leader of the Olyokma archaeological expedition, Anatoly N. Alekseev, to establish a party aiming at surveying rock art sites. Thus, the long-term period of the rock art exploration and new discoveries started. In 1981, the party was reorganised into the Middle Lena party of the archaeological-ethnographic expedition of the Museum of Archaeology and Ethnography of Yakutsk University. During the 1970-1990s, the party led research on the Olyokma, Lena, Amga, Indigirka, Aldan, Chara, Buotuma, Tyaka and Tokko Rivers (Alekseyev & Borisov, 1980; Everstov, 1979, 1980a, 1980b; Kozlov, 1980; Kozlov & Filippova, 1979). In 1980-2002, the archaeological expedition of Yakutsk University was led by Nikolai N. Kochmar, and the result was 115 recorded rock art sites and more than 5,000 images listed (Kochmar, 1988). The data collected was analysed and synthesised in Kochmar’s monograph on the rock art of Yakutia, which is the fullest summary of the information on Yakutian rock art today (Kochmar, 1994). However, the quality of the publication had not improved compared to Okladnikov’s books published decades ago; the book included black-and-white drawings of rock art images, and drawings of locations and general views at rock cliffs. Kochmar, as his predecessors, also focused on studying cultural deposits in the vicinity of rock art sites and relating them directly to the images.

Thus, the period of 1970s-1980s was marked by the emergence of regional schools in rock art studies. The Kemerovo school focused on research in the Minusinsk Basin and the Sayan-Altai Mountains Region, intensifying rock art studies by advancing recording techniques and further elaborating on the chronological sequence of rock art traditions. In East Siberia, rock art studies were continued by the disciples and followers of Okladnikov. They led extensive studies focusing on the search of new sites and the enlargement of rock art data. Another characteristic feature was that Mazin, Kochmar and Tivanenko undertook excavations under rock art surfaces and considered sites as ancient sanctuaries (Alekseyev & Kochmar, 2006; Alekseyev, Kochmar, & Pen’kov, 2002; Mazin, 1994; Tivanenko, 1979a, 1989).

2.2.4. The 1990s-2000s

By this time, most major discoveries had been already made, and a new generation of researchers continued to fill the gaps on the archaeological map of Siberia and started the process of re-examination and re-documentation of rock art sites.

In the late 1980s-1990s, Alexandr L. Zaika began his research of the rock art in the Yenisey Basin. He spent many years recording the rock art sites of the Lower Angara River, and the result was synthesised in his doctoral dissertation (see Zaika, 2013). In 2001, Zaika
focused on the Shalabolino rock art site where many new rock art surfaces have been discovered since then (e.g. Zaika, 1997; Zaika & Drozdov, 2008). In 2015, the author participated in Zaika’s survey which aimed to define the borders of the archaeological complex Shalabolino.

In 1987, revision of rock art sites of the Upper Lena River was started with an invitation to Lyudmila V. Mel’nikova to re-examine the Shishkino rock art site. Later she engaged archaeologist Vadim S. Nikolaev and geomorphologist N. I. Dem’janovich in the project which has been conducted for nearly 20 years. As a result, the Shishkino rock art site, as well as other sites of the Upper Lena Basin (personal communication, 2015), were redocumented having used more accurate techniques. Dem’janovich studied the geomorphology of the Shishkino rock cliff, and her conclusions about the rock destruction process allowed her to clarify the chronological sequence for rock art. Unfortunately, only the Shishkino site has been published to this day (Mel’nikova et al., 2011; Mel’nikova, Nikolaev, & Dem’janovich, 2012).

In the late 1980s-1990s, new rock art sites were discovered on the Western Coast of Lake Baikal by the archaeological parties of Irkutsk State University and the Irkutsk Laboratory of Paleoecology and Archaeology of IAET SB RAS. In 2009 and 2013, newly discovered sites, Nutgey and Kurtun in the Anga River Basin, were examined by the expedition of Olga I. Goriunova, and in 2014, twelve sites in the Anga River Valley were revised. The sites have been dated from the Neolithic Age to the Late Middle Ages (Novikov & Goriunova, 2014b). In 2016, rock art sites of the north-west coast of Lake Baikal were revised and new localities reported (Kichigin, Korostelev, & Kharinskii, 2018).

In the 1990s, several sites were discovered in the Khilok River Basin, Trans-Baikal, and among them, Gyrshelunsky Kamen’ and Shaman-Gora were studied by the expedition of Mikhail V. Konstantinov (M. V. Konstantinov, Ekimova, & Vereshhagin, 2008; Mamkin & Drobotushenko, 1999; Mikhalyov, 2001). New sites from other areas of Trans-Baikal were also reported (Tashak, Tashak, Imenokhoev, & Tsydenova, 2004; V. A. Tsybiktarov, 2001). During the last decades, several archaeological inventories of Buryatia were prepared (Bazarov & Namsaraev, 2011; Khamzina, 1982; Lbova & Khamzina, 1999), and serious survey works were undertaken by Buryat archaeologists8 to revise sites, including rock art sites. These inventories provide short information about site location, condition and time of examination, and they also include some sites that were not previously published. These inventories did not include Zabaykalsky Krai, where no serious research was undertaken

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since Mazin’s work. However, new sites were discovered, and the fullest information on rock art sites of the region can be found in Small Encyclopaedia of Trans-Baikal (Geniatulin, 2011).

In the early 2000s, studies of the Middle Lena River rock art were continued by N. N. Kochmar, A. V. Pen’kov and A. N. Alekseev (Alekseyev, 2004; Alekseyev & Kochmar, 2006; Alekseyev et al., 2002). The rock art sites were revised and better recorded but unfortunately the results have not been entirely published (Stepanov, A. D, personal communication 2018). After Kochmar’s died in 2008, Alekseev and Pen’kov carried on the studies of Yakutian rock art, although no big projects have been undertaken. In 2011, the site Suruktakh-Khaya on the Markha River was re-examined (Maksimova, Pen'kov, Sharaborin, & Zhirkov, 2012) and a site on the Dzhampa River, a tributary of the Lena River, was discovered (Dyakonov, 2017; Dyakonov & Alekseyev, 2013). Importantly, a substantial amount of data has been accumulated on the Arctic rock art sites in Yakutia (Alekseyev, Bravina, Dyakonov, Simokaytis, & Strogova, 2015; Argunov & Pestereva, 2018; Dyakonov, 2014b, 2015, 2018; Dyakonov & Sleptsov, 2015; V. E. Vasil’ev, 2014), which is yet to be explored.

It was already pointed out that in East Siberia mainstream rock art research considered rock art sites as default ancient sanctuaries which is also connected with a common practice of archaeological excavations at rock art sites. This interpretational framework still dominates the current East Siberian rock art research (Dyakonov, 2013; Dyakonov & Alekseyev, 2013; Okladnikova, 2014; Tashak & Antonova, 2019). Another ‘traditional’ approach developed by early rock art researchers which interprets rock art scenes with a reference to Siberian mythical stories is also still present (Stepanov & Kochmar, 2017).

However, novel theoretical frameworks have also been applied. Between 2000 and 2003, some rock art sites along the Lena and the Olenyok Rivers were investigated by Polish-Yakut archaeological-ethnological team, particularly from the perspective of their relations to shamanism (Rozwadowski, 2014, 2017a, 2017b; Rozwadowski & Knurendo, 2003). Many Siberian researchers noted the connection between ancient rock art and contemporary cult practices expressed in worshipping rock art sites and leaving offerings, but the question of the modern use of rock art has largely remained unexplored. However, recent research on contemporary rituality and materiality of the Evenki in a relation to rock art from an ethnographer’s perspective opens a new avenue in Siberian rock art research (Brandisaukas, 2017, In press).

Global technological advances did not bypass Siberian researchers, and 3D methods are becoming a necessary part of rock art recording and analysis (E. G. Devlet,
Another important advance is that technological and traceological aspects of petroglyphs are currently developing, bringing light to the understanding of the production stages and relative chronology of rock art (Zotkina, 2014, 2019; Zotkina & Kovalev, 2019). Therefore, in the last decades, many new rock art sites were reported, although most major discoveries had been made previously. In this period, the process of revision and re-documentation of rock art sites occurred, and it also brought many findings. However, with the demise of the Soviet Union, the epoch of large expeditions and big projects ended. A number of explanatory frameworks are present in the current East Siberian rock art research, but the ‘traditional’ ones which approach rock art sites as ancient sanctuaries and rock art pictures as illustrations of mythical stories still dominate.

2.3. Conclusion

The history of Siberian rock art studies started back in 1630. In the 18th Century, knowledge of rock art expanded due to the initial explorers of Siberia, and in the 19th Century, rock art appeared in the focus of scientific enquiries. In the first half of the 19th Century, the first attempt to answer the questions ‘when rock art was made’ and ‘who produced it’ was made by Spassky. In the late 19th – early 20th Century several concepts of rock art development were suggested, such as Popov’s evolution of writing systems and Savenkov’s notion of the Stone age for some images. By the end of the Russian Empire period, a considerable amount of rock art data was collected in the Yenisey Basin, the Baikal and Trans-Baikal Regions, Yakutia and the Far East.

In the Soviet Union, rock art studies were accelerated by a new generation of professional archaeologists who conducted extensive archaeological explorations and led large archaeological expeditions. It resulted in the improvements of survey methods, the establishment of chronological sequences, cultural attribution, the delineation of rock art provinces and the emergence of regional schools in rock art research. In the 1920s-1930s, the problem of academic study of rock art became salient, and the development of regional archaeological periodizations created the basis to resolve it. In the 1930s-1970s, the main rock art provinces of East and South Siberia were investigated which resulted in a number of monographs. The monographs explored the problems of chronology, cultural attribution and the meaning of rock art. The period of the 1970s-1980s was characterised by the emergence of regional schools devoted to rock art studies. Kemerovo researchers have focused on studying the rock art of South Siberia and Central Asia, and Okladnikov’s followers continued to explore Trans-Baikal and Yakutia and to study remains of ancient
rituals at rock art sites. The late 1980s-2000s were marked by the initiation and the accomplishment of the revision and the re-documentation of rock art sites.

It can be concluded that Siberian rock art has a rich history of exploration. Previous researchers defined the main rock art provinces and established chronological sequences for rock art styles and traditions. They attempted to uncover the meaning of prehistoric pictures by drawing on ethnographic data and studying cultural deposits near rock art sites. The reasons for changes in rock art traditions usually were related to major cultural changes and to the shifts in archaeological cultures. However, rock art styles and traditions sometimes do not coincide in time and space with archaeological cultures, and the appeal to a cultural shift does not sufficiently explain the emergence of new rock art styles. In this research, rock art styles and traditions of East Siberia will be better defined based on rich field data, and attempts will be made to better explain the changes and peculiarities of style distributions by drawing on the phenomenon of ethnicity and ethnic identity. This novel methodological approach is outlined in the following chapter.
CHAPTER 3. IN SEARCH OF ETHNIC GROUPS AND ETHNICITY IN ROCK ART. DEVELOPMENTS AND PERSPECTIVES

In this chapter an attempt will be undertaken to build the methodological basis necessary to uncover ethnic identities in the prehistoric rock art of Siberia. The review of the issue of ethnicity starts with the origin of the term “ethnos” through to the elaboration of the theory of ethnos in the Soviet Union. Then it continues with the emergence of the concept of ethnicity in Anglo-Saxon countries and its further developments in recent decades. This will lead to the understanding of the ethnic identity phenomenon, and a working definition of ethnicity will be proposed.

The chapter continues with a section devoted to the problem of ethnic groups and identity in rock art studies in which the central rock art concept of style will be discussed. As a result, the working definition of style and the way it can be applied in order to reveal past ethnic groups and identities will be presented.

3.1. Origin of the term and early categorizations of people entities

The term “ethnos” is of Greek origin and initially referred to a group of people or animals living together or having something in common. Later, ethnos was also used to indicate a social class. A further meaning, as in the modern sense, refers to “a people” and yet another referred to barbarians in opposition to Hellenes (Tishkov, 2003, p. 97). In the 14th Century the word “ethnos” appeared in English meaning pagan or heathen, and from the 19th Century it referred to “racial” characteristics (Eriksen, 2010, p. 14). Possibly the first scholarly definition was proposed by Russian ethnologist in emigration S. M. Shirokogorov (Klein, 2013, p. 18): “Ethnos is a group of people who speak one language, who admit common origin, who has a complex of customs, a way of life which is kept and sanctified by tradition and differs by it from other such groups” (Shirokogorov, 1923, p. 28). In Anglophone countries, the term “ethnicity” has been used for classification of people, the notion of which emerged in the 1960s (Eriksen, 2010, p. 5). However, there had been other concepts that had served the same purpose (Jones, 1997, pp. 41-48).

In the 19th Century the concept of “race” was used for categorising human groups into apparent primordial entities with distinct physical characteristics. With the development of social anthropology and sociology by the end of 19th Century the notion of “culture” became the main classificatory term; however, in the framework of socio-cultural evolutionism the focus was on cultures as universal stages, rather than as particular human entities. The recognition of cultures in the last sense originated in the German anthropological tradition which established the culture-historical method aiming to trace the history of human movement and settlement by exploring the “diffusion” of culture complexes. This tradition continued in works of Franz Boas who developed a
particularistic historical approach with emphasis on cultural determinism and in the school of British diffusionism which soon after was succeeded by structural-functionalist anthropology focused on social structure. Both anthropological currents, American culture-history and British structure-functionalism, persisted during the first half of the 20th Century and, although the American school had a focus on culture and the British one on tribal society, they both regarded them as bounded homogeneous entities (Jones, 1997, pp. 41-48).

The main paradigm of 20th Century archaeology has been that of culture-history which was popularised by Gustaf Kossinna and brought to British archaeology by V. Gordon Childe (Jones, 1997, p. 16; Lucy, 2005, p. 88). The concept implicitly underlies much of archaeological scholarship and implies that historical ethnic groups referred to as “cultures” can be defined on the basis of assemblages of material culture remains (Jones, 1997, p. 5). The culture-historical paradigm contains two important assumptions: 1) archaeological cultures are equated with ethnic groups, explicitly or, more often, implicitly; 2) archaeological cultures are regarded as neat homogenous units with clear-cut temporal and spatial borders.

Due to the relationship with the Third Reich, immediately after World War II Kossinna’s works were disregarded and detailed critique came much later. Regardless of the involvement of his tenets in the building of Nazi propaganda, his methodological principles were later implicitly borrowed by Soviet archaeologists (Klein, 2013, p. 222).

3.2. Soviet/Russian concepts

Ethnogenetical studies in the Soviet Union were launched in the late 1930s in virtue of the political and ideological situation. During the 1920s - early 1930s in the humanities, the historical school of Mikhail Pokrovsky, elder party functionary and internationalist, dominated and Nikolai Marr’s “Japhetic theory”, now considered as pseudo-scientific, was rising to its dominance in Soviet linguistics, history, archaeology and ethnology. Marr drew ethnicity from ethnic stratification which was the result of the incorporation of tribes; these tribes took different positions in a new social community forming estates. Therefore, ethnicity was something permanently changing. Such understanding of ethnicity corresponded to the aim of historical research, because it was necessary to focus on studying universal stages of cultural evolution instead of tracing histories of particular cultures. In this vein Marr’s concept conformed to the tenets of Pokrovsky’s school (Shnirolelman, 1993).

These concepts corresponded to Soviet ideology and national policy of the early Soviet Union carried out by Stalin which propagated internationalism and the fight against Great-Russian chauvinism and local nationalism. Even though the policy did not affect
archaeology until the end of the 1920s, in the early 1930s the ideas of Pokrovsky and Marr were being implanted in humanities. This led to the concept of autochthonism, which emphasised continuous historical development of a people in a particular area, in opposition to migrationism, which explained cultural evolution in a particular area in terms of migrations, influences of newcomers or shifts of population, and was popular in western countries, especially in Germany, at that time (Shnirelman, 1993).

In 1934 an ideological turn occurred on account of a new political reality: the suggested world revolution did not happen, and a fascist threat was growing in the west. Stalin declared local nationalism as the main menace and ideas of internationalism were replaced by those of Russian nationalism and patriotism. Pokrovsky’s school was denounced for its misinterpretation of Russian history, and Sergei Bykovsky and Valerian Aptekar, who were propagating Marr’s and Pokrovsky’s ideas, were arrested and executed by firing squad (Shnirelman, 1993). The new situation forced academics to focus on ethnogenetical studies. Much effort was put into studying Siberian peoples and their history for the series of monographs “Ancient History of USSR peoples”. The particular commission for studying ethnogenetical problems was organised by the USSR Academy of Sciences to fight fascist theories of ethnogenesis. They declared the importance of studying the history of all peoples in the Soviet Union, although the main focus was on Slavic ethnogenesis. Declaring the fight on fascism, Soviet archaeologists adopted Kossinna’s methodology for reconstructing the Slavic past (Shnirelman, 1993), and since then archaeological cultures have been regarded a priori as real people entities.

Interestingly, the orthodox Soviet concept of ethnos was developed only by the mid-1970s, possibly as a reaction to the contradictory theory of Lev Gumilev. He was the first to propose an elaborated theory of ethnogenesis in the mid-1960s in a series of articles and in his doctoral dissertation, albeit he could only publish it as a monograph in 1989. Although his concept has been strongly criticised, it has been very popular among non-academics. Lev Gumilev, whose parents were well-known Russian poets Nikolai Gumilev and Anna Akhmatova, had a life full of misfortune. Since 1930, he was arrested four times and spent twelve years in concentration camps (Naarden, 1996). He was rehabilitated only in 1960 and returned to academia and research. Influenced by the concept of Eurasionism of the early 20th Century and by Vernandski’s concept of biosphere and noosphere (Naarden, 1996; Titov, 2005), Gumilev elaborated his theory of ethnogenesis regarding ethnos as a “phenomenon at the boundary of the biosphere and the sociosphere, that has a very special function in the structure of Earth’s biosphere” (Gumilev, 1990, p. 32). He believed that “the history of mankind is intimately linked up with fluctuations in the Earth’s biosphere” (Gumilev, 1993, pp. 8-9). His scholarly focus was on the nomads of
Eurasia and, in pursuing an explanation for rises and declines of nomadic states, he appealed to geographical factors such as annual vacillations of solar radiation, humid and arid periods and changes in the level of water drainages. According to Gumilev, new ethnoses appeared in the borderland of two landscapes, e.g. forest and steppes. However, these factors were not the driving force of ethnogenesis (Gumilev, 1970a; Klein, 2013, pp. 54-55). Several times during the last millennia a series of ethnic explosions occurred, and to understand the reason for these in different areas, Gumilev proposed the concept of “Passionarnost” — “the ability to absorb energy from the environment and convert it in the form of labour”. In his opinion, all people have a small amount of “passion” energy, and when significant amounts of it are accumulated, it engenders the process of active ethnogenesis (Gumilev, 1970b, p. 50).

Gumilev was a very contradictory figure. He was criticised from ideological, methodological and logical points of view (Shnirelman & Panarin, 2001, p. 2). Lev Klein analysing Gumilev’s works concluded that the “Passionarnost” concept could not be taken as being scientific because Gumilev defined ethnoses based on his intuition and his supporting facts were taken out of context, therefore all his statements were of a declarative nature (Klein, 2013, p. 58). In the same vein, Viktor Shnirelman criticised Gumilev’s manuscripts (Shnirelman & Panarin, 2001). The main reason for a full critique was that his works gave a pseudo-theoretical basis for ethno-nationalism and anti-Semitism (Klein, 2013; Shnirelman & Panarin, 2001). However, Gumilev’s works are still popular due to his gripping style of writing and original way of looking at historical processes. Some of his passages on the history of Western Europe are considered to be quite relevant (Naarden, 1996, pp. 55, 79), and his scientific heritage has attracted attention even as a topic for PhD research (see e.g. Titov, 2005).

The orthodox concept of ethnos was developed later by Yulian Bromley who was the leading Soviet ethnologist and Head of the Institute of Anthropology and Ethnology in Moscow for many years. He expressed his ideas in a series of articles in the mid-1970s and synthesised them in the monograph “Ocherki teorii etnosa” [Essays on theory of ethnos] (Bromley, 1983). The monograph was also a result of debates in the 1960s - 1970s where all prominent Soviet ethnologists shared their views⁹. Some of them believed that

⁹ According to Bromley (Bromley, 1988, p. 46), his concept was also affected by the debates on the nature of “nation” initiated and led by the journal “Voprosy istorii" [Questions of history] in 1966-1968. The aim was to clarify Stalin’s definition of the term, which had a character of fundamental truth and the direct impact on the notion of ethnics: “Nation is a historically existing well-balanced community of people which appeared on the basis of commonness of language, territory, economical life and psychological character which shows itself in commonness of culture” (cited after Klein, 2013; Stalin, 1913).
ethnos can be defined by one marker of either language (Agaev, 1968), self-consciousness\textsuperscript{10} (Kozlov, 1967) or culture (Artamonov, 1971; Cheboksarov & Cheboksarov, 1971). Sergei Tokarev, after discussing all ethnic markers, came to the conclusion that no one marker can be regarded as a main marker, and therefore, an ethnos should be defined by a set of markers. However, a sufficient amount of markers also cannot be known: the more the better (Tokarev, 1964, p. 43). Bromley (1971) came to the same conclusion and tried to transcend limitations of the rigid ethnic markers approach by introducing his original dualistic theory of ethnos. He distinguished two tiers in ethnos: a stable core of ethnicity – ethnikos – that persists through all social formations, and “ethnosocial organism” which is ethnos in a broad sense correlating with particular social order (e.g. feudal, capitalist) (Bromley, 1974). Bromley proposed the following definition of ethnos in a narrow sense which was later taken as orthodox and presented in the Corpus of Ethnographical Definitions and Terms (Bromley, 1983):

> Ethnos is a stable intergenerational aggregate of people, which is historically formed on specific territory, has common characteristics and stable features of culture (including language) and psyche, as well as awareness of their unity and difference from all other similar formations manifested in endonym (ethnonym). (p. 58)

Both theories – Gumilev’s and Bromley’s – in Soviet humanities were regarded as opposite ones, because Bromley was the first one to criticise Gumilev in 1970. From his first article Bromley expressed the main idea of his concept (Bromley, 1970; Mashbits & Chistov, 1986). Soon after Lev Klein prepared an article in which he compared the two concepts and concluded that they had a lot in common, although the article due to its controversy was not published at that time (Klein, 2013, pp. 37-40). One point is that both methodologies are subjective: Gumilev took markers \textit{a priori}, and Bromley proceeded from existing points of view. Another agreement is that both regarded “self-consciousness” as an important characteristic. A further common emphasis is on the role of psychic and behavioural stereotypes. Yet another match is that endogamy was regarded as the substantial mechanism for ethnic maintenance in both concepts (Klein, 2013, pp. 41-58).

Klein has proposed his view on the ethnos problem. Like many others, he believes that the main characteristic of ethnos is self-consciousness, though he changed it to just “consciousness” which emphasises the importance of conviction in shared origin, and objective characteristics can be taken as confirmation. Thus, ethnos is a category of social

\textsuperscript{10} Samosoznanie [self-consciousness]: the term has similar meaning with “identity” but because Soviet concepts were developing independently and the term “identity” is related to specific anthropological tenets, I use the literate translation of the Russian word. “Samosoznanie” is understood as awareness of belonging to a particular ethnic group which is manifested in ethnic name. Presence of such name is acknowledged as a required marker of “samosoznanie”.

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psychology, because the feeling of ethnic solidarity plays the crucial role for ethnic self-defining. Therefore, ethnos is a reflection of existed, existing or a future social organism in people’s consciousness (Klein, 2013, p. 63). Although these works have not been published until recently, these ideas were developed by his disciple Evgeniy Kolpakov. He also considered self-consciousness as the main characteristic of ethnos, and he broke the deadlocks of Soviet debates by switching the focus from objective to subjective ethnic markers: any characteristics can be taken as ethnic if they are regarded as such by an ethnic group (Kolpakov, 1995).

Interestingly, ideas of Klein and Kolpakov are like those developed by Western scholars which are discussed in the next section. The end of the Soviet period marked a new era in the Russian social sciences which now were able to develop a diversity of theories and concepts and to critically consider the tenets of the Soviet social sciences. Valery A. Tishkov, the Head of the Institute of Anthropology and Ethnology in 1989-2015, expressed a view, that since 1990 Russian ethnology has been existing in deep theoretical crisis unable to elaborate on new methodology and theory (Tishkov, 2003, pp. 27-33). The orthodox ethnos theory was discarded and replaced with Western constructivist concepts of ethnicity (Alymov & Sokolovskiy, 2018).

While Russian ethnology has critically reconsidered its methodological foundations in the post-Soviet period, archaeological thinking still remains dominated by culture-historical approach and primordialism when treating archaeological cultures as bound rigid entities and interpreting them as objective realities. Although there are a number of Russian well-known works on the essence of archaeological culture, and they reject the possibility of equation of archaeological culture to bounded ethnic entities of the past (see Klein, 1991; Kolpakov, 2013), such a link still implicitly has underlain much of archaeological research.

However, the problem of uncovering real ethnic entities in the past with a reconsideration of the “primordial” methodological approach appears to become salient in recent years. This approach was criticised by Kradin (2009) who also emphasised the constructivist nature of archaeological analytical categories such as archaeological culture and type. Ethnonyms which are known from historiography are also constructs. However, he did not suggest a novel approach to ethnicity and identity in the past. In 2013, a roundtable was organised in Chelyabinsk to discuss the ethnicity issue in archaeology in which ethnologists were also involved (Mosin & Yablonskiy, 2013). The views expressed were rather sceptical on the possibility of the application of anthropological concepts of ethnicity onto archaeological data. For instance, Sokolovskiy (2013) argued that ethnicity was not present until 16th-17th Century because ethnic identity is a construct of modern
social and political institutions. Shnirelman (2013) suggested that ethnic reconstructions of the past need to be carried out in a reference to models of cultures which would be developed based on ethnographical record of as many cultures as possible.

Importantly, although out-dated “primordial” views on ethnic entities in the past are being revised, no novel adequate methodology has yet been offered.

3.3 American and British concepts of ethnicity

In American and British anthropology, the notion of “ethnicity” is considered to emerge in the 1960s - 1970s due to a shift in classificatory terminology. Accumulated empirical data by that time was not fitting with actual at that moment anthropological and sociological categories, and colonial crisis triggered critique of the existing anthropological tradition which led to the terminological reorientation from “tribe” to “ethnic group” and “ethnicity” (Jenkins, 1997, pp. 16-24; Jones, 1997, p. 51).

During the first half of the 20th Century the main paradigm in the classification of human diversity continued to be a “primordial” perspective which regarded human entities as natural and static based on relationships similar to kindred ones. For instance, the theories of Bromley and Gumilev are strongly primordial, although Bromley’s has an instrumental aspect when he emphasises the importance of specific historical, economic and political factors in shaping the expression of ethnic identity. However, the primordial model of ethnicity is usually associated with Clifford Geertz and Edward Shils’s concept of “primordial attachments” (Jenkins, 1997, p. 44; Jones, 1997, p. 65). From this viewpoint ethnicity is an innate aspect of human identity (Banks, 1996, p. 39).

The emergence of the social constructivist concept of ethnicity that states that “ethnic groups are what people believe or think them to be” can be traced back to works of Max Weber and Everett Hughes (Jenkins, 1997, p. 11). Weber regarded ethnicity as a resource for group formation, especially in the political sphere, where political community “inspires the belief in common ethnicity” (M. Weber, 1978, p. 389). Similarly, Hughes placed ethnicity in the heads of actors arguing that “the people in it [ethnic group] and the people out of it know that it is one” (Hughes, 1994, p. 94).

However, one of the most influential works on ethnicity is thought to be Fredrik Barth’s introduction to the collection “Ethnic groups and boundaries” (Barth, 1969). His main idea was to shift the focus from “cultural stuff”, or objective descriptive characteristics of ethnic group, to the ethnic boundary and to investigate how the boundary is constructed, maintained and reconstructed. Barth also suggested considering ethnic groups as “categories of ascription and identification by the actors themselves” thus shifting from an etic to emic approach (Barth, 1969, p. 10). He regarded ethnic ascription as “basic most general identity, presumptively determined by his origin and background”
(Barth, 1969, p. 13). This stance allowed his critics to label his concept as partly primordial but mainly instrumental (A. Cohen, 1974, p. xii; Jenkins, 1997, p. 45), and he was criticised for his major emphasis on free will and choice (Banks, 1996, p. 15).

Barth’s idea was to consider ethnic groups in interaction and interrelationships rather than in isolation; ethnic groups are “form[s] of social organization”. Thus, cultural content is necessary to signal membership and exclusion. Barth defined two orders of cultural content: 1) overt signals or signs – distinctive features people look for and exhibit and 2) basic value orientations: the standards of morality and excellence by which performance is judged (Barth, 1969, p. 14). Therefore, ethnic groups differ by cultural features chosen by actors rather than by objective cultural characteristics observed by anthropologists. Despite the variability of “cultural stuff” ethnic boundaries are thought to be more stable and “persist despite a flow of personnel across them” (Barth, 1969, p. 9).

Reconceptualization of basic theoretical assumptions also occurred in archaeology with studies by Colin Renfrew, Lewis Binford and David Clarke. Through their work the school of Processual Archaeology emerged, criticising the conventional culture-history approach and focusing on a functionalist explanation of social change. Within the new framework the problem of past ethnic groups became marginal, although the conventional culture unit has remained as a dominant analytical tool (Jones, 1997, pp. 26-27).

The New Archaeology, in an attempt to explore variations in the archaeological record and to define distinct processes involved in its formation, created an artificial dichotomy between function and style (Jones, 1997, p. 112). Defining functional categories of artefacts, Binford argued that formal, or stylistic, characteristics (e.g. pottery decoration) cross-cut these functional categories and have their function in “providing a symbolically diverse yet pervasive artifactual environment promoting group solidarity and serving as a basis for group awareness and identity”. Thus distribution of style types may tell about ethnic origin and migration (Binford, 1962, p. 220). Binford saw style as an addition to a function attribute – the viewpoint with which Sackett disagreed and suggested that style and function are complementary to each other and “any given type of artifact is itself inherently dualistic”. Style resides in choices which are historically unique and socially transmitted. Since the possibility that two unrelated societies make the same or similar choice from a wide range of ways to archive the same functional ends is improbable, the style conformity may indicate ethnic connection (Sackett, 1977, p. 371). Thus, the style distribution continued to be regarded as a passive reflection of past ethnic units in the manner similar to that of the culture-history approach. Such passivity of material culture was questioned by Ian Hodder (1982) and Polly Wiessner (1983, 1984).
In his influential ethnoarchaeological research, Hodder (1982) explored relationships between ethnic units and material culture and casted doubt on processual stances that there is a predictive connection between human behaviour and culture, and degrees of interaction are reflected in spatial arrangement of material culture assemblages (Hodder, 1982, pp. 1-11). Hodder revealed the active role of material culture items in the social and economic relations, arguing that artefacts have a secondary indirect meaning and thus they are symbols of ethnic, age, sex or status identity (Hodder, 1982, p. 185). Material items are used as symbols in different strategies depending on competition for resources and social organisation (Hodder, 1982, pp. 31, 104). Hodder’s study demonstrated that there are no straightforward correlations between material culture assemblages/types/stylistic patterning and ethnic groupings/economic strategies/the nature of production or of interaction. Another important conclusion is that the general symbolic principles and schemes that meaningfully constitute culture underlie and permeate the functional relationship forming “the whole” (Hodder, 1982, pp. 185, 212-213). It is necessary to examine these underlying structures of symbolic meaning in order to reveal the way in which styles express ethnic differentiation (Hodder, 1982, p. 205).

The correspondence of stylistic variation with social relationships was investigated by Wiessner (1983, 1984). Wiessner drew on the information exchange concept proposed by Martin H. Wobst (1977) and Margaret W. Conkey (1980) and considered style as the channel through which information about identity is transmitted. Analysing the projectile points of the San of the Kalahari Desert, Wiessner ascertained clear correlation between linguistic groups and stylistic distribution. She distinguished emblemic and assertive aspects of style, the former carries information about social identity and indicates, in this case, linguistic boundaries, and the latter informs about personal identity (Wiessner, 1983). This distinction implied that not all artefacts are used in negotiation of social relationships, but only those bearing the emblemic features of style which are identified through social comparison. Such identification via comparison is suggested to be the mechanism which underlies stylistic change and development (Wiessner, 1984, p. 229). Thus, Hodder and Wiessner share the view that material culture plays an active role in social relationships, although the question of why some artefacts signal identity and some do not, has remained unanswered.

As a result of theoretical developments in archaeology and anthropology in the 1960s-1980s, by the late 1980s it was clear that the question of ethnic groups in the past should be reconsidered. Such an attempt was undertaken by Sian Jones (1997) who made an exhaustive analytical review of the literature emphasising the dichotomy between existing approaches to ethnicity such as objectivity/subjectivity and
primordial/instrumental and to material culture such as style/function in the developing school of Processual Archaeology. To transcend limitations of clearly opposite theoretical views the suggestion to adopt the Bourdieu’s theory of practice was made. The central concept developed in his theory was the concept of the *habitus* (Bourdieu, 1977) which was defined as:

> [S]ystems of durable, transposable *dispositions*, structured structures predisposed to function as structuring structures, that is, as principles of the generation and structuring of practices and representations which can be objectively ‘regulated’ and ‘regular’ without in any way being the product of obedience to rules. (p. 72)

Thus, the idea that the *habitus* structures and simultaneously is structured by practice solves the objectivist/subjectivist dilemma. The flaw of free will in the instrumental approach to ethnicity is resolved by the principles of the *habitus dispositions* which draw limits of possible alternatives in making choice being at the same time in permanent flux and changing (Jones, 1997, p. 90).

Drawing on the concept of the *habitus*, Jones states that when people's habitual dispositions intersect with historical situation ethnicity is being constructed and cultural difference objectified (Jones, 1997, p. 120). Exploring the relationship between material culture and ethnicity relying here on works of Ian Hodder, Jones concluded that “all material culture is active in the process of social production, reproduction and transformation” (Jones, 1997, p. 119). Material culture is repeatedly used for the manifestation of ethnicity, and the choice of particular forms or styles is restricted by the structural dispositions of the *habitus* (Jones, 1997, p. 120).

In order to apply a new framework for identifying the involvement of distinct styles in signalling ethnicity, Jones suggested: 1) to examine modes of social interaction and the distribution of material and symbolic power between groups of people; 2) to examine past social organisations; 3) to employ historical approach, or, in other words, the diachronic contextual framework (Jones 1997, p.125). However, some reviewers expressed criticism in that the suggested “comparative theory of ethnicity” does not provide an applicable framework for archaeologists (Childe & Arnold, 1998; Duke, 1998; Emberling, 1998; Joffe, 2001).

Another attempt to review approaches to ethnic identity in archaeology was undertaken by Sam Lucy (2005). In contrast to Jones, instead of coming up with universal all-embracing theory, Lucy discussed some archaeological case studies which focused on how material culture articulates ethnic/cultural identities and demonstrated the employment of the perspective which implies that all the stages of production including usage should be taken into account. For instance, Lucy referred to the research of Díaz-
Andreu which examined the context of use of the Llíria pottery and concluded that it has an aristocratic character instead of being an indicator of ethnicity (Lucy, 2005, pp. 102-103). Another suggestion is to apply detailed analysis at a local level in order to reveal the context in which identities are being constantly negotiated. Such an approach allowed Lucy to uncover the processes of enduring creation and recreation of identities in regional and local variations of mortuary ritual in East Yorkshire in 5th-6th Centuries AD (Lucy, 2005, pp. 105, 109).

European archaeology has reconsidered many theoretical tenets in recent decades (Thurston, 2009), and some new ideas and concepts have been put forward. One of them which may be advantageous for this study is Gramsch’s dynamic concept of culture, also influenced by Bourdieu’s theory of practice (Gramsch, 2015). Gramsch suggested considering culture as a process and practice of different actors manifesting in various contexts. This notion implies that continuities and discontinuities occur simultaneously. Cultures and societies are hybrid and ambivalent incorporating various elements of different origins, thus, social and cultural identities are continuously negotiated through communicative action. An archaeologist can identify social action through studying rituals which are discernible in prehistoric practice.

It seems promising to try to unveil past identities in archaeological material keeping in mind general assumptions about what ethnicity is and how material culture may express and constitute identities and paying attention to details and context of usage. However, the question of what ethnicity is has still not yet been answered. The 2nd half of the 20th Century has seen many advances in anthropology and archaeology, and some of them were touched upon above. Since anthropological studies on ethnicity accelerated in the last decades and it is impossible to make an exhaustive review, only some relevant ideas for this research will be discussed below, and as a result a working definition of ethnicity will be proposed.

3.4. Further relevant ideas and viewpoints about Ethnicity

For many anthropologists, ethnicity is a phenomenon which can emerge only in the processes of social relationships where cultural distinctiveness of participants makes difference in regular interaction (Eriksen, 2010, pp. 16-17; Jenkins, 1997, p. 13). As Barth argues, cultural variation may be a result rather than the cause of ethnic boundary maintenance (Barth, 1969, p. 12). Although inter-ethnic relations suggest opposition and contrast, such interaction implies both differences and similarities (Jenkins, 1997, p. 13) because there must be “a shared field for interethnic discourse and interaction” in order for communication to take place (Eriksen, 2010, pp. 33-34).
Ethnicity is also dialectic between self-ascription and external imposition. While Barth defined ethnic groups as “categories of ascription and identification by the actors themselves” (Barth, 1969, p. 10), Jenkins emphasised the analytical distinction between group identification (from inside) and social categorisation (from outside) and investigated the interdependence of both processes (Jenkins, 1997, pp. 22-23). Whereas Cohen focused on the symbolic meaning of boundary and community held by its members (A. P. Cohen, 1985), Jenkins was more interested in understanding how external social categorisation influences ethnic identity (Jenkins, 1997, pp. 22-23) which, in his view, is “always socially constructed” though it is “a primary...dimension of individual identity” (Jenkins, 1997, p. 47). External categorisation can occur only within active social relationships and implies power and authority to do so (Jenkins, 1997, p. 52).

Ethnicity is a social identity and in dynamic daily life may overlap or be overlapped by other identities such as gender, age, status and religion. Ethnicity is situational, and in some situations ethnic identity is not relevant, and agents themselves can manipulate their numerous statuses and identities depending on social context (Eriksen, 2010, pp. 37-38). Thus, it is highly challenging to try to disentangle particular kinds of identity from fragmented archaeological remains. However, since identity is constituted through social relationships, all aspects of social relationships should be considered and there are a number of research programs that look at the combination and interaction of identities, such as gender and status, gender and age and ethnicity and gender (Diaz-Andreu & Lucy, 2005, p. 9).

Another problem in localising ethnic identity is to distinguish between local, ethnic and communal identities. An attempt to explore the difference between communal/local/ethnic etc. identities has been made by Richard Jenkins (Jenkins, 1997). He suggested distinguishing “nominal” identification and its “virtuality” where “nominal” means name or classification and “virtuality” refers to consequences of the “nominal” – rights, responsibilities, access to social and economic resources etc. According to Jenkins, the difference in identities lies in difference in consequences for each (Jenkins, 1997, p. 41).

Ethnicity is dynamic and changing; it is socially constructed, maintained and reconstructed. Ethnic groups may not have a common origin but they believe they do (Eriksen, 2010, p. 17; Klein, 2013, p. 63; M. Weber, 1978, p. 389). The construction of ethnic identity is a process linked to boundary creation and maintenance which implies the employment of symbols. The relationship between a boundary and symbolism was examined by British anthropologist Anthony P. Cohen (1985), where the symbolic aspect of community boundary is what it means to people (A. P. Cohen, 1985, p. 12). Cohen considered community as a mental construct: “...reality of community lies in its members’
perception of the vitality of its culture. People construct community symbolically, making it a resource and repository of meaning, and a referent of their identity” (A. P. Cohen, 1985, p. 118). Boundary similarly exists in people’s minds, and Cohen emphasises the meaning attached to boundaries and community rather than to their structural forms. In examples exhibiting continuity of form and substantial change of content he showed how structures may be similar but concealing different realities (A. P. Cohen, 1985, p. 98).

One of the prominent symbolic devices is ritual, because it gives experience of commonality and thus is effective in boundary maintenance, creating a sense of commonality and difference from others. Ritual occasions are themselves symbolic. Cohen distinguished two levels on which rituals communicate: first, they communicate about the relation of the group to others, and, second, about the individual’s relation to his/her group and to the world. “Both construct and allow the individual to experience social boundary” (A. P. Cohen, 1985, pp. 53-54).

Many studies of ethnic groups and the ethnicity issue have showed that ethnic identity does not disappear when the society passes through the processes of intense social change. On the contrary, ethnic feelings may strengthen or emerge during such processes or in condition of threat to cultural distinctiveness (Eriksen, 2010, p. 40). Thus ethnicity may have different degrees of intensity and importance and be either “cold” or “hot” depending on the social context (Fenton, 1999). In periods of change, social identity becomes highly important, and in order to maintain the identity and the boundary, communities and individuals appeal to culture and tradition (Eriksen, 2010, p. 81). However, as society changes, cultural forms also undergo transformations in the sense that meaning is attributed to relevant contemporary circumstances, and ethnic boundaries are rebuilt on appropriate symbolic foundations (A. P. Cohen, 1985, pp. 46, 76-77; Eriksen, 2010, p. 40).

Although there is no simple correlation between cultural similarities/differences and ethnic units (Barth, 1969, p. 14), cultural content is a meaningful repository for identity construction and reconstruction; it forms the contrast of the boundary and shapes ethnicity (Eriksen, 2010; Handelman, 1977). Thus “culture stuff” can be manipulated in creating ethnic ideologies, while culture, understood as Geertz’s “webs of significance”, creates restrictions for instrumental ethnic identity, however, culture is also constantly in the process of creation and recreation (Geertz, 1973).

Albeit ethnic identities are flexible, the degree of this flexibility may vary in different societies and periods of times. Identity may be dynamic and also depends on an individual’s choice as well as their strong sense of territoriality with a sharp feeling of
“rootedness”, which is known as the “potato principle”. The term was introduced by Ernest Gellner in reference to peasant societies with little social mobility (Eriksen, 2010, p. 78).

It may be concluded that ethnicity is a dialectic phenomenon between self-ascription and external imposition which can emerge only in the processes of social relationships, and in dynamic daily life may overlap or be overlapped by other identities such as gender, age, status and religion. Ethnicity is also dynamic and changing; it is socially constructed, maintained and reconstructed through manipulation with cultural content; ethnic feelings may strengthen or emerge during intense social change or in the condition of threat to cultural distinctiveness.

The next question which emerges is how to uncover such flexible and dynamic phenomenon in prehistoric rock art, and this is explored in the next section.

3.5. Style and identity in rock art studies

In archaeology, the desire to uncover real social entities of the past has been satisfied through the application of the archaeological culture concept in the culture-historical sense which has allowed placing assemblages of material culture in space and time. In rock art studies, such placement has been achieved through the notion of style, although the significant problem of placing rock art assemblages in chronological sequences has been an obstacle for the development of the ethnicity and ethnic group issue. Thus, style analysis has been mainly used to establish broad chronological sequences of rock art development. However, in some cases, the concept of style was applied to uncover prehistoric social and ethnic processes. In this section the definition of style and the application of the style concept in rock art studies is discussed with accent on its interpretation in terms of ethnic groups and ethnicity. The review begins with an understanding of style taken from a broader field of enquiry and proceeds to discussion of its analytical value specifically in rock art studies with examples from Siberia. As a result, the working style concept for the thesis is proposed.

Many rock art researchers in pursuit of a style definition have drawn on the word’s meaning either taken from art history or from the broader field of archaeology. Francis (2001, p. 221) states that the most commonly used definition was introduced by art historian Shapiro (1953):

Style is, above all, a system of form with a quality and meaningful expression through which the personality of the artist and the overall outlook of a group are visible. It is also a vehicle of expression within a group, communicating and fixing certain values of religious, social, and moral life through the emotional suggestiveness of forms. (p. 287)

Needless to say, Shapiro probably had in mind a quite different body of art to that of prehistoric art when generating this definition.
However, some researchers (e.g. Franklin, 1993, p. 3; see Sanz, 2012; e.g. Taçon, 1993, p. 151) have borrowed the notion of style from Sackett (1977, p. 370) who described style as a manner of doing something which is peculiar to specific time and place. This broad definition is taken out of context of processual debates on style (see above) and raises a question of how it overlaps with archaeological classificatory taxa such as type and class which are preferably used to describe variability in material culture.

Another source of a style definition in rock art has been Wobst’s article on stylistic behaviour (1977) where style was defined as “that part of the formal variability in material culture that can be related to the participation of artefacts in process of information exchange”. Since “most artefacts articulate with information exchange” and “any human behaviour involves at least potential information exchange”, it seems fairly difficult to detect “that part” (Wobst, 1977, pp. 320-322). It is clear that Wobst (1977, pp. 321, 322) meant “form of artefact” and when showing the application of his concept to an analysis of Yugoslavian headdresses, he discusses their form and their relationship with an articulation of ethnic and status identity. Here again, the term style can be easily replaced by that of type.

Concerning rock art studies, originally the style concept was developed by Breuil (1952) and Leroi-Gourhan (1982) in an analysis of West European Paleolithic art as a means for building its relative chronology. Breuil’s approach was based on analysis of superimposition and stylistic correlation of parietal with portable art. The stylistic analysis considered conventions of rendering specific details of figures such as body shapes, distortions, themes and animation of animals. Breuil described some stylistic characteristics as diagnostic for specific periods. Later Leroi-Gourhan revised Breuil’s chronology although he used the same assumptions of style evolution and diagnostic style markers (Francis, 2001; Sieviking, 1993). Such an approach to style appears to be very similar to that applied by Okladnikov (Okladnikov & Zaporozhskaya, 1959) to Siberian rock art. Although Okladnikov did not distinguish particular styles in rock art but rather defined chronological groups of images, he extensively used the word “stylistic”, referring to specific characteristics of figures such as body proportions, animal animation, distortions and the shapes of figure attributes in a manner very similar to that of French prehistoric art school.

A further advance in Soviet rock art methodology was made by Yakov Sher (1980) who formulated the theory of “expressive invariants” which is considered as the theoretical basis of the modern rock art studies in Russia (Savinov, 2009, p. 96) and was applied and further developed by other researchers (Kovtun, 2001, 2009; Molodin, 1993, 2009; Molodin & Cheremisin, 2002). Sher considered rock art as occupying a position in between two
classes of historical sources such as written and material sources and thus rock art has properties of both texts and artefacts. Drawing on linguistics, Sher regarded an image as representing a dialectic unity of content and expression. Therefore, the analysis should take into account both: elements of content, “semantic”, and elements of expression, “stylistic”. The latter can serve as ethno-cultural and chronological indicators (Sher, 1980, pp. 10-11). While the words in various languages may describe the same phenomenon, similarly in rock art there are a number of common motifs that span a wide territory and a great period of time which are, however, depicted in various ways that are specific for a particular culture. This has resulted from prehistoric artists having a limited set of standard expressive elements which were combined in order to create a number of motifs. These expressive elements were called invariants. Thus, Sher divided graphic element into two classes: changing and persistent, where the former render content, or answer the question “What is depicted?”, and the latter are invariants and answer the question “How is it depicted?”. Therefore, stylistic analysis is an analysis of elements of expression which should be initially detached from the elements of content. However, both classes contain important information about past societies (Sher, 1980, pp. 25-41).

Although Sher elaborated the methodology of stylistic analysis, he did not propose a definition of style. However, there is no diversity in its implication among Soviet and Russian archaeologists which was clearly expressed by Molodin in that style is understood as “peculiarities of art sujet expression” (Molodin, 2009, p. 74). Savinov agreed that style is the way of how an image is depicted (Savinov, 2009, p. 97). It is important to note that Soviet/Russian archaeologists have used style exclusively in reference to art objects in contrast with American processualists who generated confusion with the usage of style. In addition, attention to details of how depictions are rendered and their comparison with objects from archaeological contexts advanced Russian rock art studies in that particular styles were recognised for specific archaeological periods and cultures such as the Angara and Minusinsk styles for the Neolithic and Early Bronze Age, the art tradition of the Okunevo culture, petroglyphs of the Seima-Turbino tradition and Karasuk period of the Middle and Late Bronze Age respectively, and other styles and traditions of the later periods (Savinov, 2009, p. 100). However, Savinov noted that rock art styles are not confined to specific clear-cut periods and areas and to describe this phenomenon he suggested a term pictorial stratum (“Izobrazitel’ny plast”) as a form of existence of rock art through time and space (Savinov, 2008).

Interestingly, Taçon and Chippindale (1993) advocate an approach for the global study of rock art, replacing the general term “style” with “manner of depiction”. Following the Oxford English Dictionary, they argue that style “refers to the characteristic manner
in which subject is depicted, as that is associated with a particular group or period” (1993, p. 39). They further point out that too often archaeologists have combined together various image features with “manner”, creating problematic definitions of style in the process (Chippindale & Taçon, 1993):

A further difficulty with “style” is that is bundles together distinct characteristics. A figure has many traits – of subject, of size and scale, of pigment, of technique, of manner, of convention in perspective. By studying these separately and at the same time noticing which of them co-vary, we can better explore similarity and difference than under an all-embracing and ill-defined “style” (p. 39).

Through association with archaeological cultures rock art styles and traditions have been interpreted in a culture-historical sense, implying that material culture passively reflects past ethno-cultural entities and there is a direct correspondence between the distribution of motifs and human migrations. For Siberian rock art Okladnikov (1969) outlined large prehistoric ethno-cultural areas using rock art motifs and styles as ethnic markers. However, at that time such a view was not unique to Soviet rock art research. For instance, Leroi-Gourhan (1980) suggested that more complex designs which are limited to particular regions can be ethnic markers. In current rock art research rock art styles and specific motifs are understood as markers of identities which is quite similar to the previous research; although the focus shifted from bounded social entities to identities, rock art is mere a marker (e.g., Domingo Sanz, 2008; Novozhenov, 2015).

While some researchers were developing traditional means of rock art analysis, others have advanced the techniques of absolute dating and applied them to rock art sites. A number of dates for the French Paleolithic caves casted doubts on chronological style sequences. The situation seemed critical and provoked a discussion on the utility of style concept in building chronology at the 2nd AURA Congress in 1992 (Lorblanchet & Bahn, 1993b). However, many of the contributors acknowledged that style cannot be fully dismissed but rather employed cautiously in conjunction with a range of dating techniques and clues (Clottes, 1993; Johnston, 1993; Lorblanchet & Bahn, 1993a; Taçon, 1993). Furthermore, a number of papers dealing with more diverse interpretations of style were presented and some relevant comments were expressed, for instance, that the variability in rock art may be due to various factors (Clegg, 1993) and that similar styles can exist in two very different periods or distant areas (Lorblanchet & Bahn, 1993a).

Among various interpretations and applications of style those aiming attention at ethnic groupings are of interest here, and one such approach has been elaborated by McDonald drawing on the Information Exchange Theory (McDonald, 1999, 2008; McDonald & Harper, 2016). McDonald applied the predictions made by Wobst (Wobst,
on stylistic behaviour and tried to reveal relationships between visibility of rock art sites and the type of signalled identity. One of Wobst’s predictions was that the more visible the artefact the more appropriate it is for conveying a message containing information about ethnic or status identity (Wobst, 1977, p. 330). However, Hodder disproved such a simple correlation between material culture and ethnic identity. In his ethnoarchaeological study in the Baringo area of western Kenya it was shown that the variations in hearth position inside huts are not seen to the external world but correspond with tribal boundaries (Hodder, 1982, pp. 54-57). Moreover, recently McDonald and Harper disproved their initial hypothesis which was based on the Wobst’s predictions (McDonald & Harper, 2016), so it seems that rock art is not as predictable as Yugoslavian hats. However, McDonald’s (2008) analysis of motif and techniques used in the Sydney Basin rock art province of Australia showed some interesting patterns in their distribution which partly can be explained in terms of economic strategies (e.g. marine animals on the coast and land animals on inland sites), but only partly. Generally, the distribution did not coincide with language boundaries and did not unveil clear-cut divisions as it had been anticipated, but rather showed diffusion of some motifs from the centre of the area to its margins. It may be concluded that Information Exchange Theory is not very valuable for rock art studies since it makes too simple and straightforward predictions although it is hard to argue against the fact that images carry information.

Studies in the Kimberley region of Australia showed that rock art played a crucial role in maintaining cultural continuity of the Aboriginal people especially in turbulent times. For instance, in the 1900s during the white colonisation of the region, many Wanjina images were repainted in order to preserve cultural tradition and reaffirm the connection with the land. Topographic marks across the land were believed to have been created by the Wanjina Ancestral Beings who then “put themselves” as paintings on rock shelter walls and ceilings (Blundell & Woolagoodja, 2012, p. 475). In the south central Kimberly in the contact period the appearance of new styles, motifs and techniques is interpreted as a reaction to the threat to social cohesion (Balme & O’Connor, 2015). Thus, it appears that rock art sites create and maintain a strong connection between people, their past and their land, and therefore rock art does not just reflect group or individual identities but, moreover, rock art helps construct them through powerful emotional attachments. However, not all rock art has the same value for people. Traditional Owners in the Kimberley region do not paint or renew the earlier Gwion paintings (also known as “Bradshaws”) (Blundell & Woolagoodja, 2012).

11 Which is referred to as stylistic analysis by Jo McDonald.
In South Africa, rock art sites are potent symbols which played a pivotal role in identity formation in the post-apartheid era (Hampson, 2015; Ouzman, 1995; Smith, Lewis-Williams, Blundell, & Chippindale, 2000) as well as 2,000-1,600 years ago when great change occurred in the societies of the Drakensberg hunter-gatherers which coincide with the highpoint of the rock art tradition called the polychrome style (Prins, 2009, p. 194).

3.6. A new working definition of style

After discussing the style concept and its application for revealing past ethnic groups and processes it is possible to define a working style concept for this research. It seems promising to define style proceeding from its analytical purpose specific for rock art studies rather than from the word’s meaning in other fields of enquiry. Since in archaeology a similar analytical purpose is placed upon artefact type, the definition of the latter can be adopted: it is “a group of artifacts exhibiting consistent assemblage of attributes whose combined properties give a characteristic pattern” (Spaulding, 1953, p. 305), where the group of artefacts can be replaced by the group of motif types. It is suggested here that style should be specific to art studies taxon which refers to prehistoric art as comprising generally non-utilitarian objects (portable art and mural art), aspects of objects (e.g. pottery decoration) and activities (art making). Non-utilitarian here means that such aspects or objects do not have a capacity being useful for some purpose which is for archaeological classification and typology, and thus their variability can be described in terms of style.

For some researchers, style is argued to have once been meaningful to the original artist and thus represents their mental templates. But since research is unlikely to uncover this, such a view does not look optimistic (Francis, 2001, p. 223; Layton, 1991). In a similar vein artefact type was regarded as culturally real to the makers (Krieger, 1944; Spaulding, 1953). However, since such an assumption is difficult to prove, and there is no simple relationship between material culture and social processes, it seems proper to consider style as an analytical tool to describe variability in an art body. Exploiting style as an analytical tool does not imply an interpretation which is regarded as the next analytical stage. Such a view is advantageous because it does not create a bias to any concept or theory. It is also suggested that there are many ways of organising one set of data in accordance with research questions (Brew, 1946), which gives space for a diverse number of perspectives on rock art.

Thus, style is understood here as an analytical tool aiming to describe a group of design types which show a characteristic pattern. For the analytical purpose it is also necessary to propose a hierarchy of taxa. The lowest category is an attribute which characterises one particular expressive element; it can be technique, or posture of figure,
or shape of body etc. The next taxon is motif which is defined on the basis of one attribute – content. The third taxon is motif type which comprises a set of attributes giving a specific and recognisable pattern. The following category is style which describes a group of motif types or may include only one motif type if it is characteristic of the particular art body. If style is not enough to describe variability, the next category may be applied such as tradition which is suggested here to describe a group of motif types found on a number of media or a group of styles existing in one temporal or spatial context and having some common attribute(s). It seems that the proposed hierarchy of analytic taxa is flexible and unbiased, and analysis on different levels may answer a number of questions.

3.7. Conclusion

In this chapter an attempt was undertaken to build the methodological basis necessary to uncover ethnic identities in the prehistoric rock art of Siberia. The review of the ethnic issue from the origin of “ethnos” through the elaboration of the theory of ethnos in the Soviet Union, the emergence of the ethnicity concept in Anglo-Saxon countries and its further developments in recent decades led to an understanding of the ethnic identity phenomenon. For research purposes, ethnicity was defined as a dialectic phenomenon between self-ascription and external imposition which can emerge only in the processes of social relationships, and in dynamic daily life may overlap or be overlapped by other identities such as gender, age, status and religion. Ethnicity is also dynamic and changing; it is socially constructed, maintained and reconstructed through manipulation with cultural content; ethnic feelings may strengthen or emerge during intense social change or in the condition of threat to cultural distinctiveness.

In order to provide a means for unveiling such dynamic phenomenon as ethnicity, the style concept and its application was discussed. It was suggested that style should be employed as an analytical tool among other taxa which are organised hierarchically in order to be able to investigate patterns on different levels. The next level of analysis is the placement of recognised patterns in a temporal and spatial framework in order to find how style shifts in time and space. However, this should be further investigated in an archaeological context. If it is acknowledged that rock art sites create and maintain a strong connection between people, their past and their land, rock art therefore does not just reflect group or individual identities but, moreover, rock art helps construct them through powerful emotional attachments. Thus, style changes may be a reaction to major social shifts or some kind of threat to the cultural continuity, and in this condition, ethnic identity may emerge or strengthen.
CHAPTER 4. PREHISTORY OF EAST SIBERIA: FROM THE ARRIVAL OF FIRST INHABITANTS TO THE RISE OF THE FIRST NOMADIC STATE

This chapter will draw a picture of the culture history of East Siberia from the arrival of the first hominins to the period of early nomadic cultures with more focus on the Neolithic and Bronze-Early Iron Ages to provide an archaeological context for rock art traditions analysed in the following chapters. The following regions of East Siberia will be considered below: (1) Cis-Baikal, a region to the west from Lake Baikal which includes its coast and the southern basins of the Angara and Lena Rivers; (2) Trans-Baikal, a region to the east from Lake Baikal and confined by the boundary with Mongolia and China; and (3) Yakutia, a large region in North-East Asia.

The first hominins may have appeared in Siberia in the Early Pleistocene, although the evidence for the earliest periods is scarce. By the Late Paleolithic the region was quite densely populated by mobile hunter-gatherers successfully adapted to various environments and climate fluctuations which is important to consider in a context of the debatable question of Paleolithic rock art in Siberia. The Neolithic epoch in Siberia, as it is commonly accepted, starts with the adoption of pottery, and the Eneolithic and Bronze Ages are marked respectively by the appearance of copper and bronze artefacts or the evidence for copper/bronze casting technology. The Late Bronze Age and the following Early Iron Age are characterised by a rise of first nomadic cultures. The next Xiongnu period is outside consideration here.

This is an attempt to provide a comprehensive review of archaeological studies, however, the problem in synthesising all the models and chronologies available is that their authors provided dates in different formats, thus, bp/bc represents uncalibrated dates, and BP or BC calibrated ones. Much attention is devoted to discussion of the Middle-Holocene archaeology of the Cis-Baikal region since stages/cultures first developed in this region later served as a referencing model in Trans-Baikal and partially Yakutia. In the following Late Bronze Age, Trans-Baikal becomes a key region for the cultural history of East Siberia owing to the emergence of early nomadic societies closely linked to other cultures of Central and East Asia.

4.1. The history of archaeological research

The Cis-Baikal region is one of the most well-studied areas in Siberia, and the first mention of the artefacts related to the Baikal Neolithic is dated to 1730 (Okladnikov, 1950, p. 16), while the first Russian Paleolithic site was discovered in Irkutsk in 1871 (Abramova et al., 1984). However, from the 18th Century to the first half
of the 19th Century no serious investigations were undertaken, and some sites and artefacts were mentioned by amateurs, travellers, and political exiles.

In 1880-1881, Nikolai Witkowsky led the first systematic excavations to study the Kitoi cemetery at the confluence of the Kitoi and the Angara Rivers (Witkowsky, 1880, 1882). The unearthed material complex and mortuary practice was later defined as "Kitoi stage", "Kitoi culture", and "Kitoi period" (Bazaliiskii, 1998). Immediately after its publication, Witkowsky's findings attracted much attention, not only in Russia but also in Europe, owing to the exceptional nature of the findings and their undisputable early age (Okladnikov, 1950, p. 33). Witkowsky also discovered the Glazkovo cemetery (Witkowsky, 1889), later studied by M. P. Ovchinnikov. Based on the finding of copper and bronze artefacts in the graves of this cemetery, Ovchinnikov defined the Irkutskaya culture, now known as the Glazkovo culture (Gorodtsov, 1927), and related it to the Bronze age, suggesting that metal manufacture occurred locally (Ovchinnikov, 1904).

A stratified habitation site, Ulan-Khada, located in the Mukhor Bay of the Little Sea, Lake Baikal, was discovered in 1912 and excavated in 1913 by B. E. Petri. He defined 11 layers which spanned the time from the Mesolithic to the Late Neolithic Ages. Thus, the site was important as a basis to build a chronological sequence for the whole Late Stone epoch of the region. This undoubtedly key site was then re-examined in 1959, 1963, 1974, 1979, 1982 and 1990 (Goriunova, 2012).

The early Soviet period was marked by discoveries and subsequent studies of the famous Paleolithic sites Mal'ta and Buret' in the Angara River basin, Cis-Baikal, which yielded a rich assemblage of art and adornments and a child burial which for many decades was the only Upper Paleolithic burial in Siberia (Gerasimov, 1931).

As early as in the 1920s, a number of research problems, which remain relevant, have emerged in the debates on the chronology of the Baikal Neolithic and Bronze Age, and a key issue was the place of the Kitoi culture. One viewpoint was that it is related to the Bronze Age (V. A. Gorodtsov, A. A. Spitsyn, N. Bortvin), another that Kitoi and Glazkovo are synchronous but represent two peoples at different stages of their development (V. I. Podgorbunsky). An alternative sequence of burials was suggested by G. F. Debets where three groups were defined based on body position, occurrence of ochre, and presence of copper objects (Okladnikov, 1950, pp. 54-58).

However, the first reliable culture-history sequence of the Baikal Neolithic-Bronze Ages, acknowledged for many of the following decades, was developed by Alexey Okladnikov. In 1932-1937, Okladnikov surveyed the whole basin of the Angara River, discovered numerous prehistoric sites, and excavated more than a hundred graves. He was the first who attempted to correlate habitation complexes with burials.
based on the data of the Ulan-Khada campsite, although this problem has not been decisively solved since then. Based on the collected data, Okladnikov developed a chronological sequence of “culture-historical stages” from the Early Neolithic to the Bronze Age (Okladnikov, 1950, 1955a):

- Khin – 5th Millennium BC
- Isakovo - 4th Millennium BC
- Serovo – 3rd Millennium BC
- Kitoi – second half of the 3rd Millennium BC – early 2nd Millennium BC
- Glazkovo – around 1700-1300 BC.
- Shivera – 1300-900 BC

Although the defined culture-historical units are still relevant today, their sequence and chronology considerably changed since then. Okladnikov based his model on the social-economic advances of the defined units. Since the Kitoi complex showed an advanced fishing economy, with some types of artefacts analogous to the Glazkovo ones, such as fishing hooks, some types of arrowheads and nephrite items (rings and adzes), it was placed at the end of the Neolithic sequence. Okladnikov’s model was criticised soon after its publication, the most debated point being again the place of the Kitoi cultural complex. Fieldwork accelerated in the 1950s-1960s and produced much new data which brought further questions to Okladnikov’s established sequence (A detailed review see Georgievskaya, 1989; Khlobystin, 1978; A. W. Weber, 1995).

In the late 1970s-early 1980s, the first radiocarbon studies were undertaken which caused even more surprise, since the Kitoi samples received very early dates which undoubtedly placed the complex in the Early Neolithic (Konopatskiy, 1982; Mamonova & Sulerzhitski, 1986, 1989; A. W. Weber, 1995). The dates implied the following sequence:

- Kitoi – 5890-5150 BC (7000-6200 bp)
- Isakovo – 4190-3840 BC (5320-5000 bp)
- Serovo – 4010-3000 BC (5230-4390 bp)
- Glazkovo – 3400-2000 BC (4600-3600 bp)

Although the absolute chronology of the Neolithic and Bronze ages became clearer, it brought new research problems such as the explanation of the revealed gap in time between Kitoi and Isakovo, the origin of the Late Neolithic cultural complex, and the beginning of the Bronze Age (A. W. Weber, 1995). The problem of correlating burial complexes with living sites has also been relevant since, by the mid-1990s, more
than a hundred dates had been obtained from the burial sites, and only 24 from living sites (see A. W. Weber, 1995).

These issues have been addressed by the Baikal Archaeological Project (BAP) which started in the 1990s (Goriunova & Weber, 2017). BAP has been focusing on different aspects of past lifeways such as diet (A. W. Weber & Link, 2001; A. W. Weber, Schulting, Ramsey, & Bazaliiskii, 2016), mobility patterns (A. W. Weber & Goriunova, 2013; A. W. Weber, White, et al., 2011), chronology (A. W. Weber, McKenzie, Beukens, & Goriunova, 2005; A. W. Weber, Schulting, Bronk Ramsey, et al., 2016), genetics (Moussa, Bazaliiskii, Goriunova, Bamforth, & Weber, 2016; Waters-Rist, Bazaliiskii, Goriunova, Weber, & Katzenberg, 2016) and zooarchaeology (Losey et al., 2011; Losey et al., 2013; Losey, Nomokonova, & Goriunova, 2008; Scharlotta, Bazaliiskii, & Weber, 2016). Thus, to date, a very detailed account of the Neolithic and Early Bronze Age is available for the Cis-Baikal region.

The first brief mentions of Trans-Baikal archaeological sites occurred in the 17th Century, and in the 18th Century the first excavations of the most visible sites, slab graves, were undertaken by participants of the scientific expeditions of the Imperial Academy of Sciences (for detailed review see Aseyev, 2003). At the end of 19th Century, organisations specifically focused on the study of local history were founded. These included local history museums in Nerchinsk, Chita and Troitskosavsk (Khyakhta after 1934), and departments of the Imperial Russian Geographical Society in Chita, and Troitskosavsk. The first systematic archaeological surveys were conducted by members of the Society A. K. Kuznetsov in Eastern Trans-Baikal and A. P. Mostits and Yu. D. Tal'ko-Gryntsevich in Western Trans-Baikal (Kuznetsov, 1893, 1925b; Mostits, 1896, 1897; Tal'ko-Gryntsevich, 1898, 1928). In the late 19th - early 20th Century, archaeological research was continued by P. S. Mikhno, an employee, and later the head, of the Kyakhta local history museum, and B. E. Petri, professor of ethnology in the Irkutsk University (Aseyev, 2003; Petri, 1922). Among his students were A. P. Okladnikov, M. M. Gerasimov, G. F. Debets, P. P. Khoroshikh, who also made great contributions in the study of Trans-Baikal archaeology.

The major advance in the Trans-Baikal archaeological research occurred in the Soviet period when Academic archaeological expeditions were established to study all periods of prehistory. In 1924-1928, G. F. Debets surveyed the Uda, Selenga, and Chikoi River valleys and was the first to define archaeological cultures in this region: the Late Neolithic Angara-Baikal culture; the Late Neolithic Daurskaya culture; and the Early Neolithic Selenga culture (Debets, 1925, 1930). In 1928-1929, the First Buryat-Mongol archaeological expedition was led by G. P. Sosnovsky who tried to pay attention to all
sorts of sites, but unfortunately had time only to synthesise the data received from the excavations of Paleolithic sites and slab graves (he died in Leningrad during the Blockade) (Kitova, 2010). After World War II, the Second Buryat-Mongol archaeological expedition (1947-1958) was established under the leadership of Okladnikov (Okladnikov, 1948). In the 1950s, another Academic expedition, S. V. Kiselyov’s Soviet-Mongol expedition, led the survey of the South-Eastern Trans-Baikal (Aseyev, 2003). The sites discovered and data collected resulted in a number of monographs synthesising the accumulated knowledge (Dikov, 1958; Grishin, 1975; Ivashina, 1979; M. V. Konstantinov, 1994; Okladnikov & Kirillov, 1980; A. D. Tsybiktarov, 1998). Since the 1980s, archaeological research has been continued by the local research institutions.

The first information about the archaeological findings in Yakutia appeared in the late 19th Century, and in 1887-1890 the first excavations took place (Ovchinnikov, 1890). In the 1920s-1930s, the archaeological knowledge was extended owing to the works of E. D. Strelov, G. F. Ksenofontov, A. A. Savin, M. M. Yermolayev, and N. B. Kyaksho (see Alekseyev, 1996). Many of them paid a lot of attention to rock art sites as well (see Chapter 1). At that time, fundamental research problems such as the first arrival of people in this area in the Pleistocene, the relations to the peoples entering North America, and the origins of the Yakuts were raised (Mochanov & Fedoseeva, 2013b, pp. 43-58). The first systematic research was conducted in 1940-1946 by Okladnikov during which the whole Lena River basin was surveyed (Okladnikov, 1955b). He reported the first Paleolithic finds from Yakutia implying the early human settlement of the North of Asia (Okladnikov, 1955b). Since 1959, archaeological research was continued by S. A. Fedoseyeva and Yu. A. Mochanov. Their expedition examined all major river basins of Yakutia and discovered about 1000 archaeological sites. Stratified sites in the Aldan River basin, such as Bel‘kachi 1 (11 layers) and Sumnagin (14 layers), allowed developing a current culture-historical model which is still relevant (Mochanov & Fedoseeva, 2013a, 2013b). Recently, an alternative chronological sequence has been suggested based on new data from stratified sites excavated in the Olyokma River basin. The radiocarbon dates were calibrated using Oxford OxCal 3.10 software instead of Godwin’s correction and the Suess curve which were applied by Mochanov and Fedoseyeva (Alekseyev & Dyakonov, 2009), and two additional cultures for the Bronze Age were identified (see section on the Bronze Age). The model suggested by Alekseyev and Dyakonov has been criticised by Mochanov and Fedoseyeva (Fedoseeva, 2010, 2011; Mochanov & Fedoseeva, 2013a, 2013b) who believe that the determination of new cultures does not have sufficient ground. However, the chronological sequence in which consequent cultures co-exist with each other during some period of time may be
more representative of the migrations which gradually occupied the territory resulting in the gradual change of the material culture assemblages.

4.2. The peopling of Siberia

The issue of peopling and first hominins in Siberia, although considerably advanced in recent decades, still is one of the most puzzling questions in Siberian archaeology. The initial human appearance in Siberia could have occurred as early as in the Early Pleistocene. The multi-layered site Karama in Altai dated to 700-800 ka may be related to the spread of *Homo erectus* (*H. ergaster*) although no osteological remains have been found yet (Chlachula, 2017; Kuzmin & Kazanskii, 2015). In East Siberia, the Zasukhino site in Trans-Baikal has been preliminarily reported as having an age earlier than 790 ka (Figure 4.1) (Kuzmin & Kazanskii, 2015). Diring-Yuryakh in the Middle Lena River basin, Yakutia, is considered as a controversial site since its initial age estimation was 3.2-1.8 Ma (Chlachula, 2017; Mochanov & Fedoseeva, 2013b). Later thermoluminescence dating supported the age of 270-370 ka which still indicates that the peopling of North-East Asia already occurred in the Lower Paleolithic (Waters, Forman, & Pierson, 1999). In the Baikal-Angara area, the Igetey locality was dated to 200 ka with an Acheulian-Mousterian tradition (G. I. Medvedev, Savel’ev, & Svinin, 1990). Researchers suggest that the earliest hominins migrations were periodic and took place during warm climate stages following the major East Siberian river valleys (Chlachula, 2017).

The next wave of colonization is represented by the cultural remains left by the Middle Paleolithic people, possibly Neanderthal. While the Altai region yields an abundant record for this period, East Siberia provides rather sporadic evidence, although there is an indication that the Neanderthal reached the Asian North. Mousterian-Levallois stone industry was also recovered from the Munkharyma site in the
Middle Viluy River basin dated to 150 ka (Mochanov & Fedoseeva, 2013a). The Last Glacial of 74-55 ka featuring very cold and hyper-arid Arctic climates has probably negatively impacted the human settlement in Siberia in this period (Chlachula, 2017), and re-colonization of North Asia took place in the next warm interstadial (55-24 ka).

The transitional time from the Late Middle Paleolithic to the Initial Upper Paleolithic is one of the most problematic, owing to the scarcity of the evidence, but fascinating periods as it is related to the dispersal of Homo Sapience while possibly other Homo populations were still present and could have participated in the colonisation of Siberia. In East Siberia, cultural layers older than 50 ka do not have reliable dates; in Cis-Baikal cultural assemblages with the estimated Late Middle Paleolithic age come from re-deposited sediments, and in Trans-Baikal, there is still little solid evidence represented by the Khotyk and Barun-Alan 1 sites which yielded Levallois assemblages (Figure 4.1) (Rybin, 2014; Tashak & Antonova, 2015). Around 50-46 ka researchers identified the almost simultaneous emergence of large blade industries characteristic for the Initial Upper Paleolithic complex in Siberia and Central Asia (Rybin & Khatsenovich, 2018). The key sites in Trans-Baikal for the Initial Upper Paleolithic are Kamenka (Zwyns & Lbova, 2019) and Podzvonkaya (Antonova & Tashak, 2016). The latter yielded a large assemblage of personal adornments such as beads and pendants made from ostrich egg shells, six pieces of stones with engraved and pecked depictions, and animal bones with tally marks (Tashak, 2009). A scenario was suggested that in the Initial Upper Paleolithic a rapid directional migration from the Russian Altai through Western Mongolia and Dzungaria to Trans-Baikal occurred around 45-43 ka. This migration brought a tradition characterised by blade-based technology and personal adornments which was present until 25-27 ka. Although this techno-complex considerably differs from the Middle Paleolithic industries, the presence of Levallois artefacts suggests some technological continuity in the tool production (Rybin, 2014; Rybin & Khatsenovich, 2018). It is tempting to relate this event to the dispersal of Homo Sapiens, but Denisovans were also present during this period which are known to have interbred with Neanderthals in the Russian Altai (Slon et al., 2018) making the correlation of cultural traditions with human species tentative until more clear evidence is found. Researchers noted that the Middle Paleolithic complex survived long into the Upper Paleolithic until at least 30 ka. On the other side, the transition from the Middle Paleolithic to the Upper Paleolithic occurred quite early, about 43 ka which is earlier than in Eastern Europe. Therefore, the coexistence of different stages was a characteristic of Siberian Paleolithic (Kuzmin, 2007a).
The dynamics of human colonisation in the Upper Paleolithic is represented by an enormously larger amount of data compared to the previous less understood periods of human history. Such high resolution of the archaeological record allowed researchers to identify several stages and Paleolithic cultures to describe the variability of material culture assemblages (Derevyanko, Markin, & Vasil’ev, 1994; M. V. Konstantinov, 1994; G. I. Medvedev et al., 1990; Mochanov & Fedoseeva, 2013a, 2013b). The evidence shows successful human adaptation to various environments including the Arctic (Chlachula, 2017; Pitulko, Pavlova, Nikolskiy, & Ivanova, 2012). The Upper Paleolithic of Siberia is characterised by higher regional diversity, and it is out of scope to discuss all the peculiarities of the cultural development in this period owing to the amount of data and interpretations developed by researchers.

However, it is importantly to emphasise that researchers pointed out a quite early appearance of art and symbolism in the Upper Paleolithic with the earliest evidence at about 43-40 ka (Kuzmin, 2007a; Lbova, 2019). For East Siberia, a large assemblage of personal adornments from Podzvonkaya has already been mentioned. A key early Upper Paleolithic Tolbaga site, Trans-Baikal, is also famous for a piece of portable art – an osseous figurine of bear head (Izuho, Terry, Vasil’ev, Konstantinov, & Takahashi, 2019; M. V. Konstantinov, 1994). Personal adornments are known from the Khotyk site in Trans-Baikal (Lbova, 2011). Ust’-Kova in the Angara basin dated to 28-30 ka yielded a figurine of mammoth (Derevyanko et al., 1994). Late Upper Paleolithic (22-13 ka) is represented by famous sites Mal’ta and Buret’ dated to 22-21 ka in the Upper Angara basin which stand out due to the amount of art objects uncovered (Lbova & Rostyazhenko, 2019). Many objects in Mal’ta were found in the context of a child burial which until recently was the only Upper Paleolithic burial in Siberia. Examples of art objects and adornments are found even in the Arctic zone. The Yana RHS site in the Yana River basin dated to 28 ka produced a rich assemblage of personal ornaments and art objects which is assumed to be the oldest in the Eurasian Arctic (Pitulko et al., 2012).

Therefore, East Siberia was densely populated by the end of the Upper Paleolithic by people who were successfully adapting to different environments and climate changes. The adaptive strategies also included symbolic behaviour evidenced by art and decorations. Thus, there is no reason to reject the possibility that rock art may have also been present in Siberia in the Paleolithic (see Chapter 6). The end of the Paleolithic epoch in Siberia is marked by the appearance of early pottery which defines the next large period in the development of human cultures.
4.3. The Neolithic Age

While in Europe the Neolithic epoch starts with the appearance of farming communities, in Russian archaeological research the Neolithic period is defined based on technological rather than economical advance. Thus, the adoption of ceramic pottery is the marker of the New Stone Age. The earliest evidence of pottery-making comes from China and Japan with dates around 20000-18000 BP and 16800-15300 BP accordingly (D. J. Cohen, 2013). In Russia, Russian Far East and Trans-Baikal are two famous areas for the presence of Terminal Pleistocene ceramics, with date around 13000-10000 bp.
4.3.1. New technology, new era.

In the Far East, the period of transition from the Paleolithic to the Neolithic, 13000-8000 bp, has been broadly accepted as Initial Neolithic instead of Mesolithic (see Kuzmin, 2000; Vetrov, 2010), and archaeologists in Buryat Republic consider the Neolithic age starting at 12000 bp, while the aceramic layers of the Final Pleistocene-Early Holocene Age are still related to the Mesolithic Age (see e.g., Ivashina & Tsydenova, 2011; M. V. Konstantinov, 1994; Tashak, 2011).

In Trans-Baikal, the sites with the earliest pottery are located in three areas: Upper Vitim valley (the Ust’-Karenga complex), the Chikoi and Menza valleys (the Studenoye-1 site), and Selenga valley (the Ust’-Kyakhta-3 site) (Figure 4.2).

The archaeological investigation of the Vitim River valley started in the 1960-1970s (Aksyonov, Vetrov, Ineshin, & Teten’kin, 2000). The northern section was surveyed by Yakutian archaeologists who correlated discovered sites with the culture-historical sequence of the Middle Lena valley. In the southern section, for many decades, the research has been conducted by the Irkutsk archaeologists. The discovery of the Ust’-Karenga archaeological complex, which consisted of 16 sites, in the 1970s and its consequent study during the following decades significantly advanced understanding of human history in the region.

Ten layers have been defined in the complex which represent the history of the Upper Vitim valley from the Final Paleolithic to the Late Iron Age (Aksyonov et al., 2000). The earliest pottery was recovered from the Layer 7 which was dated to 11000-12000 bp (Figure 4.3) (Vetrov, 2008, 2010). This ceramic tradition belongs to Ust’-Karenga culture which occupied the period 13000-5000/4500 bp. In its early stage, the lithic technology resembles those of the Mesolithic and Paleolithic Ages, and continuity in the ceramic tradition has been observed. The pottery was manufactured with the application of a paddle, and inner and outer surfaces were smoothed with plants. The upper parts of the pots were decorated by the impressions of a walking or rocking...
comb forming acute-angled zig-zags composed of either curved or straight lines (Aksyonov et al., 2000).

In the period of the Atlantikum/Subboreal transition, around 4900-4600 bp, a cultural change occurred which is represented by a change in lithic and pottery technologies (Hommel, Day, Jordan, Müller, & Vetrov, 2017). For this period, 5000/4600-3500 bp, the Ust'-Yumurchen culture has been defined. Its origins were related to migrant groups from Southern Trans-Baikal. The pottery was identified as the Posol'sk pottery style, broadly distributed in East Siberia from the Early to Late Neolithic (Vetrov, 2011).

Ust'-Karenga is a key complex for understanding the transition from the Paleolithic to the Neolithic. Although the discovery of the earliest pottery first raised severe criticism, and there are still opponents of such an early age for pottery not only in the Vitim River basin but elsewhere in Trans-Baikal (M. V. Konstantinov, 2016; Maslodudo & Konstantinov, 2017), later research proved the security of the age attribution (N. E. Berdnikova, Vorob'yova, Berdnikov, & Vetrov, 2016; Hommel, Day, Jordan, & Vetrov, 2015; Hommel, Schwenninger, Ineshin, & Vetrov, 2017).

Similar to Ust'-Karenga pottery has been reported from the site Krasnaya Gorka in the Yeravna Lakes area, Vitim basin, and the layer with this pottery produced dates which place it in the 12th and 11th Millennia BC (Figure 4.2) (Ivashina & Tsydenova, 2011; Tsydenova, 2006, p. 72; Tsydenova, Andreeva, & Zech, 2017). Although ceramic innovation was a considerable cultural change, researchers revealed a continuity in lithic technologies in the Late Paleolithic and Initial Neolithic (Tsydenova & Piezonka, 2015).

The Late Pleistocene dates for ceramics were obtained at Studenoye 1, located in the Chikoi River valley (Figure 4.2). The Neolithic Age is represented by the layers №№ 2-9 which produced dates in the range from 9890 to 10780 bp (M. V. Konstantinov, 1994; Razgil'deeva, Reshetova, & Popov, 2008). The pots of a simple parabolic form with conical bases were formed with a cord-wrapped paddle. Decoration included occasional simple pits and lines underneath the rim (McKenzie, 2009; Syomina, 1985). Another site, Ust'-Kyakhta-3, is located in the Selenga basin, and the earliest pottery from this site was dated to 11500-12500 bp (Aseyev, 2003; McKenzie, 2009; Vetrov, 2010).

There are debates about whether the technology appeared independently in different areas or gradually spread from East Asia through Siberia reaching Near East and Europe (Gibbs & Jordan, 2013). If the latter model is accepted, and Trans-Baikal was one of the bridges linking western and eastern early pottery traditions, this is an intriguing context for the earliest rock art in the region (see Chapter 6). Interestingly,
for the earliest formative period of pottery-making development distinct traditions are identified, and Trans-Baikal was related to the Middle Amur area based on similarities of stylistic and technological characteristic of ceramic vessels (Yanshina, 2017). The transition from the Paleolithic to Neolithic could have had various scenarios, and Ust'-Karenga, which is the most thoroughly dated early pottery site in East Siberia (Hommel, Schwenninger, et al., 2017, p. 33), provided a context in which the earliest pottery was adopted. It was concluded that “it may have emerged as a way of coping with stress, both economic and social, perhaps even as a way of enforcing continuity rather that change in group behaviour, creating a material focus for the sharing of gathered food within the dwelling” (Hommel et al., 2015, p. 14).

4.3.2. Cis-Baikal in the Neolithic Age

4.3.2.1. Early Neolithic mortuary traditions

The Neolithic innovation comes to the Cis-Baikal region considerably later, about 7000-8000 BP, and the chronological sequence is based on burial complexes. Bazaliiskii suggested to consider well-known units, such as Khin, Kitoi, Serovo, Isakovo, Glazkovo and Shivera, as mortuary traditions rather than cultures or periods (Bazaliiskii, 2012). This approach is reasonable, and this review of the Baikal culture history starts with the examination of mortuary traditions and follows with the sequence developed based on data from habitation sites.

The Early Neolithic Age is represented mostly by the Kitoi cemeteries and burial complexes. The latest dates on the Kitoi mortuary tradition are 7500-7000 cal BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016). “Classic” Kitoi sites are located in the upper section of the Angara valley (Lokomotiv, Kitoi, Ust'-Belaya, Galashikha etc.) and in the South Baikal (Shamanka II). Other cemeteries, similar to the “classic” Kitoi, were uncovered in the East Baikal area (Fofanovo), Olkhon area (Khotoruk, Ulan-Khada IV, Kurma XI, Shamansky Mys), Upper Lena area (Makrushino, Yushino) and northern section of the Upper Lena area (Turuka) which also includes sites in the northern section of the Upper Angara valley (further down from the mouth of the Belaya River) (Ust'-Ida I, Rasputino, Serovo) (Figure 4.2) (Bazaliiskii, 2012).

“Classic” Kitoi tradition can be characterised as the following. Cemeteries are usually located on the riverbanks and tend to be found on promontories at the mouths of tributaries on 6-10-metre-terraces, except for Shamanka II on the coast of Lake Baikal (Bazaliiskii, 2011; Okladnikov, 1950, p. 65). The deceased were interred in shallow pit graves in an extended-supine position, and the graves were arranged in rows. In contrast with other mortuary traditions, “classic” Kitoi graves lack stone structures. Distinct patterns of secondary interments and missing skulls were frequently
documented, and 96% of the Early Neolithic graves demonstrate extensive use of ochre (Bazaliiskii, 2011).

Kitoi grave goods include 60-65 categories (Bazaliiskii, 2011), among them the most numerous and the most indicative are composite fishhooks of the Kitoi type, bifacially shaped arrowheads, bone and antler harpoons, and ground and chipped nephrite adzes/axes and knives (Figure 4.4). The uncovered Kitoi graves also had many ornaments such as calcite rings, split boar tusk pendants, red deer canine pendants, and beads made of mother-of-pearl and kaolinite. However, ornaments are not culture-specific and are found throughout the Neolithic and Early Bronze Age (Okladnikov, 1950, p. 84). An exclusive category includes items of portable art such as elk heads carved in antler (Shamanka II, Lokomotiv, Ust’-Belaya, Kitoi), and stone and antler sculptures of a Baikal seal. Some functional items are also considered among the art category such as antler spoons with handles shaped into elk’s heads (Shamanka II, Lokomotiv) and stone and bone fish lures (Bazaliiskii, 2011). Pottery is rarely found in the Kitoi burials (five pieces in total) and include round-bottom vessels with net impressions (Figure 4.5:1).

Although Early Neolithic cemeteries and graves of the other Baikal areas mentioned above share many similarities with the “classic” Kitoi mortuary protocol, such as extensive usage of ochre in graves, some differences exist, such as side body position and the absence of Kitoi fishhooks (East Baikal), utilisation of stones as surface structures and also inside graves (Upper Lena, the Olkhon area). The differences in the mortuary protocol and grave goods assemblages may indicate that these cemeteries were left by autochthonous groups which constantly communicated with each other resulting in common features of their mortuary traditions (Bazaliiskii, 2012, p. 86).

Figure 4.4. Some Kitoi artefacts: harpoons, fishhooks and fish figurines (after Okladnikov, 1950).
Living sites with exclusively Kitoi cultural complexes are not known. Since ceramics are rarely found in the Kitoi graves, it was difficult to correlate burial complexes with habitation complexes. However, radiocarbon dates allow relating of the Kitoi mortuary tradition with the complexes of net-impressed pottery which is the only type ever found in the Kitoi graves, although net-impressed pottery also existed in the Isakovo-Serovo time (Khlobystin, 1996, p. 278). The rarity of pottery can be explained by the fact that in the Early Neolithic this new technology was not widely adopted, and it was suggested that the Kitoi mortuary tradition should be related with aceramic Mesolithic layers rather than with those containing net-impressed pottery (McKenzie, 2009). It was previously noted that Kitoi exhibits some Mesolithic features in lithic and osseous technologies (Georgievskaya, 1989), and this assumption is further confirmed by the fact that some aceramic layers produced radiocarbon dates which fall within the Kitoi period such as Layer 7 at Berloga (6525±100 bp), Layer 7 at Ityrkhei (7300±290 bp), and Layer 7 at Gorelyi Les (8850±300 to 5490±100 bp) (McKenzie, 2009).

4.3.2.2. Late Neolithic mortuary traditions

There is scarce evidence for burial complexes attributed to the Middle Neolithic (e.g., Novikov & Goriunova, 2012), thus the period has been defined as a “lack of archaeologically visible mortuary sites” and dated to 7000 – 5570 cal. BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016). The Late Neolithic includes four regional mortuary traditions that have been defined as Isakovo and Serovo in the Angara valley, Archaic in the Upper Lena valley, and Late Serovo in the Olkhon area of Lake Baikal (Figure 4.2) (Bazaliiskii, 2012). All four existed within the period 5570 – 4600 cal BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016).

Isakovo cemeteries and graves are also located on the Angara riverbanks where the graves are arranged in rows and have surface stone structures. Skeletal remains are found in an extended-supine position with southeast and south-southeast head orientation. No extensive usage of ochre has been recorded, ochre found only in localised patches. The grave goods assemblage is less diverse and includes only 20-25 categories among which are clay vessels with round bottoms, net impressions, and round punctuations along the rims, large composite inset points (spearheads), lithic arrowheads, large bifacial knives, ground nephrite and slate knives etc. Fishing gear is rarely found, and portable art is represented by one anthropomorphic figurine and two items of anthropomorphic facial depictions (Bazaliiskii, 2011, 2012).

Serovo tradition is synchronous with Isakovo, and in many cases, it occupies the same cemeteries. Serovo graves also feature stone structures, the deceased interred in an extended-supine position but perpendicular to the river with legs pointing
towards it (the Angara River flows to the north in its upper section). Localised patches of ochre have been documented in Serovo graves. The grave goods assemblage, which comprises 30-35 categories, includes clay vessels with smoothed net impressions, comb-like stamps, and impressions of a narrow spatula, antler plates from the composite bow, large bifacially shaped points (spearheads), clay slate ground stone adzes/axes, bone and antler harpoons, and stone fish lures. Portable art included one anthropomorphic, one zoomorphic carving (Serovo, Grave 12), and a bird carving (Ust-Illir) (Bazaliiskii, 2011, 2012).

The Archaic group shares many similarities with the Angara Serovo group, such as employment of stone structures, body position and orientation, patches of ochre, but differs in that the Archaic deceased, in many cases, were covered by sheets of birch bark, and fire pits and charred human remains were found inside graves. Fishing was more common and also included stone or osseous fish images (Okladnikov, 1978b).

The Olkhon group (Late Serovo) (Goriunova, 1997) is characterised by usage of surface stone structures and the filling of pits with rocks. The body position was extended-supine and oriented north or northwest. In graves, patches of ochre, extensive fire pits and partial cremations were recorded, and some skeletal remains were covered with birch bark. Grave goods included clay vessels, osseous bow plates, ground green nephrite or slate adzes/axes, ground knives, scrapers, bone points and fleshers etc. Among lithic artefacts there are small zoomorphic figurines (Bazaliiskii, 2011, 2012).

Numerous living sites are known for the Late Neolithic with rich cultural layers which did not contain traces of dwellings. Possibly they were chum-like light surface structures. On the other hand, many stone hearths and large storage pits were found (Khlobystin, 1996, pp. 282-284). The pits contained fish bones (Novikov & Goriunova, 2005). Habitation sites exhibit a large variety of pottery styles which are discussed below.

4.3.2.3. Stratified habitation sites

Stratified habitation sites excavated in the Angara valley (Gorely Les), Olkhon area (Ulan-Khada, Ityrkhey, Berloga, Tyshkine II, III) and Middle Yenisey Basin (Kazachka) produced a great variety of ceramics which is the most numerous and characteristic category for building a culture-history sequence (Figure 4.2). Since the model presented below is alternative to mortuary traditions and based only on pottery

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12 A chum is a temporary dwelling used by nomadic peoples of Siberia.
styles, the units of the sequence are conventionally identified as “ceramic strata/layers” (*plasty*) (Savel’ev, 1989).

For the Early Neolithic Age, two ceramic types are known. Net-Impressed pottery is the earliest type in the Cis-Baikal area and often occurs together with the Khaita type (cord-impressed pottery) in one layer (Figure 4.5:1,2). The impressions of a net are the result of a manufacturing technique using a net as a support when forming a vessel. This technique is considered as autochthonous and was used in the Late Neolithic as well (Berdnikov, 2013; Berdnikov, Sokolova, & Ulanov, 2017; Goriunova & Novikov, 2017). Net-impressed pottery is widely distributed from the Central Yenisey basin in the West to Yakutia in the East, where it is characteristic of the Early Neolithic Syalakh culture, Yakutia. Two types were identified, and the early Neolithic Net-Impressed pottery I at Cis-Baikal sites dates from 7800 bp to 5500 bp (Berdnikov, 2013) or 8200-7000 BP (Goriunova & Novikov, 2017). This pottery style was found not only in the Early Neolithic Kitoi graves but also in Late Neolithic Isakovo and Archaic burial complexes. Net-Impressed pottery II has net impressions smoothed out and decoration consisting of small pits or stamps around the rims. It is usually found in the Serovo graves and rarely recovered from the Late Neolithic Layers at habitation sites, thus suggesting the existence of Net-Impressed until 4000 bp (Khlobystin, 1996, p. 291; Mamonova & Sulerzhitski, 1989).

The Khaita type pottery has impressions of a cord owing to the application of a cord-wrapped paddle during the manufacturing of vessels (Berdnikov, 2013; Khlobystin, 1996; McKenzie, 2009). This technique is assumed to originate in South-East and Central Asia (Tsydenova, 2012), and cord-impressed pottery is widely distributed in the Central Yenisey basin and in Trans-Baikal where it is considered as the earliest style (Khlobystin, 1996, p. 291). The Khaita style is a specific cord-impressed

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*Figure 4.5. Key Neolithic pottery styles of the Baikal region. 1 – Net-impressed, 2 – Khaita, 3 – Posol’sk, 4 – Ust’-Belaia (after Ulanov & Berdnikov, 2015).*
type of pottery which, additional to cord impressions, has a series of vertical and horizontal incised lines forming herringbone patterns and other geometric motifs on the upper half of the vessels (Savel’ev, 1982). Khaita pottery is widely distributed and was recovered from stratified sites in southern and northern Angara valley, Upper Lena valley, Cis-Baikal area and at some sites of Trans-Baikal. Usually it occurs in the same layers with the early Neolithic Net-Impressed Pottery I, dating to the period 7800-5500 bp (Berdnikov, 2013) or 8200-7000 BP (Goriunova & Novikov, 2017). However, the Khaita pottery is also found in association with Posol’sk Pottery, suggesting that it persisted well into the Middle Neolithic, until 4300 bp (Nomokonova & Goriunova, 2004). There is only one case when the Khaita pottery was reported being found in the Early Neolithic grave (Kichigin, Emel’yanova, & Korostelev, 2019).

The Posol’sk style is a cord-impressed pottery which includes pots with a pronounced neck and an additional band of clay thickening the rim (Figure 4.5:3). The pots have rich decorations in the upper part made by the stab-and-drag technique. The style is widely distributed in the Cis-Baikal area and Central Yenisey basin. Okladnikov related the Posol’sk pottery with the Kitoi culture because the latter was considered as Late Neolithic, although the Posol’sk pottery has never been found in graves (McKenzie, 2009; Okladnikov, 1950). However, some evidence suggests that in the Central Yenisey basin, Posol’sk pottery is present in the Early Neolithic layers at the stratified sites, Cave Eleneva, Kazachka, and Nyasha, dating to the period from 6900 to 4080 bp (Makarov, 2012). On the eastern coast of Lake Baikal, Posol’sk pottery was found in the same layers with Khaita Pottery and Kitoi fishhooks suggesting the coexistence of Kitoi and Serovo cultural complexes during the Middle Neolithic 5500-4300 bp (Nomokonova & Goriunova, 2004).

Ust’-Belaia pottery was manufactured using a smooth paddle, and sometimes net impressions occur (Figure 4.5:4). The rims were thickened with an additional band of clay, and the pots were fully decorated with impressions of blades or spatulas, stab-and-drag technique designs, and comb or coggled stamps. Ust’-Belaia pottery is widely distributed in the Cis-Baikal region and Central Yenisey basin, occupying the same layers as the Posol’sk pottery dating from 6600 bp to 4100 bp. The earliest dates were produced from sites in the Yenisey area, however, the origins of this pottery are not clearly understood, and it is assumed that it may have originated from the Minusinsk basin (Berdnikov, 2013).

Hence, according to available data, the identified ceramic complexes cannot be directly correlated to Neolithic mortuary traditions as Net-Impressed Pottery and Khaita Pottery have older dates than those available for the Kitoi graves. Later ceramic
complexes, Posol'sk and Ust'-Belaia, appeared during the late Kitoi time and continued into the Late Neolithic in which a great diversity of styles is present. Interestingly, the trend towards distinction between burial ceramic styles and those found only within habitation complexes is present during the whole Neolithic age. In addition, this sequence shows a quite continuous development with no gap in the Middle Neolithic Age.

4.3.2.4. The question of continuity/discontinuity in the Neolithic – Bronze Age history of the Cis-Baikal region

Initially, the first extensive radiocarbon studies revealed a substantial gap in the Neolithic chronology in the 5th Millennium BC (Mamonova & Sulerzhitski, 1986, 1989). Although this gap was based on analysis of bone samples from burials, the hypothesis of cultural discontinuity in the Middle Neolithic occupied a central position in the BAP inquiry. All the studies were based on the comparison between the burial complexes of Kitoi and that of combined Isakovo-Serovo-Glazkovo, thus creating a bias toward this opposition and toward greater focus on mortuary data (e.g., see A. W. Weber & Bettinger, 2010; A. W. Weber, Katzenberg, & Schurr, 2011). In the early 2000s, the gap was interpreted as cultural discontinuity suggesting “a complete or almost complete depopulation of the area at the end of the Kitoi period” (A. W. Weber & Link, 2001, p. 144). By the 2010s, the interpretation of hiatus became more cautious and it was defined as the “lack of archaeologically visible mortuary sites” (A. W. Weber, White, et al., 2011, p. 525).

The question of discontinuity has been addressed from different aspects. First of all, adaptation strategies and ancient diets were studied, and it was concluded that there was a greater reliance on fishing rather than on hunting in the Early Neolithic as compared to the Late Neolithic-Early Bronze Age. In the latter period, the diet, and consequently, the adaptation strategy was more balanced between fishing and hunting (A. W. Weber & Link, 2001). The hypothesis was further supported by an evidence for biological discontinuity which was first suggested by Gerasimov (Gerasimov, 1955). Later, Mamonova suggested that a greater difference existed between Kitoi and other populations (Serovo, Glazkovo) than was the case between Serovo and Glazkovo, based on craniological studies (Mamonova & Sulerzhitski, 1989). The study of mtDNA showed that a substantial change occurred with the Cis-Baikal population between Early and Late Neolithic (Mooder, Thomson, Weber, Bazaliiskii, & Bamforth, 2011). Although the mtDNA haplogroups presented by the Early Neolithic samples were also produced by the Late Neolithic samples, but in much smaller proportion, it was concluded that this evidence supports the notion of biological discontinuity in the Middle Holocene
population. Late Neolithic samples showed a different structure of the mtDNA pool and two new haplogroups, which may represent the arrival of new groups. The analysis of Y-chromosomal DNA revealed an even more distinct pattern showing little resemblance in the Y-chromosomal haplogroups (only one out of 20 analysed Late Neolithic-Early Bronze Age males shared K-M9 haplogroup with Early Neolithic samples) (Moussa et al., 2016).

However, other evidence supports biological continuity. The study of dental non-metric traits suggested that some genetic admixture between groups could have occurred in the area, but the difference of trait frequencies between Early Neolithic and Late Neolithic-Bronze age populations is minor (Waters-Rist et al., 2016). The study of non-metric cranial traits also revealed biological continuity although suggesting some genetic flow, or drift, in the Angara valley, most likely owing to the arrival of new populations (Movsesian, Bakholdina, & Pezhemsky, 2014; Movsesian & Pezhemsky, 2015). The authors also noted a greater resemblance between Kitoi and Glazkovo samples than between Kitoi and Serovo and proposed a scenario which implied that Early Neolithic groups might have migrated to the adjacent areas and their descendants later returned to the ancestral territory. This idea is of interest when one considers that Okladnikov placed Kitoi prior to Glazkovo in his sequence because he saw more resemblance in material culture between Kitoi and Glazkovo complexes, such as fishhooks, arrowheads, antler hoes, nephrite items, and portable art, domination of fishing gear in grave goods assemblages indicating more reliance on fishing than on hunting, and infrequent occurrence of pottery in graves, as compared to between Kitoi and Serovo or Serovo and Glazkovo (Okladnikov, 1950, p. 90).

Thus, in terms of biological continuity/discontinuity, only the study of Y-chromosomal DNA revealed a clear distinction in the Early Neolithic and Late Neolithic-Early Bronze Age sets of haplogroups. Other studies did not support the notion of complete depopulation in the Middle Neolithic. Even though there are clear indications of the arrival of migrant groups, the Early Neolithic population did not disappear and contributed to the gene pool of Late Neolithic populations as well as to the genetic composition of the modern Siberian peoples (see Mooder et al., 2011).

The notion of cultural discontinuity also raises some questions. Russian researchers did not agree with this hypothesis pointing out the resemblance of material culture in the Early and Late Neolithic complexes (Bazaliiskii, 2012; N. E. Berdnikova, 2012). Kuzmin severely criticised the idea of hiatus stating that it “may be an artifact of the limited sampling rather than a pattern in the archaeological continuity” (Kuzmin, 2007b, p. 127). Even though there is a gap in the chronology of mortuary traditions, the
data from habitation sites shows continuous occupation of this territory in the Neolithic-Bronze Age. Okladnikov noted that all culture-historical stages shared a number of common characteristics, including technologies (ground items, net-impressed pottery), artefact types (triangular arrowheads), and adornments (boar tusk pendants and red deer canine pendants) (Okladnikov, 1950, p. 84). Interestingly, the culture history based on burials does not correlate with the sequence of ceramic styles, and numerous attempts to solve this riddle have not succeeded. Possibly, the Neolithic and Bronze Age history in the Cis-Baikal region is too intricate to fit archaeologists’ neat culture-historical units.

4.3.3. Yakutia in the Neolithic

According to the model developed for the Yakutian Neolithic, The Early Neolithic Syalakh culture occupied the period 6500–5200 BP\textsuperscript{13} according to Mochanov and Fedoseeva (2013a), or 4870±170 to 3490±150 BC after Alekseyev and Dyakonov (2009). The sites with the characteristic Syalakh material culture have been recorded throughout North-East Asia (Figure 4.2) (Mochanov & Fedoseeva, 2013a, pp. 201-204). Although, some data had been uncovered in the late 19th Century and the first half of the 20th Century, the identification of the cultural complex did not occur until the excavation of the stratified sites in the Aldan River basin where the complex occupied a clear position between the Early Holocene Paleolithic Sumnagin culture and the Middle Neolithic Bel’kachi culture. Unfortunately, the Syalakh culture is represented only by habitation sites since no mortuary complexes have been found to date.

Living sites are usually located on riverbanks in areas which are rich in fish and game. It was noted that, in many cases, there are two sites close to each other, one occupying the lower level on the bottom land, and the other being located on the upper terrace. The lower sites were occasionally flooded and, therefore, exhibited clear stratigraphy, while the upper sites were continuous and produced rich habitation debris. For instance, the site Kullaty-2, located above the bottom land, produced a deep storage pit which was laid out with birch bark and contained bones of elk and fish. At every site, stone hearths are found and habitation debris are concentrated around them, although the traces of dwellings have not been detected (Mochanov & Fedoseeva, 2013a, pp. 205-206).

The most characteristic features of the Syalakh culture which distinguish it from the previous Sumnagin culture are the adoption of pottery and the appearance of fully ground tools (Figure 4.6:1).

\textsuperscript{13} The radiocarbon dates were adjusted using Godwin’s correction and the Suess curve.
The lithic assemblage includes such categories as hunting and fishing gear, and tools for working bones, wood, skin, and producing other lithic tools. The lithic technology is based on the manufacturing knife-like blades from prismatic cores. Typical tools are ground adzes/axes and axes with “ears” – rounded projections on the sides of the axe (Figure 4.6:2). Another important difference from the previous lithic complex is the dominance of a bifacial retouching technique represented in knives, arrowheads, spearheads, and javelins (Mochanov & Fedoseeva, 2013a, pp. 209-211).

The pottery featured impressions of a net or a woven fabric which were used as a base while manufacturing. In some cases, the net impressions were slightly smoothed out (Figure 4.6:1). The rims were decorated with rows of oval, hatch-like or cogged impressions. Below the rim, the pots were featured with oval or round apertures arranged in a horizontal row. A very specific characteristic of Syalakh pots was that under the row of apertures, an additional band of clay was attached. In general, the pottery is believed to be similar to the net-impressed pottery from Isakovo cultural complexes except for the additional band of clay (Mochanov & Fedoseeva, 2013a, pp. 212-215).

The faunal remains at these sites are dominated by elk, although the bones of reindeer, brown bear, roe deer, musk deer, duck, and grouse have also been found. There is scarce evidence for fishing such as the rare occurrence of fish bones, pebble sinkers, and net-impressed pottery. The latter may indicate the usage of nets for fishing, and the high proportion of adzes/axes may imply their usage for building boats (Mochanov & Fedoseeva, 2013a, p. 216).

The origins of the Syalakh culture is not clear, and Mochanov supposes that it may be related to the migration from Trans-Baikal (Mochanov & Fedoseeva, 2013a, p. 217). Although there is the same pottery manufacturing technique in Cis-Baikal where it has earlier dates, the Syalakh pots have an additional band of clay, and there are some differences in lithic assemblages. However, the Early Neolithic complexes of Trans-

Figure 4.6. Early and Middle Neolithic artefacts from Yakutia. 1, 2 – Syalakh culture, 3 – Bel’kachi culture (after Mochanov & Fedoseeva, 2013).
Baikal are insufficiently studied to draw such a conclusion which seems to be rather a prediction.

The Middle Neolithic Bel’kachi culture was dated to the period 5200-4100 BP (Mochanov & Fedoseeva, 2013a, p. 268), or to 4100±300 to 2160 ±150 BC (Alekseyev & Dyakonov, 2009). It occupied the same wide area as the previous Syalakh culture, and the main differing characteristic is the cord-impressed pottery (Figures 4.2, 4.6:3). Pots had rounded or slightly pointed bottoms. Two types of pots were identified based on the decorations: the first one had a horizontal row of apertures under the rim; and the second had a rim thickened with an additional band of clay which was further decorated with a coggde stamp (Mochanov & Fedoseeva, 2013a, pp. 272-276).

There is a rich and diverse bone and horn assemblage which includes composite arrowheads, spearheads, daggers, harpoons, awls, ithyphallic items, horn handles of adzes/axes, bow plates, and flat ornamented plates. It is worth mentioning that the occurrence of composite fishhooks in the Shilka cave and the Bukhusan cemetery, similar to those found in Trans-Baikal, was noted (Mochanov & Fedoseeva, 2013a, p. 274).

The Middle Neolithic inhabitants of Yakutia organised their camps and settlements at the same places and led the same lifestyle hunting mostly elk as did Early Neolithic peoples. The living sites produced stones hearths around which habitation debris were concentrated. In some instances pieces of ochre and graphite were found (Mochanov & Fedoseeva, 2013a, p. 278).

In contrast to the Syalakh culture, a number of mortuary complexes identified as Bel’kachi have been unearthed. Most of them were found in the context of habitation sites, Rodinka 2, Onn”es, Khaiyrgas, Malaya Dzhikimda, Uolba, Kangalassy, and only one separate cemetery, Tuoi-Khaya in the Vilyui River basin, is known to date (Figure 4.2) (Mochanov & Fedoseeva, 2013a, pp. 279-290). In total, there are 15 graves. The mortuary protocol can be described as following. The deceased were interred in shallow pits (<50 cm deep) with no surfaces stone structures, in an extended-supine position with legs pointed to the river. The graves and skeletal remains were extensively covered by ochre. The grave good assemblages included lithic toolkits, bone items such as awls, knives, harpoons and composite fishhooks, Bel’kachi-type adzes and cord-impressed pottery. In some graves, beads made from shells of river molluscs and eggshells were recovered. Anthropological studies indicated that in Onn”es, an adult male of Baikal anthropological type was interred, and in Rodinka, a young female (20-25 years old) had a combination of Arctic and Baikal features.
The Late Neolithic-Eneolithic Ymyyakhtakh culture occupied the period 4100-3300 BP (Mochanov & Fedoseeva, 2013a, p. 369) which is synchronous to the Early Bronze Age in the Baikal region. Since they share some features, it is more reasonable to consider this Ymyyakhtakh culture in the next section on the Early Bronze Age.

4.3.4. Trans-Baikal in the Neolithic Age

4.3.4.1. Early Neolithic complexes

The Early Neolithic of Trans-Baikal is represented by a number of cemeteries and individual burials which were found throughout the area and exhibits mortuary protocols which share similarities with the Kitoi mortuary tradition in the Cis-Baikal region. The most well-known cemetery is Fofanovo, located in the Lower Selenga River basin and discovered by Okladnikov in 1926 (Figure 4.2) (Lbova, Zhambaltarova, & Konev, 2008; Okladnikov, 1927). To date, Early Neolithic cemeteries have been studied also in the Vitim River valley (Bukhusan and Stary Vitim-2) and in the basins of the Onon, Ingoda, and Shilka Rivers (Lake Nozhiy, Aryn-Zhalga, Molodovskii, Arta, Duroisky) (Figure 4.2) (Ivashina, 1979; Lbova et al., 2008; Okladnikov & Kirillov, 1980; Vetrov & Lyudnikov, 2014). In addition to the cemeteries, numerous individual graves have been unearthed (see Lbova et al., 2008). Most of the burial complexes were determined as Early Neolithic based on similarity of mortuary protocol and grave good assemblages with the Kitoi mortuary tradition, such as the absence of surface stone structures, irregular head orientation, extended-supine position of the deceased, high portion of collective and paired burials, presence of burials with no skull or others where only a skull is present, and extensive usage of ochre. The grave good assemblages included such Kitoi items as calcite rings, split boar tusk pendants, red deer canine pendants, and beads made of mother-of-pearl and kaolinite and grounded adzes/axes. Pottery was rarely found. Only 29 radiocarbon dates are available for the samples from Western and Northern Trans-Baikal, and these place the identified burials in the period from 7500 to 6300 bp, or from 6600 to 5200 cal. BC (Lbova & Zhambaltarova, 2009). Thus, surprisingly, it appears that the burial complexes similar to Kitoi have earlier dates in Trans-Baikal as compared to Cis-Baikal where Kitoi mortuary tradition was dated to 7500-7000 cal. BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016).

In addition to the burial complexes in Western Trans-Baikal, a few habitation sites are considered as Early Neolithic, such as Kibalino-1, 2, and Mukhino (Figure 4.2). The latter has been regarded as a key stratified site for defining the Early Neolithic Mukhino stage in Western Trans-Baikal, which is dated to 4000-2500 BC, based on typological similarities with Cis-Baikal and Yakutia sites (Ivashina, 1979; Ivashina & Tsydenova, 2011; Okladnikov, 1970). The pottery recovered from the Early Neolithic
layer bore net impressions on the surface, which is a clear indication of the early age for some researchers (Aseyev, 2003), although net-impressed pottery is considered as broadly distributed in time and space by others (McKenzie, 2009).

In Eastern Trans-Baikal, the Chindant stage has been defined based on materials from one-layered site of Chindant in the Onon River basin which was excavated by Okladnikov in 1965-1966 (Okladnikov & Kirillov, 1980). Based on the typology of the lithic assemblage and its similarities with artefacts from the Middle Amur basin, Mongolia, and South Siberia, the site was dated to 4000-2500 bc (Ivashina, 1979; Khlobystin, 1996; Okladnikov & Kirillov, 1980). The pottery, thin-walled with straight walls and rounded bottoms, featured impressions of a cord- or grass-wrapped paddle on the external surface, and the decorations in the upper third were made by a comb or wedge-shaped implement. The early age of the site was supported only by palynological analysis which indicated steppe rather than taiga forest (Okladnikov & Kirillov, 1980), and other researchers claimed the Middle Neolithic Age for this cultural complex (see below) (Grishin, 1981; Okladnikov, 1970).

4.3.4.2. Middle and Late Neolithic complexes

There is no broadly accepted up-to-date model for these periods, and existing views contradict each other in the chronological interpretation of the few stratified sites excavated to date. Therefore, this subsection starts with a discussion of these key sites and the materials upon which the existing viewpoints are based. Some of these sites also produced materials related to the following Eneolithic-Bronze Age, a period which will be reviewed in the next section. A synthesis of knowledge on the Neolithic of Trans-Baikal was carried out by Grishin (1981), and his work will be discussed in the end of this sub-section.

4.3.4.2.1. Western Trans-Baikal

Posol’sk is a stratified site in the lower Selenga valley (Figure 4.2). Depending on the interpretation, it consisted of two, three, or more layers (see Tsydenova & Khamzina, 2006). Since the stratigraphy was not clear, two ceramic complexes were identified. One included round-bottomed pots with an additional band of clay (later known as the Posol’sk pottery) and flat-bottomed pots decorated with cord-impressions and pinches which are characteristic for the Bronze Age (Ivashina, 1979). In a recent analysis (Tsydenova & Khamzina, 2006), the Khaita, the Ust’-Belaia, and the North Baikalian styles were also identified in addition to the Posol’sk pottery. At the Posol’sk site, a radiocarbon date of 5750±110 bp (GIN5792) has been obtained from the layer containing the Posol’sk Pottery (Tsydenova & Khamzina, 2006). Another date provided for the Posol’sk pottery at the site is 4630±150 bp (GIN-6294) (Nomokonova
At the site, storage pits with assemblages of pebble tools and fish bones were found, and also fishhooks were recovered.

Yartsy Baikal’skiye is a stratified site located at the eastern coast of Lake Baikal (Figure 4.2). Three cultural complexes were identified. The complex attributed to the Middle Neolithic was recovered from Layer 2b in the Central complex and Layer 2 in the Southern complex, and is represented by cord-impressed pots, the upper parts of which were decorated with impressions of a back-stepped paddle or spatula. The lithic assemblage included micro-blades and wedge-like cores. The artefacts were found mostly near fireplaces. The next assemblage exhibited the pottery analogous to Glazkovo. The pots were smooth-walled and decorated with a row of pearl-like reliefs under the rim produced by the pressure from inside. They were recovered from Layer 2a in the Central complex and Layer 1 in the Southern complex. The last assemblage was recovered from Layer 1, Central complex. The pots were thin-walled and decorated with impressions which formed dotted parallel belts. This assemblage occupied a position above Glazkovo (Ivashina, Tsybiktarov, Tsydenova, & Simukhin, 2011; Ivashina & Tsydenova, 2011).

Okunevaya-4 and Katun’-1 are stratified sites located in the Chivyrkui Bay of Lake Baikal (Figure 4.2). At Katun’-1, the Khaita, Posol’sk and Net-Impressed pottery types were recovered from Layers 6 and 7 with the lithic assemblages typical for Kitoi and Serovo and were dated to 5500-4300 bp (Nomokonova & Goriunova, 2004). The Okunevaya-4 site produced Posol’sk pottery (Layer 4) and was dated to the Middle Neolithic (Goriunova & Lykhin, 1985).

Sanny Mys is a stratified site located in the Uda River basin and is comprised of 7 cultural layers most of which produced Paleolithic and Mesolithic complexes (Figure 4.2). Layer 2 was attributed to the Middle Neolithic since it exhibited the cord-impressed pottery with “cornice”-like thickened rims decorated with impressions of comb stamps and spatula. Layer 1 was related to the Bronze Age (Ivashina & Tsydenova, 2011). An alternative preliminary interpretation of the layers has been proposed, based on palynological studies, suggesting that layers 4-6 accumulated during the Neolithic period (Lbova, Kolomiets, & Savinova, 2007). This analysis was carried out on a new geological section, and it is not clear how it correlates with the previously excavated section and with material culture assemblages.

A ceramic complex which shares similarities with the Posol’sk pottery was uncovered at the stratified site of Mukhanskiye Ozera in the Uda River basin (Figure 4.2). It produced two cultural layers, the upper was related to the Middle Ages, and the lower to the Middle Neolithic for which the date 4620±110 bp (SOAN-6605) has been
obtained. The Neolithic artefacts were uncovered in a concentrated pattern, and this find was interpreted as a possible dwelling (Tsydenova, 2009).

Nizhnyaya Berezovka is a stratified site located in the lower Selenga valley. It contained two layers. Layer 1 produced pottery with chess- or textile-like impressions made by a ribbed paddle, as well as tripods, lithic artefacts, bones of domesticated animals (horse and bull), and metal items such as fragments of bronze knives and semi-sphere plaques. Layer 2 contained sherds of egg-shaped pots which were decorated with a back-stepped spatula. The lithic assemblage included arrowheads, scrapers, cores, knife-like blades and the shanks of fishhooks. In this layer, stone hearths and storage pits with fish scales were also uncovered. Layer 1 was related to the Karasuk\textsuperscript{14} time, based on findings of tripods and bronze items. Layer 2 was related to the Middle Neolithic since the lithic assemblage was similar to Kitoi and Serovo, and pottery was net-impressed, cord-impressed, and featured an additional band of clay under the rims (Ivashina, 1979).

In addition to habitation sites, there are a few burial complexes which are related to the period of the Middle-Late Neolithic period. These sites include three burials from cemetery Bukhusan with radiocarbon dates of $4520\pm50$, $4780\pm80$ and $4670\pm90$ bp respectively (Mamonova & Sulerzhitski, 1989). These burials fall in the period when the Serovo mortuary tradition was practiced in the Cis-Baikal region, and, moreover, they have some similarities in the mortuary protocol (Lbova et al., 2008). These Bukhusan burials featured stone surface structures and the deceased were interred on their right side with flexed legs and head oriented to the north-east. In the graves, patches of ochre were documented. The grave good assemblages included mainly fishing, but also hunting gear, as well as pottery with cord-impressions. Possibly, the adaptation strategy was closely related to the harvesting of Yeravna Lakes. Mamonova and Sulerzhitsky noted that the dispersal of radiocarbon dates produced by the Bukhusan cemetery allows the definition of four chronological groups which coincide with 1950-year lake dynamics identified by previous research (Mamonova & Sulerzhitski, 1989).

Most of the sites described above were studied during the Soviet time and provided data for the development of the culture-historical model which was proposed by L. G. Ivashina (Ivashina, 1979). For the Neolithic Age, she identified three stages: the Early Neolithic Mukhino stage ($4^{th}$ Millennium uncal. BC) based on material from the Mukhino site discussed above; the Middle Neolithic Nizhne-Berezovka stage ($3^{rd}$

\textsuperscript{14} The Karasuk culture was originally identified in South Siberia and related to the Late Bronze Age (Teploukhov, 1929).
Millennium uncal. BC) based on materials obtained from the site Nizhnyaya Berezovka, lower layers of the Posol'sk site and upper layers of the Sannyi Mys site; and the Late Neolithic Bukhusan stage (the end of 3rd Millennium uncal. BC – the beginning of 2nd Millennium uncal. BC) based on the Kitoi mortuary complexes unearthed at the Bukhusan cemetery (at that time Kitoi was still considered as Late Neolithic) and materials from 15 disturbed dune sites in the Yeravna Lakes area. Obviously, the latter stage, owing to the radiocarbon studies, is not recognised to date (Mamonova & Sulerzhitski, 1989). Research conducted after this model had been proposed have not significantly clarified the culture-historical framework. The updated viewpoint is represented in a recent summary on the archaeology of Buryatia (Ivashina & Tsydenova, 2011). According to the authors, the Middle Neolithic (5500-4500 bp) of Western Trans-Baikal is represented by complexes with the Khaita, Posol'sk, and Net-Impressed pottery and by the following sites: Posol'sk (Layers 2A-2B), Katun’-1 (Layers 7-6), Okunevaya-4 (Layer 4), Yartsy Baikal’skiyeye (Layer 2, Southern complex, layer 2b, Central complex), Mukhanskiye Ozera (Layer 2) and Bukhusan cemetery (graves №№ 3,6,13). The Late Neolithic (4500-4000 bp) is represented by complexes with the Ust’-Belaia Pottery and by the sites Posol’sk and Nizhnyaya Berezovka (Layer 2). However, it is not reasonable to relate the complexes which exhibited the Ust’-Belia pottery to the Late Neolithic, since the occurrence of the ceramic style in the Central Yenisey Basin and Cis-Baikal is dated to the period from 6600 bp to 4100 bp, thus indicating its appearance at the end of the Early Neolithic. There is also not enough data and radiocarbon dates to distinguish between the Middle and Late Neolithic. Some complexes attributed to the Middle Neolithic have produced dates in the range of 4500-4700 bp (Posol’sk, Mukhanskiye ozera, Bukhusan – see above), thus they can be equally regarded as Late Neolithic. In the Cis-Baikal region, there is no clear time boundary between the Middle and Late Neolithic ceramic complexes as well. Most of them appeared in the Early Neolithic and continued to exist well into the Late Neolithic. The Bukhusan burial complexes share similarities in the mortuary protocol with the Serovo tradition, which is regarded as Late Neolithic and documented from 5200 bp. Therefore, the distinction between the Middle Neolithic and Late Neolithic complexes and the time boundary of 4500 bp in Trans-Baikal Neolithic appears to be rather artificial.

4.3.4.2.2. Eastern Trans-Baikal

In Eastern Trans-Baikal, the culture-historical sequence developed in the 1970s (I. I. Kirillov, 1979b; Okladnikov & Kirillov, 1980) is still relevant. Kirillov identified three Neolithic cultures which were locally distributed: the Onon culture in
the Steppe zone; the Doroninskaya culture in the Forest zone (this culture was later reconsidered as Early Bronze Age, see below); and the Shilka in the Shilka River basin (I. I. Kirillov, 1979b). In addition, three stages were determined: the Early Neolithic Chindant discussed earlier; the Middle Neolithic Budulan based on the materials recovered from the habitation sites of Budulan and Aryn-Zhalga and the cemetery Lake Nozhiy; and the Late Neolithic Amogolon based on materials from disturbed dune sites (I. I. Kirillov, 1979b; Okladnikov & Kirillov, 1980). The site Aryn-Zhalga has been related to the Middle Neolithic based on similarities of pottery and lithic items to those of the Serovo cultural complex (now considered Late Neolithic), and the cemetery Lake Nozhiy has been related to the Early Neolithic based on similarities with the Kitoi mortuary protocol (Lbova et al., 2008). Palynological analysis of the site Aryn-Zhalga indicated that the cultural deposits accumulated during the time when climate was humid, and pine- and birch-dominated forest spread (Okladnikov & Kirillov, 1980). In the Budulan stage, the lithic assemblage combined both crude items made from pebbles and micro-blades. Pots had defined rims and rounded bottoms and exhibited impressions of a coarse fabric or grass-wrapped paddle. Upper parts of the pots were decorated with stamping impressions (Okladnikov & Kirillov, 1980). The Neolithic mortuary complexes have been determined based on the similarities of recovered artefacts to those from habitation sites in the area (I. I. Kirillov & Verkhoturov, 1985). The continuity in the material culture assemblage was noted in that the lithic and ceramic traditions are generally the same as in the previous stage, although the proportion has slightly changed. There are more knife-like blades and flaked items and less front cores and micro-blades (Khlobystin, 1996; Okladnikov & Kirillov, 1980). However, this culture historical sequence is based on scarce data, lacks radiocarbon dates and has not been reconsidered since it was first introduced.

More research has been done in other areas of Eastern Trans-Baikal. The Vitim River basin was considered above in a context of the earliest pottery. This ceramic tradition existed well into the Holocene and the change is related to the period of 5000/4600-3500 bp for which the Ust'-Yumurchen culture has been defined. The new ceramic tradition shared similarities with the Posol'sk pottery style, broadly distributed in East Siberia and was interpreted as an evidence for migration from Southern Trans-Baikal (Vetrov, 2011).

Many stratified complexes were excavated in the basins of the Chikoy and Menza Rivers in South-Western Zabaikalsky Krai. The authors of excavations maintain the view on the continuous cultural development in the region from the Paleolithic into the Bronze age identifying consequent stages, Early Neolithic 7000-5500 bp, Middle
Neolithic 5500-4500 bp and Late Neolithic 4500-3800 bp (M. V. Konstantinov, Yekimova, & Vereshhagin, 2016). The problem with these complexes is that the layers containing them yielded Late Pleistocene radiocarbon dates, and many researchers consider them as complexes with earliest pottery (McKenzie, 2009; Razgil’deeva et al., 2008; Razgil’deeva & Yanshina, 2014), the viewpoint which is not accepted by principal excavators.

As was mentioned previously, the only model considering both Eastern and Western Trans-Baikal in detail was drawn by Grishin (1981). His three stages, Mukhino, Chindant and Budulan (Early, Middle and Late Neolithic accordingly) repeat Okladnikov’s earlier scheme (Okladnikov, 1970)\(^\text{15}\). The Muchino stage was considered in the previous sub-section. The Chindant stage was defined based on the materials of the Chindant site in the Onon River valley. Although Kirillov related the site to the Early Neolithic and identified the Early Neolithic Chindant stage in the archaeology of South-Eastern Trans-Baikal (Okladnikov & Kirillov, 1980), Grishin saw similarity in the pottery unearthed from the site with the Middle Neolithic Bel’kachi pottery of Yakutia. He related other sites to this period, such as Ust’-Liski, Khir-Khira, and Kyshtak. Based on these materials, the Chindant stage was described as featuring pottery with imprints of threads or fabrics on the surfaces with simple ornamentation under the rim such as belts of round impressions, horizontal lines, grooves, impressions of paddle and comb. Lithic assemblage included some tools resembling Late Paleolithic forms, although a large part of tools was made from blades. The next Budulan stage, although it refers to Kirillov’s Middle Neolithic Budulan stage, was related to the Late Neolithic–Early Bronze Age and included sites from both Eastern and Western Trans-Baikal, such as Novaya Bryan’, Chichiyen, Aryn-Zhalga, Budulan, Gromatukha, Doroninskaya-3, Nizhnyaya Beryozovka, and Duroy. The pottery of this stage was marked by more pronounced complexity of forms and ornamentation covering a vessel from the bottom to the rim. In addition to vessels with impressions of threads and fabrics, pottery with waffle-like impressions appeared. The lithic assemblage, in addition to the previous types, included triangular points, grinding stones and pestles, discs with perforated holes, and ground adzes and chisels. The first metal artefacts were assumed to appear in the end of this period.

The problem with this model is that it is based on analogies with archaeological artefacts from adjacent Cis-Baikal and Yakutia. While the Neolithic model of Yakutia was developed through the extensive application of radiocarbon dating

\(^{15}\) However, in his essay on the prehistory of East Siberia and Far East, the issue of the Neolithic of Trans-Baikal was briefly touched with only a table of stages provided (Okladnikov, 1970, p. 91).
and excavations of multi-layered settlement sites in the 1960s (Mochanov & Fedoseeva, 1980), and in general is still relevant, radiocarbon dating of Cis-Baikal material resulting in the radical reconsideration of the Neolithic sequence of cultures did not occur until the late 1980s (Mamonova & Sulerzhitski, 1989). Another review of the Trans-Baikal Neolithic can be found in Aseyev (2003), but it was out of date long before it was published since it still referred to the Okladnikov’s model for the Baikal Neolithic.

4.4. Early Bronze Age

The Eneolithic Age and the Early Bronze Age started with the appearance of copper and bronze artefacts respectively and/or the evidence for metal casting manufacture in the archaeological record. Since, owing to the scarcity of data and research, it is impossible to distinguish between Eneolithic and Early Bronze Age sites, these terms are used interchangeably.

Figure 4.7. Early Bronze Age of the Baikal region (key cultural groupings and sites mentioned in the chapter) and synchronous Late Neolithic-Early Bronze Age Ymyakhtach culture of Yakutia. 1- Fofanovo, 2 – Yartsy Baikal’skiye, 3 – Bukhusan, 4 – Kharga 1, 5 – Alexandrovka, 6 – Doroninskaya-4, 7 – Darasun, 8 – Kunkur 1, 9 -Kirochi, 10 – Shev’ino, 11 – Chuchur-Muran, 12 – Kullaty, 13 – Diring-Yuryakh, 14 – Pokrovskoye, 15 – Kyordyugen, 16 – Bugachan, 17 – Ichchilyakh, 18 – Kamenka, 19 – Pomazkino.
4.4.1. Cis-Baikal in the Eneolithic and Bronze Ages

4.4.1.1. Mortuary traditions

The Eneolithic Age is represented by the Glazkovo culture first defined by Ovchinnikov (1904) and considered as a “culture-historical stage” by Okladnikov (1955a). According to recent research, the Glazkovo mortuary tradition is dated to 4600 – 3725 cal. BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016). This period is characterised by the appearance of copper and bronze technology, although many other aspects of life such as economy, lithic and osseous technologies generally remained the same as they were in the Neolithic. Greater homogeneity in Glazkovo mortuary protocol, which is considered as common for all sub-areas of the Baikal region, was also noted (Okladnikov, 1978b).

Glazkovo graves were often found within Kitoi and Serovo cemeteries, thus suggesting cultural continuity. According to Okladnikov (Okladnikov, 1955a), Glazkovo graves excavated in the Angara and Upper Lena valleys had the following characteristics (Figure 4.7). They featured surfaces stone structures which sometimes had a boat-like shape, and the grave pits were filled with stone slabs. The deceased were interred in an extended-supine position with a head oriented downstream from the river (Figure 4.8). However, there are many cases with only legs or full body flexed. Some were interred in a “sitting” position. In some burials, the remains of cremations have been recorded. Ochre usage has not been mentioned (Okladnikov, 1955a, pp. 307-319). The grave goods assemblages included lithic, bone, and metal items. The new category of metal artefacts include leaf-shaped knives (the largest are 25-30 cm long), plate knives with a concave blade and small...
rectangular knives (the smallest are 1.5-3 cm long); needles; fishhooks; rings (d=4-5 cm); tubules (possibly, served as needle-cases or ornaments); and possible fragments of a bronze pot. These items repeated some features of lithic and bone artefacts (Okladnikov, 1955a, pp. 30-49). Among the lithic artefacts there are knives, arrowheads, nephrite adzes/axes, scrapers. Bone and antler items include harpoons, fishhooks with a barrel-shaped shaft, needle cases, and needles. Ornaments include bronze and nephrite rings, bronze tubules (?), beads made of mother-of-pearl, pyrophyllite, and agalmotolit (Figure 4.8). Ceramic vessels decorated with impressions of different stamps were rarely found in Glazkovo graves.

In the Olkhon area of Lake Baikal, in the 1990s-2000s, a number of Neolithic-Bronze Age cemeteries were fully excavated, such as Khadarta IV, Ulyarba, Kurma XI, Khuzhir-Nuge XIV (Goriunova, 2002; Goriunova, Novikov, Zyablin, & Smotrova, 2004; Goriunova, Weber, & Novikov, 2012; Novikov, 2013; A. W. Weber & Goriunova, 2013; A. W. Weber et al., 2005). The Eneolithic mortuary tradition in this region shared many common features with other cemeteries of the Baikal region. The deceased were interred in shallow oval-shaped grave pits (0.4-0.6 m) which featured surface stone structures, and in some cases, graves were filled with stones. The prevalent body position was extended-supine with the head oriented to the south-west, although sided with flexed legs and body flexed also rarely occurred. Usage of ochre and fire was recorded but is not considered typical. Grave goods differentiated depending on sex, age, social status, and occupation of the interred (Goriunova, 2002; Novikov, 2013; Novikov & Goriunova, 2014a). Although Okladnikov noted that the intra-cemetery arrangement of graves in rows reflected kinship of the Glazkovo deceased (Okladnikov, 1955a), BAP researchers uncovered more nuanced patterns of cemetery spatial organization based on geochemical data. The strontium method allowed the tracing of the place of origin of interred individuals, which appeared to be an important factor in the spatial arrangement of graves. Stable isotope evidence suggested variability in diet which correlates to intra-cemetery clusters implying the existence of distinct foraging ranges (A. W. Weber & Goriunova, 2013; A. W. Weber, White, et al., 2011). Two types of cemeteries were identified, community and exclusive ones (McKenzie, 2011). The former represents a more diverse set of social groups, and the latter is more restricted with no obvious rows and clusters. It was suggested that this distinction might be a reflection of temporal change in practice from exceptional to communal cemeteries, which might have been an indication of greater sedentism (McKenzie, 2011, p. 102).

Another Bronze age mortuary tradition was identified by Olga Goriunova (Goriunova, 1996, 2002). It was named after the Shumilikha cemetery and included
burials in which deceased were interred in a flexed sitting position with the head oriented downstream. In contrast to the Olkhon area, in the Angara area the graves lack surface stone structures. In some of them, extensive usage of ochre and the remains of fire were recorded. The grave goods assemblages were generally the same as Glazkovo. Items of portable art, such as bone sculptures of fish, bear, elk, snake, anthropomorphic figures and anthropomorphic faces, are stylistically similar to the items of Glazkovo portable art (Studzitskaya, 1981). In contrast to the Glazkovo graves, the Shumulikha ones contained bones of domesticated animals such as a horse, bull, and goat or sheep (Novikov & Goriunova, 2014a). Initially, Goriunova attributed this group to the Late Bronze Age, 9th-8th Centuries BC, based on the findings of bronze weapons of the Karasuk type, but radiocarbon dating firmly placed these burials in the Early Bronze Age (4414/4240-4010 BP, or late IV – mid III cal. BC). However, the relationships between the two mortuary traditions are not clear since they are synchronous and occupy the same area. The radiocarbon dates could have been influenced by the Freshwater Reservoir Effect, and the rare occurrence of ceramics in these grave obstructs the correlation of cemeteries with living sites (Novikov & Goriunova, 2014a).

G. V. Turkin and A. V. Kharinsky (2004) suggested another model for the Bronze age, and two stages were related to the Early Bronze Age. Shumulikha stage (mid IV – mid III BC) is characterised by the Shumulikha mortuary protocol in the Angara, Upper Lena and Olkhon areas, which partly coexisted with the Serovo mortuary tradition. This stage is marked by the appearance of the first copper items. Researchers suggested that the Shumulikha mortuary protocol does not have roots in the Baikal Neolithic and was probably brought by migrants from Southern Trans-Baikal and Eastern Mongolia, where the tradition of interring the dead in a sitting position was practiced in the Late Neolithic – Early Bronze Age (Turkin & Kharinsky, 2004, p. 151). In the Glazkovo stage (mid III BC – mid II BC) three local groups existed: the South-Baikal group (Shamanka II); the Sagan-Nuge group in the Olkhon area; and the Glazkovo in the South Angara area.

4.4.1.2. Stratified habitation sites

Pure Glazkovo habitation sites are rare and are represented by campsites. Glazkovo complexes are mostly uncovered from stratified sites and have been defined on a typological basis. The Glazkovo cultural complex is present at Ulan-Khada (Layer VIII-II) and was dated to 4150-3800 bp (Khlobystin, 1987, p. 331). These layers produced numerous relicts of bonfire and stone hearths, as well as rich ceramic collections. Glazkovo pottery, mostly round-bottomed with defined rims, was manufactured using
a smooth or ribbed paddle. The rims were decorated with pinches, back-stepped blade impressions, and notches. Usually only the upper third of the pot body was decorated with pearl-like knobs, incised lines, and impressions of the tip of a small blade or spatula (Khlobystin, 1987). There are also unique vessels which feature depictions of anthropomorphic, serpent-like, and saltire-like figures (Goriunova & Novikov, 2009). Metal items are rarely found at habitation sites (Okladnikov, 1955a), but there is a great amount of fish and seal bones indicating a strong reliance on fishing (Khlobystin, 1987; Losey et al., 2008; Novikov & Goriunova, 2005).

4.4.2. Yakutia in the 3rd-2nd Millennia BC

The Late Neolithic-Eneolithic Ymyyakhtakh culture occupied the period 4100-3300 BP (Mochanov & Fedoseeva, 2013a, p. 369), or 2900±450 to 1025±235 BC (Alekseyev & Dyakonov, 2009). Although there are scarce findings of metal objects in the final stage of the culture, its overall existence partly coincides with the existence of the Glazkovo culture in Cis-Baikal and the Early Bronze Age in Trans-Baikal (Figure 4.7). Another reason for considering the Neolithic Ymyyakhtakh culture is that it provides evidence for its inclusion in a wide network of contacts present in Siberia at that time.

The sites which exhibited the Ymyyakhtakh cultural complex have been found throughout North East Asia covering the same area as the previous Bel’kachi culture (Figure 4.7). The most prominent feature of this complex is a completely different ceramic tradition and the appearance of copper and bronze items in its late stage, although the lifestyle of predominantly elk hunters remained the same (Fedoseeva, 1980; Mochanov & Fedoseeva, 2013a, pp. 371-373).

The pottery was manufactured by successively adding layers of clay which had been specifically prepared. Another peculiarity is the usage of wool and sometimes grass or needles as an admixture. The pots were formed with the application of a paddle which left waffle- or chess-like or more rarely ribbed impressions (Figure 4.9). The pots were decorated with horizontal rows of apertures and incised lines (Mochanov & Fedoseeva, 2013a, pp. 376-379).

The lithic assemblage is represented by the same categories of cores, flakes, blades, knives, scrapers, arrowheads, and large cutting tools. Generally, the level of technology was assessed as high, and the assemblage was diverse. It was noted, that the
proportion of tools made on blades decreased while the proportion of tools made on flakes increased (Mochanov & Fedoseeva, 2013a, pp. 374-375). There is also a great variety of items made from bone and horn. These are spearheads, arrowheads, draggers, harpoons, awls, needles, cutting tools, handles, needle cases, bow plates, etc. There are a number of adornments and art items made from bone and horn, and some of them feature a quite specific ornament characteristic of Ymyyakhtakh culture (Mochanov & Fedoseeva, 2013a, pp. 375-376).

Metal items were rarely found, and most of them were unearthed from burial complexes. This category includes needles, awls, and plates. There are a few finds which are indicative of casting technology such as fragments of smelting ladles and smelting forms. However, bronze artefacts are extremely rare, and in many cases, the burials were robbed, and only green traces of metal were documented (Mochanov & Fedoseeva, 2013a, pp. 379-380).

The burial complexes were discovered in the middle and the lower basins of the Lena River. These are cemeteries Chuchur-Muran and Diring-Yuryakh and graves Pokrovskoye, Kullaty, Kyordyugen in Central Yakutia, graves Ichchilyakh and Bugachan in Polar Yakutia, and graves Pomazkino and Kamenka in the Kolyma River basin (Alekseyev, Zhirkov, Stepanov, Sharaborin, & Alekseyeva, 2006; Fedoseeva, 1980; Mochanov & Fedoseeva, 2013a, pp. 381-393). The mortuary protocol can be described as follows. The deceased were interred in shallow oval grave pits and in an extended-supine position parallel to the river with legs pointed downstream. In the fillings of the graves, small pieces of charcoal and burned animal bones were recorded. Most of the graves did not have surface or in-grave stone structures, however, the Diring-Yuryakh cemetery can be considered as unique since all five graves were made in cists which were covered by limestone plate pavements of oval shape. Such structures are not characteristic of the Siberian Taiga cultures but are typical for the Steppe cultures of the Bronze Age. Interestingly, the anthropological analysis of crania indicated some similarity with Central Asia populations (Gokhman & Tomtosova, 1983). However, the protocol and grave good assemblages were typical for Ymyyakhtakh culture. It included lithic and bone tools and weapons, sherds of waffle-like pottery, white nephrite rings, traces of copper/bronze on skeletal remains, beads made of river mollusc shells etc.

Some features of the mortuary protocol and some grave goods relate the Ymyyakhtakh culture to the Glazkovo culture of the Cis-Baikal region. These are body orientation, types of metal artefacts such as celts and arrowheads, nephrite rings, and an anthropomorphic figure found in the Kullaty grave. An interesting burial complex was unearthed in 2003 at the upper reaches of the Aldan River (Alekseyev et al., 2006).
The Kyordyugen grave contained two deceased with no stone surface or in-grave structures (Figure 4.7). The outstanding feature was that the skeletal remains were covered with a hundred bone plates which were arranged in parallel rows and with 50 horn plates which had apertures for attachment. These were interpreted as a shield and as armour respectively. The date 3630-3900 bp places the burial complex firmly in the late period of the Ymyyakhtakh culture (Mochanov & Fedoseeva, 2013a, p. 392). An analogous complex was uncovered in the Glazkovo cemetery Ust'-Ilga and in Perevoznaya in the Yenisey basin (Okladnikov, 1955a, p. 248). Okladnikov interpreted these complexes as burials of warriors, which, in addition to the cases when the deceased exhibited evidence for violent death, may indicate that the Glazkovo time was a period of intense economic and social development which resulted in rivalries and conflicts.

Although the Ymyyakhtakh culture may be considered in the context of other Siberian Bronze Age cultures such as Glazkovo, Okunevo, Samus’ and Rostovka, the analogous artefacts and some similarities in mortuary protocol can be owing to the existence of trade and epochal tendencies while the origins of the Ymyyakhtakh culture remains unclear. The characteristic waffle-like pottery has been found in South-Eastern Trans-Baikal, but in a disturbed position or in an unclear context.

Recent research identified two more archaeological cultures for this period which were determined as Bronze Age cultures. The Ulakhan Segelennyakh culture (2175±425 to 1350±350 BC) was determined based on only one characteristic feature – the Glazkovo type pottery with pearl-like reliefs under the rim (Dyakonov, 2012). Such pottery has been identified by previous researchers and was interpreted as an indication of the Glazkovo influence, but it has not been defined as a separate cultural complex because it was always found together with the typical Ymyyakhtakh complex (Ertyukov, 1990). However, D’yakonov argues that the pottery style occupied a clear separate position at the site Ulakhan Segelennyakh in the Olyokma River basin. The Sugunnakh culture (1000 BC to AD 500) was identified as a culture representing the late Ymyyakhtakh tribes which moved to the Transpolar Yakutia as a consequence of Bronze Age migrations (Alekseyev & Dyakonov, 2009; Dyakonov, 2007).

4.4.3. Eneolithic and Early Bronze Age of Trans-Baikal
4.4.3.1. Western Trans-Baikal

In Western Trans-Baikal, the Early Bronze Age was initially identified based on burial complexes of the Fofanovo cemetery, which were analogous to the Glazkovo stage/culture (Okladnikov, 1950). Ivashina (Ivashina, 1979) identified the Early Bronze Age Fofanovo stage, which included Glazkovo burial complexes at the Fofanovo and
Bukhusan cemeteries and the site Kharga 1. Fofanovo and Bukhusan Early Bronze Age graves were radiocarbon dated to 4100-3670 bp (Mamonova & Sulerzhitski, 1989). The Glazkovo pottery, which has specific pearl-like reliefs under the rims of pots, have been identified at the sites Kharga 1 and Yartsy Zabaikal'skiye (Ivashina, 1979; Ivashina et al., 2011). The campsite Kharga 1 produced one cultural layer which contained numerous lithic and ceramic artefacts. The lithic technology was characterised as Neolithic, although a significant portion was represented by massive cutting tools such as adzes, axes, and hammers. The pottery assemblage included pots with cord-impressions and those with decorations made by different types of blade or spatula and combed stamps. The site was attributed to the Early Bronze Age based on the finding of a small bronze tube and Glazkovo pottery (Ivashina, 1979).

In the latest summary of the archaeology of Buryatia (Ivashina et al., 2011), another model for Western Trans-Baikal, consisting of four stages, has been proposed. The Kharga stage/culture was defined on the materials of only the eponymous habitation site and dated to the second half of the 3rd Millennium BC, while no absolute dates are available. The next, North Baikalian stage, occupied the same period, and was identified based on the findings of the North Baikalian pottery at the Posol'sk site, at the Burkhan site on the Olkhon Island, and at the Kharga-1 site. This pottery has bands of clay additional to the rims dissected by angle bracket-like stamps and is characteristic of the North Baikalian culture. This culture has been defined in the Northern Baikal area and dated to 2500-1200 BC (Kharinsky, Yemel'yanova, & Rykov, 2009). The third stage, Glazkovo, according to the authors, occupied the period from the end of the 3rd Millennium BC to the beginning of the 2nd Millennium BC and included the Glazkovo graves of the Fofanovo cemetery and the layer with Glazkovo pottery at the site Yartsy Baikal'skiye. The last stage, Khentei, occupying the beginning of the 2nd Millennium, is represented by the sites Kul'kison and Yartsy Baikal'skie which produced pottery similar to that uncovered from the sites in the basin of the Chikoi and Menza Rivers in Southern Trans-Baikal. It appears, that this model is not sufficiently justified, and the ceramic complexes which have been identified as representing “stages” are rather indicative of broad cultural contacts of Bronze Age populations rather than of processes of cultural development. Obviously, since this model is based on scarce data, it cannot be considered as valid. It appears that the distinction between the Early Bronze Age Glazkovo and the Late Bronze Age Karasuk complexes is still relevant in the region. The latter are related to the khirigisuurs and slab grave culture and discussed in the next section.
4.4.3.2. Eastern Trans-Baikal

In Eastern Trans-Baikal, the Early Bronze Age was identified as the Doroninskaya stage (Grishin, 1981) or culture (see Khlobystin, 1987) based on the materials from the eponymous habitation site Doroninskaya-4 in the Ingoda River basin. The site produced stone hearths and storage pits, as well as ceramic and lithic artefacts. The pottery featured waffle-like traces left by a ribbed paddle, which is considered as an indication of the influence of the Yakutian Ymyyakhtakh culture. Pots had round or slightly flattened bottoms. The rims were thickened with additional bands of clay which were decorated with oblique incisions. The lithic technology was considered as declining which is indicated by the poor quality of raw materials and the lower diversity of artefact types. It was suggested that the Early Bronze Age cultures already practiced agriculture based on findings of stone pestles, grinding stones, and hoes (I. I. Kirillov, 1979b; I. I. Kirillov, Kovychev, & Kirillov, 2000; Okladnikov, 1962; Okladnikov & Kirillov, 1980). However, this suggestion has been taken with caution owing to the scarcity of evidence (Grishin, 1975). Possibly, these items were used for the collection of wild plants (Khlobystin, 1987).

There are a number of other stratified campsites in Eastern Trans-Baikal which produced Bronze Age layers. However, it is difficult to distinguish between the Early and Late Bronze Age complexes since no comprehensive analysis of stratified habitation sites have been done since the 1980s, and only brief descriptions have been published. Based on the presence of the waffle-impressed pottery, the following sites can be considered as Early Bronze Age: the stratified sites Alexandrovka (Layer 2) and Darasun (Layer 1) in the Ingoda River basin, and the sites Kunkur 1, Kirochi and Shev’ino which in addition to waffle-like impressed type of pottery also contained material culture possibly related to the Late Bronze Age.

Alexandrovka is located in the Ingoda River basin and had three cultural layers. Layer 1 produced few artefacts among which were lithics and sherds of thick-walled pots. In Layer 2, stone hearths were uncovered, and the material culture assemblage consisted of lithic items, waffle- or chess-like impressed pottery and pots decorated with additional bands of clay which were incised with different stamps. In Layer 3, stone hearths also were found, and the pottery featured textile imprints and an additional band of clay under the rim. The lithic assemblage included pebble tools and tools made from knife-like blades. Roe deer, red deer, horse, and dog were identified among the faunal remains (I. I. Kirillov & Kirillov, 2011a). Possibly, Layer 3 may also be related to the Early Bronze Age since it contained pottery with textile imprints and the bones of horse. The Darasun site is another stratified site in the Ingoda River basin
which yielded Early Bronze Age material. It had two cultural layers. Layer 1 had three oval-shaped stone hearths, the sherds of thin-walled pots and pots with waffle- or chess-like impressions. Layer 2 produced 12 hearths, and the lithic assemblage included front and prismatic cores and adzes of the Gromatukha type. The faunal remains included red deer, roe deer, kulan and bison. The pottery featured impressions of interwoven threads and it was decorated with impressions of cogged and crescent stamps. It was suggested that Layer 1 can be related to the Bronze Age, and the Layer 2 to the Late Neolithic Age (I. I. Kirillov, 1979b; I. I. Kirillov & Kirillov, 2011b; I. I. Kirillov et al., 2000).

Thus, the habitation sites, which can be related to the Early Bronze Age based only on the material culture assemblage, did not produce strong evidence for bronze casting manufacture and cattle-breeding. Although it has been assumed that these innovations appeared at that time (Okladnikov & Kirillov, 1980; A. D. Tsybiktarov, 2006), the scarcity of data does not allow drawing any conclusions on the time of their emergence and how this process occurred.

In Eastern Trans-Baikal, more than a hundred burial complexes have been unearthed in the 1980s-1990s and were studied by O. I. Kirillov in his postgraduate dissertation (kandidatskaya) which has not been subsequently published. The Eneolithic and Early Bronze Age period was dated from the second half of the 3rd Millennium BC to the 16th Century BC. Although the grave good assemblages contained mostly Neolithic items such as lithic artefacts and ceramics, new objects appeared such as copper or bronze artefacts, flat-bottomed pots, tripods, and some types of adornments. The graves featured oval-shaped surface stone pavements 4-6 m long and had an additional stone fence. The pits were no more than 1 m deep, and the deceased were interred on the side or on the back with flexed legs (after A. D. Tsybiktarov, 2006, pp. 87-88).

4.4.3.3. Tsybiktarov’s model for eastern and Western Trans-Baikal

Another model of cultural development in the Early Bronze Age has been proposed by A. D. Tsybiktarov (A. D. Tsybiktarov, 2006). In contrast to the previously discussed models, this model considers both Eastern and Western Trans-Baikal. Two cultures or “culture-historical areas” which occupied different ecological niches, Selengino-Daurskaya in the steppes and Khentei in the forest, are suggested.

The Khentei culture includes the sites in the basins of the Chikoy and Menza Rivers in the forest area of Southern Trans-Baikal (Figure 4.7) (A. D. Tsybiktarov, 2006). Tsybiktarov described this culture as archaic and backward since the economy was typical of hunter-gatherers. However, habitation sites, Ust-Menza-1, Nizhnyaya
Yelovka, and Altan, exhibited evidence for bronze casting production (M. V. Konstantinov et al., 2016). A number of radiocarbon dates produced for the bronze age layers gave a range around 2770-2080 bp (M. V. Konstantinov et al., 2016, p. 47), although Konstantinov provides a time range from 3800 to 2800 bp considering the date from Late Neolithic burial Yegorkina Peshchera 3760±40 bp as the lower time boundary. The culture complex included lithic, bone, and ceramic assemblages. Among the lithic items, there are a considerable number of pestles, hammers, and hammer stones which may be related to bronze casting. The pottery exhibited cord-impressions which were slightly smoothed out, and a new form of pottery with flat bottoms appeared in the Bronze Age layers. The pots were fully decorated with a pointed paddle or spatula in a back-stepped technique. The bone items included hunting and fishing gear, as well as adornments. It appears that the Bronze Age inhabitants of this area led quite a settled life since the traces of semi-dugouts were uncovered at the Nizhnyaya Yelovka site. Numerous stone hearths and storage pits were found at the habitation sites. Only four burial complexes of this period are known to date, and three of them featured stone surface structures and extensive usage of ochre (M. V. Konstantinov et al., 2016; A. D. Tsybiktarov, 2006).

The steppe Selengino-Daurskaya culture, according to Tsybiktarov, includes the following sites: Nizhnyaya Berezkovka (Layer 2), Kul'kison, Kharga 1, Dvortsy, Ishikhan (Layer 2), Molodovsk (Layer 1), Zhigurzhinka 1 (Layer 4), Kunkur 1, and Kirochi. Layer 2 of Nizhnyaya Berezovka has been considered as Neolithic, and no new evidence has disproved this identification (Ivashina & Tsydenova, 2011). Kharga 1 contained the Glazkovo cultural complex (Ivashina, 1979). The Kul’kison site produced the pottery style which occupied the position above the Glazkovo complex at the site Yartsy Baikal’skiye, and thus it should be dated to the post-Glazkovo time. Therefore the site cannot be considered as belonging to the Early Bronze Age (Ivashina et al., 2011). The Dvortsy site contained the materials which are characteristic of the Dvortsovskaya culture dated from the mid-2nd Millennium BC to the mid-1st Millennium BC (Late Bronze Age – Early Iron Age) (I. I. Kirillov & Kirillov, 2011c, 2011d). Zhigurzhinka did not exhibit materials which could firmly relate the site to the Bronze Age although layers 1-3 were related to the Eneolithic based on stratigraphic observations (see I. I. Kirillov et al., 2000). The Kunkur site in the Onon valley is a disturbed dune site and was broadly dated to the Neolithic-Early Bronze Age based on the artefacts collected and their analogues (Okladnikov & Kirillov, 1980, pp. 95-96). Kirochi and Molodovsk produced pottery which was usually found in the burial complexes of slab grave culture of the Late Bronze Age-Early Iron Age (I. I. Kirillov &
The mortuary protocol of the Selengino-Daurskaya culture was defined according to materials from the cemetery Lake Nozhiy (Okladnikov & Kirillov, 1980) and about 100 unpublished single graves which were excavated mostly in Eastern Trans-Baikal and analysed by O. I. Kirillov in his postgraduate research. Tsybiktarov identified three types of burials which represented consequent stages in the evolution of grave architecture (A. D. Tsybiktarov, 2006), but the validity of this model cannot be proved since it is mostly based on unpublished data. Judging by the available data on habitation sites, Selengino-Daurskaya culture is an artificial construct which included sites of different age from the Neolithic to the Late Bronze Age and with different material culture assemblages. However, the existence of the Khentei culture has been acknowledged by the principal researchers in the basin of the Chikoy and Menza Rivers (M. V. Konstantinov & Yekimova, 2011).

4.5. Late Bronze – Iron Ages

This period is characterised by the appearance of the cattle-breeding cultures in the second half of 2nd Millennium BC. According to A. D. Tsybiktarov (1998, 2012a), such a considerable change in economy was a result of climate changes in 2nd...
Millennium BC. He related the end of formation of nomadic and half-nomadic cattle-breeding to the phase of humidification which occurred in 15th-14th Centuries BC after a long aridisation phase (A. D. Tsybiktarov, 2013, p. 362). These favourable conditions contributed to the growth of wealth and social development. However, in the end of 2nd Millennium BC the climate changed again becoming more arid which caused two major migrations in Central Asia which affected Trans-Baikal, westward movement of the culture of khirigsuurs and deer stone and eastward movement of the slab grave culture (A. D. Tsybiktarov, 1998, 2013).

The slab grave culture occupied an enormous territory which includes Northern, Central, and Eastern Mongolia, Inner Mongolia, Northwest China (Xinjiang region, Qilian Mountains etc.), Manchuria, Lesser Khingan, Buryatia, Southern Irkutsk Oblast and Southern and Central Zabaykalsky Krai (Figure 4.10). The culture has been identified based on numerous findings of typical graves with rectangular fences of vertically set slabs of gneiss or granite, with stone kurgans inside the fence (Figure 4.11). Owing to its high visibility in the landscape, this type of site has a long history of research starting in the 18th Century (Dikov, 1958; Grishin, 1975; A. D. Tsybiktarov, 1998). Cemeteries and single graves are located on the southern mountain slopes, although sometimes they are found in the open steppes. The grave fence usually contained only one deceased individual who was interred in a shallow pit, oriented east-west. The grave good assemblages are quite poor, the largest category includes adornments and the elements of dress. Tools, weapons, and harnesses are rarely found. Pottery is rarely found inside graves, and ceramic sherds and bones of domesticated animals such as horses, sheep, goats, and occasionally cows, are mostly found in the stone kurgans which cover the grave. Probably, they are the evidence for funeral feasts.

Borovka was the first to relate the slab graves to the Scythian time based on similarities in material culture (Borovka, 1927). Sosnovsky further developed this argument based on his excavations in the 1920s which provided him with rich data allowing for dating the slab graves to 6th-2nd Centuries BC (Sosnovskiy, 1941). Sosnovsky also attempted to determine local peculiarities in the culture identifying three types of grave structure, only one of them was considered characteristic for Eastern Trans-Baikal while all three were found in Western Trans-Baikal. The view was later reconsidered by Dikov (1958) who developed a classification of the slab graves based on grave good assemblages and related the appearance of the culture to the 8th-7th Centuries BC which correlated with the end of the Karasuk time and the Scythian-Tagar period. Two stages were defined, namely Tapkhar dated to 7th/8th-6th Centuries BC and Sayantuy dated to 5th-2nd Centuries BC. Okladnikov suggested a much older age relating
the initial period of the slab graves to the second half of the 2nd Millennium BC (Okladnikov, 1959c). Volkov researched slab graves in Mongolia and, accepting Dikov’s view in general, disagreed with the fact that some earlier graves belong to the Karasuk time claiming their Scythian-Tagar age (Volkov, 1967).

Ivashina (1979) identified the Late Bronze Age stage in Western Trans-Baikal based on artefacts similar to those of the Karasuk culture which existed in South Siberia in the period from the end of the 2nd Millennium BC to the beginning of 1st Millennium BC. The stage was then named the Karasuk-Shivera stage and included the third group of Fofanovo cemetery, and upper layers of Posol’sk and Nizhnyaya Berezovka site. This stage was believed to precede the slab grave culture.

Grishin’s later research included more data accumulated by that time, especially in Eastern Trans-Baikal (Grishin, 1975, 1981). He noticed characteristic features of the slab graves of Eastern Trans-Baikal in that very large graves (8x4 m and 9x6 m) and graves with tall corner stones are present (Grishin, 1975, p. 47). Grishin supported Okladnikov’s view and suggested that the earliest slab graves could have appeared at the Doroninsky stage (16th-11th Centuries BC) (Grishin, 1981, p. 194). In the development of the slab grave culture he distinguished three stages: 1) Tapkhar (10th-6th Centuries BC); 2) Sayantuy (5th-3rd Centuries BC); 3) Bal’zinskiy (2nd Century BC-2nd Century AD) (Grishin, 1981, p. 201). The last stage belonged to the Xiongnu period, and its identification aimed to express a view that the population of the slab grave culture
did not disappear with the appearance of the Xiongnu in the Trans-Baikal but was partially displaced further north and partially assimilated.

More recent research has been carried out by A. D. Tsybiktarov (1998) who identified two consequent stages in the culture development. The early, Chulut stage, synchronous to the Karasuk culture in South Siberia, was dated to 13th-8th Centuries BC, and the late, Atsai, synchronous to early Scythian time, was dated to 8th-6th Centuries BC. In the early complexes, occurrence of ochre, lithic items, and bone arrowheads related the slab grave culture with the preceding Early Bronze Age cultural complex, and the later featured more prominent angle stones. Later A. D. Tsybiktarov (2012b) suggested the appearance of the slab grave culture in the Middle Bronze Age identifying Tologoy stage dated to 15th-13th Centuries BC.

The question of origins of the slab grave culture is represented by two viewpoints, migratory and autochthonous. The migratory concept relates the origins of the slab graves to the Bronze Age of Northern China. Larichev was first to develop this hypothesis based on careful consideration of the Chinese publications available at that time. Many common features connected the slab graves of Trans-Baikal to the Bronze Age of Dongbei territory, such as burials in stone cists, bronze casting, ceramic tripods, and complex farming-cattle-breeding economy (Larichev, 1959). Although some critics pointed out that farming was not a feature of the slab grave culture, there are other pieces of evidence which link China and Trans-Baikal.

One of the markers of the slab grave culture is the presence of ceramic tripods. They are abundantly found in material culture of the Neolithic and Bronze Ages of ancient China (Okladnikov, 1959c). Okladnikov concluded that ceramic tripods could not have been imported owing their fragility but were made locally which is supported by the fact that some elements of technology and ornamentation are similar to local ceramic traditions of the Neolithic and Bronze Age. He suggested that the peoples of the slab grave culture formed a large social entity resembling a prototype of a later nomadic state. Possibly they were the Dingling mentioned in Chinese historiography in the 1st Century BC (Okladnikov, 1959c).

This hypothesis has recently been reassessed by Alkin (2010). He pointed out that the earliest burials in cist in East Asia are found in the Neolithic Hongshan culture which influenced the development of the following Bronze Age cultures in the area one of which was the Upper Xiajiadian culture dated to 10th-5th Centuries BC16. The latter has many aspects in common with the slab grave culture, especially bronze artefacts

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16 According to Shulga (2015, p. 17) the Upper Xiajiadian is dated to 11th-7th Centuries BC.
Three unique bronze helmets the origin of which is related to the Upper Xiajiadian culture come from the slab graves of Trans-Baikal and Mongolia. These facts suggest not only the genetic cognation of archaeological cultures of slab graves and Upper Xiajiadian but also their enduring relationship (Alkin, 2010).

This is further supported by the recent publication of the Yuhuangmiao cemetery in Northern China dated to 7th–6th Centuries BC (Shulga, 2015). This is the most representative site for the Yuhuangmiao culture which is a descendant of the Upper Xiajiadian culture and considered as the east-most Scythian-like culture yielding numerous objects of the Scythian animal art-style and bronze artefacts similar to those found in Mongolia and South Siberia. Shulga pointed out the resemblance of Yuhuangmiao materials to the slab grave culture and deer stones of the Mongolia-Trans-Baikal type thus supporting a view proposed earlier by Volkov and developed by Savinov about the existence of two large ethno-cultural areas in Central Asia, the western which included Western Mongolia, Tuva and Altai, and the eastern - Trans-Baikal, Cis-Baikal, Eastern and Central Mongolia, and Northern China. Shulga is more specific including in the ‘eastern historical-cultural entity’ the following cultures: slab grave culture, Dvortsovskaya culture, the culture of khirigsuurs and deer stones, Upper Xiajiadian, Yuhuangmiao and Maoqingsgou (Shulga, 2015).

Notwithstanding an apparent connection of prehistoric Trans-Baikal with China, the autochthonous concept of origins of the slab grave culture also has grounds. It considers the slab grave culture as indigenous and originating from the Neolithic and Early Bronze Age cultures of Trans-Baikal (Grishin, 1981; A. D. Tsybiktarov, 1998; Volkov, 1967). Grishin pointed out that ceramics found in Eastern Trans-Baikal slab graves has some archaic features characteristic for the Neolithic and Early Bronze Age complexes (Grishin, 1975, p. 103). The idea of cultural continuity was further supported by the fact that nephrite and osseous artefacts typical for the previous periods were also found in earlier slab graves. Grishin also refers to an anthropological resemblance with the Early Bronze Age populations inferred by Gokhman (Grishin, 1975, p. 104). This view was later supported by A. D. Tsybiktarov (1998) and became a cornerstone for his concept of historical development of Bronze Age-Early Iron Age cultures of Eastern Central Asia another key component of which is the culture of khirigsuurs and deer stone.

Khirigsuurs are complex structures which include a stone mound (kurgan), surrounded by a stone enclosure of various shapes, such as round, square, rectangular, and trapezium, in some cases connected to the central mound with stone pavements, and additional smaller stone structures around (Figure 4.12). A strong connection
between khirigsuurs and deer stones which often found in these complexes has been identified by researchers. Although khirigsuurs are abundantly present on a large territory stretching from Altai through Tuva, Mongolia and into Western Trans-Baikal, they are insufficiently studied – only about 60 complexes in total were excavated (A. D. Tsybiktarov, 2014, 2015). They are dated to 11th-5th Centuries BC based on depictions of weapon on deer stones found within the complexes. Khirigsuurs with deer stones of Mongolian-Trans-Baikal type are dated to 11th-8th Centuries BC (Savinov, 2002).

According to A. D. Tsybiktarov (2013, 2018), the culture of khirigsuurs and deer stones appeared in Western Trans-Baikal in the end of 2nd Millennium BC which is supported by recently obtained radiocarbon dates.

In Trans-Baikal, khirigsuurs are found only in its western part, the northernmost present in the Uda River Basin, and the easternmost in the middle section of the Chikoy River basin. Excavations revealed that some khirigsuurs contained burials in which the deceased were interred in stone cysts erected on the ground surfaces with no grave goods. In the vicinity of the mounds, small stone pavements exhibited the traces of funerary feasts (A. D. Tsybiktarov, 2011). However, some khirigsuurs did not yield burials but featured a large amount of animal bones in the stone mound. This inconsistency and variety of forms of stone fences allowed suggesting that not all khirigsuurs were burial sites but may have had different functions (A. D. Tsybiktarov, 2013).
It is assumed that the culture of khirigsuurs and deer stones has its origins in Western Mongolia, specifically in the Early Bronze Age Afanas’yevo culture (A. D. Tsybiktarov, 2011, 2012a). Since deer stones feature depictions of the Karasuk-type weapon, the origins of the culture of khirigsuurs cannot be resolved without taking into account the problematics of the Karasuk culture and the origins of Karasuk-type artefacts which is another big question of the Central Asian archaeology (Konovalov, 2012).

Although there are many lacunas in the present knowledge of early nomadic cultures, it is apparent that Western Trans-Baikal and Eastern Mongolia was a contact zone of two different cultures in the late 2nd – early 1st Millennia BC, slab grave culture and the culture of khirigsuurs and deer stones. Archaeology provided evidence for quite complicated relationship between them (A. D. Tsybiktarov, 2013). Reciprocal desecration of graves was noticed, such as the usage of stones from khirigsuurs in a construction of slab graves. There are many cases when slab graves were built over khirigsuurs and few cases when khirigsuurs touch slab grave structures. A quite common feature is a re-usage of deer stones in a construction of slab graves, and in many instances, deer stones were broken in parts or overturned. These facts, according to A. D. Tsybiktarov (2013) indicate hostile relationships between the two cultures. However, it seems that the cases in which slab graves “desecrate” khirigsuurs are more common than vice versa, which may be an indication for chronological sequence. Although A. D. Tsybiktarov insists that slab grave culture appeared in the mid-2nd Millennium BC and coexisted with the khirigsuurs, there are still not enough radiocarbon dates to support such early chronology. Recent research in South Buryatia yielded dates which placed five excavated slab graves in 11th-9th centuries BC and a Mongun-Taiga type burial related to the culture of khirigsuurs in 14th-13th Centuries BC (A. D. Tsybiktarov, 2018). Thus, there is a possibility that khirigsuurs appeared in Trans-Baikal earlier than slab graves and the period of coexistence may have been shorter.

Tsybiktarov suggests that at some point the tensions between the cultures ceased and relationships became less hostile based on the evidence of crossbreeding (A. D. Tsybiktarov, 2013). Although little anthropological research has been done, the population of the khirigsuur culture is believed to be of the Caucasian type, and the population of the slab grave culture was determined as the North Asian Mongoloid type (see A. D. Tsybiktarov, 1998).

Although clear habitation complexes belonging to the slab grave culture or the khirigsuur culture are unknown, some sites which exhibit the material culture complex related to the Karasuk period of the Late Bronze Age and some types of artefacts found
in the slab graves can be related to this period of Trans-Baikal history. In Western
Trans-Baikal, these are the first layers of the sites Posol’sk, Yartsy Baikal’skiye, Sannyi
Mys, Nizhnyaya Beregovka and Kul’kison. They featured bronze artefacts, tripods, flat-
bottomed pottery, and pottery decorated with an additional band of clay which was
further incised with different types of stamps of spatulas. In Eastern Trans-Baikal, the
Late Bronze Age complex has been identified at Dvortsy, Aryn-Zhalga (Layer 1),
Shev’ino, Kunkur, Molodovsk and Alexandrovka (Aseyev, 2003; Grishin, 1975; I. I.
Kirillov & Kirillov, 2011a, 2011d, 2011e). In Layer 1 of the site Dvortsy-1, copper slag and a
cache with a bone hoe have been found. Among faunal remains there were bones of
cow and sheep. At Molodovsk, Layer 1, three stone hearths and copper slags were
uncovered. The site Ishikhan, Layer 2, produced hearths and storage pits, remains of
sheep and horse and a fragment of bronze plate.

The culture of khirigsuurs and deer stones was present until 8th Century BC,
and the slab grave culture until 5th Century BC. The question is what occurred in 5th-3rd
Centuries BC before the arrival of Xiongnu. Although A. D. Tsybiktarov did not define
any specific stage in the slab grave culture belonging to this time, he did not reject the
possibility that some slab graves could have been built until 5th-3rd Centuries BC (A. D.
Tsybiktarov, 2012b, p. 16). Shulga (2016) proposed a hypothesis based on data provided
by archaeology, paleoclimate studies and Chinese historiography that the decline of the
Scythian-like cultures occurred quite rapidly during the end of 4th-3rd Centuries BC as
a result of the expansion of ancient Chinese states Zhao and Qin which made nomadic
tribes move northward in the Steppe where the Xiongnu Empire arose in 2nd Century
BC. However, as Shulga pointed out, according to data available, the slab grave culture
disappears in 5th Century BC and complexes dated to 4th-3rd Centuries BC are yet
unknown. However, they are present in Cis-Baikal (see below).

The complex picture of the history of early nomads in Trans-Baikal will not be
full without considering another culture. In the Steppe-forest area of Eastern Trans-
Baikal, the Dvortsovskaya culture has been identified for the Late Bronze Age based on
a characteristic mortuary protocol (Figure 4.10, 4.13) (I. I. Kirillov, 1979b; I. I. Kirillov &
Kirillov, 1985, 2011c; I. I. Kirillov et al., 2000). The deceased were interred in an
extended-supine position, with a head oriented to the east and in deep grave pits which
were filled with stones. The graves were covered with stone kurgans which were oval
or close to rectangular in shape and 6-8 m in diameter. In all graves animal skulls
deliberately placed around the deceased were uncovered. They belonged to sheep,
horse, or cow. The most characteristic feature of the grave goods assemblage is
The Dvortsovskaya culture shares many similarities with the slab grave culture, and Tsybiktorov considers its burial complexes as representing the upper social class (A. D. Tsybiktarov, 1998). The issue with this culture is that there are few publications available, and its chronology is not clear. Initially the culture was suggested to belong to the Karasuk time and predate the slab grave culture (I. I. Kirillov, 1979a). In the later publication it is dated to 9th-6th Centuries BC (I. I. Kirillov et al., 2000), and the most recent attribution is 15th-5th Centuries BC (I. I. Kirillov & Kirillov, 2011c). Researchers conventionally relied on the attribution of grave good assemblages. Shulga pointed out many similarities in artefacts of the Dvortsovskaya culture with the finding from Yuhuangmiao cemetery dated to 7th-6th Centuries BC. Although some researchers have doubts about the identification of the Dvortsovskaya culture which is very similar to the slab grave culture (A. D. Tsybiktarov, 1998), others noticed that Dvortsovskaya culture has much more in common with Chinese materials than with the slab grave culture (Shulga, 2010, 2015).

In Cis-Baikal, the Late Bronze Age period was defined as the Shivera stage (Okladnikov, 1950), and based on the findings of bronze items of the Karasuk type this stage was dated to 13th-9th Centuries BC. Data accumulated up to the 1990s allowed Goriunova to identify a number of Late Bronze Age groups in this region, such as Shivera, Shumilikhha, Mukhor and Fofanovo based on excavated burial complexes. The North-Baikal group identification was based on settlement complexes (Goriunova,
Her model was criticised by G. V. Turkin and A. V. Kharinsky (Turkin & Kharinsky, 2004) since the defined groups contradicted radiocarbon dates, included only a small number of complexes, and contained few characteristic features. They instead suggested one stage for the Late Bronze Age named Butukhei (14th–7th Centuries BC), in which two mortuary traditions existed (Kharinsky, 2005). The graves of the Butukhei tradition were featured with ring-shaped stone pavements and the deceased were interred in an extended-supine position with the head oriented to the south-east.

In the 12th Century BC, a group who were cattle-breeders arrived on the western coast of Lake Baikal and left burials of the slab grave culture of the Tyrgan type (Turkin & Kharinsky, 2004). For the late 2nd Millennium BC, the arrival of newcomers from South-East Baikal area is traced in the materials of the living sites in the North-West Baikal area and characterised by the Senogda type pottery (Kharinsky et al., 2009; Kichigin, 2011, 2015). In the 7th–3rd Centuries BC, new groups of the slab grave culture arrived to the western coast of Lake Baikal (Kharinsky, Zaitsev, & Svinin, 1995).

Recently, the chronology of the Late Bronze-Early Iron Ages has been revised based on new chronometric data (Losey, Waters-Rist, Nomokonova, & Kharinskii, 2017). This research revealed a substantial gap of about 900 years in mortuary tradition which cannot be explained by the lack of sites. The Early Iron Age was dated to 810/535 BC-130 BC/245AD, and authors noted the correlation of the appearance of Early Iron Age burials with the local environmental change characterised by drier conditions more suitable for animal-keeping. Kharinskii (2017) described two synchronous burial traditions for the Early Iron Age of the North-West Baikal coast (7th–3rd Centuries BC), slab graves and the Butukhei tradition. They occupy separate cemeteries and in addition to surface structure differ in that the Butukhei graves do not yield domestic animal bones while slab graves do. The character of localisation of slab grave cemeteries in Cis-Baikal allowed A. D. Tsybiktarov (2016b) to suggest that the colonization did not occur on a large scale because the cemeteries are found in clusters and present only in some Steppe areas and was aimed on the exchange with local Taiga inhabitants.

In Yakutia, around 3300 BP17, a new cultural tradition called Ust’-Mil’ appeared in the basins of the Viluy, Lena, Aldan and Olyokma Rivers (Figure 4.10) (Ertyukov, 1990; Mochanov & Fedoseeva, 2013b, pp. 104-106). This culture has also been characterised based on a distinctive ceramic tradition. The pots have plain thin walls with no technical impressions on them. Two types of vessels were identified. The first type included the pots with defined rims and decorated with additional bands of clay

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17 More recent radiocarbon dates are 1380±120 to 10±100 BC (Alekseyev & Dyakonov, 2009).
which were further incised. The second type included pots with straight walls and no defined rims. The pots were decorated with additional bands of clay which were not incised. These pots also have a horizontal row of apertures under the rim. The lithic assemblage is less diverse and poorer in quality as compared to the preceding cultures. Bronze items are rarely found and share similarities with the Karasuk type artefacts. The economy remained the same and was dominated by hunting elk and with less reliance on fishing. This cultural complex has been found in South-Central Yakutia and believed to have existed until the second half of the 1st Millennium BC.

The mortuary tradition of the Bronze Age has not been identified since there is very scarce data. Okladnikov related the graves Pokrovskoye, Bugachan, Ichchilyakh, and Kullaty to the Bronze Age, but they were later reconsidered as belonging to the Ymyyakhtach culture (Ertukov, 1990; Fedoseeva, 1980; Mochanov & Fedoseeva, 2013a). The materials of the burial complexes Khatyn-Tumul’ and Olyokmink have been briefly published and lost (Ertukov, 1990). Alekseyev related Syalakh, Olyokminck and Khatyn-Tumul’ complexes to the Bronze Age emphasising that all of them featured cremations. Another burial complex was discovered at the Neleger site near Yakutsk (Dyakonov, 2010). The deceased was recovered from the depth of 20-26 cm, the remains were not well-preserved which did not allow for a firm conclusion whether it was a full or partial cremation, and no grave goods were present. Radiocarbon dating placed the burial in the period of Ust-Mil’ culture.

It may be concluded that the Late Bronze Age was a turning point in the history of Siberian and Central Asian cultures owing to the emergence of nomadism. In East Siberia, Trans-Baikal was a key area where the transmission of innovations took place. Western Trans-Baikal was a contact zone of two early nomadic cultures, slab grave culture and the culture of khirigsuurs and deer stones. Eastern Trans-Baikal also provides a complex picture. It is possible that Dvortsovskaya and slab grave cultures represent several, at least two, waves of migration or some strong influences from south-east. Although arguments pointing to the continuity in the cultural development from the Neolithic into the Late Bronze and Early Iron Ages are solid, the idea that some alien impact also played an important role cannot be dismissed (e.g., Konovalov, 2017).

In the period of early nomads, it becomes possible to relate ethonyms that appeared in historiography with material culture assemblages identified in archaeological record. As was mentioned earlier, Okladnikov suggested that people of the slab grave culture could have been the Dingling. However, the record belongs to the 1st Century BC which is much later after the disappearance of the culture. Some
researchers believe that the slab graves may be related to the Donghu people mentioned in the Chinese historical records as early as in 722 BC. However, other researchers associate the Donghu people with the Upper Xiajiadian in Northern China (see Buraev, 2010; Dashibalov, 2014). Such identification is a problematic issue owing a complex picture of historical development in the regions, and an important factor was migrations that contributed to the forming of modern peoples of Siberia and Central Asia (Buraev, 2016; Solodovnikov, Khokhlov, Rykun, & Kravchenko, 2016).

**4.6. Conclusion**

East Siberia is a huge territory, and the populations shared many cultural trends and similarities thus constituting a culture-historical macro-region, although a general picture of cultures and traditions is complex (Figure 4.14), and their origins remains unclear.

The earliest evidence of human culture in Siberia is dated to 700-800 ka, and during the Upper Paleolithic (ca.40/43-10/13 ka) anatomically modern people densely populated East Siberia, reaching the Arctic and successfully adapting to various environments, as well as climate changes. The archaeological record indicates not only high cultural diversity first of all seen in lithic technologies, but also rich symbolism manifested through art and personal adornments.

In the Terminal Pleistocene and Early Holocene, Trans-Baikal was a part of the East Asia cultural macro-region where the earliest pottery was adopted around

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![Figure 4.14. Neolithic and Bronze Age of East Siberia. Arranged by I. Ponomareva.](image-url)
14,000-13,000 BP (Vetrov, 2010). One such Trans-Baikal area was the Upper Vitim basin, and it is worth mentioning that synchronous sites of the Lower Vitim basin are aceramic, although, as research indicates, these areas shared sources of lithic raw materials (Ineshin & Teten’kin, 2011). There is a substantial gap in the Early Holocene culture history since no sites were radiocarbon dated to the period 8300-7500 BP, and the next group of sites is cemeteries and graves with mortuary protocol of the Kitoi type dated to 7500-6300 BP or 6600-5200 BC (Lbova & Zhambaltarova, 2009). The “Classic” Kitoi mortuary tradition is represented by numerous graves and cemeteries in the Cis-Baikal region which were dated to 7500-7000 BP (A. W. Weber, Schulting, Bronk Ramsey, et al., 2016). Thus, the Cis-Baikal Kitoi-type graves appear to be younger than the Trans-Baikal Kitoi graves. However, insufficient dates in Trans-Baikal do not allow for any conclusions. In Yakutia, the Early Neolithic starts with the Syalakh culture, the most characteristic feature of which is the net-impressed pottery (Mochanov & Fedoseeva, 2013a). Possibly, it may be related to the influence of the Cis-Baikal region where the net-impressed pottery is present in the Kitoi graves and Early Neolithic stratified complexes. However, Mochanov believes that Syalakh pottery shares greater similarity with the Isakovo Net-Impressed pottery, but this mortuary tradition has younger dates than the Syalakh culture.

The Middle Neolithic in the Cis-Baikal exhibits a pattern of the absence of visible mortuary sites, but three broadly distributed ceramic styles, Net-Impressed pottery, Khaita pottery and Ust’-Belaia pottery, are represented at stratified living sites 7800-5500 BP, 7800-5500 BP, and 6600-4100 BP respectively. The Net-Impressed pottery is believed to originate locally, the Khaita is a cord-impressed type and may be related to Trans-Baikal, and the Ust’-Belaia is assumed to have spread from the Yenisey basin. These pottery styles continued to be present in the Late Neolithic complexes as well, and another pottery type, Posol’sk, appeared around 5500 BP in the Yenisey basin and spread throughout most of East Siberia (Berdnikov, 2013; McKenzie, 2009). In Trans-Baikal, the Posol’sk pottery is characteristic of the Late Neolithic Ust’-Yumuruchen culture in the Vitim Basin (Vetrov, 2011) and it is also present at the Middle-Late Neolithic living sites of Western Trans-Baikal (Goriunova & Lykhin, 1985; Ivashina & Tsydenova, 2011; Nomokonova & Goriunova, 2004; Tsydenova & Khamzina, 2006). The Isakovo-Serovo mortuary tradition is related to the Late Neolithic, and a few similar burial complexes were unearthed in Trans-Baikal (Ivashina, 1979; Lbova et al., 2008).

However, the Neolithic of Trans-Baikal is insufficiently studied. Few graves were dated to the Late Neolithic, and there are numerous individual burials recovered
throughout Trans-Baikal which do not have absolute dates and were identified as Neolithic on a typological basis. Neolithic habitation sites also were mostly identified based on similarities with the ceramic and lithic traditions of Cis-Baikal and Yakutia. This situation obstructs the understanding of the local history and culture development as well as uncovering the origins of migrant groups which appeared in Cis-Baikal in the Late Neolithic as clearly indicated by genetic studies. Interestingly, recent research in Eastern Mongolia revealed many connections with the Neolithic of the Baikal region (Tsydenova, 2016).

The understanding of Trans-Baikal culture-history becomes even more crucial when one considers the problem of origins of many traditions in Cis-Baikal and Yakutia. In Cis-Baikal, research indicates the appearance of migrant groups in the Late Neolithic and Early Bronze Ages (Moussa et al., 2016; Movsesian et al., 2014). However, the Trans-Baikal was also subject to Cis-Baikal influence. For example, ceramic traditions recognised in Cis-Baikal cultural complexes were also identified at some sites of Trans-Baikal thus suggesting Cis-Baikal influence during the whole Neolithic. The Late Neolithic migration has also been identified in the Upper Vitim basin and it was suggested that new groups might have come from Southern Trans-Baikal (Vetrov, 2011). However, the ceramic tradition was identified as Posol'sk pottery which produced the earliest dates of 6900 bp in the Yenisey basin to the west (Makarov, 2012). In Yakutia, the Middle Neolithic is represented by the Bel'kachi culture with the cord-impressed pottery which is replaced by the Ymyyakhtakh culture with waffle-like impressed pottery in the Late Neolithic. Both cultures are considered as non-indigenous (Mochanov & Fedoseeva, 2013a). The cord-impressed pottery is characteristic of Trans-Baikal Neolithic where it appears in the Final Pleistocene Layer of Studenoye-1 and existed until the Late Bronze Age. The pottery with waffle-like impressions was also found in Eastern Trans-Baikal, but in unclear context or in a disturbed position. Thus, it appears that in the Neolithic, there was a complex picture of cultural processes, migrations, and cultural influences, although many pieces of this picture have not been recovered yet.

The Early Bronze Age is represented by the Glazkovo culture in Cis-Baikal (Okladnikov, 1955a). In Yakutia, the Neolithic Ymyyakhtakh culture continues to exist and may have received copper/bronze items from the Glazkovo which is indicated by the occurrence of Glazkovo pottery at some sites (Ertuyukov, 1990). There is no comprehensive picture of culture-history in Trans-Baikal in the Early Bronze Age. Two of the most recent models, Tsybiktarov's and the four-stage model for Western Trans-Baikal, contradict each other in that the same sites and complexes are related to
different stages or cultures with no clear argumentation. This situation becomes even more complicated since the authors do not distinguish between culture, stage, and culture-historical area, using these terms interchangeably. Interestingly, such contradictions are found in the single chapter written in co-authorship (Ivashina et al., 2011). The book has been written for a broad audience, but it can confuse even an educated reader.

In the Late Bronze Age, the cattle-breeding slab grave culture appeared and spread throughout Trans-Baikal and reached the western coast of Lake Baikal. In Trans-Baikal, two more traditions existed at that time, Dvortsovskaya culture in Eastern Trans-Baikal which shared many similarities with the slab grave culture, and the culture of khirigsuurs and deer stones which migrated from Western Mongolia. In Yakutia, the Late Bronze Age is represented by the Ust’-Mil’ culture which is also considered as non-indigenous. It is characterised by pottery with incised additional bands of clay. This style type is also found in mortuary complexes of the slab grave culture.

The culture-history of the Neolithic and Bronze Age in East Siberia is a complex picture of trade contacts, influences, and migrations (Shepard, Goriunova, Novikov, Tiutrin, & Weber, 2016). The key area which could play a crucial role in transmitting innovations or being a place of origins of some traditions is Trans-Baikal. This area occupies an important position between major prehistoric culture areas of Central Asia Steppes and East-Siberian Taiga. However, there are many lacunas and problematic issues such as few excavated sites, scarce data, and insufficient research for the Neolithic and Early Bronze Ages, and insufficiently clear chronology of the early nomadic cultures. Hopefully, the analysis of rock art below will complement the picture and will help to better understand past ethno-cultural processes.
CHAPTER 5. IN SEARCH OF ROCK ART SITES. FIELDWORK AND ITS RESULTS

This chapter is devoted to the fieldwork conducted as a part of this research. First, an overview of the fieldwork is outlined for better understanding of how the data was collected, and what challenges were encountered. Then, the methods of rock art recording, data processing and primary analysis are described. The principles of further stages of rock art analysis, namely typology, stylistic analysis and interpretation, are discussed in Chapter 3 and are not repeated here. Finally, the results of the fieldwork are presented in tables and graphs in the last section.

5.1. Fieldwork

5.1.1. Fieldwork goals

The aim of this project is to reconsider macro ethno-cultural and social processes that took place in East Siberia in the Neolithic-Bronze Ages. A great majority of all rock art sites are related to this period, and such research implies a large geographic scope. As was outlined in Chapter 1, all the major discoveries already have been made, rock art areas outlined, and culture-historical frameworks developed, however, the quality of publications of rock art sites does not allow substantial progress in understanding Siberian prehistory. Therefore, this PhD is primarily fieldwork based. The goals of the fieldwork were: 1) since this project considers macro-history on a large territory, it was necessary to survey as large area as possible covering different geographic areas; 2) since publications available for the rock art of Trans-Baikal and Yakutia contain only black-and-white drawings and few low-quality black-and-white photographs, another goal was to create a baseline recording for rock art sites examined in the fieldwork.

5.1.2. Fieldwork overview

Fieldwork for this PhD project took place in May-September 2017 in three subjects of Russian Federation: Zabaykalsky Krai, Sakha Republic (Yakutia) and the Republic of Buryatia where; in total, 108 rock art sites were properly recorded. When preparing for the fieldwork and outlining survey routes, information was compiled from published data. When possible, arrangements were made with local archaeologists, historians and guides, however, for most of the sites, we had to rely on ourselves to locate them. Thus, the fieldwork had an adventurous and unpredictable mode resulting in many discoveries being made.

In addition, two more important rock art places were visited: three sites in the Lower Amur River basin (Sikachi-Alyan, Sheremetyevo and Kiya) and Tomskaya Pisanitsa in Kemerovo Oblast. These sites were not methodologically recorded, because the Amur River sites have been studied by a team of researchers under the leadership of Ekaterina
G. Devlet from the Institute of Archaeology RAS, one of the aims of which was a detailed recording using 21st Century technologies (e.g., E. G. Devlet et al., 2018; E. G. Devlet & Pakhunov, 2016). Tomskaya Pisanitsa is an open-air museum, and many high-quality publications are available (e.g., Miklashevich, Mukhareva, & Bove, 2016, 2017; Mukhareva, 2018). Therefore, only photographs with an IFRAO scale and standard 2-m ruler were taken to later include them as illustrations in research articles.

The original plan split the fieldwork into three main parts, or routes: Route 1 – Zabaykalsky Krai (May-June 2017), Route 2 – Yakutia (June-July 2017), Route 3 – Buryatia (July-September 2017). The fieldwork was carried out mainly as it was planned although some modifications were made on the go due to some unpredictable circumstances.

5.1.2.1. Route 1. Zabaykalsky Krai

The expedition started on 29th May in the city of Chita with the survey of sites in the city and its outskirts, Smolenskiye Skaly, Dvortsy, Titovskaya Sopka (Kamennoye Ushchel'ye), Sukhotino-13 and Sukhotinskiy Kamen’. These sites were examined with the help of local archaeologists Alexander Konstantinov and Sergey Vereshchagin. On the 31st of May the expedition headed to the east, the Khilokskiy district, where two outstanding sites, Gyrshelunskiy Kamen’ and Shaman-Gora, were surveyed with the assistance of the Head of the Khilok Local History Museum Vladimir Petrov and his son Ivan Petrov.

On the 3rd of June the expedition continued and headed to the south, to the Aginskiy district, where we were warmly welcomed by the staff of the G. Tsybikov Aginsk National Museum. With their help the Suduntuy site (Shulutay, Baraun-Chulutay) was examined. We also received support from a former head of the Aginsk Nature Museum Vladimir Strel’nikov who provided some valuable contacts in the Priargunskiy district and remotely guided us when we were working there.

On the 4th of June we arrived in the Borzinskiy district where nine sites were surveyed and recorded. Most of these were previously reported by Mazin (1986) (Kopchinskiy (Gurban’sha), Kopchil, Ust’-Tsoron, Tsoron III, Baraun-Konduy I, Baraun-Konduy II/2, Mogoytuy). Information on two more previously unrecorded sites (Khalzan-Daban, Pilotka) was provided by archaeologist Grigory Belomestnov.

On the 10th of June the expedition moved to the Priargunskiy district where the search of rock art sites previously reported by Mazin (1986) continued. This area is the biggest concentration of rock art sites in Zabaykalsky Krai from which Mazin (1986) reported 13 sites, but only four (Margutsek, Byrka, Kazachiy III and Urulyunguy I) were found during this survey. The Byrka site is well-known to local people as a nice place for a barbeque and is severely destroyed by vandals. The rock cliff was blown off, and the remaining ancient pictures have been graffitied over. Kazachiy III is situated on the
territory of the former army shooting range; the rock is blown off, but by happy chance most of the paintings survived. Urulyungui I is located just next to the Urulyunguy village, and is also graffitied over by vandals. While searching for other sites recorded by Mazin, another site, Staraya Zhila, was discovered and recorded.

After recording the Dono site in the Kalganskiy district on 16th June, the expedition moved to the Nerchinsko-Zavodskoy district where another site, Avvan (Volch’ya cave), was examined. Two more sites, Ust’-Urovskaya and Yokala, were planned to visit, but neither detailed information on their location nor a local guide were available. At this stage the initial plan started to change. These sites are located on the left bank of the Argun’ River which is the actual Russian-Chinese border. Working in a border zone requires permission from the Border Department of the Federal Security Service of Russia in the Trans-Baikal Territory which was obtained before the start of the expedition. However, these two sites are also located in a remote forested area and only a very bad dirty road leads there, and the best way to get there would be to go by the river which is not allowed due to the border control regime. Moreover, the site Ust’-Urovskaya is situated on the territory of a frontier post. The border control officers were consulted, and it was agreed that they could help and take me to their secret frontier post with the next shuttle and assist me in the rock art survey, but this required a special order from their headquarters. To make this arrangement we had to go to the headquarters personally in the Sretenskiy district located 300 km to the north-east. All this led to the reconsideration of the original plan which also included the sites Kara, Larga, Dzhalinda, and Sredne-Shaykino. They are located in the basin of the Shilka River, in a forested and difficult to access area. Some preliminary arrangements were made with archaeologist Sergey Alkin who has been working in that region for many years and visited many of these sites. However, in the end it turned out that our schedules did not accord with each other, and these sites were removed from the plan, thus allowing some time for making arrangements with the Border Department and surveying rock art sites on our way to the Sretenskiy district.

At this final stage of the Zabaykalsky Krai route, four more sites were recorded: Chandaycha (Chondaycha) in the Aleksandro-Zavodskoy district reported by Mazin (1986), Borschchovochny site in the Nerchinskiy district discovered in 2015 by the Nerchinsk enthusiasts of local lore (Yurinskaya, 2016), Butikha in the Tungokochenskiy district, and finally Ust’-Urovskaya site in the Nerzinsko-Zavodskoy district surveyed with the armed assistance of the Border Department.

This route was finished on 24th June and on 26th June I arrived at Yakutsk.
5.1.2.2. Route 2. Yakutia

This route substantially changed from the original one. Initially it was planned to survey rock art sites of the Aldan and Amga Rivers in a collaboration with the North-Eastern Federal University Museum of Writing. The survey was intended to be carried out by a means of motorboat in the absence of roads and because the sites are located along the river banks in the Taiga forest. However, the North-Eastern Federal University did not supply the Museum with motorboats and fire-arms, necessary for protection from wild animals, especially bears. Therefore, in the last moment a decision was made to cancel this expedition. But since we were already there, it was agreed to survey the rock art sites of the Lena River which are more accessible, and this area is safer because many tourists travel here, and more villages are present along the bank which means that there is less chance to encounter a bear (which happened anyway). As has already been mentioned, no motorboat was supplied, so it was attempted to hire some transport, but the prices appeared to be exorbitant. Thus, my companion in this expedition (my former undergraduate contemporary) Nikolay Sevastyanov and I took a rubber boat from the Museum of Writing and headed to the Sinsk village in the Khangalassky District, from where our survey started on the 1st of July. A staff member of the Museum Evgeniy Gorokhov and his wife Elena assisted us on this journey.

The rock art sites of this section of the Lena River were surveyed by many researchers previously (see Chapter 1 and Table 5.1), and we followed Okladnikov’s inventory, the fullest publication of rock art data available to-date (Okladnikov & Zaporozhskaya, 1972). During our survey, in total 16 sites were examined and recorded on the 90-km section of the river. Their full list is compiled in the section on results (Table 5.1), as well as a list of those sites which were not located (Table 5.2). This survey ended in the Bulgun’yakhtakh village, Khangalassky District, on 10th of July.

Since there were still two weeks until the commencement of Route 3 in Buryatia, a decision was made to go to Khabarovsky Krai to visit the rock art sites of the Ussuri and Amur Rivers. While still in Yakutsk, time was well spent on studying documents related to rock art research in the Archive of the Yakut Scientific Centre of the Siberian Branch of the RAS. The most important document that I was permitted to copy for my personal usage was Savvin’s unpublished report on his survey of rock art sites in the Lena River basin in 1939. The report also contained drawings, which made it possible to compare some of his findings with those made during this PhD fieldwork.

From 14th to 24th July, the field research continued in Khabarovsky Krai, where it was blessed with fortune. I visited the site Sikachi-Alyan twice, which is a popular tourist destination in the region, and it is not hard to get there by public transport. A challenge
was to visit the Sheremetyevo site which is located in the border zone, because, since the Ussuri River is an actual Russian-Chinese border, working in this area requires a special permission. It was total luck that I was granted the permission within a few days. After visiting Sheremetyevo, another site, Kiya, was surveyed with a help of the local history museum in Pereyaslavka village. Many people helped me and made this journey possible: Oksana Yanshina (Peter the Great’s Museum of Anthropology and Ethnography), Artur Laskin (Regional State Institution "Khabarovsk Regional Center for the Protection of Historical and Cultural Monuments"), Ekaterina Bochkaryova and Anastasia Soboleva (Khabarovsk Regional Museum Grodekova), Anna Vasilyeva and Vladimir Vasilyev (Sheremetyevo), and Svetlana Onenko (former Head of the Sikachi-Alyan Museum). The photographs taken during this survey complemented my paper devoted to the continuity of the Amur rock art tradition published later and included as a section in Chapter 6 (Ponomareva, 2018a).

5.1.2.3. Route 3. Buryatia

This part of the expedition commenced in Chita on 26th of July 2017. We drove straight to the Republic of Buryatia where a survey started with the examination of the sites in the Uda River basin: Shara-Tala, Baga-Baitsa, Badar, Barun-Alan (Alanskiye Pisanitsy), Khotogoy-Khabsagay, Naran-Khabsagay (Naran Kul’skiy), Shubuguy, Sanny Mys, Shanaty, Shara-Khunduy, Kheltegey-Baytsa, Angir-I. Maltay-Shuluun, Angir-II. Bain-Khara, Staraya Kurba (Shenezam), Dodogol (Mukhor-Nur, Averkova mountain), Golubinka (Varvarina Mountain), and Staraya Bryan’. This area is very rich for rock art and provided a large amount of data on different styles and traditions. Most of these sites were studied previously (Okladnikov & Zaporozhskaya, 1969, 1970; Tivanenko, 1990), but two sites were first documented (Badad and Shara-Khunduy). Barun-Alan has been studied for many years (Tashak & Antonova, 2019), but no comprehensive publication of this art is yet available.

Then the expedition continued in the area adjoining right bank of the Selenga River and along its right-hand tributaries. The sites in the Tarbagatayskiy district were documented, Voznesenovka, Kordon, Nadeino Cave, Nadeino (Pavlova Mountain), Lovtsov Ugol (Lovtsov Log) and Tarbagatayskaya Pisanitsa (Batyushkina). Two of these sites, Voznesenovka and Tarbagatayskaya Pisanitsa (Batyushkina), were reported in recent years in short publications (Bazarov, 2014; Bazarov & Namsaraev, 2011, p. 349). Four sites were recorded at the mouth of the Sukhara River. One site, Khayasyn, has been studied by previous researchers (Tivanenko, 1990), and three, Oboto, El’brin-Uber and Tsolga II were discovered while searching for other sites reported previously. Another group of sites was surveyed in the Tugnuy River Basin. Four sites, Khar’yastka, Narsatuy, Bain-Khara
Cave, and Gol-Tologoy have been known before (Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990). Bain-Khara Cave appears to be the largest site in the region with 647 designs recorded. Two sites, Bom and Kashkarga II, were discovered while searching for other sites. After that the expedition headed to the Bichurskiy district, where five rock art sites were documented in the basin of the Khilok River. All of them, Baryshnya, Altachey (Altash), Khaysagar, Beshegte-Baytsa (Ara-Kiret’) and Bichurskaya, have been known previously (Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990). The survey continued further to the south, in the basin of the Chikoy River. Two previously known sites, Gorodovoy Cliff, and Khabshag (Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990) were examined and another site, Staraya Kapcheranka-3, was discovered. The expedition then headed to the Kyakhtinskiy district where three known sites, Bain-Dzurkhen (Bayan-Uula), Tabangutskoye obo and Ust’-Kyakhta (Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990), were documented.

The next group of sites was surveyed in the Selenginskiy district, at the mouth of the Chikoy River on the right bank of the Selenga River (Povorot and Kamenushka) (Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990) and in the basin of the Temnik River on the left bank of the Selenga River (Ust’-Temnik II, Temnikovskaya Cave and Galtay II). The sites of Ust’-Temnik II and Galtay II were discovered while searching for other sites. After finishing in the Temnik River basin, the expedition continued the survey in the area adjoining the left bank of the Selenga River and its left-hand tributaries and headed to the south, to the Dzhidinskiy district where five sites were recorded in the area adjoining the left bank of the Dzhida. Three of the sites, Narin-Khunduy, Sarbaduy and Bayan (Cheremushki) were known previously (Okladnikov & Zaporozhskaya, 1969), and two sites, Perevoznaya-3 and Shartykey-II, were discovered during this survey. Three more sites were examined in the Dzhidinskiy district, on the left bank of the Selenga River, Derevenskaya Mountain, Baga-Zarya and Khudzhir.

The last group of sites was studied in the Ivolginskiy and Selenginskiy districts, on the left bank of the Selenga River. All of them, Ayryk, Kibalinskaya Pisanitsa, Mondogor-Khabsagay, Beryozovaya and Sutoy (Suslova Mountain), were studied previously (Bazarov, 2014; Okladnikov & Zaporozhskaya, 1969; Tivanenko, 1990).

The expedition successfully finished at the Kibalinskaya Pisanitsa on 10th of September with 63 sites recorded, and 9 of them were discovered during this survey. For more details see a section on the results in this chapter.

5.1.3. Rock art recording

As was stated above, one of the goals was to create a baseline recording for rock art sites examined during fieldwork. The protocol was the following.
First, when a site was found, the rock cliff(s) was/were visually surveyed to locate all panels where rock art was present.

When there were more than 4-5 panels present and oriented at different cardinal directions, thus making it difficult to grasp the location of rock art from a general photograph, a plan of panels was drawn using a ruler, a tape-measure and a laser rangefinder to measure the width of panels and a compass built-in GPS tracker Garmin® Montana to measure azimuth.

The next step was to compile a verbal description of each panel in a field diary. No unique number is available for archaeological sites in Russia, and each site has its unique name which is designated based on nearby geographic localities. Thus, when a known site was recorded, its proper name was used. When a site was discovered, a name was designated referring to a locality where it was found. However, this identification was preliminary, because it was based on published copies of rock art, often proving to not be accurate, and the rock art is very faded and poorly visible to the naked eye. Then GPS coordinates were taken using a GPS-tracker Garmin Montana®, and the site was also provided with a verbal geographic description relating it to nearby towns/villages/creeks/rivers/lakes. Then a description of each panel followed which contained its location in relation to other panels, measurements of height, width and cardinal direction, description of motifs depicted and its colour. Notes also were taken on the preservation condition of a panel. Due to poor visibility of rock art, a detailed inventory of rock art in the field was not possible, thus the main aim of this description was to provide key characteristics to later correlate the description with photographs at the lab stage.

After description in the field diary is finished, photographing followed. A Nikon D3200 camera, with an AF-S Nikkor 18-55 mm lens, was used. The following views were taken: pictures of general view at the site in a landscape context, pictures of each panel with a sectional 3-m levelling rod and close-ups of designs with IFRAO scale.

Structure-from-Motion (SfM) photogrammetry was also used at some sites; however, it was not used as a part of baseline recording because of insufficient resources. Shooting many pictures from different angles uses up a lot of battery, and a generator to regularly charge them was over the budget. Another factor is a large amount of space needed to store photographs taken. Since fieldwork continued for more than three months, such amount of memory cards would be also over the budget. The aim was to survey as many sites as possible with the given budget, and the amount was preferred over the quality. Moreover, photography along with a detailed description and GPS tracking has provided much more information for analysis compared to published data. Only 6 sites
out of 108 were recorded using photogrammetry (Petrovskoye Location # 1, Butikha, Smolenskiye Skaly, Dvortsy, Shaman-Gora Location # 1, Tabangutskoye obo Rock 9). Even though this method was not widely used in this project, in future it should become a necessary step in rock art recording.

5.2. Initial data handling
5.2.1. Data processing

For each site, a detailed inventory was compiled based on an adapted version of Paul Tacon’s rock art recording questionnaire (Appendix 1). The inventory list included the following points:

1) Location: Region/ District/ Distance to the closest key locality (town, village, creek, river etc.). GPS coordinates were compiled in a separate file.

2) Type: Open-air site/Cave or grotto

3) Geology: a type of geological formation based on data available in publications. No special analysis was undertaken.

4) Panels: height above the modern ground (in case of large outcrops measure from where it is comfortable to stand in front of a panel) to grasp their altitude level in a relation to each other; height and width; cardinal orientation.

5) Technique: a list of techniques used on a site, for instance light-red ochre, carving, scratching etc.

6) Rock art inventory: a description of each design with a technique used.

7) Superimpositions: a list of all superimpositions present at a site.

8) Cultural deposits/ Excavations: information about excavations undertaken at a site by previous researchers.

9) 3D Documentation: Yes/No.

10) Plan of panels: Yes/No.

11) Water source: the main water way and the closest water source are noted.

12) Preservation condition: each panel assessed in reference to the factors affecting their condition, such as fading and blurring, lichen, exfoliation, soot, and vandalism.

13) Other relevant information: any other important information about recording, or evidence of worshipping a site, and a comparison of paintings with published copies when available.

Each written description of a site was appended with an album where all relevant photographs were included, such as a general view at a site in a landscape context, plan of panel when available, location of panels indicated on photographs of general view of a site or of several panels, photographs of each panel with a levelling rod, and photographs of
designs with IFRAO scale, original and enhanced in DStretch®. Other relevant photographs were in some instances included, such as a view from a site, evidence of worshipping at a site, non-backfilled excavation pits left by previous researchers, evidence of vandalism, etc.

5.2.2. Primary data analysis
At the next stage, this qualitative data was categorised and entered in an Excel spreadsheet to be measured and calculated.

Firstly, the data was described based on its subject matter:
1. Non-figurative: vertical lines (rows, single, chaotic), dots (rows, single, chaotic), crosses (rows, single), saltires 18 (rows, single), circle/ring figures, wheel-like figures (ring with cross inside), spirals, horizontal lines, zigzag/wavy lines, triangular shapes, T-shapes, oblique lines (rows, single), heart-like shapes, lattice figures and other (rare geometric shapes).

When dots and vertical lines occurred in groups, whether organised (rows or other shapes) and unorganised (chaotic), they were counted as a single design due to their apparent affinity as an assemblage. Moreover, counting each dot or a vertical line as a separate design would considerably skew statistics, because non-figurative subjects constitute a significant portion of the East-Siberian rock art.


These definitions are quite rough, since in many cases it is impossible to determine a species depicted.

3. Ornithomorphs: ornithomorphic figures, cross-like figures, bird-track shapes, ornitho-anthropomorphous figures.

This category is separated from the category of zoomorphs since ornithomorphs constitute a substantial part in the rock art of Trans-Baikal. Cross-like figures seems to be simplified ornithomorphs and different to crosses and saltires. A subcategory of ornitho-anthropomorphous figures includes designs which are difficult to determine whether it is an ornithomorph or an anthropomorph, mostly because images are faded or blurred. However, some of them could be depictions of therio-anthropomorphs.

4. Anthropomorphs. Since no predetermined typology of anthropomorphs in the region exists, and this study aims to produce one, no subcategories were defined at the first stage of the analysis.

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18 Saltire is a diagonal cross.
5. Enclosure motif: rectangular and round.

This is a specific for the Trans-Baikal rock art subject which is an outline of different shape inside of which various compositions are found, predominantly chaotic or organised assemblages of dots, but also rows and single figures of anthropomorphs, ornithomorphs and sometimes quadrupeds. The meaning of this kind of design is unknown.


7. Undefined. This category includes figures which are destroyed by exfoliation, faded or blurred so only stains of paint are discernible.

8. Other: runic, Mongolian and Tibetan inscriptions. Also, a single depiction of a plant-like design was assigned to this category.

Secondly, a technique was described.

A technique is a very important characteristic for defining styles and traditions in East-Siberian rock art. For instance, Neolithic and Bronze Age rock art is dominated by ochre paintings, while scratching is characteristic for Medieval graffiti. The so called Kyakhta group in Buryatia includes only petroglyphs, and this tradition may be related to the western influence in the Late Bronze – Iron Ages.

1. Pictograms. This category includes both painted and drawn designs. No distinction was made because only a few drawings were recorded. One charcoal drawing was recorded in Yakutia. Ochre paintings range from yellow to brown colours, although black colour is also present. Some Tibetan inscriptions recorded in Buryatia are colourful and made in red, yellow, white, blue and black, the pigment of which is unknown, since Tibetan rock inscriptions in Buryatia have not been a focus of any research.

2. Petroglyphs: pecked, engraved, ground, scratched.

Thirdly, the height of designs in a relation to the ground was categorised: 0-1 m, 1-2 m, 2-3 m, 3-4, 4-5, 5-7 m.

And, fourthly, the cardinal orientation of panels was added: NW, N, NE, E, SE, S, SW, W.

The statistics from this primary data was plotted in Tableau® and is present in the following sections.

The next stages are typology, stylistic analysis and interpretation through the theoretical framework, the methodology of which is outlined in the Chapter 3.

5.3. Results of rock art surveys in 2017

5.3.1. Yakutia

In 2017, one of the largest concentrations of rock art in East Siberia was surveyed (Figure 5.1), although the survey route did not include the full section of the Middle Lena
River from where rock art sites were reported. In total, 16 sites were recorded (Figure 5.2), and their identification followed Okladnikov's inventory (Okladnikov, Zaporozhskaya).

The data collected was compared to the information available in publications and archival documents (Table 5.1). Overall, the majority of known sites was found, and no new sites were discovered, although some new panels and designs were recorded and identified. Concerning, the preservation of the Lena River rock art, the sites are badly

Figure 5.1. The Sakha (Yakutia) Republic. The area of research in 2017.

Figure 5.2. The location of rock art sites examined in the Middle Lena River basin in 2017. 1 – Bysagas, 2 – Petrovskoye, 3 – Petrovskoye-II, 4 – Nizhe Petrovskogo v 0.5 km, 5 - Suruktakh-Khaya (Nizhe Petrovskogo), 6 - Yurdyuk-Khaya, 7 - Tiit-Ary, 8 - Emegeetekh-Khaya, 9 - V 7 km nizhe Yelanki, 10 - Yelanka, 11 - Olguidakh, 12 - Chasovnya, 13 - Toyon-Ary, 14 - Nizhe Toyon-Ary v 1.5 km (Toyon-Ary III), 15 - Suruktakh-Atyk (Suruktakh-Aan), 16 - Bulgun yakhtakh.
damaged by weathering. Pictures are located on soft limestone cliffs on the riverbank, and the river is apparently a major factor in the rock erosion. Many sites have been vandalised by modern graffiti. Researchers’ impact can be also considered as damage since almost all rock art figures still feature chalk or pencil outline.

Table 5.1. Previous research and preservation assessment of rock art sites examined in the Middle Lena River basin in 2017.

<table>
<thead>
<tr>
<th>##</th>
<th>Name</th>
<th>Previous research</th>
<th>Preservation assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bysagas</td>
<td>The site description with drawings was first published by Okladnikov and Zaporozhskaya (1972, pp. 44-45). Knurenko (2000) reports surveying the site, but no details were provided.</td>
<td>Panels are severely damaged by exfoliation and covered by a thick crust of white coating. Some depictions recorded by Okladnikov were not found, possibly due to severe exfoliation. The designs still feature remains of chalk outline.</td>
</tr>
<tr>
<td>2</td>
<td>Petrovskoye</td>
<td>Some locations were mentioned and were surveyed by Savvin in 1939 but it is not clear which (Savvin, 1940). Information on 12 locations was published in Okladnikov and Zaporozhskaya (1972). Locations #5, 6, 8, 9, 11 have not been found. Location #2 was divided into two groups, because Okladnikov described a scene for which a drawing was given that did not match the description. This scene was found in a proximity of the described one: Group 1 – published in Pl. 87, 2, Group 2 – published as Bysagas (Pl. 84, 5), again as Balagannakh-Uruyete (Pl. 76, 2), and possibly, as Vyshe Petrovskogo (Pl. 99, 5). This area was examined in 2000 by the expedition of the Yakut State University, and the results of this survey were partially published (Knurenko, 2000). The author proposed another way of grouping the rock art sites. Since not all information was published, it is impossible to compare this project’s materials with Knurenko’s inventory. However, possibly Khatyn-Aryy I includes Petrovskoye Location #7 and 10, Khatyn-Aryy II - Petrovskoye Location #12, Khatyn-Aryy II - unknown since nothing matching its geographic location has been found in 2017, Petrovskoye I - Petrovskoye Locations #1-4.</td>
<td>Panels are badly damaged by exfoliation and flaking off (Locations #1, #3, and #12). Some paintings are graffitied over with scratching and pen drawings (Location #4). The designs still feature remains of pencil outline.</td>
</tr>
<tr>
<td>3</td>
<td>Petrovskoye II</td>
<td>The site was surveyed by Savvin in 1939, and there are also drawings of the paintings in his archival documents (Savvin, 1940). This site is not present in the Okladnikov’s inventory (Okladnikov &amp; Zaporozhskaya, 1972). In 2000 it was examined by the expedition of the Yakut State University, and the description and copies of paintings were published (Knurenko, 2000).</td>
<td>Many figures are faded and feature exfoliation. They also exhibit pencil and chalk outline.</td>
</tr>
<tr>
<td>Site</td>
<td>Description</td>
<td>Damage</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Nizhe Petrovskogo v 0.5 km</td>
<td>Description and drawings are published in Okladnikov and Zaporozhskaya (1972, pp. 49-50). Some designs that are not present in the book were recorded.</td>
<td>Most of the figures feature pencil outline and are damaged by exfoliation.</td>
<td></td>
</tr>
<tr>
<td>Suruktakh-Khaya (Nizhe Petrovskogo)</td>
<td>Probably, the site was surveyed by Savvin in 1939, since he mentioned a rock named &quot;Suruktakh-Khaya&quot; with paintings in 1 km downstream from the village of Petrovskoye (Savvin, 1940), however no more details were provided. Description and drawing are published in Okladnikov and Zaporozhskaya (1972, p. 50), and some inaccuracies were revealed during this project fieldwork.</td>
<td>The rock art is faded and damaged by exfoliation.</td>
<td></td>
</tr>
<tr>
<td>Yurduyuk-Khaya</td>
<td>The site was surveyed in 1939 (Savvin, 1940). The information and drawings were published in Okladnikov and Zaporozhskaya (1972, pp. 50-52) where three locations were reported, but the Location # 2 has not been found.</td>
<td>At Location # 1, rock art is severely damaged by horizontal fissures and exfoliation, and at the Location # 3 paintings are very faded and feature chalk and pencil outline.</td>
<td></td>
</tr>
<tr>
<td>Tiit-Ary</td>
<td>Ksenofontov reported a rock art site located in 13 verst from the Tiit-Ary village of which he also provided a drawing (Ksenofontov, 1927, Fig. 3). Actually, the site &quot;V 7 km nizhe Yelanki&quot; is located there. Another copy of this scene was published in Okladnikov and Zaporozhskaya (1972) also as Tiit-Ary site. However, this scene was not found during this PhD fieldwork, as many other paintings drawings of which were published by Okladnikov, possibly due to severe exfoliation of the panels. One of the panels present here was published by Okladnikov as the Toyon-Ary site (Okladnikov &amp; Zaporozhskaya, 1972, Pl.144,8).</td>
<td>The rock art is severely damaged by exfoliation, covered by white coating and features chalk outline.</td>
<td></td>
</tr>
<tr>
<td>Emegeteekh-Khaya</td>
<td>Ksenofontov (1927) was first to publish the information (Locations # 1 and # 2) and drawings of the paintings (Ksenofontov, 1927, Fig. 1 and 2). Then the site was surveyed by Savvin in 1939 who made another drawing of the painting at the Location # 1 (Savvin, 1940). All three locations are present in Okladnikov and Zaporozhskaya (1972), although they are not defined as separated locations.</td>
<td>A scene at Location # 1 is damaged by exfoliation and features a pencil outline. This panel is graffitied over with a large inscription &quot;ГИ&quot; made with black paint. Paintings at Location # 2 are very blurred and severely damaged by exfoliation.</td>
<td></td>
</tr>
<tr>
<td>V 7 km nizhe Yelanki</td>
<td>The site description with drawings is published in Okladnikov and Zaporozhskaya (1972, p. 59). The description of the site location is incorrect (it is found upstream not downstream from the Yelanka village), and many panels are not present in the publication.</td>
<td>Some figures are damaged by exfoliation and feature chalk outline.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Yelanka. Kamenolomnya</td>
<td>The site description with a drawing is published in Ksenofontov (1927, Fig. 6), and Okladnikov and Zaporozhskaya (1972, p. 58). Okladnikov’s Figure 1 (Okladnikov &amp; Zaporozhskaya, 1972, Pl. 127,2) has not been found.</td>
<td>Some paintings are faded, blurred, damaged by exfoliation and feature chalk outline. Since the site is located at the beach where a lot of people come for weekends, and it is hidden and located behind thick bushes, this place is used as a toilet (no public toilet is available).</td>
</tr>
<tr>
<td>11</td>
<td>Olguidakh</td>
<td>The site description with drawings is published in Okladnikov and Zaporozhskaya (1972, pp. 59-60). Five locations were reported, but only four (#1-4) were found.</td>
<td>Most of the figures are hardly discernible due to severe exfoliation and flaking off. Remaining designs feature chalk and pencil outline. Rock art panels at Locations #3 and #4 were graffitied over with inscriptions by vandals. Those at Location #4 are scratched over the ancient paintings.</td>
</tr>
<tr>
<td>12</td>
<td>Chasovnya</td>
<td>The information about the site was first published by Ksenofontov (1927) and supplemented with drawings, Location #1 – Ksenofontov (1927, Fig. 17), Location #2 – Ksenofontov (1927, Fig. 7). Okladnikov and Zaporozhskaya (1972) reported on four locations, but Locations #3 and #4 have not found during this project fieldwork.</td>
<td>The rock art is severely damaged by exfoliation, and figures feature pencil outline.</td>
</tr>
<tr>
<td>13</td>
<td>Toyon-Ary</td>
<td>The site was first reported by Ksenofontov (1927) who also provided a drawing of the panel (Fig. 8). Then the site was examined, and the painting copied again by Okladnikov and Zaporozhskaya (1972, Pl. 139). In the 1990s-2000s Toyon-Ary was examined by Alekseyev and Kochmar (2006). More paintings were revealed at this location defined as Toyon-Ary I. Another location was discovered, Toyon-Ary II, which was not found during this project fieldwork. They reported another location, Toyon-Ary III, which was published by Okladnikov as site “Nizhe Toyon-Ary v 1.5 km” surveyed during PhD fieldwork.</td>
<td>The site is graffitied over by vandals.</td>
</tr>
<tr>
<td>14</td>
<td>Nizhe Toyon-Ary v 1.5 km (Toyon-Ary III)</td>
<td>The site description with drawings is published in Okladnikov and Zaporozhskaya (1972, pp. 62-63). Some of the designs published there were not found during PhD fieldwork. The site was examined and recorded by Alekseyev and Kochmar in the 1990s-2000s (Alekseyev &amp; Kochmar, 2006), and this site was described as Toyon-Ary III.</td>
<td>Figures are damaged by exfoliation and feature chalk outline. A hole from a gunshot is present in the left part of the panel.</td>
</tr>
</tbody>
</table>
15 Suruktakh-Aatyk (Suruktakh-Aan) The information about the site was first reported by Ksenofontov (1927). He also provided drawings of the following groups of paintings: Location # 2 – Fig. 13; Location # 3 – Fig. 9; Location # 4 – Fig. 10 (?); Fig. 11, 12, 14 - were not found. This site was then surveyed by Savvin in 1939 (Savvin, 1940). The fullest information is available in Okladnikov and Zaporozhskaya (1972). However, the description provided is confusing, because it starts with a description of a location # 1 with no references to drawings, then continues with groups 2-5 not mentioning any other locations. Two locations were recorded that are not present in Okladnikov’s publication, Location # 1 and # 6. Location # 5 Group 2 was published by Okladnikov as Toyon-Ary location # 2.

Pictures and scratched designs have been outlined by pencil and chalk; there are graffities scratched (Location # 5 Group 1) and painted by vandals next to the paintings (Location # 4). Many pictures are severely damaged by exfoliation (Locations ## 1-3).

16 Bulgun’yakhtakh The site description with drawings is published in Okladnikov and Zaporozhskaya (1972, p. 69).

The pictures are graffitied over with white paint.

Some sites were not found during this project survey (Table 5.2).

Table 5.2. A list of rock art sites reported by previous researchers which were not found in 2017.

<table>
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<tr>
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<tbody>
<tr>
<td>Petrovskoye Locations ## 5, 6, 8, 9, 11</td>
<td>V 5 km vyshe Elanki</td>
<td>Khatyn-Ary III</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Nos Lavrentiya&quot;, Fig. 4</td>
<td>V 4 km vyshe Elanki (the rock &quot;Nos Lavrentiya&quot;)</td>
<td>Elanskaya, Fig. 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elanskaya, Fig. 5</td>
<td>V 0.5 km vverkh Elanki</td>
<td>Elanka. Pravy Mys</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>V 1 km nizhe Elanki</td>
<td>Olguidakh Location # 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toyon-Ary II</td>
<td></td>
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<td></td>
<td></td>
<td>Toyon-Ary, Location # 3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Chasovnya Locations # 3 and # 4</td>
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</tbody>
</table>

In total, 668 designs at 16 sites were recorded (Figures 5.3, 5.4). The majority are non-figurative designs such as groups of dots and vertical lines (264). Another large category is undefined designs (182), because many pictures are blurred, faded and damaged by exfoliation. Figurative motifs present here are zoomorphs (98), anthropomorphs (108), ornithomorphs (8) and boat-like figures (8). Out of 668 designs, only 54 are petroglyphs which are Medieval scratched graffiti (Figure 5.5). Most of the rock art is located 1-2 m above the ground (451) which is a comfortable height both for an artist and a viewer (Figure 5.5). However, some paintings are located more than 3 m above the ground which may be an indication of their antiquity, since a platform from which these
pictures could have been comfortably painted or viewed may have been destroyed by the river activity. Another characteristic of this rock art area is that a larger part of it is oriented to southward directions, south-east and south (Figure 5.5).

Figure 5.3. Total number of designs and motifs recorded at the rock art sites of the Middle Lena River in 2017.

Figure 5.4. Proportions of motifs present at the rock art sites of the Middle Lena River basin surveyed in 2017. 1 – Bysagasy, 2 – Petrovskoye, 3 – Petrovskoye-II, 4 – Nizhe Petrovskogo v 0.5 km, 5 - Suruktakh-Khaya (Nizhe Petrovskogo), 6 - Yurdyuk-Khaya, 7 - Tiit-Ary, 8 - Emegeetekh-Khaya, 9 - V 7 km nizhe Yelanki, 10 - Bulgun’yakhtakh, 11 – Olguidakh, 12 – Chasovnya, 13 - Toyon-Ary, 14 - Nizhe Toyon-Ary v 1.5 km (Toyot-Ary III), 15 - Suruktakh-Aatyk (Suruktakh-Aan), 16 - Bulgun’yakhtakh.
Figure 5.5. Location of designs in a relation to the ground, technique and cardinal direction of designs recorded at the rock art sites of the Middle Lena River in 2017.
5.3.2. Zabaykalsky Krai

In Zabaykalsky Krai, 28 sites in total were surveyed and recorded in June 2017 (Figure 5.6, Table 5.3). This number comprises a substantial part of rock art sites known in the region to-date. Only sites in the basins of the Shilka River and Chikoy River were not visited. A list of non-recorded sites also includes those that were searched for but were not found.

Figure 5.6. The localization of rock art sites recorded in Zabaykalsky Krai and Buryatia in 2017.


The Republic of Buryatia: 46 – Shara-Tala; 47 – Baga-Baitsa; 48 – Badad; 49 – Barun-Alan (Alanskiye Pisanitsy); 50 – Khotogoy-Khabasagy; 51 – Naran-Khabasagy (Naran Kul’skiy); 52 – Shubuguy; 53 – Sanny Mys; 54 – Shanaty; 55 – Shara-Khunduy; 56 – Khetegey-Baytsa; 57 – Angir-I. Maltay-Shuluun; 58 – Angir-II. Bain-Khara; 59 – Staraya Karga (Shenezam); 60 – Dodogol (Mukhor-Nur, Averkova mountain); 61 – Golubinka (Varvarina gora); 62 – Staraya Bryan’; 63 – Voznesenovka; 64 – Kordon; 65 – Nadeino Cave; 66 – Nadeino (Pavlova Mountain); 67 - Lovtsov Ugol (Lovtsov Lov); 68 – Tarbagatayskaya Pisanitsa (Batyushkina); 69 – Ayryk; 70 – Kibalinskaya Pisanitsa; 71 – Mondagor-Khabasagy; 72 – Beryozovaya; 73 – Sutoy (Suslova Mountain); 74 – Khaylasyn; 75 – Obota; 76 – El’brin-Uber; 77 – Tsolga II; 78 – Khar’ystka; 79 – Narsatuy; 80 – Bain-Khara Cave; 81 – Gol-Tologoy; 82 – Bom; 83 – Kashkarga II; 84 – Baryshnya; 85 – Altachey (Altash); 86 – Khysagar; 87 – Beshegte-Baytsa; 88 – Bichurskaya; 89 – Gorodovoy Cliff; 90 – Khabshag; 91 – Staraya Kapcheranka 3; 92 – Bain-Dzurkhenn (Bayan-Uula); 93 – Tabangutskoye obo; 94 – Ust’-Kyakhta; 95 – Derevenskaya Mountain; 96 – Baga-Zarya; 97 – Khudzhir; 98 – Povorot (Location # 3); 99 – Kamenshka; 100 – Ust’-Temnik; 101 – Temnikovskaya Cave; 102 – Galtay II; 103 – Ukhnaan-Eber (Ulaan-Temnik); 104 – Narin-Khunduy; 105 – Sarbaduy; 106 – Perevoznaya-3; 107-Bayan (Cheremushki); 108 – Shartykey.
Although the survey route was built based on the published information on rock art in the region (Mazin, 1986; Okladnikov & Zaporozhskaya, 1970), several new sites were recorded (See Table 5.3). These are Staraya Zhila discovered during this fieldwork, Khalzan-Daban and Pilotka, information about which were provided by local archaeologist Grigory Belomestnov, Sukhotino-13, known to local archaeologists but not reported in publications, and Dvortsy, which was discovered in 2016 but no information had been published yet. This survey also examined several sites, only brief or partial information about which was available in publications, Borshcheyovochny, Ust’-Urovskaya, Avvan (Volch’ya cave), Smolenskiye Skaly, and Gyrshelunskiy Kamen’ (Fedotov & Myasnikov, 2015; Geniatulin, 2011; Yurinskaya, 2016). Many of sites examined in 2017 were previously discovered and recorded by Alexandr Mazin in the 1980s, and a substantial part of these were first re-examined during this survey. A brief report on this part of the fieldwork was published in Russian (Ponomareva, 2018c).

Table 5.3 also compiles the information on the preservation state of the rock art sites. It can be summarised, that all prehistoric paintings are faded, blurred, and some are damaged by lichen, white coatings and water flows. Those paintings located in the forested areas appear to exhibit brighter colours. Those sites which were previously studied bear traces of research activity such as chalk outlines and non-backfilled excavation pits. The last but not the least factor is vandalism. Apparently, those sites which are located on the territory or in a close proximity to modern settlements are the most damaged by vandalism: Byrka, Urulyunguy I, Kazachiy III, Titovskaya Sopka (Kamennoye Ushchel’ye), Sukhotino-13, Sukhotinskiy Kamen’ and Gyrshelunskiy Kamen’.

Table 5.3. Previous research and preservation assessment of rock art sites examined Zabaykalsky Krai in 2017.

<table>
<thead>
<tr>
<th>##</th>
<th>Name</th>
<th>Previous research</th>
<th>Preservation assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Imandan-Makit (Verkhov’ya Nerchi)</td>
<td>This site was not surveyed during PhD fieldwork. Information and data were provided by Alexandr Konstantinov who was shown this site by locals in winter 2017. Later published in A. V. Konstantinov and Ponomareva (2019)</td>
<td>Some designs are blurred and faded.</td>
</tr>
<tr>
<td>18</td>
<td>Butikha</td>
<td>The site was surveyed in 1959 by M. I. Rizhsky, whose report was included in Okladnikov and Zaporozhskaya (1970, p. 50). Again, it was examined in 1984 by Mazin (1986, pp. 26-27). He undertook excavations under the panels and traced three cultural layers.</td>
<td>The paintings are still bright, although all the figures feature chalk outline and the excavation pit has not been backfilled. Some figures are faded and exhibit minor exfoliation.</td>
</tr>
<tr>
<td>19</td>
<td>Borshcheyovochny</td>
<td>The site was discovered in 2015 by Nerchinsk enthusiasts of local lore (Yurinskaya, 2016).</td>
<td>A central scene is bright, but several designs are destroyed by water flows and damaged by lichen and white coating.</td>
</tr>
<tr>
<td>20</td>
<td>Ust’-Urovskaya</td>
<td>Information about the site is reported in a book on local history and lore (Fedotov &amp; Myasnikov, 2015).</td>
<td>The paintings are damaged by pigment exfoliation.</td>
</tr>
<tr>
<td>No.</td>
<td>Site Name</td>
<td>Information Provided</td>
<td>Condition Details</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>21</td>
<td>Avvan (Volch’ya cave)</td>
<td>Information about the site is also reported in a book on local history and lore (Fedotov &amp; Myasnikov, 2015).</td>
<td>The paintings are very damaged by surface erosion and exfoliation.</td>
</tr>
<tr>
<td>22</td>
<td>Dono</td>
<td>The site is discovered in 1983 by Mazin (1986).</td>
<td>Some designs are damaged by pigment and surface exfoliation.</td>
</tr>
<tr>
<td>23</td>
<td>Chandaycha (Chondaycha)</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>The paintings are very faded.</td>
</tr>
<tr>
<td>24</td>
<td>Byrka</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>This unique site which may belong to the Pleistocene age has been almost completely destroyed by vandalism. A part of the rock cliff was blown off, and remaining paintings have been graffitied over with inscriptions. Some of these graffiti were already present when Mazin studied the site but he did not mention this fact in his publications.</td>
</tr>
<tr>
<td>25</td>
<td>Staraya Zhila</td>
<td>The site was discovered during this research fieldwork in 2017.</td>
<td>The paintings are faded and damaged by surface exfoliation.</td>
</tr>
<tr>
<td>26</td>
<td>Kazachiy III</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>Although the rock cliff was blown off because of the activity of an army shooting range located nearby (not used now), most of the paintings survived.</td>
</tr>
<tr>
<td>27</td>
<td>Urulyunguy I</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>The panels are graffitied over with painted inscriptions by vandals.</td>
</tr>
<tr>
<td>28</td>
<td>Margutsek</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>The paintings are very faded, blurred and damaged by surface and pigment exfoliation.</td>
</tr>
<tr>
<td>29</td>
<td>Mogoytuy</td>
<td>The site was discovered in 1984 by Mazin (1986).</td>
<td>The paintings are faded and blurred.</td>
</tr>
<tr>
<td>30</td>
<td>Baraun-Konduy I</td>
<td>The site was discovered in 1983 by Mazin (1986).</td>
<td>The paintings are faded.</td>
</tr>
<tr>
<td>31</td>
<td>Baraun-Konduy II/2</td>
<td>The site was discovered in 1983 by Mazin (1986). According to him, there are two locations, but the Location # 1 has not been found</td>
<td>The paintings are very faded and feature chalk outline.</td>
</tr>
<tr>
<td>32</td>
<td>Tsonor III</td>
<td>The site was discovered in 1984 by Mazin (1986).</td>
<td>The paintings are very faded, some of them almost totally obliterated and covered by white coating.</td>
</tr>
<tr>
<td>33</td>
<td>Ust’-Tsonor</td>
<td>The site was reported by Okladnikov and Zaporozhkaya (1970, pp. 48-50) as a second group of the Baraun-Konduy site. It was re-examined in 1983 by Mazin (1986).</td>
<td>The paintings are very faded, blurred, damaged by white coating and surface and pigment exfoliation.</td>
</tr>
<tr>
<td>34</td>
<td>Kopchinskiy (Gurban’sha)</td>
<td>The site was discovered in 1974 by Mazin (1986).</td>
<td>The paintings are faded, blurred and some are damaged by lichen and horizontal splitting. There is a non-backfilled excavation pit</td>
</tr>
<tr>
<td>Site Name</td>
<td>Date of Discovery</td>
<td>Information</td>
<td>Condition</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Kopchil</td>
<td>1984 by Mazin</td>
<td>The site was discovered in 1984 by Mazin (1986).</td>
<td>The paintings are very faded and blurred.</td>
</tr>
<tr>
<td>Pilotka</td>
<td>Information</td>
<td>Information about the site was provided by G. I. Belomestnov.</td>
<td>The paintings are very faded, and there are modern scratched and painted graffiti next to the rock art.</td>
</tr>
<tr>
<td>Khalzan-Daban</td>
<td>Information</td>
<td>Information about the site was provided by G. I. Belomestnov.</td>
<td>The paintings are faded.</td>
</tr>
<tr>
<td>Suduntuy (Shulutay, Baraun-Chulutay)</td>
<td>The site was studied in 1950 and 1965 by Okladnikov and Naidano (Okladnikov &amp; Zaporozhskaya, 1970, p. 45) and in 1984 by Mazin (1986, pp. 34-37).</td>
<td>Some paintings are faded, blurred and damaged by surface exfoliation. The figures feature chalk outline.</td>
<td></td>
</tr>
<tr>
<td>Titovskaya Sopka (Kamennoye Ushchel’ye)</td>
<td>Information and tracings were published by Okladnikov and Zaporozhskaya (1970), and by the 1980s the site had been destroyed (Mazin, 1986, p. 25).</td>
<td>The site was almost totally destroyed by a quarry, only 3 small panels are left, and there is a dump in the quarry now.</td>
<td></td>
</tr>
<tr>
<td>Sukhotino-13</td>
<td>According to Alexandr Konstantinov (Personal communication, 2017), the site was known since the 1980s but no information has been published.</td>
<td>The site is dumped with trash; a homeless person lived there until recently, and his belongings were still under the panel with paintings when the site was examined.</td>
<td></td>
</tr>
<tr>
<td>Sukhotinskiy Kamen’</td>
<td>Information and tracings were published by Okladnikov and Zaporozhskaya (1970, pp. 44-45), later Mazin (1986, p. 25) informed that the paintings had been lost because of inscriptions of tourists and hydrologists.</td>
<td>The paintings are totally destroyed by modern inscriptions. Only one composition out of 7 published by Okladnikov is present to date. The figures feature chalk outline.</td>
<td></td>
</tr>
<tr>
<td>Smolenskiye Skaly</td>
<td>The site was known since the 1980s but was first documented in 2009 (Geniatulin, 2011).</td>
<td>The paintings are faded and damaged by surface and pigment exfoliation.</td>
<td></td>
</tr>
<tr>
<td>Dvortsy</td>
<td>The site was first documented by S. V. Vereshchagin and A. V. Konstantinov in 2016.</td>
<td>The paintings are faded and damaged by surface exfoliation.</td>
<td></td>
</tr>
<tr>
<td>Shaman-Gora (Ulan-Khada)</td>
<td>The site was discovered in 1996 by the Chikoy archaeological expedition led by M. V. Konstantinov (M. V. Konstantinov et al., 2008; M. V. Konstantinov et al., 2003)</td>
<td>The paintings are faded, blurred and damaged by surface exfoliation.</td>
<td></td>
</tr>
<tr>
<td>Gyrsheleunskiy Kamen’</td>
<td>The site was discovered in 1991 by the Chikoy archaeological expedition led by M.V. Konstantinov. More groups of paintings were revealed by V. F. Petrov and I. V. Petrov in 2008-2009 (Geniatulin, 2011).</td>
<td>Some paintings are blurred, and the site is graffitied by vandals.</td>
<td></td>
</tr>
</tbody>
</table>
Although this amount of data accounts for this part of the fieldwork as successful, 14 sites which were searched for were not found: Baraun-Konduy II/1, Konduy 16 km, Tsoron I, Tsoron II, Urulyunguy II, Urulyunguy III, Kalashnikovo, Maly Ulistay, Drovanoy, Nortuy I, Nortuy II, Kazachiy I, Kazachiy II, Kazachiy IV.

In total, 917 designs at 28 sites were recorded (Figures 5.7, 5.8). The majority are anthropomorphs (304) and non-figurative designs (291). A substantial category consists of undefined designs (182) because many paintings are faded and/or blurred. Compared to the Yakutian data presented in the previous section, there are much less zoomorphs (quadrupeds), no boat-like motifs, but much more ornithomorphs (36), and enclosure motifs (9) which is not found in Yakutia at all. All the rock art recorded in Zabaykalsky Krai is of ochre paintings ranging from light-red to brown colours. Most of the rock art is located 1-2 m above the ground (441) (Figure 5.9), although a substantial part of the paintings is located either 0-1 m or 2-3 m above the ground. No rock art has been found higher than 4 m. Concerning cardinal orientation of the painting, prevalent directions are south-east, south, south-west and west (Figure 5.8).

<table>
<thead>
<tr>
<th>Site</th>
<th>Number of designs</th>
<th>Non-figurative</th>
<th>Zoomorphs</th>
<th>Non-anthromorphs</th>
<th>Anthropomorphs</th>
<th>Ornithomorphs</th>
<th>Enclosure</th>
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<td>Verkhov'ya Nerch</td>
<td>26</td>
<td>3</td>
<td>5</td>
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<tr>
<td>Sukhie</td>
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<td>9</td>
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<td>Aven</td>
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<tr>
<td>Dono</td>
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<td>10</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>Kazachiy II</td>
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<td>45</td>
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<td>Ust-Urguy II</td>
<td>36</td>
<td>7</td>
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<td>4</td>
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<td>Tienot II</td>
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<td>1</td>
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<td>Sharan-Gorya</td>
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<td>23</td>
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<tr>
<td>Gyshelkunikky Kamern</td>
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<td>3</td>
<td>15</td>
<td>0</td>
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</tbody>
</table>

Figure 5.7. Total number of designs and motifs recorded at the rock art sites of Zabaykalsky Krai in 2017.
Figure 5.8. Proportions of motifs present at the rock art sites of Zabaykalsky Krai recorded in 2017. 17 – Imandan-Makit; 18 – Butikha; 19 – Borschchovychny; 20 – Ust’-Urovskaya; 21 – Avvan (Volch’ya cave); 22 – Dono; 23 – Chandaycha; 24 – Byrka; 25 – Staraya Zhila; 26 – Kazachiy III; 27 – Urulyunguy; 28 – Margutsek; 29 – Mogoytuy; 30 – Baraun-Konduy I; 31 – Baraun-Konduy II/2; 32 – Tsoron III; 33 – Ust’-Tsoron; 34 – Kopchinsky; 35 – Kopchil; 36 – Pilotka; 37 – Khalzan-Daban; 38 – Suduntuy (Shultay, Baraun-Chulutay); 39 – Titovskaya Sopka; 40 – Sukhotino-13; 41 – Sukhotinskiy Kamen’; 42 – Smolenskiye Skaly; 43 – Dvortsy; 44 – Shaman-Gora; 45 – Gyrshelunskiy Kamen’.

Figure 5.9. Location of designs in a relation to the ground and cardinal direction of designs recorded at the rock art sites of Zabaykalsky Krai in 2017.
5.3.3. Buryatia

In Buryatia, 63 rock art sites in total were documented in July-September 2019. As stated previously, the route was built based on data available in publications and summaries (Bazarov & Namsaraev, 2011; Lbova & Khamzina, 1999; Okladnikov & Zaborozhskaya, 1969, 1970; Tivanenko, 1990), but many discoveries were made even at known sites since only black-and-white drawings were published. Moreover, many sites, information about which was not published or published just briefly, were recorded (see Table 5.4).

Table 5.4. Previous research and preservation assessment of rock art sites examined in Buryatia in 2017.

<table>
<thead>
<tr>
<th>##</th>
<th>Name</th>
<th>Previous research</th>
<th>Preservation assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>Shara-Tala</td>
<td>It appears that this is the Zal’tira site mentioned by Popov in Chenkirov and Popov (1928, p. 157). Okladnikov’s description of its location is totally wrong (Okladnikov &amp; Zaborozhskaya, 1970, pp. 8-11). This is the reason why archaeologists could not locate the site ever since. However, local people who showed us the site always knew its location.</td>
<td>Some designs are faded and covered by white coating and lichen. One panel is graffitied over with scratching. Remains of chalk outline are still visible.</td>
</tr>
<tr>
<td>47</td>
<td>Baga-Baitsa</td>
<td>The site was recorded by Okladnikov. He mentioned a Buddhist suburgan at the site (Okladnikov &amp; Zaborozhskaya, 1970, p. 5), but, according to the photo published (Okladnikov &amp; Zaborozhskaya, 1970, p. 7), the space in front of the panels was free of any build structures that are present at the site today.</td>
<td>Severe weathering and exfoliation, the paintings are badly damaged and very faded.</td>
</tr>
<tr>
<td>48</td>
<td>Badad</td>
<td>The site was discovered by a local in 2015 and has not been published.</td>
<td>Some paintings are faded and damaged by white coating, lichen and surface exfoliation.</td>
</tr>
<tr>
<td>49</td>
<td>Barun-Alan (Alanskiye Pisanitsy)</td>
<td>The site was discovered in 1997 by E. V. Tashak, A. G. Rabdanov and I. F. Pleshkova (Bazarov &amp; Namsaraev, 2011, p. 377) and was not comprehensively published. The archaeological complex Barun-Alan I includes the rock art site, a multilayer site (7 layers) dating from the Middle Paleolithic to the Iron Age and a complex interpreted as a sanctuary which consists of 48 stone structures. The complex was studied by V. I. Tashak during 2000-2012 (Tashak &amp; Antonova, 2015, 2019).</td>
<td>The paintings are very faded and some of them are outlined by pencil, the authorship of which is unknown since the site was not recorded neither by Okladnikov, nor Tivanenko. Some panels are damaged by exfoliation, covered by white coating and black lichen.</td>
</tr>
<tr>
<td>50</td>
<td>Khotogoy-Khabsagay</td>
<td>Castrén (1999, p. 293) mentioned a rock art site in the Khorinsky district, probably the Khotogoi-Khabsagay on the Ona River, where he undertook excavations under the rock surface. Excavations here were also carried out by D. I. Davydov (Okladnikov &amp; Zaborozhskaya, 1970, pp. 13-14). Okladnikov was first to fully document the rock art site.</td>
<td>The rock art paintings are faded and blurred, and many of them are damaged by lichen, white coating and exfoliation. Several panels are graffitied over with scratched inscriptions by vandals.</td>
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<tr>
<td>Page</td>
<td>Site Name</td>
<td>Site Description</td>
<td>Details</td>
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<tr>
<td>51</td>
<td>Naran-Khabsagay</td>
<td>The site was first documented by Okladnikov and published as Naran-Khabsagay (Okladnikov &amp; Zaporozhskaya, 1970), but the location provided was incorrect. This information was repeated in later archaeological summaries of the region (Khamzina, 1982, pp. 133-134; Lbova &amp; Khamzina, 1999, p. 171), but in the latest summary incorrect information about two sites appeared (Bazarov &amp; Namsaraev, 2011, pp. 380-381).</td>
<td>The paintings are faded and damaged by lichen, white coating and exfoliation. The figures feature pencil outline.</td>
</tr>
<tr>
<td>52</td>
<td>Shubuguy</td>
<td>Location # 1 was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970), Location # 2 was later discovered and reported by Tivanenko (1990), and Location # 3 was discovered during this survey. Tivanenko (1989, pp. 129-130): reports surveying the site in 1977 and making a section of the edge of a dirty road which passes near the rock cliff. He described stratigraphy and informed collecting artefacts of various age, such as flint, chalcedonic and slate flakes, blades and two scrapers, animal bones (horse, capra or row deer and birds), and charcoal. In 1979 he made a test pit under the rock cliff but there were no cultural accumulations possible to unearth because of fallen rocks, although a chalcedonic arrowhead was found between rock boulders.</td>
<td>The paintings are very faded, and many panels are covered by lichen, white and black coatings, and damaged by exfoliation. At the Location # 1, the figures still feature chalk outline.</td>
</tr>
<tr>
<td>53</td>
<td>Sanny Mys</td>
<td>The site has been known as a multilayer settlement site with the lowest levels dating to the Paleolithic Age. Paintings at the rock cliff above the site were reported by Tivanenko (1990).</td>
<td>The paintings are very faded and partly covered by white coating.</td>
</tr>
<tr>
<td>54</td>
<td>Shanaty</td>
<td>The site was first documented and reported by Tivanenko (1990).</td>
<td>The paintings are very faded and barely visible with a naked eye. Many of them are covered by white coating and lichen, and the figures still feature chalk outline.</td>
</tr>
<tr>
<td>55</td>
<td>Shara-Khunduy</td>
<td>The site was discovered in October 2016 by Evgeny Vladimirich Martynov, teacher in the school of the village Verkhniye Tal’tsy. The information about the discovery was published in a local newspaper (Komolikova, 2017).</td>
<td>Some figures are faded and covered with white coating.</td>
</tr>
<tr>
<td>56</td>
<td>Kheltegey-Baytsa</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970).</td>
<td>The site is severely damaged by weathering. All panels that remained feature evidence of exfoliation of rock surfaces. The paintings are also very faded.</td>
</tr>
<tr>
<td>57</td>
<td>Angir-I. Maltay-Shuluun</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970). Tivanenko (1989, p. 130) reports excavating a test pit 0.5x0.5 at the rock art site which showed that there is a thick cultural layer 0.5 m deep that yielded bones of large animals, coal and ash. No artefacts were found.</td>
<td>An unauthorised wooden fence was built next to the panels, and its left end is built just next to a panel with paintings. Some designs are faded and damaged by white coating, lichen, and exfoliation.</td>
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<td>Page</td>
<td>Location</td>
<td>Report Details</td>
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<td>58</td>
<td>Angir-II. Bain-Khara</td>
<td>The site was reported by Okladnikov and Zaporozhskaya (1970, p. 36) who provided a tracing of a scene consisting of two quadrupeds (elk?; horse?) and dots. Lbova and Khamzina (1999, p. 85) and Bazarov and Namsaraev (2011, p. 158) reported dots, enclosures, ornithomorphic and anthropomorphic figures and Lbova and Khamzina (1999, p. 85) reported that the paintings were covered by the Buddhist inscriptions. Probably, the site reported by Okladnikov is a different site than that which is present in later archaeological summaries. Prehistoric paintings are very faded and damaged by the Buddhist inscriptions – only chaotic dots can be identified.</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>Staraya Kurba(She nezam)</td>
<td>The site was first documented and reported by Tivanenko (1990). The paintings are very faded and damaged by exfoliation and lichen.</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Dodogol (Mukhor-Nur, Averkova mountain)</td>
<td>The paintings at this site match those published by Okladnikov and Zaporozhskaya (1970) as Mukhor-Nur (the Averkova mountain), the site, which was not found during the fieldwork because in the area where Okladnikov placed the site, no rock outcrops are present. Tivanenko (1990) reported a newly discovered site Dodogol, the tracings of which match those published by Okladnikov and recorded in this survey. Tivanenko (1989, pp. 128-129) reported excavating at the site. He identified several slab graves and khirigsuurs at the foot of the south-eastern part of the rock outcrop. Near the rock, there are circular stone pavements, one of which was excavated and yielded ash, coal, burned animal bones and Iron Age pottery. Tivanenko excavated in several spots and concluded that the site was a large cult place. He also made a test pit under the rock which yielded two layers of offerings, and the lower produced a stone blade. Tivanenko also excavated on top of the rock where he unearthed a thick layer of ash, coal and burnt and split bones, among which horse teeth were identified. A fragment of an Iron Age ceramic vessel was also found there. In one of the niches traces of a child cremated burial were found. The paintings are very faded and damaged by exfoliation and lichen.</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>Golubinka (Varvarina Mountain)</td>
<td>The site was reported in Okladnikov et al. (1980) and later re-examined by Tivanenko (1990). All designs are very faded and damaged by severe exfoliation and white coating, and probably many designs documented by previous researchers have disappeared. The site has been also graffitied over with painted inscriptions by vandals.</td>
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<tr>
<td><strong>62</strong></td>
<td><strong>Staraya Bryan'</strong></td>
<td>The site was reported by Tivanenko (1990). According to Lbova and Khamzina (1999, p. 89), the site was discovered in 1974 by Okladnikov, but it is unclear where this information comes from. There are archival materials in Okladnikov's fund in Saint-Petersburg that contain tracings marked as Staraya Bryan'-'73(^{19}), they match to some designs recorded during this survey, but they are not those published by Tivanenko (1990). There is also correspondence between Okladnikov and Tivanenko(^{20}), and in a letter dated to 28 March 1975 Tivanenko informed on discovering 50 new sites. There is Novaya Bryan' site on the list with a drawing attached which depicts the same scene present among Okladnikov's copies but differs in some details. Thus, this is a different copy, and it does no match neither Okladnikov's copies nor those published later in Tivanenko (1990). According to V. A. Tsybiktarov (2011, p. 47), the site was discovered by N. V. Komisarova, a staff member of National Museum of the Republic of Buryatia who made tracings and gave them to Tivanenko. Thus, it is not clear who is the author of the discovery of this site. In 1992, excavations were undertaken in the cave which revealed cultural remains related to the Bronze Age (Lbova &amp; Khamzina, 1999, p. 89).</td>
<td>The paintings are faded and damaged by white coating, lichen and black coating, possibly soot. The cave has been graffitied over with scratched inscriptions and chalk drawings. The figures still feature chalk outline.</td>
</tr>
<tr>
<td><strong>63</strong></td>
<td><strong>Voznesenovka</strong></td>
<td>The site was first recorded by N. V. Tsydenova in 2010 (Bazarov &amp; Namsaraev, 2011, p. 349).</td>
<td>The paintings are faded.</td>
</tr>
<tr>
<td><strong>64</strong></td>
<td><strong>Kordon</strong></td>
<td>The site was first documented and reported by Tivanenko (1990).</td>
<td>The paintings are faded.</td>
</tr>
<tr>
<td><strong>65</strong></td>
<td><strong>Nadeino Cave</strong></td>
<td>The site was reported in Okladnikov and Zaporozhskaya (1969) who provided tracings which do not match what was recorded during this survey. Tivanenko (1989, pp. 140-141) reported excavating two test pits but provided stratigraphic description for only one without giving details about where exactly those test pits were. He identified five cultural layers featuring cultural assemblages from the Neolithic to modern time which included split animal bones, stone tools, ceramics, hearths and accumulations of coals. No details about stratigraphic belonging of these finds were provided.</td>
<td>The paintings are faded and damaged by exfoliation. The site is graffitied over by vandals, and the paintings inside the cave are damaged by black coating, possibly soot.</td>
</tr>
<tr>
<td><strong>66</strong></td>
<td><strong>Nadeino (Pavlova Mountain)</strong></td>
<td>The site was recorded by Okladnikov in 1952 (Okladnikov &amp; Zaporozhskaya, 1969), surveyed by Lbova and Petunova in 1983 (Lbova &amp; Khamzina, 1999, p. 163) and by Tsydenova in 2010 (Bazarov &amp; Namsaraev, 2011).</td>
<td>There are three non-backfilled excavation pits under rock art panels, but neither of the researchers who studied the site reported excavating there. The paintings are very</td>
</tr>
</tbody>
</table>

\(^{19}\) The Archive of The Russian Academy of Sciences St. Petersburg Branch, Fund 1099, Inventory 1, File 760.

\(^{20}\) The Archive of The Russian Academy of Sciences St. Petersburg Branch, Fund 1099, Inventory 1, File 357.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Lovtsov Ugol (Lovtsov Log)</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970). The paintings are very faded and damaged by green lichen and exfoliation.</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970).</td>
</tr>
<tr>
<td>Tarbagatayskaya Pisanitsa (Batyushkina)</td>
<td>The site containing a single panel was discovered by Father Sergiy (Sergey Nikolayevich Paliy) about 10 years ago and shown to B. A. Bazarov several years ago (Bazarov, 2014). Another panel was discovered during this survey.</td>
<td>The paintings are very faded.</td>
</tr>
<tr>
<td>Ayryk</td>
<td>Location # 1 (Kheltegey-Baytsa) was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1970). Locations #s 2-4 were discovered and reported by Tivanenko (1990, pp. 30-31) who also informed on collecting surface artefacts near the Location # 3 which includes stone tools and flakes. Location # 2 was not found during this survey.</td>
<td>The paintings are faded, blurred and damaged by exfoliation and dirt flows. The figures feature chalk outline.</td>
</tr>
<tr>
<td>Kibalinskaya Pisanitsa</td>
<td>Three groups of paintings were described and published in Okladnikov and Zaporozhskaya (1969), and the fourth group was reported by Tivanenko (1990). Matching recorded rock art with Okladnikov's three groups was not successful, because not only Okladnikov's description is confusing and unclear, but the rock art pictures are located high above the ground and no special equipment was available to properly record it. Tivanenko's location # 4 was not found as well. There is a Neolithic-Bronze age site (two locations) in the vicinity of the site (Bazarov &amp; Namsaraev, 2011, p. 185).</td>
<td>The panels are damaged and destroyed by weathering because the site is located just next to the Selenga River, the paintings are faded, blurred and damaged by exfoliation, white coating and lichen.</td>
</tr>
<tr>
<td>Mondogor-Khabsagay</td>
<td>The site (Location # 1) was first surveyed by E. R. Rygdylon in 1936, and Okladnikov and Zaporozhskaya (1969, p. 60) included his report and a copy of one panel. A panel located to the south-east features chalk outline, but Rygdylon mentions seeing other paintings in 5 m to the west, therefore it is not clear who left the chalk outline. In 2009 the site was surveyed by Bazarov (2014) who reported discovering two more locations (Locations # 2 and # 3). Location # 4 is filed as “Mondogor-Khabagay. Petroglify” in the Buryatia archaeological database (Pavel Marnuev, personal communication 2019).</td>
<td>Location # 1 - the paintings are very faded, blurred, damaged by white coating, exfoliation, and three panels are destroyed by Buddhist inscriptions. Location # 2 – the paintings are severely damaged by exfoliation of the panel. Some figures are blurred and faded. Location # 3 – the paintings are faded, blurred and damaged by exfoliation of the rock surface. One panel is graffitied over with red paint. Location # 4 – the paintings are covered by white coating.</td>
</tr>
<tr>
<td>Beryozovaya</td>
<td>The site was first reported in Bazarov and Namsaraev (2011). The paintings are faded, and the rock surface is exfoliating.</td>
<td>The paintings are faded, and the rock surface is exfoliating.</td>
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<td>Location</td>
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<tr>
<td><strong>Sutoy</strong> (Suslova Mountain)</td>
<td>Locations #s 1-3 were first documented and reported by Tivanenko (1990). Location # 1 - the paintings are in good condition, only one panel is damaged by weathering – the paintings are faded and blurred. Location # 2 – the paintings are very faded, blurred and covered by white coating and damaged by exfoliation. Location # 3 – the paintings are faded and damaged by exfoliation.</td>
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</tr>
<tr>
<td><strong>Khaylasyn</strong></td>
<td>Locations #s 1-5 were documented and reported by Tivanenko (1990), but later summaries provide different information about locations. According to Lbova and Khamzina (1999), there are three locations, and the most recent summary informs on four locations (Bazarov &amp; Namsaraev, 2011). During this survey, only Locations #s 2 and 5 following Tivanenko were found. The rock art site is located within a large archaeological complex which includes all types of sites present in the region. Location # 2 – the paintings are very faded and damaged by weathering, green and black lichen and white coating; Location # 5 – the paintings are faded and damaged by exfoliation.</td>
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</tr>
<tr>
<td><strong>Oboto</strong></td>
<td>This site was discovered while searching for Tivanenko’s Tsolga (Tivanenko, 1990, p. 38). The location of this site is close to his description (in 4 km to N from the village of Tsolga), and he also reported two locations found in 150 m from each other. However, no painting matches his tracings. The paintings are very faded and severely damaged by weathering and exfoliation.</td>
<td></td>
</tr>
<tr>
<td><strong>El’brin-Uber</strong></td>
<td>This site was also discovered while searching for Tivanenko’s Tsolga (Tivanenko, 1990, p. 38). The paintings are faded.</td>
<td></td>
</tr>
<tr>
<td><strong>Tsolga II</strong></td>
<td>This site was also discovered while searching for Tivanenko’s Tsolga (Tivanenko, 1990, p. 38). The paintings are very faded and damaged by weathering and exfoliation and some are covered by white coating.</td>
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</tr>
<tr>
<td><strong>Khar’yastka</strong></td>
<td>The site was documented and reported by Tivanenko (1990). His geographical description is misleading, and the site was found by coincidence. The paintings are very faded and damaged by exfoliation.</td>
<td></td>
</tr>
<tr>
<td><strong>Narsatuy</strong></td>
<td>The site was reported by Tivanenko (1990, p. 38), but he did not copy the paintings because they are very faded. The paintings are very faded.</td>
<td></td>
</tr>
<tr>
<td><strong>Bain-Khara Cave</strong></td>
<td>The site was first mentioned by V. V. Popov (Chenkirov &amp; Popov, 1928), and later fully documented and published in Okladnikov and Zaporozhskaya (1969, pp. 89-91) which also mentions a test pit in the cave where pottery sherds resembling the Bronze Age or Iron Age ceramics were unearthed. The paintings feature chalk outline, and some of them exhibit fresh outline by white marker. The cave floor is covered by manure ~ 20 cm deep – cows enjoy the shade here during summer. The paintings are faded, especially outside the cave, blurred and damaged by exfoliation, white and black coating, possibly soot, and lichen.</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>Gol-Tologoy</td>
<td>The site was first reported by V. V. Popov in 1927 (Chenkirov &amp; Popov, 1928, pp. 153,157; Erbanov et al., 1927, p. 97). Later it was fully documented and published in Okladnikov and Zaporozhskaya (1969).</td>
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<tr>
<td>82</td>
<td>Bom</td>
<td>The site was discovered during this survey.</td>
</tr>
<tr>
<td>83</td>
<td>Kashkarga II</td>
<td>The site was discovered while searching for the Okladnikov's Kashkarga which has not been located since his study.</td>
</tr>
<tr>
<td>84</td>
<td>Baryshnya</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969).</td>
</tr>
<tr>
<td>85</td>
<td>Altachey (Altash)</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969), but designs recorded during this survey do not match published tracings. According to the information, provided by Pavel Marnuev (personal communication, 2019), this is the Altachey site.</td>
</tr>
<tr>
<td>86</td>
<td>Khaysagar</td>
<td>The site was first reported in 1897 (N. V. Kirillov, 1897, p. 138) documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). Tivanenko (1990, p. 39) claimed finding a new composition, but it was a scene inaccurately traced by Okladnikov.</td>
</tr>
<tr>
<td>87</td>
<td>Beshegte-Baytsa (Ara-Kiret’)</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969).</td>
</tr>
<tr>
<td>88</td>
<td>Bichurskaya</td>
<td>Lbova and Khamzina (1999) informed that the first mention of this site is dated to 1869, but no reference was provided. The site was documented by Tivanenko (1989, 1990). He reports excavating a hearth next to the rock cliff in which he unearthed fragments of animal bones (Tivanenko 1990, 40). In another book (Tivanenko 1989, 133-134) he reports making three test pits. The first one was in the middle part of the rock cliff and yielded accumulations of coals and river pebbles. The second pit was at the foothill of the cliff and yielded coals, pebbles and few fragments of burnt bones. The third pit was made in a stone quarry where the cliff was blown off. This pit yielded a large accumulation of animal bones arranged around a hearth.</td>
</tr>
<tr>
<td>89</td>
<td>Gorodovoy Cliff</td>
<td>The site was first mentioned by Khoroshikh (1972) and later documented by Tivanenko in 1977 (Tivanenko, 1990).</td>
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<tr>
<td>Location</td>
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<tr>
<td>Khabshag</td>
<td>Four locations were documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969), but only Locations #s 3 and 4 were found. However, three other locations with rock art not reported by Okladnikov were recorded. Location #1 – the paintings are very faded and covered by white coating; Location #2 – ancient paintings are covered by a Buddhist inscription and yellow and black lichen; Location #3 (Okladnikov’s) – the paintings are very faded and damaged by exfoliation; Location #4 (Okladnikov’s) – the paintings are covered by white coating; Location #5 – probably, ancient paintings are destroyed by the Buddhist inscriptions and scratched initials graffitied by vandals.</td>
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<tr>
<td>Staraya Kapcheranka ka-3</td>
<td>The site was discovered while searching for the Staraya Kapcheranka 2 rock art site reported in V. A. Tsybiktarov (2001). Tracings were not published but judging by a description provided (Staraya Kapcheranka 2 contains two panels featuring a different set of designs), this is another site. The paintings are faded and graffitied over with white paint.</td>
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<tr>
<td>Bain-Dzurkhen (Bayan-Uula)</td>
<td>The site was documented by Okladnikov who reported excavating a small cave in the same mountain, where according to a local legend, a Buddhist monk lived. Pottery sherds of, probably Neolithic or Bronze Age were unearthed (Okladnikov &amp; Zaporozhskaya, 1969, p. 10). The paintings are faded and damaged by white coating and exfoliation. One panel was found fallen on the floor.</td>
<td></td>
</tr>
<tr>
<td>Tabanguts koye obo</td>
<td>The site was first documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969) and later re-examined by Tivanenko (1990) who reported finding new petroglyphs and three new locations, but only 10 rocks out of 54 recorded by Okladnikov and 1 recorded by Tivanenko were found during this survey. The rocks are covered by light-green lichen and exposed to weathering.</td>
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</tr>
<tr>
<td>Ust’-Kyakhta</td>
<td>Three locations were documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). Lbova and Khamzina (1999, p. 127) informed that the site was also surveyed by Mazin in 1986, and that Okladnikov studied the site in 1976 although the monograph was published in 1969. It is not clear where this information comes from. There is a non-backfilled excavation pit in the Location #3, outside the cave entrance. Okladnikov and Zaporozhskaya (1969, p. 17) reported surveying the cave (Location #3) and excavating 3x1 m pit inside the cave, near the entrance, where no ancient artefact was unearthed. Lbova and Khamzina (1999, p. 127) mention excavating a test Location #1 - The paintings are faded, blurred and damaged by white coating, and exfoliation. One panel is graffitied with green-paint inscriptions over the rock art. Location #2 – The paintings are faded, blurred and damaged by white coating and exfoliation. Location #3 – The paintings are faded, blurred and damaged by white coating and black lichen.</td>
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<tr>
<td>Location</td>
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<tr>
<td>Derevenskaya Mountain</td>
<td>Three locations were documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969), and another one was found during this survey. Location # 1 – the paintings are protected by a shelter and feature chalk outline. Location # 2 – The paintings are faded and damaged by exfoliation. Location # 3 – The paintings are faded, blurred, covered by white coating and damaged by exfoliation. Location # 4 - the site is dumped, there are remains of someone living there. The paintings are faded and blurred.</td>
<td></td>
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<tr>
<td>Baga-Zarya</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). He reported 50 rocks with petroglyphs and making stamping copies from 43. During this survey, 59 rocks were recorded. Some petroglyphs are not well-visible, and the rocks are covered by lichen.</td>
<td></td>
</tr>
<tr>
<td>Khudzhir</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). The paintings are faded, blurred, damaged by exfoliation and covered by white coating. There is a non-backfilled excavation pit under the panels, but neither Okladnikov and Zaporozhskaya (1969), nor Lbova and Khamzina (1999) reported excavating the site.</td>
<td></td>
</tr>
<tr>
<td>Povorot (Location # 3)</td>
<td>Three locations were documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). Tivanenko (1990) reported excavating 10 m² under the panels with paintings at the Location # 3 where he unearthed remains of offerings, hearths and a large amount of ceramics (including fragments of two tripods), animal bones, two bronze tubes and a human burial. During this survey, only the Location # 3 was found. The paintings are very faded and blurred. The north-western part of the rock cliff is graffitied over by vandals.</td>
<td></td>
</tr>
<tr>
<td>Kamenushka</td>
<td>The site was documented and reported by Tivanenko (1990). He also reported collecting surface artefacts (stone tools) in 20 m to the north-east from the rock art site (Tivanenko, 1990, pp. 40-41). The paintings are very faded.</td>
<td></td>
</tr>
<tr>
<td>Ust’-Temnik II</td>
<td>The site was found while searching for the Ust’-Temnik site reported in Okladnikov and Zaporozhskaya (1969). The paintings recorded at this site do not match the Okladnikov’s tracings. The paintings are faded.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Site Name</td>
<td>Description</td>
</tr>
<tr>
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<td>-------------------------------</td>
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<tr>
<td>101</td>
<td>Temnikovsky kaya Cave</td>
<td>The cave was first surveyed in 1888 by V. V. Ptitsyn who measured the cave and noticed the evidences of ritual worshipping (Ptitsyn, 1896). Later the cave was studied by Tivanenko in 1977 (Tivanenko, 1990). He undertook excavations in the southeastern corner of the cave and identified three layers. In the upper layer artefacts of 20th Century were unearthed (a coin, a wooden case from Buddhist books and a wooden plate with initials marked as 1941). The second layer yielded an accumulation of ash, burnt bones, three stone flakes and a small piece of bronze. The third layer did not give any artefacts (Tivanenko, 1989, pp. 138-140; 1990, p. 1990).</td>
</tr>
<tr>
<td>102</td>
<td>Galtay II</td>
<td>The site was discovered while searching for the Galtay site reported by Tivanenko (1990).</td>
</tr>
<tr>
<td>103</td>
<td>Ukhaan-Eber (Ulaan-Temnik, Khusoo)</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). They reported 18 khirigsuurs and 45 slab graves close to the rock art site, and at one of the rock cliffs a Paleolithic site was discovered.</td>
</tr>
<tr>
<td>104</td>
<td>Narin-Khunduy</td>
<td>The site was documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). It was also reported unearthing a horse burial at the rock art site (Okladnikov &amp; Zaporozhskaya, 1969, p. 40).</td>
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<td>105</td>
<td>Sarbaduy</td>
<td>Three locations were documented by Okladnikov (Okladnikov &amp; Zaporozhskaya, 1969). He reported excavating a test pit 0.5x0.5 m and 0.35-0.3 m deep in the Sarbaduy cave (Location # 3) where pieces of bark, sheep astragali, fragments of horn and two fragments of an osseous ornamented artefact were unearthed (Okladnikov &amp; Zaporozhskaya, 1969, pp. 46-47).</td>
</tr>
<tr>
<td>106</td>
<td>Perevoznaya-ya-3</td>
<td>The site was discovered while searching for the Perevoznaya rock art site reported in Lbova and Khamzina (1999). The paintings do not match the description provided.</td>
</tr>
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</table>
Although Lbova and Khamzina (1999) informed that the site was first reported by Tal'ko-Gryntsevich, no such information was found in his original publication (Tal'ko-Gryntsevich, 1900). The site was documented by Okladnikov (Okladnikov & Zaporozhskaya, 1969) who did not mention Buddhist inscriptions present at the site. The inscriptions are reported in a later summary by Lbova and Khamzina (1999). There is another mistake in this summary - information is provided on two rock art sites, Bayan and Cheremushki II, but in reality, they are the same site.

The paintings are severely damaged by exfoliation, weathering and white coating. On one panel, older rock art is destroyed by a Buddhist carving.

The paintings recorded at this site do not match Okladnikov’s tracings of the Shartykey site (Okladnikov & Zaporozhskaya, 1969), and the site is located further from a nearby village than informed in Lbova and Khamzina (1999). Pavel Marnuev confirmed that this is a new location (Personal communication, 2019).

The paintings are blurred and damaged by white coating and exfoliation.

The following table includes 28 sites that were searched for but were not found during this survey:

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<th>Khorinskiy district</th>
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<td>Pisanitsa «Buyskaya»; Khara-Nur; Burget-Baytsa; Sukhoi Ruchei</td>
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<td>Shartykei; Dzhida; Chomnik; Perevoznaya; Ekhirit II; Zarubino-Khudzhir; Orgoyton III, or Ust‘-Kjahta. Pisanicy vshe zheleznodorozhnogo mosta</td>
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Figure 5.10. Total number of designs and motifs recorded at the rock art sites of Buryatia in 2017.
In total, 4752 designs at 63 sites were recorded in Buryatia (Figure 5.10, Table 5.6). The majority are non-figurative (1635) and anthropomorphs (1209). A substantial category consists of undefined designs (517) because many paintings are faded and/or blurred. Compared to data presented in the previous sections, there are proportionally less zoomorphs (quadrupeds) (265), no boat-like motifs, much more ornithomorphs (914), and enclosure depictions (177) (Figure 5.11). The majority of rock art recorded in Buryatia is ochre paintings ranging from light-red to brown colours. Petroglyphs are also present, which are a few Buddhist carvings and sites of the Kyakhta group found in the Kyakhtinskiy and Dzhidinskiy districts in Southern Buryatia. Most of the rock art is located 0-2 m above the ground (3391), although some paintings are located higher than 2 m above the ground and even as high as 5-7 m (Figure 5.12). Concerning cardinal orientation of the painting, prevalent directions are south-east, south, south-west and west, similar to Zabaykalskiy Krai (Figure 5.8).

<p>| Table 5.11. Designs and motifs recorded at the rock art sites of Buryatia in 2017. |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|</p>
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<thead>
<tr>
<th>Site</th>
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<th>Enclosure</th>
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</tbody>
</table>
Figure 5.12. Proportions of motifs present at the rock art sites of Buryatia recorded in 2017: 46 – Shara-Tala; 47 – Baga-Baitsa; 48 – Badad; 49 – Barun-Alan (Alanskiye Pisantsiy); 50 – Khotogay-Khabsagay; 51 – Narany-Khabsagay (Naran Kul’skiy); 52 – Shubuguy; 53 – Sanny Mys; 54 – Shanaty; 55 – Shara-Khunduy; 56 – Kheltegely-Baytsa; 57 – Angir-I. Malty-Shulusun; 58 – Angir-II. Bain-Khara; 59 – Staraya Kurba (Shenezam); 60 – Dodogol (Mukhor-Nur, Averkova mountain); 61 – Golubinka (Varvarina gora); 62 – Staraya Bryan; 63 – Voznesenovka; 64 – Kordon; 65 – Nadeina Cave; 66 – Nadeina (Pavlova Mountain); 67 - Lovtsov Ugol (Lovtsov Lov); 68 – Tarbagatskaya Pisantsa (Batyushkina); 69 – Ayryk; 70 – Kibalinskaya Pisantsa; 71 – Mondogor-Khabsagay; 72 – Beryozovaya; 73 – Sutoy (Suslova Mountain); 74 – Khaylasyn; 75 – Oboto; 76 – El’brin-Uber; 77 – Tsoiga II; 78 – Khar’yastka; 79 – Narsatuy; 80 – Bain-Khara Cave; 81 – Gol-Talogay; 82 – Bom; 83 – Kashkarga II; 84 – Baryshnya; 85 – Altacheh (Altash); 86 – Khaysagar; 87 – Beshegte-Baytsa; 88 – Bichurskaya; 89 – Gorodovoy Cliff; 90 – Khabshag; 91 – Staraya Kapcheranka 3; 92 – Bain-Dzurkhen (Bayan-Uula); 93 – Tabangutskoye obo; 94 – Ust’-Kyakhta; 95 – Derevenskaya Mountain; 96 – Baga-Zarya; 97 – Khudzhir; 98 – Povorot (Location # 3); 99 – Kamenshika; 100 – Ust’-Temnik; 101 – Temnikovskaya Cave; 102 – Galtag II; 103 – Ukhaan-Eber (Ulaan-Temnik); 104 – Narin-Khunduy; 105 – Sarbaduy; 106 – Perevoznaya-3; 107-Bayan (Cheremushki); 108 – Shartykey.

Figure 5.13. Location of designs in a relation to the ground, technique and cardinal direction of designs recorded at the rock art sites of Buryatia in 2017.
5.4. Conclusion

In this chapter, the results of fieldwork carried out as a part of this PhD project were presented. The main fieldwork took place in three subjects of the Russian Federation, Yakutia, Zabaykalsky Kray and Buryatia. Other rock art sites, in the Amur River basin and Tomskaya Pisanitsa in West Siberia, were also visited while in Siberia. In total, 108 rock art sites with 6334 designs were recorded. Chronologically, these sites range from those that might be the earliest rock art sites in Siberia (see Chapter 6) to Medieval and Buddhist graffiti. Thus, the sample is representative for considering all major rock art styles and traditions of East Siberia. However, since this PhD is devoted to only prehistoric rock art, in the following chapters only these bodies of rock art are considered.
CHAPTER 6. IN SEARCH OF THE EARLIEST IMAGES AND ETHNOCULTURAL CONTINUITY IN THE ROCK ART OF EAST SIBERIA

This chapter was prompted by some discoveries made during fieldwork carried out for this PhD project. Originally, the consideration of rock art which may be attributable to the Paleolithic Age was not an intention since the research topic of the earliest rock art in Siberia requires scientific dating methods applied in order to advance it. The issue of the attribution of the earliest rock art in the region has not been decisively resolved because East Siberian rock art lacks overall research in general and scientific research in particular. Those studies carried out in recent decades are not sufficient if the size of the region and the number of rock art sites are taken into account. The difficulty of dating rock art is a factor too. Since this PhD project did not intend to carry out any scientific analyses, it was decided not to focus on the most problematic body of rock art. However, field survey yielded some new evidence which speaks to the importance and relevance of further research on this issue. Moreover, some of the sites which may be attributed to the Pleistocene age also provide examples of continuity of their usage through the Neolithic and Bronze Age, thus providing material for studying ethno-cultural identities embedded in rock art.

The chapter starts with a review of debates on the Paleolithic rock art in Siberia, which is followed by a presentation of the results of the PhD project fieldwork. They revealed the importance and relevance of further research of this topic promising more discoveries. The second section of the chapter is an analysis of the data gathered in the context of theoretical framework outlined in Chapter 3 with two case studies. The first one considers the site of Shaman-Gora, one of the possible Paleolithic rock art sites in Trans-Baikal, and the second investigates petroglyphs in the Lower Amur Basin. Both rock art complexes exhibit evidence of ethno-cultural continuity in the production of rock art in specific localities during several millennia.

6.1. Identifying the earliest rock art in Siberia

6.1.1. Debates on the Paleolithic rock art of Siberia: a review

In 1949 Alexey Okladnikov claimed the Paleolithic age for three animalistic depictions at the Shishkino rock art site (Figure 6.1) (Okladnikov, 1949; Okladnikov & Zaporozhskaya, 1959). These were three figures painted with light-red ochre: two wild horses and one large aurochs (Figure 6.2). The paintings were very faded and exhibited evidence of weathering which convinced the researcher of their deep antiquity. Nevertheless, the main argument followed two lines of support, subject matter and style. As Okladnikov argued, wild horses and aurochs inhabited open grasslands predominant in the region in the Pleistocene Age, and they could not have survived in the dense Taiga.
forest, the landscapes which occurred in the Upper Lena basin in the Neolithic and Bronze Ages. Faunal remains uncovered from Paleolithic settlement sites of the region, Mal’ta and Buret’, were referred to. Following the other line of support, style plus subject matter, these depictions could not have also been attributed to the later periods because the rock art of the Neolithic and Bronze Ages is dominated by other motifs and does not include depictions of horses and aurochs. The rock art of the Iron Age and the Middle Ages has a variety of horse depictions, but they differ in style, size and technique. Okladnikov also emphasised a stylistic resemblance of these Pleistocene images with those found in the caves of the Franco-Cantabrian region.

In 1967-1971, mainly in the journal “Soviet Ethnography”, an academic discussion occurred on the chronological attribution and other research problems concerning rock art found in the Soviet Union. The discussion started with a paper by Formozov (1967), who criticised the Okladnikov chronological framework developed by that time. By the late 1960s, archaeological research in the Soviet Union made substantial progress which also included rock art studies that resulted in a number of fundamental monographs being published. For Siberia, Okladnikov’s works identified the earliest rock art images (Figure 6.2) and developed an all-embracing chronological framework for the Baikal region (Okladnikov, 1959b, 1966; Okladnikov & Zaporozhskaya, 1959). Some weak arguments in the framework were pinpointed by Formozov (1967).

Concerning Paleolithic Shishkino images (Figure 6.2), he noted that the wild horse probably did not become extinct at the end of the Pleistocene and was present
during the Holocene in Yakutia. This claim is supported by osseous remains of the wild horse uncovered from the Kullaty settlement (3rd-2nd Millennia BC) in the Middle Lena River basin, a fact that was actually known to Okladnikov. Two decades later, three more pieces of evidence of a wild horse present in Yakutia until historical times were already known (Arkhipov, 1984). The attribution of the aurochs was also not convincing to Formozov, since it could be a depiction of a bull - a common motif in the Bronze and Iron Age rock art of South Siberia (Okunevo and Tagar cultures). Formozov also criticised Okladnikov’s stylistic approach because too geographically remote analogies were used for chronological determination. He suggested that this figure of the bull/aurochs is more likely attributable to the Bronze Age because it stylistically fits with other Bronze Age imagery present at the Shishkino, having the same technique and similar size, rather than with the parietal art of the Franco-Cantabrian region. The open-air context of this art also raises doubts about its antiquity (Formozov, 1967).

Okladnikov himself did not participate in the discussion, although the Formozov critique was met by Pelikh (1968), who did not answer to the point but focused on speculating about proper application of the Marxist methodology, and Martynov (1971). The latter supported Okladnikov’s attribution concluding that all arguments taken together allow inferring a deep antiquity of the images in question (Figure 6.2). Concerning palaeontological data, more recent osseous remains of wild horse do not reject the possibility of the Paleolithic Age of the depictions (Martynov, 1971). Other participants in the discussion, Savvateev (1969) and Chernetsov (1969), supported the Formozov

![Figure 6.2. Shishkino rock art identified as Paleolithic: 1, 2 – aurochs or bull, 3 – horse (Okladnikov, 1949), 4 – photo of the aurochs/bull, 5 – photo of the horse №2 (I. Ponomareva).](image-url)
critique, emphasising the importance of such a dispute and further research on rock art. Answering his critics, Formozov (1969) expressed the importance of analysing facts and data rather than focusing on empty theoretical generalisations and speculations.

In the 1970s, Okladnikov attributed four more depictions from the sites of Tal’ma (Upper Lena River), Dolgiy Rapids and Ushkaniy Island (Angara River) in East Siberia to the Pleistocene period, identifying them as rhinoceros (Figure 6.3). However, this identification is dubious (see Bednarik, 1993; Molodin & Cheremisin, 1999, p. 139), and cannot be verified since only Okladnikov’s tracings are available. As Vadim S. Nikolaev, who carried out the redocumentation of the Tal’ma site, stated, nothing similar to the figure published by Okladnikov was found, and he is convinced that this image never existed [Personal communication, 2019]. As for the petroglyphs from the sites in the Angara River basin, these are not accessible being now flooded by a sequence of hydroelectric power stations. Therefore, the existence of these rhinoceros remains a mystery.

In 1989, a team of Irkutsk researchers started the redocumentation of the Shishkino rock art site (Mel’nikova & Nikolaev, 2006; Mel’nikova et al., 2012). Their 20-year research led them to the conclusion that no rock art could have survived on open rock surfaces in Siberia since the Paleolithic Age. Although, this conclusion is exaggerated, their focus on the geology of the Shishkino site, how and when the rock outcrop itself became exposed, and how the weathering processes impacted its destruction, provided the basis for establishing a new chronological sequence for the rock art of the Upper Lena River basin. They proved that the rock surface itself on which the bull was depicted could not have appeared earlier than the Bronze Age. The surface with the horses could have been exposed as early as the Late Neolithic Age.

Therefore, there is no Paleolithic rock art in the Baikal region known to-date, although a rich assemblage of portable art comes from the Upper Paleolithic sites in the region, such as Mal’ta, Buret’, and Ust’-Kova (e.g., Abramova, 1963). Time proved
Formozov correct about the Shishkino “Paleolithic” rock art, however, the Okladnikov framework and methodology were applied elsewhere and proved to be relevant in some points.

In Siberia, Okladnikov’s disciples and followers carried forward the rock art research and discovered and identified more examples of what was assumed to be Paleolithic rock art. In Yakutia, several figures at the Tokko site in the Olyokma River basin were assumed to be at least 4000 years, the end of the Paleolithic Age in the region according to the chronology of that time (Okladnikov & Mazin, 1976). These are the figures of aurochs, horses, elk, and deer which are characterised by a naturalistic manner of depiction (Figure 6.4.). The main argument for this was that aurochs and wild horses are characteristic of the Pleistocene period. Moreover, these figures, the paint of which is very faint, occupy central positions on the panels and have been superimposed by later images. However, as with Okladnikov’s attribution, which was criticised for not considering finds of osseous remains of wild horses dated to the Holocene period, the attribution of the Yakutian paintings attracted criticism. Arkhipov (1984) suggested that the Tokko rock art site cannot be related to the Pleistocene Age due to the fact that the depicted fauna was present during the whole Holocene period, and is rather related to the Iron Age, based on a study of offerings placed at the site. Nikolay Kochmar, a later researcher of the rock art of Yakutia, re-examined the Tokko site and concluded that the figure of aurochs was actually a depiction of a steppe bison, thus supporting the Paleolithic attribution of this rock art (Kochmar, 1994).

Another region of East Siberia where Paleolithic rock art was identified is Eastern Trans-Baikal and adjacent North-Western Amur Oblast. The sites are Byrka, Nyukzha, Sredneshaiikino, Butikha, and recently reported Uteni (Mazin, 1986, 1994; Zabiyako & Kobyzov, 2010).

The Byrka site was discovered in 1983, where 20 panels were recorded with more than 80 painted designs, among which extinct fauna was present. Panel 20, according to Mazin’s inventory, features a figure of a rhinoceros and a herd of the steppe bison. According to dates available for the extinction of fauna, the earliest group of images at this

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.4.png}
\caption{Tokko (Yakutia). 1-5 – figures identified as Paleolithic (Okladnikov & Mazin, 1976).}
\end{figure}
Mazin also undertook excavations under Panel 20 and identified five cultural layers which yielded rich material. In the lowest, the fifth layer, Mazin unearthed a stone tool smeared by ochre and two items of portable art resembling depictions of animals (Figure 6.6.3). No radiocarbon or other scientific analysis was undertaken, and the layers were dated based on the typology of artefacts.

The Nyukzha site yielded even more solid evidence (Figure 6.6.). The excavations undertaken at the site revealed that the cultural layer was covering a fallen panel with a painting of an animal (Figure 6.6.1). This layer yielded pieces of ochre, and some stone artefacts recovered from the layer had stains of red paint on them. One stone flake even featured an ochre fingertip. However, the site was dated based only on the typology of stone artefacts which were related to the Paleolithic Dyuktai culture of North-East Asia dated to 35000–10500 cal. BP.

The sites Sredneshaiikino and Butikha were related to the Early Holocene period based on a stylistic similarity with the images at Byrka and Nyukzha and the typological dating of artefacts recovered from the lower cultural layers excavated in the vicinities of
the panels with the paintings. Moreover, the lowest, third, layer of Butikha yielded a radiocarbon date of 10920±198 bp (Mazin, 1994, p. 80).

Another site, Shaman-Gora, exhibiting a panel of stylistically similar figures of steppe bison found in a small grotto was discovered in the 1990s (M. V. Konstantinov et al., 2008; M. V. Konstantinov et al., 2003). Although the authors insist upon its Late Neolithic–Bronze Age date, the arguments are not convincing since they refer to the finding of osseous remains of the steppe bison unearthed at the Ust’-Menza 1 site, which were not directly dated. Excavations were undertaken in the grotto, and researchers identified four cultural layers: the fourth and the third were attributed to the Pleistocene, the second where a large assemblage of stone arrowheads was present was related to the Late Neolithic, and the first layer to the Bronze Age. This attribution was made based only on a typological identification of uncovered artefacts. The density of the finds in the Neolithic second layer was used to support the Late Neolithic–Bronze age of the rock art. This attribution was contended by V. A. Tsybiktarov (2006) who remarked on the stylistic resemblance of the Shaman-Gora images to those present at the Byrka site, and pointed out that excavations undertaken in the grotto also yielded Pleistocene layers.

In 2008, the list of possible Paleolithic rock art sites in East Siberia extended even more with a new site, Uteni reported from the Western Amur River basin. Authors informed on 88 designs on 21 panels among which possibly a depiction of rhinoceros and a figure of bison are present (Figure 6.8, Zabiyako & Kobysov, 2010).
In order to provide a full picture of Siberian Paleolithic rock art, another site needs to be considered. This is also important because the site publication again raised the question of the possibility of the presence of Pleistocene rock art in North Asia. The site Kalgutinskiy rudnik is located far from the sites considered above, in the Altai Mountains (Molodin & Cheremisin, 1999, 2002, 2007), differs in its art and context and was considered in association with other rock art sites in Central Asia and Mongolia attributed as possibly Paleolithic (The latter are not considered here and for more information see Cheremisin, Molodin, Zotkina, Tseveendorj, & Cretin, 2018; Molodin & Cheremisin, 1999; Rozwadowski, 2017a.) In addition, the researchers, in contrast to those in East Siberia, are quite optimistic about the potential presence of the Paleolithic rock art in Siberia. Kalgutinskiy rudnik is an open-air site where 18 relief figures found on horizontal rock surfaces were identified as horses, aurochs and deer and attributed to the Paleolithic Age mostly based on their stylistic appearance; furthermore, they were also characterised as heavily patinated and barely visible due to weathering. Although this attribution was criticised by Kubarev, who argued that these figures should be related to the Early Bronze Age (Kubarev, 2004), the authors believe that the age determination is grounded, especially in the context of the discovery of Foz Côa, which demonstrated that Paleolithic rock art can be found on open-air surfaces (Cheremisin et al., 2018; Molodin & Cheremisin, 1999).

It is important here to recall the famous Kapova cave in the Ural Mountains which dates back to the Late Paleolithic Age (Lyakhnitskiy, 2008). Although it does not belong to Siberia geographically, its presence provides an evidence that the populations of North Asia may have also produced rock art as early as in the Pleistocene.

To sum up the state of knowledge on the Paleolithic rock art in Siberia, there are no proven and scientifically dated sites yet. The main argument for attributing the age is still stylistic analogy, and there are certain doubts about using style as a dating argument. The interpretation of depicted animals as rhinoceroses, steppe bison or other extinct
species has also raised questions. Some sites were excavated in order to define the age of the paintings, but the relationship between the excavated cultural layers and rock art panels is not direct.

Twelve rock art sites were discussed in this chapter. Geographically, only one site is located to the west from the Yenisey River, in the Altai Mountains, and considered here for a full picture of the debates on the Paleolithic rock art of Siberia. Four sites are found in the Baikal region and their Paleolithic attribution now seems hardly possible. A single site, Tokko, in Yakutia was identified based on species determination and stylistic analogy and appears to need further enquiry. There are several sites, Shaman-Gora, Byrka, Butikha, Srendeshaykino, and Uteni in Zabaykalsky Krai, and Nyukzha in adjacent Amur Oblast, which yielded rich excavated material that included stone tools with stains of ochre, items of portable art and a panel with a painting on it covered by cultural layers (Figure 6.6). However, only one radiocarbon date was produced by Butikha, while no radiocarbon dates are available for most of these excavations, even for those carried out in the late 1990s. This project fieldwork also included Zabaykalsky Krai where three out of four mentioned sites, Shaman-Gora, Byrka and Butikha, were examined, and another site, Staraya Zhila, was discovered during the survey. The discoveries made in 2017 are presented in the following section.

6.1.2. Discoveries and new perspectives

During the fieldwork in 2017, three sites attributed previously to the Paleolithic Age were surveyed (Byrka, Shaman-Gora, Butikha), one new site was discovered (Staraya Zhila) and two sites yielded stylistically similar images thanks to a better recording technique.

1. Byrka (Figure 6.9). Unfortunately, this unique site has been almost totally destroyed by modern vandalism. All rock surfaces are covered by graffiti over the ancient images. Most of the panels recorded by Mazin cannot be located because a significant part of the rock cliff was blown off by locals in the 1990s when quarrying for stones. One of the largest panels, Panel 20 according to Mazin’s inventory, which features a herd of bison and a rhinoceros, is now completely covered by graffiti, and only some ancient figures can be partly recognised. Mazin reported discovering the site in 1983, but his photographs show that at that time the rock was already covered by visitors’ initials. Interestingly, he did not mention this vandalism in the publication of the site. The rock panel also bears the researcher’s impact – chalk outlines and a non-backfilled excavation pit under the panel.

Therefore, although the site gave rich material and could be a key site for Paleolithic rock art research, now it is lost for academia as well as for the public. However, this place is still used for barbeques.
2. Staraya Zhila (Figure 6.10). A small site yielding a stylistically similar zoomorphic figure (Figure 6.10.3-4) was discovered just in 8 km from the Byrka site. This discovery indicates that even though the Byrka site is now lost, there are still some possibilities for future research in the area which has a large concentration of rock art sites. Mazin reported 26 sites from the area of the Urulyunguy and Borzya River basins, related to the periods from the Paleolithic to the Bronze Age (Mazin, 1986), although not all of them were located during my fieldwork.

The paintings are found on two neighbouring rock outcrops described as Location # 1 and Location # 2. Location # 1 has only three images – a zoomorphic figure, a ring and a circular stain of paint, all of them on the same rock panel. Location # 2 has designs found on four small panels: a quadruped, two single vertical lines, a stain of paint
and two bird-track figures. The discovery of this site is important because it was not touched by neither vandals nor researchers with their chalks and shovels and can be studied with all scientific methods available to date. Interestingly, the site’s imagery is similar not only to Byrka but also to Uteni reported recently from the Western Amur River basin in that zoomorphs are rendered in a strikingly similar manner, and such motifs as bird-track shapes, rings and vertical lines accompany Pleistocene-looking animals (see Zabiyako & Kobyzov, 2010).

3. Shaman-Gora. During my fieldwork, the site was examined, and the Location # 1 (the Grotto) was recorded using Structure from Motion (SfM) photogrammetry. The model built in Agisoft™ Photoscan™ was then used to extract a high-quality image of the whole panel which was then digitally enhanced with DStretch® and traced in Adobe Photoshop®. As a result, a better tracing of the painting was produced allowing analysis and more thorough identification of motifs depicted (see the next section, Figure 6.15).

4. Butikha (Figure 6.11). The location of this site was a discovery by itself because this site was not found since the Mazin’s study. The paintings do not exhibit either extinct fauna or stylistic resemblance to the Byrka-type images. The site was dated to the early Holocene based on a single date 10920±198 produced by the third cultural layer and the resemblance of stone arrowheads from this layer to those defined as “Khin” arrowheads in the Baikal region by Okladnikov (Mazin, 1994, p. 80; Okladnikov, 1950).
5. **Suduntuy** (Figure 6.12). DStretching and tracing of one of the panels revealed a zoomorphic figure depicted in a similar to Byrka manner (Figure 6.12.3-5). It looks like a blurred stain of paint on tracings made by previous researchers (Mazin, 1986, p. 181; Okladnikov & Zaporozhskaya, 1970, p. 222), because it is very faded and not visible to a naked eye unless digitally enhanced. The figure is superimposed by rows of dots which are probably a part of the Bronze Age imagery abundantly present on other panels. Thus, although not an indication of age, it may show that there are more than one stages present at the Suduntuy site.

6. **Shara-Tala** (Figure 6.13). A visual survey of the site provided a fuller picture of the rock art present here. The site had not been surveyed by professional archaeologists since Okladnikov’s work. This site differs in motifs and style from typical rock art sites of the region featuring a large number of zoomorphic figures painted with red ochre of
Figure 6.1. Suduntuy (Shulutay, Baraun-Chulutay) (Zabaykalsky Kra). 1 – General view at the site; 2 – General view at the Panel 9 with 3-m scale; 3 – Panel 9, original photo; 4 – Panel 9, DStretch-LDS; 5 – Panel 9, tracing. Photo and tracing I. Ponomareva.

Figure 6.13. Shara-Tala (Buryatia). 1 – general view at the site with 3-m scale; 2 – Panel 2, original photo; 3 – Panel 2, DStretch-YRD; 4 – a close-up of a zoomorphic figure, DStretch-YRD. Photo I. Ponomareva.
different tints. One of the figures is depicted in the same manner as zoomorphic figures of the Byrka and Shaman-Gora sites.

**Concluding remarks.** The research into the earliest rock art of East Siberia presented above is promising. However, archaeological collections and documentation from previous research and especially excavations undertaken under rock art panels must be reassessed and rock art sites identified as featuring possibly Paleolithic rock art should be studied in more detail. Sites excavated previously, Nyukzha, Byrka, Butikha, and Shaman-Gora, can be re-excavated in order to review and date cultural layers identified by previous researchers, so artefacts collected before can be assigned with age. Several sites, Staraya Zhila, Suduntuy and Shara-Tala, were discussed here because stylistically similar images were identified. Since stylistic analogy as the only argument cannot be used for establishing age, further scientific research needs to be carried out on these sites.

6.2. Ethno-cultural continuity in rock art: from Paleolithic into the Neolithic and Bronze Age: two case studies from the Russian Far East and Trans-Baikal.

6.2.1. Shaman-Gora rock art site

As was stated in the previous section, the site was discovered and first recorded in the 1990s (M. V. Konstantinov et al., 2003). The authors related the site to the Neolithic-
Figure 6.15. Shaman-Gora, Location #1 (Grotto) (Zabaykalsky Krai). 1 – general view at the panel with 2-m scale, original photo; 2 – general view at the panel, DStretch-LDS; 3 – tracing of the panel. Photo and tracing I. Ponomareva.

Figure 6.16. Shaman-Gora (Zabaykalsky Krai). 1 – A topographic plan of the Locations 1-5 (after M. V. Konstantinov et al., 2003); 2 – Location #2, Panel 2, original photo; 3 – Location #2, Panel 2, DStretch-LDS; 4 – Location #3, original photo; 5 – Location #3, DStretch-CRGB; 6 – Location #5, original photo; 7 – Location #5, DStretch-YRD. Photo I. Ponomareva.
Bronze Age, although the site imagery features depictions of extinct fauna. The site was visited during this project fieldwork and recorded using Structure from Motion (SfM) photogrammetry which allowed producing a better tracing of the painting for more thorough interpretation.

The site is known for its splendid panel in a grotto featuring a herd of bison and other fauna. However, there are five locations all found on the same slope of a mountain. Location # 1 is a grotto with a single panel where 49 designs were identified (Figure 6.15), most of them are naturalistically depicted bull-like animals, and two figures are anthropomorphic.

The other locations (Figure 6.16) are open-air sites found nearby (M. V. Konstantinov et al., 2003). Location # 2 has two panels with 19 designs on them, most of which are abstract motifs such as rows and pairs of parallel vertical lines. Panel 2 exhibits a composition with two anthropomorphic figures and groups of vertical lines. Location # 3 has a group of vertical lines and a composition consisting of a small anthropomorphic figure and three vertical lines to the right, and Location # 4 has a single panel with vertical lines painted on it, probably the remains of some exfoliated design. Location # 5 features a single composition consisting of two anthropomorphic figures and a boar-like zoomorphic figure. These locations were preliminarily related to the Neolithic-Bronze Age, and authors reported collecting surface artefacts identified as Paleolithic and Neolithic in the vicinity of the rock art locations (M. V. Konstantinov et al., 2003).

6.2.1.1. Paleoenvironmental context

Since it appears that Upper-Final Paleolithic Age is possibly the time when pictures first appeared on the panel, it seems logical to start with reviewing paleoenvironment of that period. This information is available from long-term archaeological research carried out in the basin of the Chikoy and Menza Rivers (M. V. Konstantinov et al., 2016).

In the Upper Paleolithic of this region, the climate was colder than it is today and open steppes with small forested zones dominated the landscape. The fauna included wild horses, woolly rhinoceros, reindeer, red deer, steppe bison, mammoth, Asiatic wild ass, saiga antelope, dzeren, spiral-horned antelope and Baikalian yak (*Poephagus Baicalensis*). All these animals were systematically and successfully hunted by the people of the Upper Paleolithic (M. V. Konstantinov et al., 2016, p. 67). It is known that aurochs also roamed in Northern Eurasia in the Pleistocene and became extinct about 380 years ago (Stuart & Lister, 2012).
About 13000 bp the climate started changing and became warmer which caused the northward migration and the extinction of megafauna. The Holocene period started 10300 bp, and The Mesolithic Age identified in the region was related to the cultural layers dated to 10800-7000 bp. At that time in the region, a dense taiga forest started to occupy the previously open spaces. According to osteological remains uncovered from archaeological sites, people hunted red deer, roe deer, goitered gazelle, argali, wild horse and boar. There is also evidence of hunting using a bow and fishing with harpoons, nets and fish-hooks (M. V. Konstantinov et al., 2016, p. 68).

In the Neolithic-Bronze Ages, people hunted elk, red deer, aurochs, roe deer, Siberian musk deer, bear, fox, hare, wolf and birds (M. V. Konstantinov et al., 2016, p. 79). This list may not be full due to the poor preservation of osteological remains in cultural layers. Mikhail Konstantinov also states that wild horse and bison were present during the Neolithic, but the latter is represented by a single find which was not directly dated. It is believed that steppe bison survived no later than 8000 bp (Stuart & Lister, 2012; Zaretskaya et al., 2015).

6.2.1.2. Attribution of motifs

A better tracing (Figure 6.15-3) allows for more grounded identification of the species depicted, which in the case of extinct fauna present may provide a terminus ante quem. However, many figures on the panels are faded, blurred and damaged by weathering and only those better preserved can be identified.

It appears that on the Shaman-Gora panel the majority of the fauna depicted are Bovina – steppe bison (Bison priscus) and aurochs (Bos primigenious) (Figure 6.17). These
two species can be distinguished based on the most characteristic features depicted by an ancient artist.

For the bison this is a large hump along with a massive body which can be seen in Figures 5, 6, 10 (Figure 6.15-3). These figures are the largest, and although this characteristic is not an argument for assuming the age, it may indicate the connection of these figures as a group. Moreover, they have some common stylistic features. Another figure with a large hump and massive torso is Figure 16 (Figure 6.15-3). It is also relatively large but faces the opposite direction and is depicted in a different stylistic manner. The figure follows another animal, the front part of which was washed away and thus unidentifiable. Probably Figures 20 and 27 (Figure 6.15-3) can also be included in this group, although their outlines are not clearly discernible because many figures are superimposed here.

Other bull-like figures may be identified as aurochs. Although Figures 8 and 12 (Figure 6.15-3) have a hump, they are thinner and smaller than figures defined as bison, therefore they rather resemble aurochs. Figures 20-32 (Figure 6.15-3) can also be determined as aurochs on the same grounds.

Another row below features quite different animals. Figures 37 and 39 (Figure 6.15-3) have a dissimilar body outline and shape of the head. Probably they are depictions of saiga antelope or dzeren. Figure 37 (Figure 6.15-3) has a long nose similar to that of saiga antelope (Figure 6.14-3).

The next image, Figure 41 (Figure 6.15-3), is peculiar because it has one large horn on its forehead and three smaller projections from its nose. The first suggestion was that this is a depiction of a woolly rhinoceros which is present in the Pleistocene osteological remains of Trans-Baikal. Based on the data available, it is assumed that in Siberia the animal died out around 14000 cal. BP (Kuzmin, 2013). However, the figure when compared to other depictions of rhinoceroses in Trans-Baikal (Mazin, 1986), Mongolian Altai (Cheremisin et al., 2018), Ural Mountains (Lyakhnitskiy, 2008) and Europe (Chauvet, Deschamps, Hillaire, Clottes, & Bahn, 1996; Nash, 2011), bears some distinctiveness. The rhino figure from Byrka has a long muzzle with a horn protruding from the tip of its nose. Another depiction of a woolly rhinoceros was identified in Altai Mountains (Jacobson, Kubarev, & Tseevendorj, 2001), although this determination was contested, and another view is that it is a depiction of a boar and related to the Bronze Age (Kubarev, 2004; see Molodin & Cheremisin, 2007). A doubtless depiction of a rhinoceros dated to the Paleolithic Age comes from Kapova (Shulgan-Tash) Cave (Lyakhnitskiy, 2008). This figure has a characteristic hump and a single protruding horn from the nose. Famous rhino paintings from Chauvet Cave and a recent discovery from Romania have the same
characteristic features (Chauvet et al., 1996; Nash, 2011). The figure revealed at the Shaman-Gora panel differs in that the horn protrudes from the forehead instead of the nose and the animal does not have a large hump on its back. By having a large single horn on the forehead this animal resembles the Siberian unicorn (*Elasmotherium sibiricum*) (Figure 6.17-1) which roamed Eurasia in the Pleistocene and became extinct around 39000-35000 cal. BP (Kosintsev et al., 2019). However, there are not many osseous remains of this large animal. The most confirmed records come from Eastern Europe and Central Asia with isolated finds in Mongolia and China (the latter referred as *E. caucasicum*). Because there is no evidence that *E. sibiricum* was present in Trans-Baikal, this determination is rather speculative. However, it indicates that more research on this painting is needed.

Other figures are damaged and difficult to determine whether they are aurochs, bison or other species. It appears that another Bovina known from osseous evidence, Baikalian yak (*Poephagus baicalensis*), is not present on this panel. Possibly, Figure 25 (Figure 6.15-3) is a depiction of elk hunted since the Neolithic onward according to the archaeological record (M. V. Konstantinov et al., 2016).

Another important feature of this panel is a large exfoliated surface on which a big anthropomorphic figure is depicted. Apparently, this exfoliation destroyed the lower part of the herd of animals because some remains of paintings are still discernible at the edges of the exfoliation. Thus, the anthropomorphic figure, which has a headress and something next to/ in the left hand (according to Konstantinov et al. (2003), it is a drum), appeared later than the main animalistic composition. This anthropomorphic figure is not characteristic of any style identified in the region and does not have any analogues. Another anthropomorphic figure present on the panel is depicted in the top left corner and is typical for the Selenga style/tradition identified in Buryatia or Steppe group defined in Eastern Trans-Baikal for the Bronze Age rock art (see Ponomareva, 2019).

6.2.1.3. Chronology

It may be concluded that the main panel of the Shaman-Gora is multilayered and related to a period of at least eight thousand years. It can be quite confidently stated that some of the images, first of all, the depictions of steppe bison, appeared no later than 8000 bp. The aurochs could have been painted any time from the Pleistocene and during the Holocene period since they become extinct only several hundreds of years ago (Stuart & Lister, 2012). A possible image of an elk could have been painted any time during the Holocene, and its occurrence on the right edge of the composition points to its relative late appearance compared to the core composition. The anthropomorphic figure in the top left corner of the composition is related to the Bronze Age rock art tradition of the
region, and another anthropomorphic figure on the exfoliated part of the panel more likely is also related to the Bronze Age.

Concerning other locations, at Location # 2 a composition with an anthropomorphic figure with a similar headdress is present in a composition with groups of vertical lines - a motif often found in the context of Bronze Age rock art. Location # 3 also has an anthropomorphic figure and vertical lines characteristic for the Steppe group of the Bronze Age. In Location # 4 only oblique lines are present which can be of any age. And finally, Location # 5 has a composition consisting of a boar-like animal, the earliest osteological remains of which were found in the Mesolithic cultural layers, and two anthropomorphic figures not typically found among the Steppe group of Selenga style rock art. Thus, this composition could have appeared any time from the Mesolithic onward.

Therefore, the complex Shaman-Gora rock art appeared as early as 8000 bp and functioned in the cultures of the Neolithic and Bronze Ages. However, only the earliest and the latest paintings can be chronologically placed with any precision, in contrast to those which could have appeared any time during the Late Pleistocene and the Holocene. Two scenarios are more likely. The first is that there are two groups of images – those created in the Late Pleistocene-Early Holocene and this group includes the depictions of bison, aurochs and saiga antelope/dzeren, and Bronze Age rock art which includes anthropomorphic figures and zoomorphic figures found on the periphery of the panel. Thus, there is a big time-gap between two groups of paintings and cultural discontinuity. The second possibility is that the paintings appeared continuously starting from the end of the Pleistocene and through the Neolithic and Bronze Age. Yet another less likely scenario is possible if the animal attribution is not correct and all imagery is related to the Bronze Age or even younger period. However, the Bronze-Iron Ages of Trans-Baikal are represented by other quite different rock art styles and traditions (see Chapter 8).

The uncertainty of cultural continuity in the region will become clear after discussing the archaeological context.

6.2.1.4. Archaeological context

The time when steppe bison depicted on the Shaman-Gora panel became extinct is terminus ante quem, which means that the paintings could have appeared any time before 8000 bp. Thus, it is relevant to review the archaeological context to see when possible artists were present in Trans-Baikal at that time.

The site Shaman-Gora is found in an area where extensive archaeological research has taken place since the 1970s and many multi-layer settlement sites were studied. The principal investigator, Mikhail V. Konstantinov, developed a culture history
framework encompassing periods from the Upper Paleolithic to the Bronze Age based on excavated data (M. V. Konstantinov, 1994; M. V. Konstantinov et al., 2016).

The earliest evidence of human occupation is related to the Upper Paleolithic and dated to 35000 bp. The data unearthed allowed Konstantinov (1994, p. 124) to divide the period into three consecutive stages, Initial (35000-25000 bp), Middle (25000-18000 bp) and Late Upper Paleolithic (18000-10800 bp). For the Initial Upper Paleolithic Konstantinov identified two cultures, Tolbaga and Kunaley, which occupied the same territory, the basins of the Khilok and Uda Rivers, but exhibited quite different lithic complexes. The Tolbaga complex is characterised by a blade industry, while the Kunaley complex was identified based on the dominance of flakes in its lithic assemblage. These two industrial lines continued to develop in the Middle Upper Paleolithic. Most of the excavated material is related to the following, Late Upper Paleolithic period, and Konstantinov noted that the ratio of flakes and blades is almost equal in the technocomplex which was interpreted as merging of two lines of lithic evolution into one.

Excavations of Paleolithic settlements yielded numerous remains of dwellings which were of a rounded shape, enclosed by stone outer linings and usually had one hearth inside. In one such dwelling at the Tolbaga site an osseous sculpture of the head of a bear was unearthed from a layer related to the Initial Upper Paleolithic (Figure 6.18).

The next period, Mesolithic (10800-6500 bp) differed in that the lithic industry developed even further and was dominated by micro-blades. Two types of dwellings existed, ones that were similar to the Paleolithic structures and had stone outer linings, and others that did not which, along with the fact that cultural layers are thinner than Paleolithic ones, was interpreted as an evidence of higher mobility of the Mesolithic population.
The Neolithic was divided into three consecutive stages, Early Neolithic (6500-5500 bp\textsuperscript{21}), Middle Neolithic (5500-4500 bp) and Late Neolithic (4500-3800 bp). The Neolithic Age was identified based on the presence of pottery in the cultural layers. The sequence exhibited continuity in lithic technology as well as in pottery-making. However, the problem was that this Neolithic sequence was determined based on the geomorphological identification of cultural layers and contradicted radiocarbon dates. This contradiction was called an anomaly which has not been explained (M. V. Konstantinov, 1994; M. V. Konstantinov et al., 2016). The layers containing ceramic pottery sherds yielded Final Pleistocene dates which were accepted by other researchers in the context of securely dated early pottery in the Russian Far East and the Vitim River basin\textsuperscript{22} (Razgil’deeva et al., 2008; Yanshina, 2017). However, the authors of the excavations insist on their concept of cultural development in the region (Maslodudo & Konstantinov, 2017).

6.2.1.5. Continuity vs. discontinuity in the rock art production at the Shaman-Gora rock art site

The situation of two significantly different viewpoints on the cultural history in the Final Pleistocene – Early-Mid Holocene does not make the archaeological background clear for the interpretation of the Shaman-Gora panel. On one side, there is Konstantinov’s culture history framework showing cultural continuity from the Upper Paleolithic into the Neolithic and Bronze Age. On the other side, at the Studenoye-1 site, there are radiocarbon dates (9890 to 10780 bp) that place the layers identified as Early, Middle and Late Neolithic in the Mesolithic. The next, Early Bronze Age layer yielded a date of 2280 bp (Razgil’deeva et al., 2008). Therefore, judging on the evidence of radiocarbon dates from the Studenoye-1, one of the key sites of the area, it is not clear what happened in the period of 9890-2280 bp.

This issue of problematic chronology of the Early Holocene corresponds to two more likely scenarios suggested for the Shaman-Gora site which are both possible in this archaeological context. The first scenario is that there are two phases present, the first includes the depictions of the Pleistocene fauna, thus attributable to at least 8000 bp and the second is related to the Bronze Age. This scenario corresponds to the picture outlined by radiocarbon dates yielded by archaeological sites of the Chikoy-Menza Rivers area. The second scenario is that the panel exhibits a continuous appearance of images starting in the end of the Pleistocene and continuing through the Holocene. This scenario corresponds to the culture history framework outlined by Konstantinov (M. V. Konstantinov, 1994; M. V. Konstantinov et al., 2016).

\textsuperscript{21} In recent works, this chronology slightly changed to 7000-5500 (Maslodudo & Konstantinov, 2017).
\textsuperscript{22} The issue of the early pottery is reviewed in Chapter 4.
Since two scenarios are possible, it is problematic to provide an interpretation through a perspective on ethno-cultural identity, a theoretical framework outlined in the Chapter 3. It was noted there, that rock art sites create and maintain a strong connection between people, their past and their land which would explain the appearance of the Bronze Age paintings if cultural disruption took place in the area in the Neolithic. Importantly, these Bronze Age figures do not overlap earlier paintings and occupy either the periphery of the panel or other locations as if touching but appreciating what was already there. Therefore, notwithstanding the possibility of two scenarios of rock art production at the site, they both may be interpreted as evidencing continuity understood as people attempting to communicate through time using rock art as a means of connection. However, the site needs more research to clarify the chronology and phases of rock art production in order to better understand socio-cultural processes that took place in societies that created and appreciated this rock art.

The process of ethno-cultural continuity seen through the prism of rock art production and functioning in prehistoric societies is better exemplified through another case study on the petroglyphs of the Lower Amur River.

6.2.2. Continuity in the rock art tradition of the Siberian Lower Amur Basin

6.2.2.1. Abstract

This case study explores the problem of the correlation of rock art traditions and archaeological cultures of the Lower Amur basin (Russian Far East) in the Neolithic period. The aim of this research is to reconsider established chronology based on recent archaeological findings and advances in rock art data. This researcher’s previously published paper on this topic only considered face design, but in this research, zoomorphic images are also examined. A recently-discovered pattern of a long-lasting rock art tradition is explained through an anthropological perspective on ethnicity, identity, social practice, symbolism and community.

6.2.2.2. Introduction

The lower section of the Amur River begins from the city of Khabarovsk and ends at its mouth, and the basin of the Lower Amur is a specific cultural region identified as such by archaeological research (Okladnikov & Derevianko, 1973; I. V. Popov, 1969).

The rock art of the lower Amur basin is represented by six site complexes (Figure 6.19): Sikachi-Alyan, Auri (урочище Маï, urochishche Mai) and Kalinovka on the banks of the Amur River; and Sheremetyevo, Kiya and Sukpai in the Ussuri basin, a tributary of the Amur River. The major sites are the Sikachi-Alyan complex where about 300

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petroglyphs at six sites have been recorded, and Sheremetyevo with about 30 petroglyphs at three sites. The Kiya complex includes 13 images at three sites, and the Kalinovka site consists of a single stone with 15 images (Figure 6.20, Laskin, 2015b; Okladnikov, 1971, 1981b). The sites of Auri and Sukpai were attributed to the Middle Ages and Iron Age (8th–10th Centuries CE and the mid-1st Millennium BCE – the mid-1st Millennium CE respectively) (Dyakov, 1978; Okladnikov, 1971) and are not considered here.

Four sites of the Sikachi-Alyan are concentrations of separate granite boulders with petroglyphs on them which are scattered along the left bank of the Amur River, and two other sites are petroglyphs on vertical surfaces of rock outcrops. In Sheremetyevo, the petroglyphs are located on vertical surfaces of rock outcrops at two sites (Figure 6.21), and the other four sites are locations with petroglyphs found on separate boulders. In Kiya, all the rock art images are present on vertical surfaces of a single rock outcrop (Figure 6.22).
The Amur petroglyphs became known to the public in the late 19th Century and immediately attracted much scientific attention. In 1898–1899, American researchers Berthold Laufer and Gerard Fowke explored the Lower Amur basin and reported visiting the petroglyphs (Fowke, 1906; Laufer, 1899). Then, the Sikachi-Alyan rock art site was examined by explorer Vladimir K. Arsenyev in 1908, by ethnographer Lev Sternberg in 1910 and by Japanese anthropologist Torii Ryozo in 1919. Sternberg became interested in the Amur petroglyphs due to intense rock art studies elsewhere in Siberia (Okladnikov, 1971).

The first historical interpretation of the major site Sikachi-Alyan was attempted by N. G. Kharlamov, who worked there over a period of a few years and surveyed the site in the late 1920s. He suggested that boulders with images were vestiges of an ancient city and religious centre. Kharlamov called the city 'Gal’bu' and attributed it to a period from the 1st Millennium BCE to the 1st Millennium CE. This view of the site’s contents as the vestiges of some architectural structures was then echoed by Soviet ethnographer Alexander M. Zolotaryov, mentioning Sikachi-Alyan in his study of the Ulch people, where he also described the Kalinovka stone. Zolotarev suggested that the latter was a memorial site to mark an expedition by an undetermined ancient people, probably the Bolhae (Okladnikov, 1971, pp. 11-12).
In 1935, during Okladnikov’s first survey of the Amur River, the Sikachi-Alyan petroglyphs (Figure 6.23) were studied and some of them were copied with a stamping method (Miklashevich, 2015b). Later, in the 1950s–1960s, the sites Sikachi-Alyan, Sheremetyevo, Kiya and Kalinovka were fully documented and published in a series of articles and monographs (Okladnikov, 1959a, 1968a, 1968b, 1971, 1977b, 1981a, 1981b). Okladnikov established stylistic groups among the petroglyphs and their chronological sequence (see Table 6.1). He also provided an interpretation of them, drawing on ethnographic data gathered from the Amur peoples. The chronological sequence has not been revised since then and is considered to be reliable (see Laskin, 2015b; Shevkomud, 2004), although many of Okladnikov’s assumptions did not prove to be valid (see Table 6.1). Many relevant archaeological findings have been made in recent decades, which raises the possibility of revising the petroglyph’s presumed ages. Such revision has been attempted previously (Ponomareva, 2015) and it has been shown that a major rock art tradition, known as the Sikachi-Alyan group (see below), dated to the
The latest advances in the studies of Amur rock art (E. G. Devlet & Laskin, 2014, 2015; Laskin, 2007, 2014a, 2014b, 2015a, 2015b) provide additional and better data, which is also taken into consideration in this study.

6.2.2.3. The Sikachi-Alyan group: characteristics and chronology

Okladnikov (1971) defined two major groups of Amur rock art: the Sikachi-Alyan group and the Middle Ages petroglyphs. The Sikachi-Alyan group comprises the majority of the Amur petroglyphs (stages 1–4, see Table 6.1) from the sites Sikachi-Alyan, Sheremetyevo and Kiya, which were made by percussion and mostly seem to date to the Neolithic Age. This study focuses on this group and does not consider the medieval petroglyphs. Among the Sikachi-Alyan petroglyphs, the prevalent motif is a ‘mask/face’ (see Figure 6.24). According to Okladnikov (1971), the group also includes motifs of ‘birds’, ‘serpents’ (spirals and wavy lines), ‘boats’ and ‘elk or deer’.

<table>
<thead>
<tr>
<th>№</th>
<th>Period*</th>
<th>Dates**</th>
<th>Characteristics</th>
<th>Grounds</th>
<th>Images</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mesolithic</td>
<td>10000-12000 BP</td>
<td>‘Animalistic depictions primitive in technique and style - figures of elks, probably bulls, and also horses’ (Okladnikov 1971: 88). - forest birds, - simple partial faces - skull-like faces</td>
<td>Discovery of the flux FIGURINE of a bird (Fig. 7, 68) in the Mesolithic layer excavated at site 1 of the Sikachi-Alyan complex. However, the context of this finding is not clear. Serpentine-like petroglyphs of birds in a composition with animalistic figures were located 25-30 m from the excavation pit. - Faces: an assumption that inverted petroglyphs on boulders must have been older than those in a normal position on the same boulder.***</td>
<td>See Fig. 7, 51-65, 69</td>
</tr>
<tr>
<td>2</td>
<td>Developed Neolithic or Vinogradovka Culture</td>
<td>3rd millennium - late 4th millennium BC</td>
<td>Blossoming of mask faces - sculptural mask faces - geometrically ornamented mask faces - waterfowl</td>
<td>Analogous face depictions found on some pottery fragments (Fig. 7, 52, 13)</td>
<td>See Fig. 10. Examples of face masks are not provided</td>
</tr>
<tr>
<td>3</td>
<td>*</td>
<td>2nd millennium BC</td>
<td>More abstract and more ornamental mask faces and 2 elk figures ornamented with spirals</td>
<td>A logical assumption that styles develop from realistic to abstract</td>
<td>See Fig. 7, 44, 45. Examples of face masks are not provided</td>
</tr>
<tr>
<td>4</td>
<td>Mesolithic period</td>
<td>Late 1st millennium BCE - early 1st millennium CE</td>
<td>Engraved face masks and boats in Kalnorka and Sikachi-Alyan</td>
<td>Engraved with a sharp, possibly metal tool</td>
<td>See Fig. 2</td>
</tr>
<tr>
<td>5</td>
<td>Middle Ages</td>
<td>8-10th centuries CE</td>
<td>Incised zoomorphic figures, horse riders, anthropomorphic figures</td>
<td>Analogous images on Jurassic brown coal artefacts</td>
<td></td>
</tr>
</tbody>
</table>

Neolithic Age, did not coincide with defined archaeological cultures. The latest advances in the studies of Amur rock art (E. G. Devlet & Laskin, 2014, 2015; Laskin, 2007, 2014a, 2014b, 2015a, 2015b) provide additional and better data, which is also taken into consideration in this study.
6.2.3.1. Zoomorphic depictions

Among the Sikachi-Alyan group there are 42 quadrupeds, 16 ornithomorphic figures that might depict waterfowl and forest birds, four depictions of animal tracks and 27 designs of spirals and wavy lines, which were interpreted by previous researchers as serpent designs (Figure 6.24). In 30 of them, the species have been ‘determined’ (Velizhanin, 1985), which has encouraged correlation with climate periods.

Okladnikov defined an archaic group of zoomorphic figures (Table 6.1, stage 1) which included depictions of quadrupeds in a specific manner characterised by a massive body and a concave back (Figure 6.25: 11, 51–65). They were assumed to be depictions of ‘elk’, ‘bulls or bison’, ‘kulan or tarpan’ and ‘goral’ (Velizhanin, 1985). According to A. G. Velizhanin, these are xerophilous, cold-resistant fauna, and their depictions were made when there were steppes in the Amur basin and the water-level was lower. As recent studies indicate (Kuzmin, 2005), such conditions could have been present in the preboreal period (10 000–9300 uncal. bp; dates of climate periods are as presented by Kuzmin (2005)).

The next group includes thermophilic fauna, such as ‘goral’ and ‘Siberian stags’ or ‘bulls’, and birds, such as ‘spoonbills’ and ‘flamingos’ (Figure 6.25: 46–50). The birds are indicators of warm and humid climates (Velizhanin, 1985). Warming of the climate started in the boreal period and reached its peak at the Holocene climatic optimum (Kuzmin, 2005). Thus, this group of images may have appeared from 9300–5000 uncal. bp.

The last group pareidolically and subjectively identified includes the modern fauna of the Amur region, such as ‘elks’, ‘rats’, ‘bats’, ‘ducks’, ‘boars’, ‘snakes’ and ‘bears’ (Velizhanin, 1985). These images (Figure 6.25: 6–8, 24–29, 44–45) could have appeared...
Figure 6.25. A tentative attempt to correlate Amur rock art with archaeological cultures and climate periods. Since the dates of climatic periods provided by Kuzmin 2005 are uncalibrated, the dates of the archaeological cultures in this table are also present as uncalibrated and follow Shevkomud and Kuzmin (2009). Animal designations are pareidolic, subjective and untestable (for pareidolia in rock art interpretation see Bednarik 2016).

during the subboreal period (5000–2500 bp) (Kuzmin, 2005). Since the presumably depicted fauna is still present in the region, the images theoretically could have been made during the current climate period.

6.2.2.3.2. ‘Mask/face’ designs

The ‘mask/face’ motif is dominant in Amur rock art, and there are 145 ‘mask/face’ images in total (Figs 6 and 8). They are characterised by striking curvilinear decoration. The ‘eyes’ are often shown as concentric circles, and the inner space of the face was filled with ornamental lines, which repeatedly outline the face contour and the contour of the eyes. However, there is diversity within the ‘mask’ motif group, and the ‘masks’ differ in the shape of the face contour, shape of ‘eyes’ and ‘nose’, and internal and external ornamental elements. Their first typology was elaborated by Okladnikov (1971), although it was not intended to serve an analytic purpose, only as a description of a wide variety of facial designs. This relative typology was based on the shape of the face contour, and eight types were defined: oval, egg-oval, heart-like, trapezoidal, rectangular, with an oval top and straight bottom, monkey or skull-like, and partial. Another typology was proposed by Elena Okladnikova (Okladnikova, 1979) in order to compare the rock art of the Amur region with the rock art of the north-west coast of North America. She considered all mask/face designs as skull-like faces and divided them into seven groups depending on the manner of subject depiction. Among them there were heart-like designs and faces with different eyes. This typology succeeded in uncovering common ground in the worldview of Asian and American peoples. However, one cannot be sure that all these face designs depicted skulls, masks and ‘maskoids’, and possibly they are depictions of animal muzzles or something else.

Previously, another typology was elaborated (Ponomareva, 2015). This did not draw on any interpretive assumptions and was based on the analysis of ornamental elements and their co-occurrence. Here, this typology is further elaborated, and it includes petroglyphs which were discovered recently (E. G. Devlet & Laskin, 2014; Laskin, 2007, 2014a, 2014b, 2015b). This typology is intended to uncover consistent patterns in the

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**Figure 6.26. Mask/face motif types.**

![Mask/face motif types](#)
structure of ‘face’ designs to compare them with ornaments and ‘face’ depictions on pottery.

Two main types have been defined in the Amur ‘face’ designs: curvilinear and geometric (Figs 8 and 9). It has been noted (Ponomareva, 2015) that the basis of the face structure is the ‘eye’ shape. Curvilinear ornaments were mostly found in compositions with round ‘eyes’, and geometric and angular lines tend to be present along with an elongated ‘eye’ shape (Figure 6.27, I). The elongated eye shape includes such forms as elongated ovals, drop-like, almond-like figures and oblique lines (Figure 6.27, II). Curvilinear face designs are ornamented with smooth lines outlining the contour of a ‘skull’ or a ‘face’. The ornamental lines of geometric face designs also outline the contour, but in a more stylised manner with angular triangles and rhomboids. Each type has two subtypes, radial (Figures 6.27, I-3 and II-3) and partial (Figures 6.27, I-2 and II-2). Radial face designs have external elements, radial lines, and they are found in both the curvilinear and geometric groups. There are examples of paired face designs where one has radial lines and the other does not. The same situation occurs in the partial subtype, which describes ‘face’ designs without face contour.
6.2.2.3.3. Chronology 24

The chronology of the ‘face’ design group has been considered previously (Ponomareva, 2015), through comparison of the petroglyphs with ‘face’ depictions found on pottery fragments. Analogous designs on ceramics come from the Malyshevo (Middle Neolithic) and Voznesenovka (Late Neolithic) archaeological cultural traditions. It is difficult to provide general statistics on such artefacts, since pottery with ‘face’ depictions is rarely found, with only 22 such items in total at present. In this research, all available evidence is combined, such as that from portable art, ceramics and the correlation of presumed animal species with climate periods, to establish a preliminary chronological sequence for the Amur rock art tradition (Figure 6.25). Unfortunately, no superimposition on rock art surfaces and boulders has been documented.

Initial Neolithic. It is conventionally accepted by Russian researchers that the Neolithic epoch in Siberia and the Far East began with the adoption of pottery. The earliest such evidence is known from the Osipovka culture, which is therefore considered to be from the Initial Neolithic. Approximately 70 occupation sites of it are located in the area of the confluence of the Amur and the Ussuri Rivers, and are dated to 14 200–9900 cal. BCE (Shevkomud & Kuzmin, 2009). A flint figurine of a bird was discovered by Okladnikov

![Figure 6.28. An anthropomorphous figure on the edge of a boulder. Sikachi-Alyan, site No. 2. Photo I. Ponomareva.](image-url)

24 The radiocarbon dates of archaeological cultures in this section are provided after Shevkomud and Kuzmin (2009). According to these authors, they were calibrated with Calib Rev 5.0.1. For more details, see Shevkomud and Kuzmin (2009, pp. 8-9). However, in Figure 6.25 the dates of the archaeological cultures are given uncalibrated in order to be comparable with climate periods the dates of which are provided by Kuzmin (2005) as uncalibrated.
at the Sikachi-Alyan site in the layer attributed to the Osipovka culture (Okladnikov, 1971) (Figure 6.25: 68). Other evidence comes from the Osipovka culture settlement Goncharka-1 (Shevkomud & Yanshina, 2012): two pebbles with three small pecked pits which are similar to the simple depiction of a face, where two pits are thought to show the eyes and a third the mouth (Figure 6.25: 67). Another pair of artefacts (Figure 6.25: 66), so-called ‘Y-like items’ which are made of basalt and feature anthropomorphic depictions, was unearthed in a burial complex. It is worth remarking that the relief faces were made on the edges of stones. This was noted as a characteristic feature of Amur rock art (Figure 6.26: 70), because a considerable number of ‘face’ petroglyphs was made on the edges of boulders (Okladnikov, 1971). Therefore, this evidence indicates that the simple face motif and the specific manner of depicting the motif on the edges of stones or boulders could have emerged as early as the 15th Millennium BCE in the art of the Osipovka culture. Two simple face depictions on pebbles have also been unearthed at the site Sheklyaevo-6, in an adjacent region of the Maritime Territory, dated to 13,000-8000 uncal. bp (Garkovik, 2014). Interestingly, one of them was accomplished on the edge of a pebble cleavage. The Osipovka culture existed in the transitional period between the Paleolithic and Neolithic Ages, and is considered the basis of the Neolithic cultures of the Amur region; many cultural features of the following epochs originated from this cultural complex (Shevkomud, 2004; Shevkomud & Yanshina, 2012).

Early Neolithic period. The region may have been occupied by the Mariinskaya culture, dated to 7750–5800 cal. BCE (Shevkomud & Kuzmin, 2009). However, since its cultural complex, which consisted of specific lithic artefacts and ceramic vessels, is present at only one site (Suchu Island), was found in a disturbed position, and its ceramics have common features with those of the Kondon and Osipovka cultures, the validity of the Mariinskaya culture has been debated (Shevkomud & Yanshina, 2012). Therefore, this culture is not included in Figure 7. The Middle Neolithic includes the Kondon (early stage) and the Malyshevo (late stage) archaeological cultures. The epoch is characterised by imprinted pottery ornaments which have analogies in the cultural complexes of the Maritime Territory and Manchuria. The Kondon culture is represented by approximately 35 sites in the area of the middle and lower basins of the Amur River and the lower reaches of the Ussuri River. The early stage of the Kondon culture was dated to 6590–5620 cal. BCE, and the late stage to 5310–5070 cal. BCE (Shevkomud & Kuzmin, 2009).

Only zoomorphic depictions have been attributed to this time, based on species determination and correlation with climate periods (Figure 6.25: 46–65). However, these petroglyphs could have been created during the time of the subsequent Malyshevo culture which also existed during the Holocene climatic optimum. Possibly, the tradition of face
design continued during the Early Neolithic into the Middle Neolithic, and there is some
evidence to suggest this. One of the zoomorphic figures which is related to the pre-boreal
has a face design depicted on its body (Figure 6.25: 58). Another indication is a pottery
fragment with a face design which was discovered in 2007 in the context of the Kondon
culture (at Knyaze-Volkonskoye-1), although this has not yet been published (O. V.
Yanshina, pers. comm.).

The other Middle Neolithic culture, Malyshevo, is represented by 30 occupation
sites in the Lower Amur basin. The early radiocarbon dates have been debated and it was
suggested that the culture occupied the period 4260–2900 cal. BCE (Shevkomud & Kuzmin,
2009). The Malyshevo pottery is characterised by striking curvilinear ornaments,
imprinted compositions and the coloration of the surface with red paint.
Anthropomorphous ceramic figures were also found (Filatova, 2008; V. E. Medvedev &
Filatova, 2014; Shevkomud & Kuzmin, 2009). There are five examples showing an
ornamental band formed by two alternating ‘face’ designs, and in most of them the
alternation of two types of ‘face’ designs, geometric and curvilinear, is present (Figure 6.25:
30, 31, 32; see also V. E. Medvedev & Filatova, 2014, p. 52). Thus, both these types of rock
art depictions could have existed in the Malyshevo period and, moreover, it seems that the
more decorative designs, such as those ornamented with multi-line spirals and concentric
circles, should be attributed to this period.

The Late Neolithic was represented by the Voznesenovka culture in the Amur
basin, and its development proceeded in three stages (Shevkomud, 2004; Shevkomud &
Kuzmin, 2009). The early stage, Gorinsky, dates to 3000–2600 cal. BCE (Shevkomud &
Kuzmin, 2009) and is closely related to the Malyshevo culture. The pottery has many
similar features such as comb and ‘gearwheel’ imprints, with various parts of the vessel
being painted, rims decorated with straight and wavy rolls, designs based on meanders,
spirals, ‘masks’ and concentric compositions (Filatova, 2008; V. E. Medvedev & Filatova,
2014). However, the difference can be seen in the face designs present on the pottery,
which look more realistic (V. E. Medvedev & Filatova, 2014). In Malyshevo, they were
incorporated in the ornamental bands, thus engaging with the enclosed surface of a
ceramic vessel. In Voznesenovka, the face designs are central figures in the compositional
structure (Figure 6.25: 12, 13). The ‘face’ composition, rather than being built by repetitious
curvilinear lines, represents complete images which find direct analogies among the Amur
petroglyphs (e.g. Figure 6.25: 18–23).

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25 Published in Gabrilchuk (2017) when this article was already in production.
The next stage, Udyl’sky, is dated to 2600–2200 cal. BCE (Shevkomud & Kuzmin, 2009), and the indication of an alien ceramic tradition, possibly originating on Sakhalin Island, has been noted (Shevkomud, 2004). Most of the ceramic fragments with ‘face’ depictions have been found in the context of the early, Gorinsky, stage. However, two fragments have been found in the context of the middle, Udyl’sky, stage (Figure 6.25: 1, 2).

The late, Malogavansky, stage, which is dated to 2200–1700 cal. BCE (Shevkomud & Kuzmin, 2009), although continuing the Voznesenovka tradition, is marked by completely different ceramics (Shevkomud, 2004). No face depiction has been found in this complex or the next. The Final Neolithic was occupied by the Koppinskaya culture, dated to 1700–900 cal. BCE (Shevkomud & Kuzmin, 2009); however, this transitional time between the Neolithic and the ‘Palaeometal’ has not been sufficiently studied.

Although there is no evidence to attribute petroglyphs to the 2nd Millennium BCE, some zoomorphic figures depicting modern fauna such as ‘elk’, ‘boar’, ‘Himalayan black bear’ and ‘rat’ could have appeared in the subboreal period, based on Velizhanin’s interpretations (Velizhanin, 1985) (Figure 6.25: 6–8, 24–29, 44–45). The presence of the Kalinovka stone — on which the face designs together with numerous ‘boats’ were engraved with a sharp, possibly metal, tool (he therefore dated the Kalinovka petroglyphs to the Palaeometal Age) — may indicate that the tradition of the ‘face’ motif did not cease with the appearance of migrants from Sakhalin Island. However, the stone has not been located since Okladnikov’s work in 1968 (Okladnikov, 1981b) and no good photograph of it is available. Further, remnants of the rich Neolithic rock art tradition can be seen in traditional ornaments of the Amur peoples today (Okladnikov, 1959a).

6.2.2.4. Continuity: ‘structuring structures’

It appears that the Amur rock art provides an example of a very long-lived rock art tradition in which the ‘mask/face’ motif dominated during the Neolithic epoch. This tradition is present in three sites of which Sikachi-Alyan is the major one. This unique pattern can be explained through an anthropological perspective on ethnicity, identity, social practice, symbolism and community.

Ethnicity is a very elusive and much debated phenomenon, and possibly this is not the case with the Amur Neolithic rock art. However, ethnicity is about realising one’s

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26 The term was introduced by Gorodtsov (1927), and it is accepted in many parts of Russia to refer to Eneolithic and Bronze Ages when it is difficult to distinguish between them. In the Amur region, the appearance of bronze artefacts is synchronous to the appearance of iron artefacts and dated to 11th–10th Centuries BCE. These are rare findings which do not allow researchers to reconstruct the development of metallurgy. Therefore, in the Amur region, the term ‘Palaeometal’ serves to render peculiarities of the regional cultural development and refers to both Bronze and Iron Ages (Arutyunov, Aleksandrov, & Brodyanskiy, 1982; Yanshina, 2013).
own cultural distinctiveness, and maintaining and signalling it in intercultural communication. This has been a ubiquitous situation throughout human history. For many anthropologists, ethnicity is a phenomenon which can emerge only in the processes of social relationships where the cultural distinctiveness of participants makes a difference in regular interaction (Eriksen, 2010, pp. 16-17; Jenkins, 1997, p. 13). As Barth argues, cultural variation may be a result, rather than the cause, of ethnic boundary maintenance (Barth, 1969, p. 12). Although interethnic relations suggest opposition and contrast, such interaction implies both differences and similarities (Jenkins, 1997, p. 13), because there must be “a shared field for interethnic discourse and interaction” in order for communication to take place (Eriksen, 2010, pp. 33-34). The rock art sites could serve as such “shared fields” where communication between communities could occur, and some artistic elements could appear due to the influence of communication with other cultures.

At some sites, another Middle Neolithic complex has been identified, which was related to the Bel’kachi culture present in Yakutia during 5200–4100 cal. BCE (Shevkomud & Kuzmin, 2009). This complex represents the migration from the northern part of the Amur region or even from the Aldan-Lena basin. Although the role of the Bel’kachi cultural complex in the genesis of the Amur cultures is not sufficiently understood, some zoomorphic depictions could have been created due to the impact from Yakutia, where they dominated Neolithic rock art imagery. In the Middle and Late Neolithic, the cultures of the Amur basin actively interacted with the cultures of Manchuria and the Maritime Territory, which allows distinguishing two contact zones, south-western and north-eastern, in the Lower Amur basin (V. E. Medvedev & Filatova, 2014). Therefore, even though it is too straightforward to claim the emergence of ethnicity in the Amur region in the Neolithic, the presence of such a complex multi-cultural situation suggests the existence of ethno-cultural identities in terms of understanding one’s own cultural distinctiveness and maintaining it through active strategic usage of rock art.

Since there are only three Neolithic rock art site complexes in the Amur basin, and Sikachi-Alyan is the major one, it seems that this was a very powerful place which could serve as an aggregation site for the communities of the region over a long period. There were changes in style through the Neolithic epoch, but the main idea which crosscuts all Neolithic periods was the idea of the ‘face’ motif. It is impossible to uncover the real meaning of the motif, but at least it is possible to suggest its importance and symbolic value. The motif could have played the role of a meaningful repository, and even though this meaning could have changed from generation to generation, the repository was an ideological source for maintaining the connection of communities with the past.
and with the land. Thus, Sikachi-Alyan, as well as other sites, could create and maintain the symbolic boundaries of the Amur basin community.

The relationship between boundaries and symbolism was examined by British anthropologist A. P. Cohen (1985), who argued that the symbolic aspect of a community boundary is what it means to people (A. P. Cohen, 1985, p. 12)(Cohen 1985: 12). Cohen considered community as a mental construct: “[the] reality of community lies in its members’ perception of the vitality of its culture. People construct community symbolically, making it a resource and repository of meaning, and a referent of their identity” (A. P. Cohen, 1985, p. 118). Boundaries similarly exist in people’s minds, and Cohen emphasises the meaning attached to boundaries and community rather than their structural forms. In examples exhibiting continuity of form and substantial change of content, he shows how structures may be similar but conceal different realities (A. P. Cohen, 1985, p. 98). Unfortunately, in the Amur rock art only persistent structures can be observed, and it is impossible to unravel the changing meanings. However, it is possible to suggest the symbolic value of rock art sites since they might be the places religious life was focused on and where rituals were carried out.

One of the prominent symbolic devices is ritual because it gives experience of commonality, and thus is effective in boundary maintenance, creating a sense of commonality and difference from others. Ritual occasions are themselves symbolic. Cohen distinguished two levels on which rituals communicate: first, they communicate about the relation of the group to others, and, second, about the individual's relation to his group and to the world, so that “both construct and allow the individual to experience social boundary” (A. P. Cohen, 1985, pp. 53-54). It was suggested that in the Amur basin at least four cult centres existed in the Neolithic, based on excavations of the settlements Gasya (near Sikachi-Alyan), Voznesenskoye, Suchu and Tachta (V. E. Medvedev, 2005). The main indications of the non-utilitarian purpose of some sections of the settlements were concentrations of ceramic and stone portable ‘art’ objects, adornments and high-quality and richly decorated pottery interpreted as having been made for use in ritual. All four cult centres were related to the Malyshevo and Voznesenovka cultural layers, although it has been suggested that the creation of sanctuaries could have started in the Osipovka period in Sikachi-Alyan, which is also the major rock art site in the area. Other rock art sites such as Shermetyevo, Kiya and the place where the Kalinovka stone was found, could potentially also have functioned as cult centres, and future archaeological investigation should test this (V. E. Medvedev, 2005). The ceremonial role of the ‘face’ motif might be exemplified by an interpretation of their emphatic ‘eyes’ as expressing the condition of narcotic intoxication (Tabarev, 2012). The practices of the consumption of fly amanita for
ritual and medical purposes and related beliefs were widely present among various Siberian and Far Eastern peoples (for a review, see E. G. Devlet & Devlet, 2005, pp. 186-195).

The relationships between the communities and the rock art sites were reciprocal. The sites as the containers of meaning helped to create and maintain social identities and at the same time were exposed to change and alien influence. As an example, the changes are seen in the rock art attributed to different periods of the Neolithic. In the Initial Neolithic, it was simple ‘faces’ and, possibly, some zoomorphic figures. The Early Neolithic period was dominated by zoomorphic imagery. The Middle Neolithic saw a blossoming of ornamentalism, and the Late Neolithic brought more realistic images. Thus, there was change and continuity at the same time. It seems that the rock art site in terms of its function can be compared with the habitus, the concept of which was developed by Bourdieu in his theory of practice (Bourdieu, 1977). The idea that the habitus structures and simultaneously is structured by practice can be applied to the understanding of the role rock art sites played in people’s social practice. The habitus dispositions draw limits of possible alternatives in making choices, being at the same time in permanent flux and changing, and this is what is seen in rock art stylistic development. Even though there is change, the choices are made from a limited number of possibilities. Even though the face designs are very diverse, there are very clear patterns in their structuring. Material culture is repeatedly used to manifest ethnicity, and the choice of particular forms or styles is restricted by the structural dispositions of the habitus (Jones, 1997, p. 120).

6.2.2.5. Conclusion

The Amur Neolithic rock art traditions are represented by three sites, of which one, Sikachi-Alyan, due to the number and diversity of petroglyphs, can be considered the major site. The Sikachi-Alyan petroglyphs group is dominated by the ‘face’ motif, although it also includes numerous zoomorphic depictions. The evidence presented here indicates that the Sikachi-Alyan group occupied a vast period of more than ten thousand years, and some characteristic features for every stage can be tentatively determined.

The rock art that might be related to the Osipovka period could include some simple designs of ‘faces’ and ‘birds’. A quite homogeneous zoomorphic group was apparently related to the Early Neolithic, although the ‘face design tradition’ continued to be present. In the Middle Neolithic, the growth of ornamentalism occurred, which was expressed in both ceramics and rock art. This tendency continued in the early stage of the Voznesenovka culture, although the ‘face’ designs tended to be less ornamental. There is no stylistically distinctive zoomorphic group which can be related to a particular period. Only two elk figures stand out due to their decoration with spirals (Figure 6.25: 44, 45),

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and because of this they may be related to the Malyshevo period. Possibly, the rock art
tradition did not cease in the Late and Final Neolithic, even though there is no evidence
to support this suggestion apart from the Kalinovka stone. The rich ornamental tradition
survived over a ten-thousand-year history and the remnants can be observed in the
decoration of arts and crafts of modern Amur peoples. This attempt to create a
chronological model for the Amur petroglyphs is only tentative and provisional, based as
it is on several uncertainties. However, it is fully testable and thus scientific, and will no
doubt be tested by scientific age estimation work in the future.

Anthropological perspectives on the longevity and persistence of the Amur rock
art tradition has given some hints for understanding the role which rock art sites played
in pre-Historic societies. The area of the lower Amur basin was a territory where processes
of intercultural communication occurred which could have caused the emergence of
ethno-cultural identities, and where the rock art sites could have served as “a shared field
of discourse and interaction” between communities. Numerous similar designs indicate
the repetition of artistic events, which could be evidence of ritualistic practice. Therefore,
the sites, and especially the ‘face’ motifs, could have been used as symbolic devices in
building communities and establishing and maintaining their boundaries, even though
the meaning attached to the place and to the art changed over time. The stylistic
development could be an indication of this change. The rock art sites as powerful and
meaningful places, and the art as the expression of cultural distinctiveness, were
structured by social practice, and at the same time, structured social identities.

6.3. Conclusion

The earliest rock art of East Siberia is the most problematic rock art body in the
region, but it cannot be separated from other rock art traditions and styles present in the
later epochs. The history of rock art research in Siberia has seen many debates about the
presence of Paleolithic rock art in the region. Okladnikov was the first to identify rock art
images of such antiquity. Although his interpretation of the Shishkino pictures was later
proven to be incorrect, his disciples discovered more examples of what can be possibly
related to the earliest period of human history. In Trans-Baikal, some of these sites were
examined during this PhD project fieldwork and yielded results which speak to the
importance and relevance of further research on the problem of the earliest rock art in
East Siberia.

One of the sites, Shaman-Gora, was analysed in the second section of the chapter.
It was attempted to identify species depicted and to infer the chronology of the rock art
production. It was concluded that three quite different scenarios are possible, one is that
two separate phases, Final Pleistocene-Early Holocene and Bronze Age are present, the
other is that pictures appeared continuously during at least eight thousand years, and yet another is that all imagery is related to the Bronze Age or younger period. The first and second scenarios are more likely in terms of the archaeological and rock art context of the region. It was argued that even the first scenario may indicate some cultural continuity understood as an attempt to communicate through time using rock art as a means of communication. However, more detailed analysis through an anthropological perspective on ethno-cultural identity outlined in Chapter 3 is not yet possible, because more research is needed to clarify the chronology, phases of rock art production and archaeological context.

Another case study was presented in this chapter focused on quite a different body of rock art but provided a more nuanced picture of its development allowing for a more thorough anthropological interpretation. Here three sites which constitute a pronounced rock art tradition were examined. According to the data available, the rock art tradition could have existed during at least six thousand years and its remnants can be observed in arts and crafts of modern Amur peoples. In this study, it was shown how concepts of ethno-cultural identity, symbolism and community can be applied to rock art to better understand its role and function in prehistoric societies.

This would not be possible without extensive references to archaeological data and research carried out in the region. Thus, more archaeological research on rock art sites, which in the first section were identified as possibly featuring Final Pleistocene-Early Holocene imagery, is highly promising for understanding social life of the deep past. Moreover, most of these sites exhibit multilayerness of rock art production indicating a continuous active role of these places in socio-cultural processes during several millennia. A precise identification of these phases and their age determination using scientific methods will contribute to unveiling these processes, and this is a task for future research. General and provisional attributions based on stylistic analysis of the data collected in 2017 are outlined in the following chapters.
CHAPTER 7. NEOLITHIC ROCK ART AND THE EMERGENCE OF ETHNO-CULTURAL IDENTITY

While there are only a dozen sites that might be related to the Paleolithic epoch, but without firm grounds, the Neolithic Age yields a large body of striking rock art which allows tracing stylistic developments and ethno-cultural processes. However, not all areas exhibit rock art attributed to this period. Neolithic rock art is found in the Taiga zone along the banks of rivers which have been serving as roads for millennia. The most famous area, which gave the name to a style dominant in this period, is the Angara River basin (Figure 7.1). Neolithic rock art has also been found in the Lena, Aldan, Amga and Olyokma River basins. In the southern part of East Siberia, in the Steppe Trans-Baikal only several sites were related to the Neolithic, but no evidence supports this attribution. Therefore, this chapter will focus on the Taiga rock art, and will specifically deal with the Angara rock art style.

The chapter starts with a review of rock art attributed to the Neolithic by previous researchers. The reviews of rock art in the Baikal and Trans-Baikal regions and Yakutia were published in two encyclopaedia entries (Ponomareva, 2018b, 2019), and parts of these

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texts are used in the first section. In order to comply with the copyright agreement, these parts are organised as self-citations.

The main part of the chapter will discuss the Angara style, its development in time and space and then it will attempt to go beyond the cultural and chronological attributions of rock art in order to try to understand why and through what processes changes in rock art style occurred. In order to answer these questions, the phenomena of ethnicity and ethno-cultural identity are explored. This analysis was published in the Oxford Journal of Archaeology in co-authorship with Paul S.C. Taçon (Ponomareva & Taçon, 2019). To include the article in the thesis, it was edited, some redundant parts and parts contributed by Paul S.C. Taçon were removed for the purpose of coherence of the thesis. This paper was submitted just before the start of this PhD fieldwork, a part of which was carried out in the Middle Lena River basin, one of the key areas considered in the article. Since observations made during the fieldwork complement the picture outlined in the analysis, they were added in the text.

The Trans-Baikal data is largely considered in the next chapter, since the majority of rock art is found in the Steppe zone and related to the following period, the Bronze Age. A large and quite peculiar body of rock art is present in the area of Eastern Zabaykalsky krai, Amur Oblast and South-Central Yakutia which is within the Forest zone, but it is discussed only in the literature review section and conclusion, since this project fieldwork did not cover those remote parts of East Siberia.

7.1. Neolithic rock art of East Siberia

The main contributions to rock art research in East Siberia were made by Okladnikov in Baikal, Trans-Baikal and Yakutia (Okladnikov, 1966; Okladnikov & Zaporozhskaya, 1959, 1969, 1970, 1972), Mazin in South Yakutia and Eastern Trans-Baikal (Mazin, 1986, 1994; Okladnikov & Mazin, 1976, 1979), Kochmar in Yakutia (Kochmar, 1994) and Mel’nikova and Nikolayev in the Upper Lena River basin (Mel’nikova et al., 2011, 2012).

The rock art of the Angara river provided Okladnikov material on which the first comprehensive chronological framework was developed (Okladnikov, 1966), and which was later applied as a reference scheme in other areas of Siberia.

Okladnikov characterised the Neolithic rock art as “having a focus on a single motif – the elk. Elk images dominate the rock art sites of the taiga zone, which are mostly found on the banks of the Lena and Angara Rivers and their tributaries.” (Ponomareva, 2019, p. 6) The elk played an important role in the economy of the Taiga peoples, and it was one of the most common characters in the mythology of indigenous peoples of Siberia. Okladnikov identified two stylistic groups; “[t]he first group of elk depictions has a
naturalistic manner of representation, features which are distinctive for the animal such as the beard, nose, eyes, and ears are shown, and the dynamics of movement expressed (Figure 7.2). The second group featured a more simplistic manner of depiction where no details were shown, and the head has a paraboloid shape. The former was dated to the Early Neolithic and the latter to the Late Neolithic based on analogies in portable art.” (Ponomareva, 2019, p. 6) Thus, a naturalistically depicted elk became a marker of the Neolithic rock art. Similar depictions in Yakutia were also related to this period. This attribution was supported by indirect archaeological evidence. At the Suruktakh-Khaya-at Markha site (Figure 7.3) the lower layer of cultural deposits unearthed yielded Neolithic arrowheads, and a Neolithic habitation site was found near a Churu rock art site featuring a pair of naturalistically depicted elks (Figure 7.4) (Okladnikov & Zaporozhskaya, 1972).

The revision of rock art sites of the Upper Lena River, which started in 1987 and lasted for over 20 years, resulted in a reconsidered chronological sequence which was based on the study of the geomorphology of the Shishkino rock cliff (Mel'nikova et al., 2011, 2012). A number of naturalistically rendered figures of elks and boar were attributed to the Late Neolithic Age (Figure 7.5).

In Yakutia, “Okladnikov’s model considered rock art only in the Lena basin. Mazin’s seminal research allowed further development of the model which also included the rock art of the Olyokma and Aldan river basins (Okladnikov & Mazin, 1976, 1979). Rock art groups identified by style and superimposition analysis were then correlated with
archaeological cultures based on the analysis of unearthed cultural deposits at the rock art sites. Kochmar elaborated the model by including more data and evidence, although the methodology remained the same." (Ponomareva, 2018b, p. 5)

“The Early Neolithic rock art was identified based on the excavations of the Nyukza rock art site, located in the adjacent Amurskaya Oblast (Figure 7.1), where cultural deposits were found over a panel featuring a zoomorphic figure with a paraboloid head (Figure 6.6). Stylistically similar figures are present at the Srednyaya Nyukzha and Tokko sites in the Olyokma basin (Figure 7.6:7, 8). The artifacts unearthed from the Nyukzha site were dated based on typological similarities with artifacts of the Syalakh archaeological culture (Okladnikov & Mazin, 1976). However, later, this attribution was reconsidered, and the artifacts were claimed to belong to the Late Paleolithic age; however, no radiocarbon dates have been obtained (Mazin, 1986)” (Ponomareva, 2018b, p. 5). In the Aldan basin, figures of elk at the sites of Maya and Sygdar’ya were dated to the Early Neolithic based on their central positions on the panels and their larger size compared to other images (Figure 7.6:1,2) (Okladnikov & Mazin, 1979).
“There is some debate whether the following group belongs to the Early or Middle Neolithic. It included figures of elk in a naturalistic manner of depiction. In some cases, these figures were accompanied by linear marks and rows of vertical lines which were interpreted as game driving structures. This group of images has analogies throughout the forest zone of Siberia at the rock art sites of the Upper Lena, Angara, and Tom rivers. These naturalistic elk figures were identified as Angara style and have been a focus of debates concerning their age and cultural attributions (see Kovtun, 2001). Okladnikov and Mazin (1976) related this group to the Middle Neolithic Bel’kachi culture based on the excavations at the Krestyakh rock art site (Figure 7.6:3,4,10,11). Later Kochmar claimed the Early Neolithic age of this group of naturalistic elk figures by drawing on the same stylistic similarity with naturalistic elk depictions in the Baikal region where Okladnikov related them to the Early Neolithic (Figure 7.7) (Okladnikov, 1966). Another argument was concerning the Syalakh attribution of the stone artifacts unearthed at the Kuskangra rock art site (Kochmar, 1994), although the stylistic unity of the Kunkangra elk depictions with this group is questionable.

While Okladnikov and Mazin (1976, 1979) related the group of naturalistically depicted elks to the Middle Neolithic Bel’kachi culture, Kochmar (1994) attributed quite different groups of images to this period (Figure 7.7). These are the zoomorphic figures with paraboloid heads that are stylistically similar to those dated to the Early Neolithic based on the Nyukzha site evidence. This group also included other zoomorphic figures with wedge-like and rectangular heads. Kochmar also related anthropomorphic figures of the Suon-Tiit site to this period based on the inferred association with cultural deposits.
excavated there. He pointed out that the rock art of the Middle Neolithic differed from the previous periods in that new motifs appeared, such as depictions of serpents and specific anthropomorphic figures with three-fingered hands, round heads and in some cases with phalli. According to Kochmar (1994), this imagery is an expression of shamanistic beliefs which can be seen in the rock art of later periods elsewhere in Siberia.

The next period in the Yakutian history was occupied by the Ymyjakhtach archaeological culture, which is considered as Late Neolithic, but at the same time it is synchronous to the Early Bronze Age Glazkovo culture in the Baikal region, where distinct rock art imagery was related to the Glazkovo period based on anthropomorphic depictions present on several pottery vessels (Okladnikov, 1974)”(Ponomareva, 2018b, pp. 5-8). This imagery is discussed in the next chapter.

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<td><img src="image11.png" alt="Image 11" /></td>
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<td><img src="image14.png" alt="Image 14" /></td>
<td><img src="image15.png" alt="Image 15" /></td>
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*Figure 7.6. The Neolithic rock art of Yakutia, eastern Trans-Baikal and Amur region as identified by A. Mazin. 1, 4 – Maya, 2 – Sydar’ya, 3, 5, 6 – Bes-Yurekh (after Okladnikov & Mazin, 1979); 7, 8, 12 – Tokko, 9 – Nuykha, 10, 11 – Krestyakh, 13 – Olyokma (after Okladnikov & Mazin, 1976); 14 – Getkan, 15 – Ust’-Tsoron (after Mazin 1986).*
<table>
<thead>
<tr>
<th>Period</th>
<th>Culture</th>
<th>Petroglyphs</th>
<th>Typical artifacts</th>
<th>Table of Archaeological Cultures of Yakutia</th>
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<td>Sumnagin Culture</td>
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<td>Ust'-Mil' Culture</td>
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</tbody>
</table>

Figure 7.7. Chronological model of the rock art of Yakutia/Sakha Republic after Kochmar (1994).

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In Trans-Baikal, Okladnikov identified a hunting, or forest, rock art group (Okladnikov & Zaporozhskaya, 1970). The sites, as it follows from the name, are found in the forested areas of Trans-Baikal and feature rock art similar to that found in the Baikal region and Yakutia. Only two sites from this group were related to the Neolithic age, these are the Bain-Khara Angirskaya (Figure 7.8) and the Bain-Khara Cave in the Tugnuy valley (Figure 7.9) (these are two different sites found in different areas, and the similar names are a coincidence). According to Okladnikov, the Bain-Khara Angirskaya featured a pair of naturalistically depicted elks (Figure 7.8:1), but later archaeological surveys reported on quite different imagery. Lbova and Khamzina (1999, p. 85) and Bazarov and Namsaraev (2011, p. 158) reported dots, enclosures, ornithomorphic and anthropomorphic figures and Lbova and Khamzina (1999, p. 85) reported that the paintings were covered by Buddhist inscriptions. Probably, the site reported by Okladnikov is a different site than that which is present in the later archaeological summaries. This site was surveyed during this project fieldwork, and only barely visible remains of some paintings could be identified under the Buddhist inscriptions (Figure 7.8:2,3). The Bain-Khara Cave was also examined for this project, and the figures referred to by Okladnikov show signs of some influence of the Scythian animalistic style (Figure 7.9) which is discussed in the next chapter. Moreover, these two sites are found in the Steppe landscape.
“Later Alexander Mazin, whose fieldwork mainly occurred in Eastern Trans-Baikal, Upper Amur River basin, and Yakutia, the regions mostly covered by dense taiga forest, identified several rock art style appearances related to the Neolithic Age (Figure 7.6) (Mazin, 1986).

Mazin’s taiga rock art style included a naturalistic image of a deer (Figure 7.6:9) and zoomorphic figures with paraboloid heads present at the Getkan (Figure 7.6:14) and Byrka sites. Their age was established by excavations which yielded Early Neolithic artifacts. According to Mazin (1986), in the Late Neolithic Age, the taiga style split into two coexistent styles named ‘hunting’ and ‘reindeer herding’. The former is localised in Trans-Baikal and includes depictions of elk from the Ust’-Tsoron site (Figure 7.6:15) dated to the Late Neolithic and anthropomorphic figures with horns which are related to the Early Bronze Age based on analogies on ceramic vessels of the Glazkovo culture. The latter, reindeer herding, is present in Amurskaya Oblast and Yakutia and is characterised by anthropomorphic figures in association with reindeer where they appear to ride or lead them (Figure 7.6:13). This style also continues into the Bronze and Iron Ages.” (Ponomareva, 2018b, pp. 10-11)

Mazin identified another style, the Steppe style, in the steppe zone and dated its emergence to the 6th-5th Millennia uncal. BC based on excavations at the Urulyungui site and a single radiocarbon date 6734±87 produced by excavations at the Nortuy I rock art site (Mazin, 1994, p. 86). However, this is the only evidence for such early age. The style is
represented by the same set of motifs and their fashion as Okladnikov’s Selenga group which is related to the Bronze Age and in detail examined in the following chapter.

Thus, there is a large and diverse body of rock art in East Siberia which is related to the Neolithic epoch. Although it is dominated by elk depictions, the manners in which they are rendered are various. Several researchers developed chronological schemes which differed in some styles’ attributions because they were drawing on indirect evidence and broad analogies. However, these studies were carried out a half century ago while simultaneously pioneering East Siberian rock art research. One particular rock art style is analysed in the following section, but there is much Neolithic rock art that is left beyond this consideration and needs reassessment and scientific attention.

7.2. Angara rock art style and the emergence of ethno-cultural identity

The Siberian Angara tradition of petroglyphs and pictograms, also known as the “Angara style” (Podol’skyi, 1973), is particularly rich in naturalistic depictions of elk (*Alces alces*). It is vaguely dated to the Neolithic-Eneolithic-Bronze Age and broadly distributed within the Taiga zone of Siberia (Figures 7.1,2,10-12). The Angara style has been the subject of many scholarly debates, which have mainly focused on its age. By the early 1970s, Alexey Okladnikov had published a number of monographs on Siberian rock art, including sites at the Upper Lena River (Okladnikov & Zaporozhskaya, 1959), Middle Lena River (Okladnikov & Zaporozhskaya, 1972), Angara River in East Siberia (Okladnikov, 1966) and Tom River in West Siberia (Okladnikov & Martynov, 1972). In all these areas, the motif of the naturally rendered elk dominated and was argued to be associated with the Neolithic period (Figures. 7.2,10-12). Okladnikov interpreted the broad distribution of stylistically analogous designs in terms of historical stadialism, propagated by Marxism-Leninism: since prehistoric inhabitants of Northern Europe and Asia lived in a single geographic zone, they had similar material cultures and worldviews which were expressed.

![Figure 7.10. The rock art site of Kamenny Ostrov II, in the Angara River Basin. The Archive of the Russian Academy of Sciences, Saint-Petersburg branch, Fund # 1099, Inv. 1, File # 872. © St Petersburg Branch of the Archive of the Russian Academy of Sciences (SPbB ARAS).](image-url)
through a limited number of motifs and in the same stylistic manner (Okladnikov & Martynov, 1972, p. 239).

The Neolithic age attribution of the naturalistic elk depictions in West and East Siberia was based on analogy with the antler figurines of elk found in the Bazaikha burial ground at the Yenisey River (Okladnikov, 1950, 1966; Okladnikov & Martynov, 1972; Okladnikov & Zaporozhskaya, 1959; Savenkov, 1886, p. 55) (see Figure 7.13). The argument based on this analogy is controversial since the age of the burial ground has been questioned (Studzitskaya, 1981, 1987), as has the similarity of the figurines to the rock art images of elk (Kovtun, 1993). Analogous naturalistic rock art representations of elk in Yakutia (Figures. 7.12 and 7.14:12–22) have been related to the Early and Middle Neolithic (4th–3rd Millennia BC) (Kochmar, 1994), while in West Siberia (the Altai and the Tom River) they have been attributed to the Bronze Age (second half of the 3rd to the 2nd Millennia BC) (Kovtun, 2001; Molodin, 1993).

Such a broad distribution of a single rock art style across time and space demands reconsideration of the style’s definition. Analysis of the style has been undertaken elsewhere (Ponomareva, 2016), and here the previously identified stylistic groups will be compared with items of mobiliary art, which allows for more accurate chronological attribution. Rock art is very problematic to date, and Siberian rock art is not an exception. It has not seen any attempts to apply direct dating techniques. Most of the areas considered lack scientific research, and the core area for this study, the Angara River Basin, was flooded by the Bratsk hydroelectric power station in the 1960s, and therefore can be

![Figure 7.11. Tom rock art site, Tom River Basin, Kemerovo Oblast. Photo I. Ponomareva.](image-url)
studied only from publications and archival data. It appears that comparison with other art objects is the only method available.

The analysis starts by situating the Angara style in time and space. It appears that rock art styles do not coincide chronologically with identified archaeological cultures (Ponomareva, 2018a) although this can be seen only through the application of the culture-history concept and then by moving beyond its assumptions (see Chapter 2). The question of why changes in rock art styles occurred is then addressed by drawing on ethnicity and ethnic identity debates.

7.2.1. The Angara rock art style in time and space

The initial examination of the style started with an analysis of the internal dynamic of the style’s development (Ponomareva, 2016). This was based on the study of three palimpsests from the Kamenny Ostrov II site in the Angara region. As a result of this, the images of elk were divided into two relative chronological groups. The first included the images with naturalistic appearance, and the second had two variants: (a) schematic, in which a head was represented as an amorphous rectangle; and (b) exaggerated, with an overly large nose and upper lip (Figure 7.15). This sequence shows a tendency in the style’s development, from naturalistic to schematic, and these two groups can possibly be correlated with specific chronological periods, as will be discussed further below.
The next stage was to analyse all the images attributed to the Angara rock art style by previous researchers. This included more than 400 designs in West, South and East Siberia. Although the Angara rock art style obviously received its name because the most striking naturalistic elk depictions were found in this region, this term may also have emerged due to the need to distinguish between two early styles apparent in the Yenisey rock art. One of them has similarities with the Angara petroglyphs, while the other, the Minusinsk style, does not and therefore was considered local (Podol’skyi, 1973; Sher, 1980). The stylistic analysis has supported the traditional view that the Angara River Basin was the place of origin of the Angara style. In comparison with other areas where similar images have been recorded, the Angara-region petroglyphs and pictograms show greater variability in the technique and the manner of representation (Ponomareva, 2016). Many features which are rarely found in the Angara region are predominant in other areas – for example, X-ray representations in West Siberia, and painted paired figures in Yakutia. However, only the Angara-region rock art has all the characteristics which are found across the area associated with this style (Figure 7.14).

By considering in more detail other areas where the Angara elk images have been identified, it has been possible to delineate stylistic areas which have their own specific characteristics (Ponomareva, 2016). The ‘central Angara rock art area’ includes, in addition to the Angara River basin itself, the Upper Lena River basin and the east bank of the Middle Yenisey River. In this area, most of the Angara-style elks are petroglyphs occurring on sandstone outcrops. However, in the Angara River basin there is diversity in the techniques and the types of rock used. For instance, some rock art sites are on yellow-whitish or grey limestone outcrops, but most of them are found on grey limestone-sandstone. Elk figures are either engraved, painted, engraved over painted images, or painted over engraved images (Okladnikov, 1966).
South-Central Yakutia has been suggested to form a ‘province’ of the Angara rock art style (Figure 7.14:19–22). It has many features in common with other Angara rock art, such as: (a) the figure is in the horizontal plane; (b) the size ratio of the head-with-neck to the torso is 1:3 or 1:4; and (c) the hump slants smoothly. However, it differs from the central Angara rock art area in that all the images are painted, and the animals are shown mostly in pairs. Most of the rock art panels in the region are on whitish and yellowish limestone outcrops, on which red pictures may have been clearly visible when they were created (Fig. 5).
Another area where elk representations are present is West Siberia (Tom River basin), and they also exhibit a number of distinguishing attributes (Figure 11): (a) the size ratio of the head with elongated-neck to the torso is 1:1; (b) the presence of the X-ray type of representation (where internal anatomical features are illustrated); (c) ground inner space of the head; (d) depiction of the outstretched legs of the running animal in such a way that one front leg crosses the rear leg; (e) a hump in the form of a small peak; (f) split hooves; (g) a narrow rump; and (h) a droplet-shaped nostril (Fig. 7.14:1–6). It was argued in Ponomareva (2016) that the Tom rock art sites and similar rock art sites must be regarded as a Bronze Age tradition independent of the Angara style. There are also a number of elk depictions within the rich corpus of art of the Okunevo culture which existed in the Minusinsk Basin in the Early Bronze Age (2500–1700 cal. BC; Polyakov, 2017) (Fig. 7.14:7–10). These depictions have been considered by many researchers to belong to the Angara rock art style and thus to indicate the presence of a Neolithic substrate of the Okunevo culture (Maksimenkov, 1975; Savinov, 2006; Sokolova, 2009). However, stylistic analysis has not proven this hypothesis, but has instead shown a clear similarity with the elk depictions from the Tom rock art sites (Ponomareva, 2016).

In East Siberia, it is possible to support the Neolithic age of the Angara rock art style through correlations with items of mobiliary art, of which a rich corpus (c.235 items to date) has been recovered from the Neolithic and Bronze Age complexes of the Baikal area.

Before considering the mobiliary art in detail it is necessary to discuss the validity of its use for comparative dating. First of all, the amount and the context of the evidence are important. As discussed above, Okladnikov was criticised for using this method for
dating naturalistic elk depictions at rock art sites. However, at that time little evidence was available, apparently only from the Bazaikha burial ground. Okladnikov relied on the Marxist stadialism concept in order to use the Bazaikha burial ground, which is located in the Middle Yenisey basin, to date the rock art of the Angara and Tom River basins. Since then, 43 osseous artefacts with depictions of elk have been found at Neolithic and Bronze Age sites in East and Central Siberia (most of them in the Cis-Baikal region); 12 of them are from contexts which yielded radiocarbon dates (Tables 7.1 and 7.2; Figure 7.16). Therefore, there is now enough evidence to characterise the portable art traditions which existed in the core area of the Angara rock art style in the Neolithic and Bronze Ages.

Another argument against a stylistic comparison is that it would be subjective given the different media being used, since rock art is two-dimensional and mobiliary art is three-dimensional and artists obviously had specific conventions for expressing the same motif in different media. Therefore, the focus will be placed upon other aspects of the art, such as the dominance/absence of a motif in the art of particular archaeological cultures, and tendencies in the stylistic developments of rock art and portable art. Some observations of stylistic similarities may serve as minor arguments, however.

In terms of the cultural attributions of the bone artefacts with elk depictions, as determined by researchers in the Cis-Baikal region (Table 7.1), there are 26 items belonging to the Early Neolithic Kitoi culture, dated to 7500–7000 cal. BP (the dates of the Cis-Baikal cultures follow A. W. Weber, Schulting, Bronk Ramsey, et al., 2016); only one item was recovered from a site identified with the Late Neolithic Serovo culture (5570–4600 cal. BP); and six items originated from contexts within the Early Bronze Age Glazkovo culture (4600–3725 cal. BP). If we consider only those items from a radiocarbon-dated context (Table 7.2; Figure 7.16:1–7, 10, 12), there are six items from Kitoi graves, one from a Kitoi site and one item from a Serovo complex. One flat osseous elk depiction was recovered from a single grave at the Shumilikha cemetery (Figure 7.16:11) which was originally identified as belonging to the Kitoi mortuary tradition (Okladnikov & Konopatskiy, 1984) but later yielded radiocarbon dates which placed this burial in the Early Bronze Age (Goriunova, 2002). Another elk figure, the top of a bronze knife handle, was unearthed from the Gorodishche II cemetery (Figure 7.16:12). Overall, therefore, most of the items of mobiliary art depicting elk belong to the Early Neolithic, because the identification of the only item dated to the Late Neolithic as an elk depiction is actually doubtful (Figure 7.16:10), and little evidence comes from the Early Bronze Age complexes.

27 In fact, four flat animalistic osseous figures were found in the grave, but only one can be identified as an elk depiction.
The Kitoi mobiliary elk depictions include elk heads (which could have served as parts of rods), elk-head pendants (with a hole), spoons with elk-head handles, rods with elk heads, and a crescent-like plate with elk heads on its ends. It is important to note that Kitoi portable art imagery is dominated by depictions of elk and fish. The elk figurines exhibit a number of stylistic features, such as naturalistic depictions of heads which render their natural curvature and show the eyes, nose and lips. The corpus of Kitoi portable art with depictions of elk is dominated by elk heads, and there are many rock art figures which show only an elk head in the Angara basin (25 out of 140 – see Ponomareva, 2016).

Four elk heads and two elk figures which were associated with Early Bronze Age burials had a more simplistic manner of representation, exhibiting rudimentary lines and missing details (see Studzitskaya, 1987, fig. 137(8); 2004, fig. 2, 9). This correlates with the later chronological group identified in the rock art palimpsests of the Kamenny Ostrov II site (Figure 7.15:4, 5).

The analysis of portable art indicates that it is more reasonable to relate the Angara rock art style in the Cis-Baikal region (the central Angara rock art area) to the Early Neolithic Kitoi culture than to other periods. The Late Neolithic attribution of naturalistic elk figures of the Shishkino rock art site (Figure 7.5) in the Upper Lena Basin (Mel'nikova et al., 2012) does not reject the idea of the emergence of the style in the Early Neolithic. The research of the geomorphology of the Shishkino rock cliff showed the time when the panels became exposed, therefore earlier images either did not survive or there was nowhere to place them.
Table 7.1. The elk depictions in the mobiliary art of Eastern Siberia and the Yenisey basin²⁸

<table>
<thead>
<tr>
<th>№</th>
<th>Site</th>
<th>Region</th>
<th>Elk head</th>
<th>Elk head pendant</th>
<th>Flat elk figure</th>
<th>Full elk figure</th>
<th>Spoon with elk head handle</th>
<th>Rod with elk head</th>
<th>Crescent-like plate with elk head end</th>
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<td>Yenisey basin</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>Okunevo culture</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>26</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>43</td>
<td></td>
</tr>
</tbody>
</table>

²⁸ This table includes depictions of elk as identified by researchers.
Table 7.2. The elk depictions in the mobiliary art of Siberia from dated context (see Figure 7.16).

<table>
<thead>
<tr>
<th>Fig.</th>
<th>Site</th>
<th>Region</th>
<th>Culture</th>
<th>Available radiocarbon dates</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shamanka II, grave 83</td>
<td>South Baikal</td>
<td>Kitoi culture</td>
<td>7476±39 BP; 7245±54 BP</td>
<td>(Bazaliskii &amp; Weber, 2006; A. W. Weber, Schulting, Ramsey, et al., 2016)</td>
</tr>
<tr>
<td>4</td>
<td>Shamanka II, grave 15</td>
<td>South Baikal</td>
<td>Kitoi culture</td>
<td>7243±52 BP;</td>
<td>(Bazaliskii et al., 2006; A. W. Weber, Schulting, Ramsey, et al., 2016)</td>
</tr>
<tr>
<td>5</td>
<td>Shamanka II, grave 14</td>
<td>South Baikal</td>
<td>Kitoi culture</td>
<td>7341±59 BP; 7225±44 BP; 6870±70 bp (TO-11049)</td>
<td>(Bazaliskii et al., 2006; A. W. Weber, Schulting, Ramsey, et al., 2016)</td>
</tr>
<tr>
<td>6</td>
<td>Ust'-Yodarma II, ExUn 1, Level 6</td>
<td>Angara basin</td>
<td>Kitoi culture</td>
<td>6680±120 bp (SOAN-8357); 6215±70 bp (SOAN-8355); 6090±110 bp (SOAN-8099); 5945±100 bp (SOAN-8094)</td>
<td>(Lokhov &amp; Dudariok, 2012)</td>
</tr>
<tr>
<td>7</td>
<td>Fofanovo, grave 11</td>
<td>Selenga basin, Trans-Baikal</td>
<td>Kitoi culture</td>
<td>6660±100 bp; 5746-5465 BC (GIN-7113)</td>
<td>(Lbova et al., 2008)</td>
</tr>
<tr>
<td>8</td>
<td>Tuoi-Khaya I, near hearth</td>
<td>Vilyuy basin, Yakutia</td>
<td>Syalakh culture</td>
<td>6500-5200 BP</td>
<td>(Mochanov &amp; Fedoseeva, 2013a)</td>
</tr>
<tr>
<td>9</td>
<td>Syul'dyukar Layer 4</td>
<td>Vilyuy basin, Yakutia</td>
<td>Syalakh culture</td>
<td>6500-5200 BP</td>
<td>(Mochanov &amp; Fedoseeva, 2013a)</td>
</tr>
<tr>
<td>10</td>
<td>Vzvoz, C. Layer 2, Accum. 3</td>
<td>Angara basin</td>
<td>Serovo culture</td>
<td>4688±100 bp; 3700-3100 BC (SPb-579)</td>
<td>(German &amp; Leontiev, 2012)</td>
</tr>
<tr>
<td>11</td>
<td>Shumilikha, grave 2</td>
<td>Angara basin</td>
<td>Kitoi culture?</td>
<td>4380±15 bp (2410±15 BC) (SOAN-1665)</td>
<td>(Goriunova, 2002)</td>
</tr>
<tr>
<td>12</td>
<td>Gorodishche II</td>
<td>Angara basin</td>
<td>Glazkovo culture</td>
<td>4230+40 bp (GIN-8842)</td>
<td>(Tyutrin, 2008)</td>
</tr>
</tbody>
</table>
In Yakutia, Kochmar (1994) correlated superimposed rock art depictions with cultural layers and proposed a chronological sequence of rock art development in the region. The representations of the elk, which are similar to the central Angara style, were attributed to the Early Neolithic Syalakh culture, dated to 6500–5200 BP, and to the Middle Neolithic Belkachi culture, dated to 5200–4100 BP (Mochanov & Fedoseeva, 2013a). According to Kochmar, in the Late Neolithic to Early Bronze Age (the Ymyyakhtakh culture, 4100–330 BP), elk iconography became simplistic and schematic (1994, pp. 135-141).

In addition, two elk depictions, as identified by Mochanov and Fedoseeva (2013a) – a stone figurine and an osseous depiction of a head (Figure 7.16:8 and 9) – have been recovered from Syalakh-culture sites in the Vilyuv River basin. However, there is no direct evidence that they are as early as the Early Neolithic.

Observations on geology and processes of erosion may give some clues on the relative antiquity of images. During this PhD fieldwork, rock art sites of the Middle Lena River basin were surveyed, and it was noted that some rock art is located more than 3 m
high above a level on which a viewer can safely stand. The rock formations on which rock art is found in this area consist of a fragile white-yellow limestone which is exposed to hydraulic action, aeolian processes and thermal erosion (Costard, Dupeyrat, Gautier, & Carey-Gailhardis, 2003; Gautier et al., 2018). Most of the rock art recorded in this area exhibits severe exfoliation. It is possible that a large part of the rock art in the Middle Lena River basin has been destroyed by geological processes, and a major factor is spring ice melting resulting in further floods which, possessing enormous power, carries blocks of ice, rooted out trees and rock conglomerations downstream, with the potential to destroy a river island on its way. Unfortunately, research shows that the climate change influences the frequency, intensity and duration of extreme climatic and hydrologic events in the region (Gautier et al., 2018) thus endangering the future of the rock art as well.

If the processes of erosion are considered, it can be suggested that rock art pictures which are found at a greater height from the modern viewer are older than those located lower, because a rock platform on which an ancient artist could stand could have been destroyed by the erosion processes. The illustration to this hypothesis can be seen in Figure 7.17. There are only three panels which are located more than 5 m high from the modern viewer level. If images from the levels 0-2 m are compared to images located higher, a stylistic pattern can be observed which supports the attribution of naturalistically rendered images to the earlier time and more schematic and cruder pictures to the later periods. However, this observation needs scientific research to prove it.

The chronology of the Angara rock art style in South Siberia (the Yenisey basin) is also problematic (Miklashevich, 2015a; Sovetova, 2016; Sovetova & Miklashevich, 1999). However, along with the Minusinsk style, it is considered to be one of the earliest rock art traditions in the area (Miklashevich, 2015a). The only recent evidence came from traceological studies undertaken on the Shalabolino rock art site (Girya, Drozdov, Devlet, & Makulov, 2011). This research showed that one elk figure, which is stylistically similar to the representations of the naturalistic group, was engraved using a stone implement (Girya et al., 2011, fig. 4)(Girya et al. 2011, fig. 4), while other representations executed in a more abstract manner (the muzzles are shown as rectangles and the legs are outlined in a sketchy way) were made with a metal tool (Girya et al., 2011, fig. 8). However, these first traceological results were regarded as ambiguous, and researchers are in agreement that the Minusinsk and the Angara styles in the Minusinsk Basin in general pre-date the art of the Early Bronze Age Okunevo culture (Miklashevich, 2015a). Recent research supported the idea of co-existence of these two styles (Zotkina, 2019).
Figure 7.17. Depictions of elk and other zoomorphs of the Middle Lena River correlated with the modern viewer height. 1, 2 - Suruktakh-Khaya (Nizhe Petrovskogo); 3 - Toyon-Ary; 4, 7 – Petrovskoye Location # 2; 5, 6 - Suruktakh-Aatyk (Suruktakh-Aan) Location # 3; 8, 10, 13 – Bysagas; 9 – Olguidakh Location # 3; 11 – Petrovskoye Location # 3; 12 – Petrovskoye # 12; 14 – Petrovskoye Location # 4. Tracings and photos I. Ponomareva. Photographs enhanced with DStretch.
The Okunevo art is famous for its striking multi-component imagery, and the Angara style could also have co-existed in the Minusinsk Basin. There is evidence for this from recently discovered panels in the Minusinsk Basin in which Angara-style figures are superimposed over Bronze Age figures (Zaika & Drozdov, 2008). In the Strelka cemetery of the Okunevo culture, a piece of portable art was found which has a naturalistic depiction of an elk (Savinov, 1981) (see Figure 7.16:13). Nevertheless, it is a unique artefact since only one other osseous elk figurine has been found in an Okunevo complex, the Itkhol II cemetery, which does not show similarities with either the Strelka figurine or East Siberian portable art, but has decorations characteristic of Okunevo art (Polyakov & Esin, 2015). As noted above, some examples of elk petroglyphs from the Okunevo rock art complex were stylistically related to the elk petroglyphs of the Tom River basin. Thus, the elk motif in the Minusinsk Basin is present in various styles and media. It is related to different cultural influences and to a long period of time, possibly starting in the Neolithic and continuing well into the Bronze Age.

In the southern part of West Siberia, there is no consensus on the age of the Tom rock art (Figure 7.11). Okladnikov’s assumption that it was Neolithic has been questioned by Kovtun (Kovtun, 1993, 2001), who states that the Angara style of the Tom River Basin should be associated instead with the Late Bronze and Early Iron Ages. His conclusion was based on the analysis of superimpositions and invariant analysis of style29. However, the view that the appearance of the style in this area should be related to the Late Neolithic is still supported (Martynov, 1997), and while recent studies have supported the Bronze Age attribution of the earliest Tom petroglyphs, they have not fully rejected the possibility of the Late Neolithic age (Marochkin & Kononchuk, 2014). A number of portable art items, such as osseous and wooden elk heads, recovered from sites in western Siberia (Figure 7.16:14) have been broadly dated to the Neolithic and Eneolithic periods (Eding, 1940; Fribus & Grushin, 2017; Molodin, 1992; Morozov, 2010; Moshinskaya, 1976; Serikov, 2007).

7.2.2. The emergence of ethno-cultural identity

The evidence indicates that the Angara style originally appeared in the Early Neolithic in the Cis-Baikal region around 7500–7000 BP. Then, around 6500–5200 BP, the style spread across South-Central Yakutia, where it was associated with the Syalakh culture, which is characterised by net-impressed pottery. Although Syalakh pottery has a number of specific features, the manufacturing technique of using a net as a support when forming a vessel is considered to have originated in Cis-Baikal, where the net-impressed pottery found in the Early Neolithic layers dates back to 7800–5500 uncal. bp (Berdnikov, 2013).

29 The method of the invariant analysis of style was elaborated by Yakov Sher (see Sher, 1980).
According to Mochanov and Fedoseeva (2013a), all archaeological cultures of Yakutia were non-indigenous. Although its origins are not clear, the Syalakh culture may be related to migration from the Cis-Baikal region. Interestingly, most of the Yakutian rock art sites are located in the southern and central parts of the region, in the basins of the Lena, Aldan, Amga and Olyokma Rivers, although Neolithic and Bronze Age cultures occupied an enormous territory in North-East Asia. The marking of rocks with stylistically specific rock art was perhaps necessary for newcomers to establish a firm connection with the new land. Some differences from the original Angara style, in the more simplistic manner of depiction and prevalence of painting, may indicate the creation and negotiation of a new identity.

In West Siberia, the style appears to be present during the Bronze Age, possibly appearing in the Late Neolithic to Eneolithic periods. Studies of the Neolithic burial complexes in the northern foothills of the Altai Mountains and in the Kuznetsk Depression have inferred the migration of populations from the east and the inclusion of the eastern component in the Neolithic cultures of these regions (Kiryushin, Kungurova, & Kadikov, 2000; Kungurova, 2005). However, the process of interaction between the incoming and indigenous populations seems to have been complex, since a cultural impact from the northern Taiga cultures has also been identified (Marochkin, 2015). The southern area of West Siberia has been suggested to have been the contact zone between the cultures of East and West Siberia in the Late Neolithic (Bobrov, 1988, 2016). In the Bronze Age, the Tom River basin was culturally related to the Altai Mountains and the Minusinsk Basin, and stylistically similar elk depictions in the art of the Okunevo culture demonstrate this connection (Figure 7.14.1–10).

As has been discussed above, ethnicity may emerge only in the process of social communication. The evidence presented here suggests that in the Kuznetsk Depression in the Late Neolithic, at least two culturally distinct groups interacted with each other. Among the petroglyphs of the Tom rock art site there are a number of figures which can be related stylistically to the original Angara style, and perhaps they are an indication that the newcomers tried to create a connection with the new land through engagement with rock art. However, the main body of the Tom rock art, although it has some features in common with the original Angara depictions, such as the execution of the elk muzzle, presents quite different specific traits. These differing features were designed to serve as a manifestation of cultural distinctiveness, the awareness of which had appeared only due to the cultural contact, communication and exchange. Thus, although local populations could borrow something from newcomers, consciously or unconsciously, they modified it in order to maintain their emerging identity.
7.3. Conclusion

This chapter focused on the Neolithic rock art of East Siberia which is quite uniform in what ontology it expressed but very diverse in expressive means of what can be called Neolithic hunter-gatherer monumental art. The rock art styles identified by previous researchers and archaeological evidence indicated cross-regional migrations and a wide network of contacts across the whole Taiga belt of Siberia. However, rock art did not only serve as mere markers of peoples moving around, it was an active agent in signalling peoples’ identities. In the previous chapter, the earliest rock art was discussed, and the case study of the Amur rock art which was possible to correlate to dated archaeological material tells a story of ethno-cultural continuity across millennia. The Taiga Neolithic rock art tells a different story – a story of increased mobility, intensification of contacts and, as a result, of a necessity to express and maintain cultural belonging.

The analysis of the Angara rock art style in an archaeological context, with a focus on mobiliary art from dated contexts, allows for a more accurate placement of the style in time and space. The application of the concept of ethnicity suggests processes that could have underlain the stylistic changes in Siberian rock art. It appears that the style formed in the Cis-Baikal region in the Early Neolithic and later fused in South-Central Yakutia with an Early Neolithic migration which also brought a technology of manufacturing ceramic vessels. This group marked their appearance with rock art similar to the Angara style, but within a different geo-ecological context.

In the Late Neolithic, a migration or infiltration from the Cis-Baikal region to the west occurred which brought eastern influences into mortuary rites, material culture and the art tradition. However, interaction with the inhabitants of the Kuznetsk Basin was complex, and it appears to have affected the perceptions of the people of this area and their identity. The appearance of newcomers with different cultures and traditions may have influenced the emergence of their ethno-cultural identity. Although the adoption of some cultural elements could occur, inter-cultural communication and the threat to cultural continuity may have caused the use of art to maintain cultural distinctiveness. A distinct rock art style, such as the Tom style, could have been a means through which the local population affirmed and reaffirmed the connection with their past and their land. It appears that the effect of this was so powerful that the rock art tradition emerged and then flourished during the Bronze Age.

It is believed that the Angara style in West Siberia could have existed well into the Iron Age (Kovtun, 2001), and echoes of the Tom tradition can be seen in the form of the Kulai cast bronze sculpture of the Iron Age. Thus, this appears to have been a long rock art tradition which continued to maintain the ethno-cultural identity of the local
population over at least a millennium. It seems that rock art served as a means of communication about a people and their land not only between locals and newcomers but also between generations conveying the connection of past and present. Major rock art sites such as the Tom site may have been strong focal points on the crossroads of time and space.

The Angara style is not the only rock art style present in East Siberia in the Neolithic. More rock art was related to this period in the region of Eastern Zabaykalsky Krai, Amur Oblast and South Yakutia. This was reviewed in the first section of this chapter, and it was concluded that it needs reassessment since no major research has been carried out since Mazin’s seminal work there. This region can be another rock art area since it features quite peculiar styles and imagery and it is located on the southern side of the Stanovoy Range belonging to the Amur River basin. The Stanovoy range is an important geographic feature since it divides two major river basins, one flowing into the Arctic Ocean, and the other into the Pacific. Interestingly, the Angara style is present along the rivers of the basin of the Arctic Ocean.

Another issue is the presence of the Neolithic rock art in Western Trans-Baikal. There are only two sites related to this period by Okladnikov, however, this attribution lacks any grounds. The absence of Neolithic rock art in the Steppes of Siberia can be an indication that this area was not populated in that period. Archaeology also provides a rather incomplete and blurry picture (see Chapter 2). Therefore, future research may bring some insights.
CHAPTER 8. BRONZE AGE ROCK ART OF EAST SIBERIA: UNRAVELLING MANIFOLD IDENTITIES

This chapter will focus on the Trans-Baikal Bronze Age rock art. The dominant Selenga tradition is related to the Late Bronze-Early Iron Ages and associated with the slab grave culture. Another Kyakhta rock art group is connected to the rock art traditions of Central Asia and South Siberia. This picture will not be complete without another, Taiga, or Forest, rock art group and other kinds of monumental art such as deer stones, stelae and decorated burial slabs taken into consideration. The aim of the chapter is to disentangle the perplexity of styles, traditions, groups and manifold identities through stylistic and spatial analyses and comparison with other art objects.

The chapter starts with a review of all rock art traditions of East Siberia identified by previous researchers for the Bronze Age to provide a reference point. These reviews were originally published in the Encyclopaedia of Global Archaeology (Ponomareva, 2018b, 2019), and to comply with the copyright relevant passages are organised as citations. The main part is devoted to a detailed analysis of the Trans-Baikal rock art and its placement in the broader Asian context, and the last section will discuss the results of this analysis through the anthropological perspectives on the phenomenon of ethno-cultural identity.

8.1. The diversity of rock art: a review

8.1.1. Taiga Early Bronze Age rock art

The area of Cis-Baikal is the most representative in East Siberia for Early Bronze Age rock art. Here, “[t]he rock art of the Bronze Age, according to Okladnikov (1966), considerably differed from that of the Neolithic. In general, the images became smaller, the painted pictures prevailed, and the stylistic manner appeared to be more abstract in contrast to naturalistic Neolithic images. In terms of the content, the set of motifs is dominated by anthropomorphic figures which include dancing figures, sometimes shown as in a half-sitting pose, and many of them are ithyphallic. Also, images of boats appeared in this period, which were quite abstract and depicted with anthropomorphic figures shown as vertical lines (Figure 8.1). In the Angara River basin, two complexes were identified. The first included the images of faces/ masks. They were correlated with the face/mask depictions of the Okunevo culture present in the Minusinsk basin in the Early Bronze Age. The second included anthropomorphic figures with horns, upraised arms, and rhomboid legs which were dated to the Late

Figure 8.1. Bronze Age rock art of the Shishkino rock art site. After Mel’nikova, Nikolaev & Dem’janovich (2012).
Bronze Age. The latter was initially described based on the materials of the Shishkino rock art site where anthropomorphic figures with horns and upraised arms were found in boats in a composition with a figure of a deer which had its head turned back and vertical lines along with a spiral on the rump (Figures 8.1, 8.2). Okladnikov considered it to be similar to the deer figures found on the deer stones in Trans-Baikal and metal artefacts of the Scythian type and therefore dated the complex to the Late Bronze Age–Early Iron Age (Okladnikov & Zaporozhskaya, 1959).

Another area with striking Bronze Age rock art is the eastern coast of Lake Baikal where two sites, Sagan-Zaba and Aya bay, are present (Figures 8.1, 8.3). The petroglyphs of Sagan-Zaba are located on a high white marble cliff which towers over the lake. A prevailing motif here is...
large anthropomorphic figure with broad shoulders, thin waists, and short legs. The figures give an impression that they are dancing, and some of them have horns and stripes on the torso. The site was dated to the Early Bronze Age based on the analogue with anthropomorphic figures depicted on the ceramic vessels of the Samus’ culture present in West Siberia in the Early Bronze Age. Another argument was that, in the vicinity of the rock art site, the cultural remains of the Glazkovo culture of the Early Bronze Age were unearthed. The Aya bay site was related to the Late Bronze Age, since the anthropomorphic figures present there, although being similar to those at Sagan-Zaba, were smaller and more simplistic in their stylistic appearance and were shown in an X-ray manner (Figure 8.3:6,7). The pictures of the Sagan-Zaba and the Aya bay rock art sites allowed Okladnikov to suggest cultural contacts across Eurasia, from Scandinavia to Lake Baikal, in the Bronze Age. These are “dancing” anthropomorphic figures, boats, and swans. The latter is a motif rarely found in Siberia but present in the rock art of Fennoscandia. This hypothesis was supported by the phenomenon of a wide distribution of the Glazkovo white nephrite rings and Seima-Turbino bronze artefacts. Considering the anthropomorphic imagery of the Baikal Bronze Age rock art, which featured many shamanistic traits such as headdresses, X-ray style, dancing manner, and depictions of rings which can be interpreted as drums, Okladnikov inferred the emergence of shamanism, which therefore was indigenous in Siberia (Okladnikov, 1974).” (Ponomareva, 2019, pp. 8-10)

In Yakutia, the Bronze Age started later (see Chapter 4), and the period occupied by the Early Bronze Age Glazkovo culture in Cis-Baikal, in Yakutia is known as the time of the Late Neolithic Ymyyakhtakh archaeological culture. Yakutia was also a part of a greater Siberian network of contacts, and this is supported not only by the presence of pottery similar to the Glazkovo and other archaeological evidence but also by an apparent influence in rock art. A set of motifs characteristic for this period includes “anthropomorphic figures with triangular bodies and horns/horn headdresses which are shown in various poses, such as adoration and dancing, and compositions, e.g., hunting and reindeer-herding scenes (Figure 8.4). Many of the figures
are ithyphallic. The imagery, as in other parts of Siberia, also includes depictions of boats with simplified anthropomorphic figures shown as vertical lines. This rich rock art group also includes so-called ‘solar symbols’ depicted as four-spike wheels and face-masks, a motif rarely found in East Siberia (Kochmar, 1994; Okladnikov, 1976; Okladnikov & Mazin, 1979). Another group, which was related to the Ymyyakhtakh culture, is not so widely present in Siberia and found only in Yakutia and adjacent Amur Oblast. It includes animal depictions the legs of which are depicted as boots (Figure 8.4:3) (Mazin, 1986).” (Ponomareva, 2018b, p. 8)

In forested areas of Trans-Baikal, Okladnikov identified a hunting rock art group (Figures 8.2, 8.5) characterised by naturalistic animal depictions, anthropomorphic figures, many of which had hornlike headdresses and were part of scenes with the depictions of wild fauna such as deer, elk, bear, and boar (Okladnikov & Zaporozhskaya, 1970). Okladnikov considered these images as being more dynamic and expressive in their style and considered them as being synchronous with the Selenga group, which dominated the Steppe zone in the Late Bronze Age, since some zoomorphic figures exhibited slight stylistic resemblance with the deer stone style. Okladnikov considered the sites of the hunting group as having a different function and related them to hunting magic. According to Mazin (1986), in the area of forested Eastern Trans-Baikal, South-Central Yakutia and Amur Oblast, Neolithic rock art traditions continue well into the Bronze and
Iron Ages with some transformations. The reindeer-herding style is characteristic for Amur Oblast and South-Central Yakutia and includes anthropomorphic figures in association with reindeer where they appear to ride or lead them. The hunting style is localised in Trans-Baikal and in the Bronze Age, in addition to naturalistic animal depictions, it included anthropomorphic figures analogous to those present in Cis-Baikal.

8.1.2. Steppe Bronze Age rock art of East Siberia

The Steppe zone of East Siberia (Trans-Baikal and some areas of Cis-Baikal) yields a rich body of rock art mostly associated with the early nomadic cultures of the Late Bronze-Iron Ages. This rock art is simultaneously diverse and uniform including several rock art styles and traditions which may have influenced the rock art of adjacent regions.

The prevalent type of rock art characteristic of the Steppes of Trans-Baikal is Selenga group or style (Figures 8.2, 8.6:2), which was named after the core area, the Selenga River basin, where the sites are concentrated (Okladnikov & Zaporozhskaya, 1970). In the Steppe zone of Eastern Trans-Baikal, Mazin (1986) identified the Steppe style (Figure 8.2) which is represented by a similar set of motifs and their fashion as Okladnikov’s Selenga group. According to Tivanenko (1990) the sites exhibiting the motifs and elements characteristic for the Selenga group are found in the area which extends from the north-western coast of Lake Baikal in the north to Ulan-Bator in the south and from the Dzida River basin in the west to the Onon and Vitim River basins in the east (Figure 8.2).

The sites of the Selenga group are usually found on isolated rock outcrops, sometimes in shelters and caves, in the steppes and forest steppes, where they dominate a picturesque landscape. All Selenga rock art was made with red paint and includes the following motifs: (1) so-called yards-enclosures of different shapes such as rectangular, square, oval, and

Figure 8.6. Examples of Kyakhta (1) and Selenga (2) rock art groups. 1 – Baga-Zarya (original photo), 2 – Mondogor-Khabsagay (DSStretch-enhanced). Photo I. Ponomareva.
circular, with other motifs depicted inside them such as rows or chaotic assemblages of dots and anthropomorphic and ornitomorphic figures, (2) ornitomorphic figures with spread wings shown as if flying and seen from underneath, and (3) anthropomorphic simplistic figures, often shown in rows. This group was related to the slab grave culture of the Late Bronze Age–Early Iron Age based on a few analogous images found on bronze knives typologically dated to this period (Okladnikov & Zaporozhskaya, 1970). In contrast, Mazin believed the Steppe style in Eastern Trans-Baikal could have emerged as early as the 6th–5th Millennia BC based on excavations at the Urulyunguy site and a radiocarbon date 6734±97 uncal. bp produced by excavations at the Nortuy I rock art site (Mazin, 1986; 1994, p. 86). However, this is the only evidence for such an early age, and Nortuy I was not located during PhD fieldwork.

Quite different rock art is present in South Buryatia. This is petroglyphs, namely pecked, engraved, and scratched figures, found on basalt boulders scattered on hills. This rock art differs considerably from the Selenga group not only in technique but also geo-ecological setting. The imagery includes depictions of ibex, deer, and wolves (Figures 8.2, 8.6:1). This group was identified by Okladnikov as the Kyakhta group because the sites are only found in a small area around the town of Ust’-Kyakhta (Figure 8.2) (Okladnikov & Zaporozhskaya, 1970).

Another type of monumental art, deer stones, is found in Trans-Baikal (Dikov, 1958; Grishin, 1981; Okladnikov, 1954b). The deer stones are decorated stone stelae which are found throughout the steppes of Eurasia and related to various sepulchral and ritual complexes of the early nomads (1000–500 BC) (Savinov, 1994). They were named deer stones by the earliest explorers of Central Asia because many of them are decorated with stylistically distinct figures of deer. However, the deer stones are very diverse in their form, depicted subject matter, and the compositions of images (Volkov, 2002). More than 800 out of 1000 known deer stones were found in Mongolia, where they are related to the khirigsuurs - large and complex ritual sites (Savinov, 2016). In Trans-Baikal only a dozen are known (Figure 8.7), and the region is considered as a periphery of the deer stone area (Savinov, 1994). Here they were found re-used in grave construction of the slab grave culture (A. D. Tsybiktarov, 2016a).
Although this section is focused on the Steppe rock art, it is interesting to see what rock art was present in the Taiga at that time. In Yakutia the period synchronous with the slab grave culture in Trans-Baikal was dominated by Ust'-Mil' archaeological culture dated to 3300–2000 cal. BP (Mochanov & Fedoseeva, 2013b). According to Okladnikov and Mazin (1976, 1979), the rock art of the Taiga mostly continued traditions and styles which appeared in earlier times although with some changes. Kochmar (1994) related “solar symbols,” X-ray anthropomorphic figures, some shaman’s depictions, boats and overturned anthropomorphic figures to this period (Figure 7.7). In the Aldan basin, a group of rock art sites was related to the late 1st Millennium BC–early 1st Millennium AD which included more diverse themes and scenes such as hunting with dogs (Figure 8.8:2), boats and nets, reindeer-herding and reindeer-riding (Okladnikov & Mazin, 1979). In the Olyokma basin, two sites, Tungurcha and Tungurchakan, were related to the 1st Millennium BC (Okladnikov, 1976). They featured scenes of anthropomorphic figures with serpentine creatures and reindeer-herding scenes (Figure 8.8:1). While the motifs described appear to be a result of local development of rock art, there is evidence that this Taiga world was also connected with the Steppes. The Bes-Yurekh site yielded one figure of deer (Figure 8.8:3) which had a slight stylistic resemblance with the deer-stone style mentioned above.

In the Baikal region, the deer-stone style also influenced the rock art of the 1st Millennium BC. Depictons of deer resembling figures found on deer stones were identified by Okladnikov at the Sakhyurte rock art site on the western coast of Lake Baikal (Okladnikov, 1974). In the Angara River basin, the Manzya site was related to this period based on three depictions of cauldron of Scythian type (Okladnikov, 1966). Later, a number of petroglyphs in deer stone style were discovered at the Shishkino site in the Upper Lena River basin (Figure 8.9), the area where bronze cast objects of the Scythian animal style were also found in the context of Korsakov’s treasure (V. I. Berdnikova, Vetrov, & Lykhin, 1991). The petroglyphs were dated to between the 7th – 2nd Centuries BC (Mel’nikova et al., 2012).
To conclude this review, it can be said that the rock art of the Steppe Trans-Baikal does not look so elaborated in terms of styles and chronology as rock art in the adjacent Baikal region and Yakutia. While an influence of the Scythian-Siberian art was identified even as far as in Yakutia, no rock art in deer stone style has been distinguished in Trans-Baikal yet, although the slab grave culture is considered as Scythian-like by researchers. The Selenga group/style appears as a homogenous monolith dominating the Steppe rock art sites with very broad chronological attribution to 2nd-1st Millennia BC. However, as will be shown in the following analysis, the Selenga group/style yields evidence of entangled imageries related to local traditions as well as macro-regional influences thus informing on different levels of ethno-cultural identity.

Another issue is that there is no uniformity on the name and terminology of the Selenga/Steppe group/style/type/tradition, and this needs to be clarified. Okladnikov was the first to define the Selenga group localising it in the basin of the Selenga River. Mazin identified the Steppe style in Eastern Trans-Baikal which is similar to the Selenga group in many aspects, although he pointed out that the latter exhibits many enclosures and ornithomorphs which are rarely found in the Steppe style (Mazin, 1994, p. 94). Tivanenko (1990), not distinguishing between terms style, type and group, suggested to broaden definitions and define “Steppe” petroglyphs\(^{30}\) in contrast to “Taiga” ones. V. A. Tsybiktarov (2011), following Tivanenko’s broad understanding of the Selenga rock art, determined Trans-Baikal traditions as “Petroglyphs of the Selenga type”, “Petroglyphs of the Forest type” and “Petroglyphs of the Kyakhta type”. There are two important terminological aspects; firstly, pictograms and petroglyphs must be distinguished, and secondly, terms type, style, group and tradition are not synonyms and it is important to clarify their usage in regard to the Trans-Baikal rock art body.

It will be demonstrated in the following analysis that this rock art exhibits both common grounds in the whole Trans-Baikal and regional differences in its eastern and westerns areas. Archaeological context suggests that this rock art is related to common culture-historical processes and thus needs to be identified as a single whole although with regional variants. It is suggested to define this rock art body as the Selenga tradition. Although Okladnikov suggested that the Selenga rock art is confined to the Selenga River basin, it will be shown below that Mazin’s Steppe style also belongs to this tradition. The name “Selenga” is preferable over the name “Steppe” because the latter is meaningless in a broader Asian rock art context in which many rock art styles and traditions are found in the Steppe zone. Another important point is that Selenga is a rock art tradition because it

\(^{30}\) Tivanenko, as with many other Siberian researchers, often calls painted rock art petroglyphs.
includes a diverse set of motifs depicted in various styles which indicate its existence during millennia.

Similar disarray can be found in the interpretation of the Kyakhta group rock art. However, in this chapter it is argued that this rock art body should retain its definition as it was put by Okladnikov. This group was defined in contrast to the dominant painted rock art of Trans-Baikal, but it nevertheless is a multi-component and complex phenomenon. The only characteristic that united this group is that it features petroglyphs found on boulders. There is great diversity of similar rock art in Central Asia spanning from the Neolithic to the Ethnographic time, and even a cursory look at the Kyakhta group suggests that this is not a single style or tradition either.

8.2. Painted rock art tradition of Trans-Baikal

8.2.1. Motifs, typology and spatial distribution

To better define the Selenga tradition, all painted designs recorded in Trans-Baikal will be analysed in this section in terms of their spatial distribution, and their chronological attribution will be discussed in the next section. The primary categories of the rock art were described in the Chapter 5, and here they will be scrutinised.

8.2.1.1. Non-figurative

This is the most common motif recorded in Trans-Baikal which constitutes 34% (Figure 8.10). Prevailing non-figurative motifs are groups of dots organised in rows, chaotic groups of dots, and groups of vertical lines organised in rows (Figure 8.11). Groups of dots and groups of vertical lines due to their abundancy were counted as groups while other non-figurative motifs were counted as single figures. If each dot and line had been counted separately, they would have made up an enormously large number and considerably skew the statistics.

There are several patterns revealed by the spatial distribution of non-figurative motifs. Firstly, all three types of the arrangement of dots, rows, chaotic and single, are predominant in Western Trans-Baikal (Figure 8.12). In Eastern Trans-Baikal, vertical lines
appear to prevail at sites located in the Forest areas (Imandan-Makit, Butikha, Borshchovochny, Avvan, Dvortsy, Smolenskiye Skaly, and Shaman-Gora) or at sites which were suggested to be featuring rock art much older than the Selenga tradition, considered in Chapter 6 (Byrka, Staraya Zhila, Shaman-Gora, Suduntuy). They are also present in large amounts at the Steppe sites which exhibit multiple chronological groups, such as Suduntuy and Ust’-Tsoron. However, in the South-Eastern Zabaykalskiy Krai where a concentration of Steppe rock art sites is found, there is no clear pattern since some sites have more dots and others more vertical lines. Maybe this can be explained when compared to Yakutian data where vertical lines prevail over dots. Thus, a greater proportion of vertical lines in South-Eastern Zabaykalskiy may be explained by its closer location to the Taiga rock art of the Upper Amur River basin and South-Central Yakutia. However, this hypothesis needs further research. In Western Trans-Baikal, where dots clearly prevail over vertical lines, there are some exceptions, for instance small sites exhibiting a limited range of motifs. A pattern seen at the Forest sites of Eastern Trans-Baikal seems also to be present at two sites, Baryshnya and Shara-Tala, located in forested landscape in Western Trans-Baikal.

Secondly, chaotic dots and rows of dots do not reveal any apparent spatial pattern constituting on average from 1/3 to 1/2 of dots assemblages with greater proportions at larger sites (Khotogoy-Khabsagay, Barun-Alan, Mondogor-Khabsagay) and some cave sites (Bain-Khara Cave, Staraya Bryan’, Gorodovoy Cliff, Temnikovskaya Cave) (Figure 8.13).

Thirdly, when motifs other than dots and vertical lines are considered, Western Trans-Baikal features more crosses while Eastern Trans-Baikal more saltires, although Buryatia yields a more diverse rock art assemblage due to the total number of designs recorded (Figure 8.14). Another clear pattern is observed regarding the wheel-like figure.
design. It is prevalent at the sites Baga-Zarya and Tabangutskoye obo which belong to the Kyakhta group considered in a separate section.

Figure 8.12. Spatial distribution of the motifs “dots” and “vertical lines”. Sites (same in all following analytic maps): 17 – Imandan-Makit; 18 – Butikh; 19 – Borshchovychny; 20 – Ust’-Urovskaya; 21 – Avvan (Volch’ya cave); 22 – Dono; 23 – Chandycha; 24 – Byrka; 25 – Staraya Zhila; 26 – Kazachiy III; 27 – Urulyunguy; 28 – Margutsek; 29 – Mogoytuy; 30 – Baraun-Konduy I; 31 – Baraun-Konduy II/2; 32 – Tsoron III; 33 – Ust’-Tsoron; 34 – Kopchinsky; 35 – Kopchil; 36 – Pilotka; 37 – Khaltan-Daban; 38 – Suduntuy (Shulutay, Baraun-Chulutay); 39 – Titoivskaya Sopka; 40 – Sukhotino-13; 41 – Sukhotinskiy Kamen’; 42 – Smolenskiye Skaly; 43 – Dvortsy; 44 – Shaman-Gora; 45 – Gyrshelunskiy Kamen’; 46 – Shara-Tala; 47 – Baga-Baitsa; 48 – Badad; 49 – Barun-Alan (Alanskiye Pisanitsy); 50 – Khotogoy-Khabsagay; 51 – Naran-Khabsagay (Naran Kul’skiy); 52 – Shubuguy; 53 – Sonny Mys; 54 – Shanaty; 55 – Shara-Khunduy; 56 – Khelegetey-Baytsa; 57 – Angir-I. Maltay-Shuluun; 58 – Angir-II. Bain-Khara; 59 – Staraya Kurba (Shenezam); 60 – Dodogol (Mukhor-Nur, Averkova mountain); 61 – Golubinka (Varvarina gorge); 62 – Staraya Bryan’; 63 – Voznesenovka; 64 – Kordon; 65 – Naideino Cave; 66 – Naideino (Pavlova Mountain); 67 – Lovtsvo Ugol (Lovtsov Lov); 68 – Torbagatayskaya Pisanitsa (Batyushkina); 69 – Ayrlyk; 70 – Kibalinskaya Pisanitsa; 71 – Mondogor-Khabsagay; 72 – Beryozovaya; 73 – Sutay (Suslova Mountain); 74 – Khaylasyn; 75 – Oboto; 76 – El’brin-Uber; 77 – Tsoila II; 78 – Kharsyatska; 79 – Narsatuy; 80 – Bain-Khara Cave; 81 – Gol-Tologoy; 82 – Bom; 83 – Kashkarga II; 84 – Baryshnya; 85 – Altachey (Altash); 86 – Khaysagor; 87 – Beshegte-Baytsa; 88 – Bichurskaya; 89 – Gorodovoy Cliff; 90 – Khabshag; 91 – Staraya Kapcheranka; 92 – Bain-Dzurkhen (Bayan-Uula); 93 – Tabangutskoye obo; 94 – Ust’-Kyakhta; 95 – Derevenskaya Mountain; 96 – Baga-Zarya; 97 – Khudzhir; 98 – Povorot (Location # 3); 99 – Kamenshuka; 100 – Ust’-Temnik; 101 – Temnikovskaya Cave; 102 – Galtay II; 103 – Ukhaan-Eber (Ulaan-Tenmik); 104 – Narin-Khunduy; 105 – Sarbaduy; 106 – Perevaznaya-3; 107-Bayan (Cheremushki); 108 – Shartykey.
Figure 8.13. Spatial distribution of the motifs “Chaotic dots” and “Rows of dots”. For the list of corresponding sites, see figure caption of the Figure 8.19.

Figure 8.14. Spatial distribution of other non-figurative motifs. For the list of corresponding sites, see figure caption of the Figure 8.19.
The second most common motif recorded in Trans-Baikal is anthropomorphic figures which constitute 27% (Figure 8.10). They are found in various compositions with ornithomorphs, non-figurative designs, inside and outside enclosures, but the most common type of composition which is found throughout Trans-Baikal is anthropomorphs arranged in rows. Such rows of anthropomorphs are not found at most of the Taiga sites and small Steppe sites containing one or a few panels. They also tend to be present in smaller proportions at cave sites. When Western and Eastern Trans-Baikal are compared, the latter shows a greater proportion of rows of anthropomorphs versus single figures (Figure 8.18).

Anthropomorphs of the Steppe sites are quite uniform and do not feature any peculiar characteristic which could be determined as specific for this tradition. It is rather an absence of any style in anthropomorphs that is characteristic. However, four types were identified which are found throughout Trans-Baikal (Figures 8.15, 8.16). 23.5% of anthropomorphic figures were not assigned to any type due to their poor visibility and preservation condition. In addition, 63 figures were not
determined as types as well because they were identified as unique. These figures feature a peculiar headdress, posture or other attribute.

The type of V-shaped figures was identified to see if there are any connections between Trans-Baikal and Baikal rock art. Only five V-shaped figures were recorded. In addition, among those figures which were assigned to the Unique category are three horned figures and two figures possibly featuring shamanic attire which also can be discussed in the context of the Glazkovo component in the Trans-Baikal painted tradition. Although this is a quite small amount of designs if compared to the total amount of rock art surveyed during this PhD fieldwork, this group of depictions is nevertheless important to consider in a context of origins of the Selenga tradition (see the next section).

One of the most common types of anthropomorphic figures is Type II. Simple figures which is characterised by an absence of any characteristic features. Simple figures are present at all types of sites in all areas and do not yield any pattern. Due to their simplicity, it is difficult to consider this kind of imagery apart from other motifs.

The most common anthropomorphic motif is III-1. Stick-Herringbone which prevails in Trans-Baikal (Figure 8.17). Three other varieties of stick figures, III-2. Stick-Wide and short, III-3. Stick-Long tail, and III-4. Stick-elongated, are also encountered in both Buryatia and Zabaykalsky Krai, and large rock art sites yield all identified types of anthropomorphic figures.

The Type III-3 Stick-Long tail was distinguished from ithyphallic figures, which are quite common in Trans-Baikal rock art, because such exaggerated appendix, which is longer than legs, may depict a tailed costume, or it is purposefully exaggerated to express an idea which was not important in an average ithyphallic figure. Spatial distribution shows that this type of anthropomorphic figure dominates within anthropomorphic images at a few sites both in Western and Eastern Trans-Baikal, such as Derevenskaya Mountain, Dodogol, Shanaty, Gyrshelunskiy Kamen’, and Kazachiy III (Figure 8.17). These sites possibly had a different function compared to adjacent sites which feature different assemblages of anthropomorphic figures.

The Type IV. Square anthropomorphic is mostly found in Western Trans-Baikal. In Eastern Trans-Baikal only the variety Type IV.2. Square shoulders is present in a small amount (Figure 8.17).
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8.2.1.3. Ornithomorphs

The third most common motif, ornithomorphs, constitutes 18% of all imagery recorded in Trans-Baikal with more designs present in Western Trans-Baikal (Figure 8.10). In Siberian rock art in general, although depictions of birds are present, they are not as common as in Trans-Baikal where the prevailing manner in which ornithomorphs are shown is in flight with their wings spread. There is only one design recorded that shows a bird in profile (Figure 8.20:7). Most of the ornithomorphic figures that can be identified with some confidence depict birds-of-prey which are a common feature of the Trans-Baikal environment with 35 species present today (Dorzhiev, 2016).
Many ornithomorphic depictions of Trans-Baikal look quite naturalistic, and it is tempting to identify real species depicted. Okladnikov determined four kinds of birds-of-prey, such as kites, falcons, hawks and eagles. However, his determination may raise questions since rock art in Trans-Baikal generally is very faded and copying techniques at that time were far from perfect. In nature, more than just four species of birds-of-prey are present today, and possibly rock art is as diverse as its surrounding environment. However, an attempt to re-identify species depicted more accurately failed, because in nature, a bird species is recognised based on its silhouette, colour, size, behaviour, habitat and voice. In rock art, a silhouette is the only characteristic.

Moreover, a wing-spread and the shape of the wings are not always reliable features, because the wing tended to be stylised. Thus, only the shape of tail is left. Among all birds of prey, only a kite has a specific fork-like tail which can be recognised in some rock art figures. This feature allowed the identification of 43 figures of kites. Fifteen figures of eagles were identified since they have larger wing-spread, and the end of the wings are pointed forward. Fifteen figures of falcons were also identified because they have a narrow and long tail (Figures 8.19, 8.20). No hawks were distinguished, because they do not feature apparent characteristics which could be recognised in rock art. Moreover, this bird prefers a forest environment. Therefore, 73 figures out of 950 were determined. In contrast, Okladnikov recorded 475 ornithomorphic figures in total, among which he identified 133 kites, 166 falcons, 45 hawks and 53 eagles.

Although, some species were identified, eventually it was decided to typologise ornithomorphic figures based on the degree of stylisation and schematisation (Figures 8.19, 8.20).
Type I included naturalistic depictions of birds, Type II - stylised figures in which one or two features were exaggerated, and Type III - schematised figures. Another type of depiction, ambiguous ornitho-anthropomorphic figures, was brought in the category of ornithomorphs. These designs combine features of ornithomorphs, such as wing-like arms, and anthropomorphs, such as a defined head and legs.

Type I has five varieties. The most abundant was broadly defined Birds of Prey, and the others are Kite-like, Eagle-like, Falcon-like, discussed above, and Other (Figure 8.20:1-7). The latter groups included three figures which depict other kinds of birds. Interestingly, in Eastern Trans-Baikal only five figures of naturalistically rendered ornithomorphic figures were recorded, while in Western Trans-Baikal they are found in all areas surveyed (Figure 8.21).

Type II has the following varieties: stick, geometric and square (Figure 8.20:8-13). The first type of stylisation is characterised by thin wings and elongated body. There are only six figures in Eastern Trans-Baikal and 80 figures in Western Trans-Baikal where they tend to be found at larger sites which contain a more diverse imagery. The second type of stylisation consists of an ornithomorphic figure that has a triangular or rhomboid shape. There are only 29 such depictions, and 28 were recorded in Western Trans-Baikal. The third type of stylisation has the wings depicted parallel to the body thus resembling square
anthropomorphic figures discussed above. There are 47 figures in total, and 45 are also found in Western Trans-Baikal (Figure 8.21).

Type III includes two kinds of figures, cross-like figures and bird-track-shapes (Figure 8.20:14,15). While the latter is very rare, only five figures were recorded, the former is a common design not only in Steppe and Forest Trans-Baikal, but in Yakutia as well. Despite the simplicity of the shape, this motif is recognisable and might be a bridging motif between the Steppe and Forest rock art.

Ornitho-anthropomorphic figures, 41 in total, were identified at a few sites in South-Eastern Trans-Baikal and at the larger sites of Western Trans-Baikal. The ambiguity of these figures may be a key to better understanding the ontology of those people who created this art (Figures 8.20:16,17, 8.21).

![Figure 8.21. Spatial distribution of ornithomorphs. For the list of corresponding sites, see figure caption of the Figure 8.19.](image)

**8.2.1.4. Enclosures**

This motif was considered by previous researchers as one of the most characteristic motifs of the Selenga group/style. It can be described as a rectangular- and rounded- shape figure which outlines a composition of other designs. The most common designs are rows of dots and chaotic assemblages of dots (Figure 8.22:1). It appears that rows of dots tend to be found within rectangular enclosures and chaotic dots within rounded ones, but opposite combinations also occur. There are 186 enclosure designs recorded in total, 105 are rectangular, 75 are rounded, and six are undefined. Most of them contain only dots, but 53 feature more complex compositions, such as rows of anthropomorphs, single or multiple, with dots between, under, or around them, and anthropomorphs with ornithomorphs and dots (Figure 8.22). Only one enclosure recorded
had just ornithomorphs inside. Okladnikov pointed out that depictions of birds are never found inside enclosures and tend to be shown above the design. The fieldwork data supports only the later point (Figure 8.22:4,5,10,11). Only nine enclosures in total were recorded in Eastern Trans-Baikal (Figure 8.23) and none of them have complex compositions inside. They are either very faded or contain assemblages of dots.

This motif is quite mysterious since it is not apparent what it depicts. Okladnikov noted the resemblance of the square shape of slab graves and round shape of khirigsuurs with square and rounded enclosures. However, at that time khirigsuurs were believed to belong to the Turkic period. Okladhikov suggested that enclosures symbolise a community where the dots are its members, their souls or their cattle. The equation of the universe and the community was characteristic for prehistoric societies; thus, enclosures may also express the notions about the universe and afterlife. Referring to ethnography,
Okladnikov related enclosures along with other motifs to the spring rituals of the fertility cult (Okladnikov & Zaporozhskaya, 1970, pp. 91-93).

Although Okladnikov's interpretation has been commonly accepted by other researchers, there are alternative approaches to the meaning of the enclosure motif in particular and the Selenga tradition in general. Some researchers tried to decipher the motif and surrounding compositions as a kind of prehistoric calendar related to the prehistoric knowledge of astronomy (Larichev, 2009). Although the paleo astronomical approach seems to be appealing, the problem lies in the preservation condition of rock art. Such an approach requires accuracy of data, but the Selenga rock art, owing to its open-steppe context, is significantly weathered, and exact calculations of all motifs and especially dots and vertical lines are not possible. Moreover, many of Larichev's calculations are based on Okladnikov's published tracings which proved to be inaccurate. Tivanenko approached the rock art as the early form of pictographic writing which is sheer fantasy and speculation (Tivanenko, 2011).

Adding more to the list of difficult to prove interpretations, it is tempting to suggest that the enclosure motif is a not a motif at all. Possibly it is a means of composition building when the outline encloses a one-time artistic event or a specific composition. This would explain the diversity of complex enclosure designs. Simple enclosures with just dots inside can be explained in the same way. Every site exhibits a large amount of chaotic assemblages and rows of dots, and possibly enclosures are just frames to single out specific groups of dots related to a specific event.

Figure 8.23. Spatial distribution of enclosures. For the list of corresponding sites, see figure caption of the Figure 8.19.
8.2.1.5. Zoomorphs (quadrupeds)

This category constitutes 246 out 5334 designs in total recorded in Trans-Baikal which is just 13% of the painted rock art in this database. There are 95 designs in Eastern Trans-Baikal and 246 designs in Western Trans-Baikal. However, a large part of the Eastern Trans-Baikal quadrupeds was considered in previous chapters on the earliest and the Neolithic rock art (Byrka and Taiga styles). When these figures are subtracted, only 155 zoomorphs in total in the whole Trans-Baikal are left to consider.

In contrast with previously discussed motifs, quadruped depictions demonstrate an absence of any canon – they are very diverse, and types and styles are not clearly distinguishable. However, a few groups were identified. A quite large group (19 figures) is constituted by stick figures. The quadrupeds are depicted with just three or four lines. A significant portion is found in Eastern Trans-Baikal where stick figures seem to dominate over other zoomorphs. Six designs were recorded in Western Trans-Baikal. Three figures, a doe and two boars, were defined as deer stone style since they are depicted in a manner characteristic for animal depictions found on deer stones. This is a very important finding and will be discussed in detail in the next section. The majority, 102 designs, were labelled as Selenga-associated group which included a quite diverse array of wild quadrupeds, such as elk, deer, boar, ibex, possibly wolf, and domesticated quadrupeds such as horse and dog, although in most cases, species are impossible to determine with confidence. Thirty-one figures are very faded and were labelled as undefined.
8.2.1.6. Selenga tradition defined

To conclude this analysis, it is necessary to provide a definition of the Selenga tradition. Although this rock art is also found in Mongolia, so far it is possible to give a characterisation of only Trans-Baikal materials. The Selenga tradition is present in both Eastern and Western Trans-Baikal and includes the following elements: (1) it is dominated by non-figurative motifs such as rows of dots and chaotic assemblages of dots which often occur in compositions with (2) simple and stick anthropomorphic figures with herringbone-like or square shoulders. Anthropomorphs are often depicted in rows. These compositions also might include (3) ornithomorphs. They are quite diverse in the manner they are depicted and include the following types: naturalistic, stylised and schematic. All listed motifs are sometimes found within (4) enclosures, which can be round or rectangular and dominated by a simple variant featuring only assemblages of dots inside. This is the canon, or the core, of the Selenga tradition which also has regional variants and marginal types of depictions.

Two regional variants, Eastern-Trans-Baikal and Western-Trans-Baikal are defined. The main difference lies in the proportion of motifs present: 1) more vertical lines in the Eastern variant which can be explained be the influence of the Forest rock art tradition; 2) more crosses in Western Trans-Baikal and more saltires in Eastern; 3) anthropomorphs are more commonly depicted in rows in the Eastern variant; 4) square anthropomorphs are abundantly present in Western Trans-Baikal while in the Eastern variant only those with square shoulders are rarely found; 5) ornithomorphs are rather characteristic for the Western variant and rarely found in Eastern Trans-Baikal; 6) enclosures are also more abundantly present in Western Trans-Baikal, in the Eastern variant only simple ones with just dots inside have been recorded.

Zoomorphs appear to be rather a marginal type of imagery since they do not constitute a significant proportion in the tradition and do not feature any specific style found throughout Trans-Baikal. This is quite a small and diverse group, and some pictures may be expressions of local identities while some are evidence of alien rejected/non-incorporated influences. This group is very interesting to consider in a wider context of Siberian and Central Asian rock art traditions which is undertaken in the next section.
8.2.2. Selenga rock art tradition in time and space

The Selenga rock art group was first related to the Late Bronze Age based on analogous depictions on bronze artefacts (Okladnikov, 1952). The most famous example which can be found in all later reviews of the Trans-Baikal rock art (e.g., Dikov, 1958; Grishin, 1975, 1981) is a Karasuk-type bronze knife with anthropomorphic depictions on its handle recovered from a slab grave near the city of Nerchinsk in Eastern Trans-Baikal by Fidler in 1833, which is held by the British Museum (Figures 8.25:3, 8.29:9). Later Grishin related this grave to the Tapkhar stage of the slab grave culture (10th-6th Centuries BC) (Grishin, 1981, p. 129). The British Museum website suggests it dates to 1000 BC-801 BC (circa). Other examples referred to by Okladnikov are two Tagar-type knives from Ordos-Suiyuan area in China (Figure 8.25:4,5). Their context is unknown since they were purchased on the Peking market in the 1940s for the Sawyer collection (Loehr, 1951). Both knives feature depictions of bird figures very similar to those present in the Selenga-type rock art. Okladnikov also pointed out that animal depictions in the Selenga group stylistically resemble those present on artefacts of the Scythian animal style and deer stones which also supports the chronological attribution of the group to the Tagar period (Figure 8.15:1,6). Interestingly, already in that early article Okladnikov wondered that if the Selenga rock art is related to the Scythian-Tagar time then why it is so different from the rock art associated with this period in other areas of

Figure 8.25. Okladnikov’s analogues for the Selenga group of rock art. 1. ? 2 – Mongolia, 3 – Fidler’s knife, 4, 5, 6 - Ordos-Suiyuan. After Okladnikov & Zaporozhskaya (1970).

31The English spelling of his name is unknown since it is encountered only in Russian-language literature. The original drawing which travels through all publications also comes from a Russian source (see Okladnikov, 1952). The information on the online collection database of the British Museum does not provide this information.

Interestingly, the drawing of the knife which is re-used in each seminal work on either rock art or the Bronze Age of Trans-Baikal (Dikov, 1958; Grishin, 1975, 1981; Okladnikov & Zaporozhskaya, 1970) comes from Friedrich Gustav Klemm’s letter to secretary of the Imperial Russian Geographic Society dated to 1858 informing on this finding with the drawing attached (Klemm, 1858). In addition, as early as in 1917 a high-quality photograph of this knife was published in Tallgren (1917, Fig. 26).

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https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=263164&partId=1&place=40925&object=21931&page=1

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Scythian-like cultures. Although he suggested that this can be explained either by chronological succession which is less likely, or by the fact that these groups of rock art images had different functions. This question is still relevant today.

Dikov (1958, pp. 48-49) suggested, in reference to the Fidler’s knife, that animalistic depictions in the Selenga rock art are more naturalistic than in bronze artefacts, resembling earlier deer stones, and that the Selenga-type rock art can be related to the Middle Bronze Age. In the Late Bronze Age, it co-existed with deer stones and metal art objects, and the latter could have borrowed some motifs from the older Selenga rock art.

Later, Okladnikov supported the earlier age of the Selenga rock art noticing more links between the rock art and slab graves. Some slabs of the slab graves were decorated with petroglyphs in similar motifs and styles. One peculiar motif is two horizontal lines interpreted as “roads” incorporated in compositions with other typical Selenga motifs (Figure 8.35:1). In addition, the Ul’ba slab grave yielded a depiction of the Karasuk-type knife with an ibex-figure-pommel (Okladnikov & Zaporozhskaya, 1970). Thus, Selenga rock art, Karasuk-type artefacts and slab graves are all connected. In addition, another bronze knife with depictions of birds was found during surface surveying in Mongolia (Figure 8.25:2) (Okladnikov & Zaporozhskaya, 1970, p. 81; Volkov, 1967). Later Dorzh and Novgorodova (1975, p. 43) mentioned another bronze knife from Sükhbaatar aimag in Mongolia featuring depictions of horses on one side of the handle and birds on the other.

However, slab grave petroglyphs employed a different technique to the Selenga rock art technique which is relief and more common for the rock art of the Scythian time found in Mongolia, South Siberia, Altai etc. Another point to consider is that Okladnikov emphasised that the Selenga rock art occupies the Selenga basin with the easternmost area being the Uda River basin, because its markers, enclosures and ornithomorphic figures, are not found in Eastern Trans-Baikal. However, Nerchish, where Fidler’s knife comes from, is located in Eastern Trans-Baikal, secondly, the area of slab grave culture occupies a large part of Eastern Trans-Baikal, and finally, Ul’ba mentioned above is located in the Onon River basin also in Eastern Trans-Baikal.

Another answer to Okladnikov’s question was offered by Grishin (1981, p. 167) who suggested that the Selenga rock art is rather related to the late stage of the slab grave culture. The argument was based on a bronze plate from Titovskaya hill near the city of Chita held by the Chita regional museum, the finding context of which is unknown (Figure 8.29:7). He noticed that this type of plate was recovered from the Karasuk-time complexes in Mongolia as well as from complexes dated to 3rd Century BC-8th Century AD in Trans-Baikal. Later he revised this conclusion and suggested that this piece of evidence may
indicate the survival of the Selenga rock art well into the 1st Millennium BC long after the disappearance of the slab grave culture (Grishin, 1982).

The 1970s excavations of the Dvortsy complex which became a key site to determine the Dvortsovskaya culture yielded bronze belt plates with carved depictions of birds which exhibit an apparent resemblance with the rock art (Figure 8.37:6) (I. I. Kirillov, 1979a). There is no information on the exact age of the grave from which these objects were recovered (see I. I. Kirillov & Kirillov, 2011d), and the chronology of the culture itself is not clear (see Chapter 4). However, undoubtedly this finding belongs to the Late Bronze Age.

More pieces of evidence were later assembled by Tivanenko (1990, pp. 56-60) to support the established chronological attribution. However, they are rather inconclusive about the age of the Selenga rock art. Two forms of evidence are related to depictions of a wheel-like design which is commonly interpreted as a solar symbol. Firstly, he refers to similar depictions on the stelae of the Early Bronze Age Okunevo culture in the Minusinsk Basin and, secondly, he noted many analogues to what is found on pommels of the Tagar bronze knives. However, a motif of a circle with a cross inside resembling a wheel or a solar symbol is found throughout Eurasia and in different contexts, hence the Okunevo art barely can serve as an analogue. Moreover, this motif is not characteristic for the Selenga tradition – only five figures out of 1814 abstract designs were in total recorded in the project fieldwork. Two more of Tivanenko’s arguments pointed out the analogue for firtree-like figures, according to him, commonly present in the Selenga group and found on some bronze knives. However, no such design is found in the Selenga rock art. Another analogue was depictions of arrow-like figures on pottery found in Eastern Mongolia related to the Bronze Age (Navaan, 1974). This argument is rather inconclusive since only a drawing is available, and the depictions bear no resemblance to the Selenga rock art. Moreover, no similarity between the ornamentation of the pottery sherds with rock art images was mentioned by the author of excavations (Navaan, 1974). An interesting analogue was found between V-shaped figures present in the rock art which could be schematic ornithomorphic depictions and depictions of V-shaped symbols found on a bronze knife from unknown archaeological context in an area near Duryony published by Dikov. Finally, Tivanenko argues finding depictions of a tripod and a bronze knife with an ibex-like pommel at the Bichura rock art site similar to petroglyphs of a tripod and a bronze knife recorded at the slab graves Khongor-Bator and Ul’ba. These arguments cannot be verified because most of the Bichura site was destroyed (see Chapter 5), and among remaining rock art no such depictions were recorded. In addition, Tivanenko’s
references should be taken with caution because many inaccuracies between his published tracings and actual rock art can be found.

Although all analogues discussed above point to the same quite broad time-period, they do not have a clear dated archaeological context. Researchers referred to analogous depictions found on bronze artefacts from unknown or undated archaeological complexes. Mazin aimed to clarify the issue undertaking excavations at rock art sites. Although the direct link of archaeological deposits uncovered at rock art sites is difficult to prove, importantly, this study provided evidence for various activities at those places. Three sites featuring Mazin’s Steppe style were related to the Late Neolithic based on: (1) artefacts uncovered from the lower layer of the Urulyunguy I, (2) a radiocarbon date 6734±97 uncal. bp yielded by an offering spot at the Nortuy I, and (3) pottery with cord impression uncovered at the Drovyanoy. These facts do not prove the age of the rock art style but rather indicate human activity at the sites. All archaeological deposits uncovered from rock art sites were interpreted in terms of ritual activities by Mazin thus providing a connection between the rock art and the deposits. The Urulyinguy I site was surveyed during this project fieldwork, and it seems that the rock could be suitable as a shelter as well. Thus, artefacts from the lower layer could have been left there by people during a short stay any time before the rock art was placed. Nortuy I and Drovyanoy were searched for but were not located.

Since the time when seminal works discussed above came out, only a few more pieces of portable art comparable to rock art appeared in the literature, but their context is either unknown or the analogue is inconclusive. Unfortunately, slab graves and khirigsuurs do not yield rich grave good assemblages because of the specifics of the mortuary protocols and because many of them were plundered in antiquity. However, considering the Selenga tradition in a broader context of archaeological and rock art connections might be promising for placing this rock art in time and to define its role in prehistoric ethno-cultural processes. It appears that this tradition, having a significant local substrate, engaged with alien elements during the millennia of its development. The evaluation of this is undertaken bellow.

8.2.2.1. Early Bronze Age components

Several motif types recorded at the painted sites of Trans-Baikal indicate a connection of these sites to the Early Bronze Age rock art of the Baikal region and Yakutia suggesting Early Bronze Age origin of the Selenga tradition.

Five V-shaped figures are found at three rock art sites, Shara-Tala, Dvortsy and Smolenskiye Skaly (Figure 8.26:12-15). Horned figures are found at the Pilotka, Suduntuy and Bain-Khara Cave sites (Figure 8.26:4,6,7). While Dvortsy, Smolenskiye Skaly and
Pilotka, which are located in Zabaykalsky Krai, were discovered in recent years, rock art of Shara-Tala (Figure 8.5:4) and some figures of the Bain-Khara Cave (Figures 7.9, 8.32:3) were identified by Okladnikov as belonging to the hunting rock art group which needs reconsideration. Okladnikov related nine sites to this group (Figure 8.5), and some of them were surveyed during this PhD fieldwork (Table 8.1). From a careful review of the sites, it is clear that there is no reason to suggest the presence of this group. Firstly, many sites are destroyed and cannot be revisited, and secondly, the remaining sites do not constitute a homogenous stylistic entity or geographic area. However, the idea of the presence of specific rock art in the forested areas of Trans-Baikal is still relevant, although this rock art more likely belongs to the Early Bronze Age.

Table 8.1. Okladnikov’s hunting group of the Trans-Baikal rock art sites (corresponds to Figure 8.5).

<table>
<thead>
<tr>
<th>Fig</th>
<th>Site</th>
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<tbody>
<tr>
<td>1</td>
<td>Angir (Angir-I-Maltay-Shuluun)</td>
<td>Surveyed. Features Selenga style and the influence of the deer stone style. Found in the Steppe landscape.</td>
<td></td>
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<tr>
<td>2</td>
<td>Suduntuy</td>
<td>Surveyed. Found in the Steppe landscape. A zoomorph in Byrka style traced (see Chapter 6). Horned anthropomorphic figure recorded.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Temeen-Shuluun</td>
<td>Lbova and Khamzina (1999) described the site as featuring the Selenga style imagery. Not present in later archaeological summaries.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Shara-Tala</td>
<td>Surveyed. Found in the Forest landscape. Imagery includes V-shaped anthropomorphic figures.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tamgatuu-Khoshuun</td>
<td>Mentioned by Lbova and Khamzina (1999). Not present in later archaeological summaries.</td>
<td></td>
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<tr>
<td>6,8</td>
<td>Onokhoyskaya</td>
<td>Destroyed (Lbova &amp; Khamzina, 1999).</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Naushki</td>
<td>Destroyed (Lbova &amp; Khamzina, 1999).</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Butikha</td>
<td>Surveyed. Found in the Forest landscape. Mazin (1986) attributed to the Final Pleistocene-Early Holocene period (see Chapter 6).</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Sali</td>
<td>The preservation condition unknown. Found in Forested landscape in very remote area of Trans-Baikal. Vetrov and Mil' (1999) pointed out the resemblance of the imagery with the Steppe rock art.</td>
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One of the main arguments for attributing anthropomorphic figures with V-shaped bodies and horns was the comparison to analogues present on the pottery of the Early Bronze Age Samus’ culture in West Siberia. Another argument was that the Glazkovo cultural remains were uncovered in the vicinity of the Sagan-Zaba rock art site. To date, much more archaeological evidence has been accumulated which allows support for Okladnikov’s viewpoint and gives a more nuanced picture.

Nine items of ceramic vessels or their fragments with anthropomorphic depictions come from the Glazkovo complexes (Figures 8.26:1,3,5, 8.29:3-5) (Goriunova & Novikov, 2009; Khlobystin, 1987, p. 404). Another vessel with anthropomorphic depictions was found in Yakutia in a complex of the Ulakhan-Segelennyahkh culture (Figure 8.29:2) which is considered to be related to the Early Bronze Age of the Baikal region (Dyakonov, 2012, 2014a). Not all types of figures present on pottery can find their counterparts in rock art due to the peculiarities of media used. However, two types, namely V-shaped and horned figures, yield numerous analogues (Figure 8.26). In addition to depictions on
pottery, there is a bronze medallion with a depiction of a horned anthropomorph which comes from the Glazkovo burial context (Figure 8.26:2) (Goriunova & Weber, 2017). The Glazkovo art also includes other numerous anthropomorphic depictions expressed in items of portable art (see Okladnikov, 1955a; Studzitskaya, 1981, 1987), but their direct comparisons with rock art are problematic.

In Yakutia, 18 V-shaped figures were recorded (Figure 8.26:17). Seven figures are quite peculiar featuring the head and the torso joined together in a rhomboid shape (Figure 8.7:1). This kind of figure can be seen on a Glazkovo pottery sherd (Goriunova & Novikov, 2009, Fig. 2.4). Three V-shaped figures also have horns, one of them is also shown in X-ray manner and another possibly showing a shamanic dress. In Yakutia, there are six more horned anthropomorphic figures which do not feature a V-shaped torso (Figure 8.26:9). Similar figures are also found on the Glazkovo pottery and metal cast (Figure 8.26:1-3). Interestingly, similar V-shaped anthropomorphic figures are found as far as at the Maya rock art site (Figure 8.4:5) and in the Lower Amur River basin. Although the evidence presented comes from the Early Bronze Age complexes, another piece of pottery
(Figure 8.26:10) shows that this type of image could have been present in the Late Bronze Age as well. One rock art depiction is found in a context of a runic inscription thus suggesting the survival of this iconography well into the Middle Ages.

Therefore, although few pieces of evidence show the survival of the anthropomorphic figure with V-shaped torso into the later epochs, most of the archaeological evidence implies that this iconography, along with figures with horns and depicted in X-ray manner are motifs characteristic for the Early Bronze Age of East Siberia. In Trans-Baikal, they are found along with other imagery, such as simplified zoomorph figures, possibly elk, groups of dots and vertical lines, and simple anthropomorphs. At the Shara-Tala site, a V-shaped anthropomorph is superimposed by a brighter looking elk figure, thus implying its relatively younger age (Figure 8.26:14). Similar zoomorphic imagery is also present at other rock art sites of Trans-Baikal located in the forested areas and surveyed during this project. These are: Butikha, Borshchovochny, and Shaman-Gora Location # 5 (Figure 8.27). Another site, Imandan-Makit, was discovered recently and the information and photographs were generously provided by Alexander V. Konstantinov (Figure 8.27:1).

Similar simplistic figures of quadrupeds are also found at the Steppe rock art sites: Ust’-Tsonor, Suduntuy, Khotogoy-Khabsagay, Nadeino (Pavlova Mountain), Ayryk, Khaylasyn, Oboto, Tsolga II, Bain-Khara Cave and Beshegte-Baytsa (Ara-Kiret’) (Figure 8.28). Interestingly, anthropomorphic horned figures are also found at the Steppe rock art
sites, such as Pilotka, Suduntuy and Bain-Khara cave (Figures 8.26.4,6,7). Some of the listed sites are the largest sites in the region: Bain-Khara Cave with 647 designs, Beshegte-Baytsa (Ara-Kiret’) with 439 designs, and Khotogoy-Khabsagay with 311 designs. While there is not enough evidence to relate the identified kind of imagery, such as simplified

Figure 8.28. Zoomorphs of the Steppe Trans-Baikal similar to those recorded at the forest sites. 1 – Ust’-Tsoron, 2 – Suduntuy, 3 – Khotogoy-Khabsagay, 4 – Nadeino (Pavlova Mountain), 5 – Khaylasyn, 6 – Oboto, 7 – Ayryk, 8 – Bain-Khara Cave, 9 – Tsolga II, 10 - Beshegte-Baytsa (Ara-Kiret’). Photo I. Ponomareva, enhanced with DStretch.
quadrupeds and horned anthropomorphic figures of Trans-Baikal to the Early Bronze Age, it can be suggested that the largest sites could have existed since that time. Their relative antiquity as compared to other Steppe rock art sites could have justified them as more powerful, significant and spiritually loaded places. They yield not only Bronze Age imagery of several styles but also much more recent Buddhist and Old-Mongolian inscriptions, thus proving their importance and active functionality over millennia. Therefore, more research is needed on this group of sites to identify stages of rock art production and their age.

It was noted, that anthropomorphic figures are often found arranged in rows holding each other’s hands. This motif, although characteristic for the Selenga rock art, especially for the sites of Eastern Trans-Baikal, appears to be quite widely encountered in
time and space. The furthest analogue can be found on a Neolithic ceramic vessel from
the Maritime territory, Russian Far East (Figure 8.29:1). The vessel belongs to the
Vetkinskaya culture dated to 6100–5800 uncal. bp (Brodyanskiy, 2013). Brodyansky also
pointed out the resemblance of Neolithic lithic technologies of Eastern Trans-Baikal and
Russian Far East. The relations between the two areas in the Neolithic were already noted
by earlier researchers (Grishin, 1981; Okladnikov, 1970; Okladnikov & Kirillov, 1980).
Trans-Baikal and the Far East are also territories where the earliest pottery is found (see
Chapter 4). These links are of special importance when recalling Mazin’s hypothesis that
the earliest Steppe-style sites appeared as early as in the Late Neolithic. Rows of
anthropomorphic figures can be also found in the Early Bronze Age rock art and pottery
of the Baikal region and Yakutia (Figure 8.29:2–5). The motifs persisted well into the later
periods and are found on bronze plates from Trans-Baikal. One from Titivskaya sopka was
mentioned above (archaeological context unknown, suggested age 3rd Century BC–8th
Century AD) (Figure 8.29:7). Another was published in I. I. Kirillov and Kirillov (2011c)
(Figure 8.29:8), but no information was provided on its context. These plates resemble
some enclosure designs with rows of anthropomorphs inside (Figure 8.22:7). Interestingly,
both plates are from Eastern Trans-Baikal, although enclosures are abundantly found in
Western Trans-Baikal. Rows of “dancing” anthropomorphs are present even wider and, for
instance, can be found in the rock art of the Tagar culture in the Minusinsk Basin (Figure
8.29:10) (Sovetova, 2005, p. 34, Pl. 26,2). Thus, the question that arises is whether the wide
occurrence of the motif is a matter of coincidence or related to a common substrate of
Siberian cultures. In the case of the latter, the Selenga rock art at least might have roots in
the cultures of the Neolithic–Early Bronze Ages. The commonness of the motif of rows of
anthropomorphs thus exhibits continuity in religious beliefs and practices during
millennia. This conclusion agrees with suggestions put forward by previous researchers
(Mazin, 1994; V. A. Tsybiktarov, 2011).

Another type of imagery that connects the Selenga tradition with the Taiga rock
art is a schematic ornithomorphic figure resembling an arrow pointed upward. This is a
common depiction found throughout East Siberia (Figure 8.30:2). An analogue comes from a pottery
vessel unearthed from the Severobaikal’sk I site

Figure 8.30. A cross-like figure of the Trans-Baikal painted tradition and its analogue. 1 – Severobaikal’sk I (after Kharinsky, Yemelyanova, & Rykov, 2009), 2 – Khotogoy-Khabsagay (tracing I. Ponomareva).
in the North Baikal area. This type of pottery is dated to 2400-1200 BC (Figure 8.30:1) (Kharinsky et al., 2009).

Therefore, the Selenga tradition has its origins in the Early Bronze Age rock art tradition of the Taiga zone of Siberia exhibiting continuity not only expressed through motifs and motif types in rock art but also evidenced by the continual ritual usages of some rock art sites since the Neolithic.

8.2.2.2. Karasuk-period components

In the previous section a group of stick quadrupeds was identified among zoomorphs recorded at the sites of the Selenga tradition. The extreme simplicity of their appearance does not allow for stylistic comparisons; however, some suggestions can be put forward.

The Minusinsk Basin of South Siberia is undoubtedly the most well-studied area in Siberia regarding rock art styles and their chronology. A peculiar petroglyphic tradition was described and related to the Karasuk culture of the Late Bronze Age based on findings of stone slabs decorated with petroglyphs in burial complexes (Kovaleva, 2011). The tradition was characterised as overall geometric because of the way quadrupeds were depicted. Three styles were identified, 1) linear in which quadrupeds' torsos are depicted with a single line, 2) conditionally-realistic, similar to the previous one but slightly more naturalistic, and 3) geometric in which the torso has a rectangular shape with vertical stripes inside. All three styles existed synchronously during the classic Karasuk (13th-11th Centuries BC) and the Kamennolozhskiy stage/culture (10th-9th Centuries BC). Although these depictions are quite simple in style which is an obstacle for broad comparisons, Kovaleva pointed out that these figures are different from simply-depicted quadrupeds of later periods in that four legs and ears as short lines are always shown. Trans-Baikal stick quadrupeds have only two legs, but at the Suduntuy site in Eastern Trans-Baikal a composition of several quadrupeds is strikingly similar to the Karasuk linear style (Figure 8.31:1,2,5). Next to them, an anthropomorph with square shoulders is depicted. Interestingly, this type of anthropomorph figure so characteristic for the Selenga tradition is also present in the Karasuk tradition and not found in the rock art of the following Tagar period.

A bronze anthropomorphic figure exhibiting square shoulders was unearthed from the Okunevaya-4 site located on the peninsula Svyatoy Nos, eastern coast of Lake Baikal (Figure 8.31:3). The figure was recovered from Layer I which contained mixed materials from the Late Bronze Age to the Middle Ages (Goriunova & Lykhin, 1985). Similar depictions of anthropomorphs with square shoulders are abundantly present in the Selenga rock art. The bronze figure also features a large round head, a characteristic
that is not common but present at some sites. A large ithyphallic anthropomorph with square shoulders was recorded at Bain-Khara cave. It is accompanied by four elongated zoomorphs executed in the same pigment which is lighter than the surrounding rock art (Figure 8.31:4). This panel exhibits superimposition, but figures are very faded, and more research is needed to confirm the stages of rock art production. However, this scene

Figure 8.31. Selenga tradition (1,4,7,8,9), its Karasuk (2,5) and other Late Bronze Age analogues (3,6,10,11). 1 – Sudunduy, 4 – Bain-Khara Cave, 7 – Galtay II, 8 – Ust'-Tsoron, 9 – Gorodovoy Cliff (tracings and photos I. Ponomareva, enhanced with DStretch), 2 – Il’inskaya II, 5 – Yesino III (after Kovaleva, 2011), 3 – Okunevaya-4 (after Goriunova & Lykhin, 1985), 6 – Ust'-Mil' (after Dyakonov, 2014), 10 – Kalbak-Tash I (after Francfort, Jacobson, Kubarev & Sher, 1994), 11 – Ustyu-Mozaga (after M. A. Devlet, 2094).
strikingly resembles a composition present on the Karasuk slab from Yesino III (Figure 8.31:5).

Quite peculiar anthropomorphic depictions with mushroom-like headdress are present in the Late Bronze Age rock art of Altai and Tuva (Figure 8.31:10,11) (M. A. Devlet, 2004b; Francfort et al., 1996) which are also found in the Karasuk rock art complexes, and a few anthropomorphs with similar headdresses were recorded at the sites Ust’-Tsoron (Eastern Trans-Baikal) and Gorodovoy Cliff (South Buryatia) (Figure 8.31:8,9).

It appears that this group of imagery indicates the connection of Trans-Baikal with other early nomadic cultures of Central Asia and South Siberia and its participation in a continental network of contacts. Possibly, simplistic zoomorphic depictions and square anthropomorphs are epochal markers of the Late Bronze Age monumental art since they are broadly present at that period.

8.2.2.3. Mongolian-Trans-Baikal style

Another alien style that is found at the sites of the Selenga tradition is the deer stone style. An exceptional picture was recorded during PhD fieldwork featuring a painted figure of a doe identical to deer depictions found on deer stones of the Mongolian-Trans-Baikal type (Figure 8.32:6).

According to Savinov (1994), deer stones are decorated anthropomorphic stelae without any particular anthropomorphic characteristics but featuring complex pictorial symbolics, related to various kinds of burial and ritual structures and widely present in the whole steppe belt of Eurasia in the Early Scythian time. Savinov sees its origin in the Okunevo culture of the Early Bronze Age in Minusinsk Basin which was displaced southward by the alien Andron culture of the Middle Bronze Age, where it survived, possibly until the Late Bronze Age. Although the issue of deer stones has an extensive bibliography, and several approaches were suggested, the most commonly accepted view is that there are three types of deer stones (Volkov, 2002): (1) Eurasian without animalistic depictions; (2) Sayan-Altai featuring naturalistic animalistic depictions; and (3) Mongolian-Trans-Baikal with ornamentally stylised figures of deer. While the majority, approximately 800 out of 1000, were found in Mongolia, in Trans-Baikal only 10-12 deer stones are known (Dashilkhamaev, 2010; Dikov, 1958; Grishin, 1981; Okladnikov, 1954b). The number is unprecise because some information comes from early studies which only briefly mention them without any illustrations. Thus, Trans-Baikal is a periphery of the eastern area of deer stones (Savinov, 1994).

In Mongolia, deer stones are related to khirigsuurs, and it was suggested that the distinct culture of khirigsuurs and deer stone needs to be identified in the archaeological record, an idea in agreement for Trans-Baikal (A. D. Tsybiktarov, 2011). However, some
researchers believe that such identification is not sufficiently grounded (Savinov, 1994). The latter can be supported by the fact that the area of khirigsuurs does not coincide with the area of deer stones. While khirigsuurs are present in Western Trans-Baikal, deer stone of the Mongolian-Trans-Baikal type have been reported from Eastern Trans-Baikal as well (Figure 8.32:4,5) (Dashilkhamaev, 2010; Grishin, 1981). Savinov related this type to 10th-8th Centuries BC which is synchronous with the Kamennolozhskiy stage/culture in the Minusinsk Basin.

In Mongolia and Trans-Baikal deer stones were found in two contexts, such as (1) within khirigsuur complexes and (2) re-used in slab graves. This raises a question of what role the tradition of deer stones played in the slab grave culture. The tradition of erecting stone stelae as part of burial complexes has deep roots in South Siberia and Central Asia (Bemmann & Brosseder, 2017; Savinov, 1994). In Trans-Baikal, the term “deer stones” was often misused when referring to other kinds of stelae. Numerous stelae are found in structures of slab graves, and A. D. Tsybiktarov (2016a) suggested distinguishing them as pseudo-anthropomorphic stones. They are similar to deer stones in that they are also found in burial complexes and slightly resemble a human figure, but they do not feature imagery characteristic for deer stones.

Although zoomorphic depictions are not characteristic for the Selenga tradition, there are several sites where quadruped motifs are abundantly present. One of them is Angir-I. Maltay-Shuluun in the Uda River basin (Figure 8.32:1,2). Two central panels

Figure 8.32. Selenga tradition and the Mongolian-Trans-Baikal style of deer stones. 1, 2 – Angir I. Maltay-Shuluun, 3 – Bain-Khara Cave, 6 – Shara-Khunduy (photo I. Ponomareva, enhanced with DStretch), 4 – deer stone from the Ingoda River, 5 – Chindyly deer stone from the Aginsk area (after Dashilkhamaev, 2010), 7 – Ivolga deer stone (after Okladnikov, 1954), 8 - deer stone from the Gusinoye lake.
feature a bright-red picture with numerous figures of wild animals such as elk, deer, and ibex along with anthropomorphs, ornithomorphs and rows of dots characteristic of the Selenga tradition. Zoomorphs are static, with only two legs shown, and the manner in which they are shown is quite specific. This manner can be better seen in the large figure of elk on the left panel. It is easily recognisable as elk because of the beard being shown. However, the figure is stylised in that it is slim with an extremely elongated muzzle resembling a bird beak, a pointed triangular shaped hump, rounded croup and stifles emphasised. Stylistically similar figures of a stag and a doe are present at the Bain-Khara cave (Figure 8.32:3). Although some features such as beak-like nose, pointed hump and elongated body relate the Angir elk to the Mongolian-Trans-Baikal deer stones, its more naturalistic manner of depiction may be an indication of its younger age. Possibly this is a transitional form to what can be seen at the Bain-Khara cave. An occurrence of these zoomorphs with ornithomorphs at the same panel made with same-colour pigment implies their concurrency which may also be an indication of the age of the ornithomorphic motif in the Selenga tradition.

8.2.2.4. Scythian-period complex: zoomorphs

Another, Sayan-Altai type of deer stone is related to 8th-6th Centuries BC which is the Early Scythian time (Savinov, 1994). Animalistic depictions, most commonly deer and boar, found on these stelae were identified as Arzhan-Mayemir style owing to its occurrence in the Early Scythian complexes (Figure 8.33:2-5) (Savinov, 1994, 1998; Sher, 1980). This type of deer stone is not found in Trans-Baikal, but there are few rock art sites that feature stylistically similar imagery.

A composition was revealed at the Bayan site in the Dzhida River basin featuring rows of dots, characteristic for the Selenga tradition and two zoomorphs below placed one
under another (Figure 8.33:1). The upper figure is identifiable as a boar in the Sayan-Altai style because of its elongated and pointed downward legs. Similar depictions of boars are found not only on deer stones but also are widely present on objects of the Scythian animalistic style. Interestingly, petroglyphs in deer stone style were revealed at the Shishkino site further north, in the Upper Lena River basin (Figure 8.9).

Other depictions of zoomorphs feature minor resemblance with Scythian-time monumental art and can be only be presumably related to this period. Scythian animal style is extraordinarily peculiar and highly recognisable in the manner animals such as deer, feline, horse, bird-of-prey, gryphon, wolf, etc. are depicted on metal items such as weapons, horse harnesses, clothes, adornments, and bronze kettles. Frozen burial mounds of the Pazyryk culture in the Altai Mountains yielded fantastic organic materials richly decorated with Scythian-style art such as fabrics, rags, horse masks and saddles, and mummified human remains featured tattoos on their well-preserved skin. Rock art related to this period in Altai and Yenisey basin also features a resemblance to the Scythian art objects although adopted to another kind of media and is regionally specific. The Selenga rock art is remarkably different to this rock art in the set of motifs which is not dominated by animal depictions with the exception of the ornithomorphic motif and that it employs a technique of rock art painting.

Horse is an important motif in the Scythian-time art. It is present in portable art as well as in rock art, for instance Tagar petroglyphs of horses are one of the most stylistically recognisable. Although there are no analogous depictions in regard to style, there are a number of horse figures at the Selenga rock art sites (Figure 8.34). Two panels with depictions of horses were recorded at the Khotogoy-Khabsagay site located in the Uda River basin. On one panel they are rather schematic, but the dynamics of galop is recognisable (8.34:7). On another, three figures’ croups are outlined in a similar manner as elk and deer figures from Angir-I. Maltay-Shuluun and Bain-Khara Cave (Figure 8.34:2). Two horse-like figures were also recorded at the Baraun-Konduy II/2 in Eastern Trans-Baikal, but they are very faded (Figure 8.34:6). Two more depictions of horses are found at the Nadeino (Pavlova Mountain) in the Selenga River basin which resemble schematic ones from the Khotogoy-Khabsagay (Figure 8.34:1). A pair of horses placed one behind another with two horizontal lines above is present at the Ust’-Kyakhta site (Figure 8.34:5). Another pair of horses placed one above another, also with a horizontal line above, was recorded at the Bichura site (Figure 8.34:3). An interesting composition was recorded at the Lovtsov Ugol (Lovtsov Log) site featuring symmetrically paired horses (Figure 8.34:4). Several zoomorphs are depicted in a manner which preliminarily can be named as dynamic (Figure 8.35). This small group includes figures which are difficult to determine
in terms of species. Possibly, among them are deer, wolf, feline or lynx. They are characterised by rounded lines of torso and head, and the front legs are shown as if in a preparation to jump. Some figures feature their tails curved and pointed upward which may indicate that they are felines (Figure 8.35:5,6). Today in Trans-Baikal, a near

Figure 8.34. Horses in the Selenga tradition. 1 – Nadeino (Pavlova Mnt), 2, 7 – Khotagoy-Khabsagay, 3 – Bichura, 4 – Lovtsov Log, 5 – Ust’-Kyakhta-1, 6 – Baraun-Konduy II-2. Photo I. Ponomareva, enhanced with DSretch.
threatened small wild manul cat inhabits grasslands and mountain steppes. Snow leopards have been spotted in mountain areas of Buryatia and Zabaykalsky Krai. The endangered Siberian tiger which now inhabits Russian Far East and Northeast China is assumed to have ranged as far as Eastern Mongolia before it was hunted down almost to extinction in early 20th Century. Trans-Baikal is also inhabited by lynx. Its appearance is similar to cats, but they have a short tail, and possibly some feline-like figures without tails may be lynx depictions (Figure 8.35:7). Predators such as wolves and felines are important motifs in Scythian art. It is believed that the feline motif is more common for the Early Scythian art

Figure 8.35. Dynamic zoomorphs of the Selenga tradition. 1 – Gol-Tologoy, 2 – Barun-Alan, 3 – Ust’-Kyakhta-1, 4, 5 – Narin-Khunduy, 6 – Kheltegoy-Baytsa, 7 – Perevoznaya-3. Photo I. Ponomareva, enhanced with DStretch.

Figure 8.36. Strange zoomorphs of the Selenga tradition. 1 – Mondogor-Khapsagay-4, 2 – Voznesenovka, 3 – Ayryk-3. Photo I. Ponomareva, enhanced with DStretch.
but transformed into the wolf motif in the Late Scythian time period (Figure 8.35:3) (see Kubarev & Cheremisin, 1987). However, although these motifs appear to be present in the Selenga tradition, characteristics identified for depictions of predators in Scythian style are not found in the Trans-Baikal figures. Another small group is stylistically different from the previous but similar in that it may also feature depictions of felines (Figure 8.36). These animals are shown in static poses with two legs pointed down. The shapes of their torsos and heads are inconclusive for determining species but they all feature a long and curved line along their backs which could be a long tail. One figure also has large claws (Figure 8.36:2).

8.2.2.5. Ornithomorphs

As was pointed out, a large part of the Selenga tradition, especially in Western Trans-Baikal, is constituted by the ornithomorphic motif. Depictions of birds are not very common for Siberian rock art, but they occur. There are depictions of swans and ducks in the Lower Amur River basin and on the western coast of Lake Baikal which are depicted in profile, but birds of Trans-Baikal are birds-of-prey depicted in flight with their wings spread out, and this is an important characteristic when searching for analogues (Figure 8.37:5). Several artefacts were already mentioned with similar depictions: two knives from Ordos and a knife from Mongolia with depictions of birds on their handles referred to by Okladnikov (Figure 8.25:2, 4, 5), and bronze plates from the Dvortsy complex (Figure 8.37:6). Grishin also mentioned a bronze plate with a stylised depiction of a bird from the site Delyun-Boldok which he related to the Late Scythian-Tagar time, but the illustration provided is quite unclear (Figure 8.37:7) (Grishin, 1962; 1981, p. 115). A peculiar art object was recovered from Layer 1 of the Dvortsy-1 site (Figure 8.37:8). The head of a bird-of-prey was sculptured from a piece of antler and, in addition, another depiction of a bird was carved on the side. The layer was related to the Bronze Age (I. I. Kirillov, 1979b). Dyatchina, Kirillov, and Kirillov (2011) mention a zoo-anthropomorphic depiction showing a human-bird figure with spread out wings-arms and tail-like torso carved from a thin bronze sheet recovered from Layer 1 of the Duroi site, but no illustration is provided. Mazin found two iron figures of birds in a crevice of the Kopchil rock art site in Eastern Trans-Baikal which were interpreted as offerings (Figure 8.37:9, 10) (Mazin, 1986, pp. 41-42). Two bronze plates with frontal depictions of the head of gryphon were unearthed from the Kurla cemetery in the North Baikal area dated to the second half of the 1st Millennium BC (Kharinskii, 2017). Interestingly, none of these objects come from Western Trans-Baikal where ornithomorphs are abundantly present in rock art.
It appears that the earliest analogue for naturalistic depictions of birds-of-prey outside Trans-Baikal can be found in North-West China (Figure 8.37:1). A bone tube with carvings of eagle figures was unearthed in Datong county in the context of the Kayue culture (10th-7th Centuries BC) which occupied the area of the upper reaches of the Yellow River and its tributary Huang Shui. [Qinghai Provincial Cultural Relics Department, 1994].

Ornithomorphic depictions such as birds-of-prey and gryphons are an important part of the Scythian-Siberian art. A very common motif is a head of gryphon which could have served as an ornament on weapons, horse harnesses or items of clothing, but a motif of a bird-of-prey with spread wings which is of interest here is a rarer motif. The easternmost Scythian-like Yuhuangmiao culture in Northern China yielded bronze objects made in the shape of a bird with spread wings (Figure 8.37:2-5). These are three belt hooks and one pendant from a woman’s grave (Shulga, 2015, Pl.98, 5,6,17, Pl.115, 39). They were found in burials of the Yuhuangmiao cemetery dated to 7th-6th Centuries BC.

Moving to the west, ornithomorphs also can be found in the art of the Scythian time in South Siberia. Savinov noted the appearance of new motifs such as gryphons and birds with spread wings in the Saglynskaya culture of Tuva in 5th-4th Centuries BC. Famous are golden bird figures from the Kosh-Pey cemetery (Figure 8.37:11). Savinov related this event to the influence of the Pazyryk culture of Altai (6th-3rd Centuries BC) (Savinov, 2002, pp. 124-125). This influence was also identified in the Tagar rock art of the Minusinsk Basin in 5th Century BC.

In South Siberia, frontal depictions of birds-of prey are known at the rock art sites of the Upper Yenisey where they were related to the second half of the 1st Millennium BC (M. A. Devlet, 1976, 2001). However, as Sovetova (2005, p. 60) noticed, more bird depictions are found in the Middle Yenisey basin (Figure 8.37:12). Although profile figures are also present, for instance a depiction of great bustard very similar to that from Khotogoy-Khabsagay, this group is dominated by flying birds-of prey, possibly eagles, with spread wings. She related these depictions to 6th-4th Centuries BC based on analogues from Scythian burial complexes in Ukraine, Western Russia, Altai and Tuva (Sovetova, 2005, p. 62). Interestingly, the South Siberian petroglyphs of birds feature their heads turned to the side with the pointed beak shown – a characteristic not found in Trans-Baikal but present at the Selenga-tradition sites of Eastern Mongolia (Khachurt, Ilkh-Tengerin-Am) (Okladnikov & Zaporozhskaya, 1970, p. 68).

The Pazyryk culture of Altai (6th-3rd Centuries BC) yielded a beautiful dynamic scene which was carved from leather depicting an eagle attacking an elk (Figure 8.37:18,
Another depiction of a bird with spread wings made from leather and partially covered with a sheet of gold was found in the Pazyryk burial mound (Rudenko & Rudenko, 1949, p. 61). A golden adornment depicting a vulture holding an ibex, related to 5th-4th Centuries BC, comes from the Peter the Great Siberian collection (Figure 8.37:17, Rudenko, 1962, Pl. XIX,1). Rudenko argued that the motifs of eagle and gryphon in the Scythian art has its origins in the art of ancient Persia (Rudenko & Rudenko, 1949, p. 11). Another example is a wooden saddle pommel depiction of a bird-of-prey from the Bashadar burial mound No. 2 (Figure 8.37:16). There are a few bird depictions in rock art related to the Scythian time, but they considerably differ from the Trans-Baikal ornithomorphs in their style (Figure 8.37:13, Kubarev, Tsevendorzh, & Jacobson, 2005).

Moving further to the west, golden bird figures were unearthed from the Chilikty burial mound No. 5 in Eastern Kazakhstan (Figure 8.37:14). They were suggested to adorn a headdress. This large Tsar kurgan was related to the end of 8th – beginning of 7th Centuries BC (Samashev, Toleubayev, & Dzhumabekova, 2004, pp. 131, 135). A couple of pendants were found in the Tulkharskiy cemetery in South-Western Tadzhikistan dated to the end of the 1st Millennium BC (Artamonov, 1973, p. 17). A golden diadem ornamented with figures of birds-of-prey was found on a bronze helmet in the Kelermes kurgan No. 1, North-West Caucasus, and dated to 7th Century BC (Figure 8.37:19). Many features of this fantastic object connect it to those manufactured in the Near East and Eastern Greece in the first third of the 1st Millennium BC (Alekseev, 2012, pp. 92-93). And the westernmost in this review analogue comes from the Mel’gunovskiy kurgan in the North Black Sea region where 17 eagle-shaped golden plates were unearthed, which is also dated to 7th Century BC (Figure 8.37:20) (Alekseev, 2012, p. 120).

This cursory review of analogues to the rock art motif of bird-of-prey with spread wings shows that many such objects belong to the Scythian-Siberian animalistic art. Interestingly, in the North Black Sea region, Caucasus, Kazakhstan and Northern China depictions of birds are found in the Early Scythian complexes of elite burial mounds in western areas, while in Altai, Minusinsk Basin and Tuva this motif is identified as a feature of Late Scythian art.

Many portable bird depictions are found in Eastern Trans-Baikal, but their archaeological context is unknown. However, it indicates that the ornithomorph was an important motif not only in Western Trans-Baikal where it is abundantly present in rock art, but also in Eastern Trans-Baikal where it is less common.

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33 The archaeological context of the collection is unknown since it was accumulated in the 18th Century through the purchase of artefacts from local ancient grave plunderers. Researchers believe the majority of these artefacts originated from the Altai region (Rudenko, 1962).
art but also in Eastern Trans-Baikal which supports the proposed view on the commonness of the Selenga tradition in both regions.

Another important observation which will be developed in the last section of this chapter is that, although the majority of dated analogues come from Scythian complexes, the ornithomorphic motif of the Selenga tradition possibly appeared in the Late Bronze Age since it is found in compositions with animals in the Mongolian-Trans-Baikal style. One such painted composition has already been discussed above, and another needs to be considered in the context of the Kyakhta petroglyphic group.

8.3. Kyakhta group: preliminary approach

As was argued above, this rock art body does not represent a single tradition or a style and thus should retain its identification as the Kyakhta group which emphasises its geographic localisation. Originally this project did not aim on studying the Kyakhta group since it was wrongly assumed that this rock art is not related to the Bronze Age painted tradition of Trans-Baikal. Only two sites out of seven recorded by Okladnikov were cursory surveyed during this research fieldwork, Tabangutskoye obo and Baga-Zarya. However, when in the field, it became apparent that the Kyakhta group cannot be dismissed when considering Trans-Baikal Bronze Age rock art, although survey methods and tools were not prepared for proper documentation of petroglyphs. Images were recorded using the same technique as painted rock art which is not accurate enough for relief figures. Thus, many designs cannot be identified and properly analysed, especially engraved and shallowly ground ones. It appears, that this gap needs to be filled by future research, and only a preliminary approach is possible here.

There are 247 designs recorded in total at two sites, and the dominant motifs are zoomorphs (103)
and non-figurative (94). Only 10 anthropomorphs are present, and 39 were not defined (Figure 8.38). No enclosures and ornithomorphs were identified in this group. The category of non-figurative motif does not include types characteristic for the Selenga tradition and is dominated by ring figures (21) and wheel-like designs (60). Half of the zoomorphs (42) were not identified as a species, although three elks, eight deer, one bovin, 41 ibexes, three canid-like figures (dogs or wolves), three horses, two camels, and two lizard-like animals were determined. Among anthropomorphs, three riders are present.

Tugutov was first to identify this group and to relate it to the Bronze Age based on depictions of domesticated animals (see V. A. Tsybiktarov, 2011). A more nuanced attribution was developed in Okladnikov’s seminal monograph. Referring to the stylistic resemblance of depictions with objects of Scythian animalistic style, he related the group to the Late Bronze-Early Iron Ages, or 6th-3rd Centuries BC (Okladnikov & Zaporozhskaya, 1970). Another viewpoint was presented by V. A. Tsybiktarov who related the Kyakhta group to the culture of khirgisuurs and deer stones. This interpretation is in accordance with A. D. Tsubiktarov’s concept of culture-history for the Bronze-Iron Ages in Trans-Baikal (see Chapter 4) and follows Novgorodova’s view on the rock art in Mongolia (Novgorodova, 1984). She identified two large ethno-cultural regions for the Late Bronze-Early Iron Ages, the western one which is characterised by khirgisuurs, petroglyphs and Caucasian-type population, and the eastern one represented by slab graves, Selenga paintings and Mongoloid-type people. Thus, it seemed logical that the Selenga tradition belonged to the indigenous slab grave culture, and the Kyakhta group was associated with the alien culture of khirgisuurs. However, it seems that the real picture of ethno-cultural processes is considerably more complex. It was already noted that the area of khirgisuurs does not coincide with the area of deer stones in Trans-Baikal. V. A. Tsybiktarov also pointed out that the areas of the Kyakhta group and khirgisuurs do not match either – Kyakhta petroglyphs are found in a small area in South Buryatia while khirgisuurs are found as far north as the Uda River basin. Moreover, as was mentioned earlier, the Kyakhta is not a stylistically homogenous group.

Okladnikov noted stylistic resemblance of some images to the Scythian animalistic style, but at that time the issue of the origins and chronology of this style was not elaborated as well as it is today. Comparing the petroglyphs of the Kyakhta groups with the styles and groups identified in the monumental art of early nomads in other areas of Siberia and Central Asia will show that this group is as multi-componential as the Selenga tradition and features the same chronological groups, but in a different context and technique. At the sites of the Kyakhta group petroglyphs of later periods are also present, but their consideration is out of the scope of this study.
Possibly, the earliest petroglyphs can be related to the time of the classic Karasuk culture (13th-11th Centuries BC). These are few zoomorphs depicted in the Varchinskiy style recorded at the Baga-Zarya site (Figure 8.39:1, this rock was not previously published). Another motif characteristic for the Karasuk monumental art is wheel-like figures generally interpreted as solar symbols (Figure 8.39:3) but also related to another common Late Bronze Age motif – chariots and carriages. There is one design published by Okladnikov which could be a chariot (Figure 8.39:2) (Okladnikov & Zaporozhskaya, 1969, Pl.34,16), and another composition was recorded during this research fieldwork featuring rectangular designs which could be depictions of carriages (Figure 8.39:4). Interestingly, the tradition of using chariots continues during the 1st Millennium BC in eastern area of the Scythian world which includes Northern China, Trans-Baikal, Mongolia and Minusinsk Basin (Shulga & Shulga, 2019).

The next stylistic group is related to the Mongolian-Trans-Baikal deer stone style. Petroglyphs of this style were recorded at the Baga-Zarya site (Figure 8.40:4) and also can be found in Okladnikov’s tracings of the Subuktuy site (Figure 8.40:2) (Okladnikov & Zaporozhskaya, 1969). In addition, a discovery of another outstanding composition was reported recently (Figure 8.40:3, Imenokhoev, 2017). These images are instantly recognisable because of the technique employed (they are thoroughly ground) and the manner in which they are shown – heads are elongated and stretched forward and slightly up, ornamental antlers lie along the back, hump is in a form of a pointed upward triangle,
and the group is delicately outlined. A small petroglyphic site was recorded by Okladnikov which connects the Kyakhta group to the Selenga tradition (Figure 8.40:1). This is the site Borgoy-Sel’gir which was not included in the Kyakhta group, but it features a composition with a deer in Mongolian-Trans-Baikal style. In the right-hand corner of the panel a typical ornithomorph for the Selenga tradition was added, but it differs in that it is made in relief and its head turned to the side with the beak shown. The latter links these depictions with those present in the rock art of Mongolia and South Siberia. This composition also supports the hypothesis about the time when the ornithomorphic motif appeared in Trans-Baikal rock art as advanced above.

Yet another stylistic group that can be identified is related to the Scythian period (Figure 8.41). Possibly, some figures can receive more definite attribution owing to their
resemblance to styles identified for the Early and Late Scythian time. Following Sher (1980), more naturalistic depictions of ibex, deer and horse should be related to the Early period (Figure 8.41.1-3), and those more ornamental and stylised to the Late period (Figure 8.41:4,5). There is an interesting figure of horse with deer antlers at the Baga-Zarya site (Figure 8.41:1) which is reminiscent of the famous horse masks in the shape of deer antlers in the Pazyryk culture. Researchers also pointed out that synthetic motifs combining features of two or more animals are a characteristic of the Scythian art in general.

Therefore, the petroglyphs of the Kyakhta group are synchronous to the Selenga tradition. They are related to the same ethno-cultural processes and should be considered together when attempting to unravel past social and ethno-cultural identities which is undertaken in the following section.

8.4. Early nomadic rock art of Trans-Baikal. Manifold identities unravelled

The Late Bronze Age was a turbulent period in the history of Central Asia and adjacent regions of Siberia which is characterised by the rise of early nomadic cultures and the establishment of continent-wide networks of contacts. This certainly influenced the
role rock art played in the early nomadic societies. Notwithstanding all the innovations which the new epoch brought, these cultures were connected to their predecessors, and this continuity can be better seen in rock art.

Excavations at the Trans-Baikal rock art sites revealed that these places were already worshipped in the Neolithic (Mazin, 1994; Tashak & Antonova, 2019; Tivanenko, 1989). Some sites which feature imagery identified as the earliest in the region also contain Late Bronze Age depictions. Possibly the largest sites such as Bain-Khara Cave, Khotogoy-Khapsagay and Beshegte-Baytsa were marked as important places at the dawn of the Selenga rock art tradition since some designs find analogues in the Glazkovo art.

The occurrence of multiple events at these sites marked by the abundance and diversity of rock art is one of the characteristics of rituality. It was noted in Chapter 3 that rituals are important devices for symbolic construction of community because they create a sense of commonality and difference from others (A. P. Cohen, 1985). These ritualistic events could have been religious in nature. Mazin’s excavations unearthed human burials at rock art sites which were interpreted as human sacrifices (Mazin, 1994). Other researchers also noted the occurrence of human sacrifices in complexes of the slab grave culture (A. D. Tsybiktarov, 1998). Thus, some rock art sites were enormously powerful places endowed with the energy of human sacrifices. Moreover, recent archaeological studies of some rock art sites revealed complex built structures which may have served as open-air sanctuaries. Evidence shows that they were used over long periods of time starting from the Late Neolithic and continuing well into the Middle Ages, although the majority of studied structures appears to be constructed in the second half and the end of the Bronze Age (Tashak & Antonova, 2019).

Although the origins of some motifs, for instance rows of anthropomorphs commonly found at the Selenga sites, can be traced as far back as the Early Bronze Age and possibly the Neolithic, the appearance of the Selenga tradition in its completed form is more likely related to the Late Bronze Age when in a context of migrations, contacts and influences the processes of the emergence and negotiation of ethno-cultural identities occurred.

It was demonstrated above that the Selenga tradition is a multi-component phenomenon exhibiting a pattern of a very long existence during which some elements emerged within the tradition and some were incorporated. This picture becomes even more complex when another rock art body is taken in consideration. The petroglyphic Kyakhta group located in the South Buryatia features all styles which were also identified in the Selenga tradition. It appears that South Buryatia was a contact zone between two rock art traditions, the painted Selenga tradition having local substrate, and the
petroglyphic tradition of Central Asia. This suggestion may correlate to the Tsybiktarov’s (1998) culture-historical model, but only at first glance. There are at least four chronological layers that can be identified in the rock art of Trans-Baikal, in both Selenga and Kyakhta, namely Karasuk (13th-11th Centuries BC), Mongolian-Trans-Baikal (10th-8th Centuries BC), Early Scythian (8th-6th Centuries BC) and Late Scythian (5th-3rd Centuries BC). Thus, Trans-Baikal experienced at least four major waves of alien influence in its monumental art. However, the nature of these waves and the scale of the impacts was different.

It is unlikely that a large Karasuk migration occurred, although bronze objects of the Karasuk type are found on a significant territory including Trans-Baikal. Few rock art pictures can be related to the Karasuk impact, and most of them are found within the Kyakhta group. There is no sound evidence to relate the emergence of any motifs in the Selenga tradition to this period. Possibly, the iconography of some of them, namely stick quadrupeds and square anthropomorphs, rather reflects the epochal characteristics of rock art expressed in the simplicity of styles.

The next wave is related to the appearance of the culture of khirigsuurs and deer stones which according to A. D. Tsybiktarov (2011) took place as early as in 13th Century BC. However, the chronology of this culture is yet to be clarified, and the issue of discrepancy of areas of khirigsuurs and deer stones needs to be addressed. This period is marked by the appearance of one of the prominent motifs, the bird-of-prey with spread wings. The earliest archaeological analogue is known in China dated to 10th-7th Centuries BC. It also was found in Early Scythian complexes in Northern China, Central Asia, Caucasus and the North Black Sea region. In Sayan-Altai, the motif of bird-of-prey is characteristic for the Late Scythian art. In Trans-Baikal, this motif seems to be indigenous emerging in 10th-8th Centuries BC because it occurs together with animal depictions in Mongolian-Trans-Baikal style.

The ornithomorph motif in the Selenga tradition appears to be related to the processes of inter-cultural communication and ethnic boundary maintenance. For many anthropologists, ethnicity is a phenomenon which can emerge only in the course of social relationships (Eriksen, 2010; Jenkins, 1997). The archaeological record provides a picture of a complex cultural situation in Western Trans-Baikal in the end of the 2nd–early 1st Millennium BC. Evidence shows that the relationships between the culture of khirigsuurs and deer stones and the slab grave culture were not always peaceful. Although both cultures participated in the same trade network with other cultures of Central Asia which can be illustrated by the occurrence of the Karasuk bronze artefacts in slab graves and their presence among depictions on deer stones, reciprocal desecration of graves implies
a hostile relationship (A. D. Tsybiktarov, 2013). In such situations it becomes highly important to preserve one’s own ethno-cultural continuity. Rock art helps to maintain it through powerful emotional attachments as rock art sites create and maintain a strong connection between people, their past and their land.

In periods of change, social identity becomes highly important, and in order to maintain the identity and the symbolic boundary, communities and individuals appeal to culture and tradition (Eriksen, 2010, p. 81). The construction of ethnic identity is a process linked to boundary creation and maintenance which implies the employment of symbols (A. P. Cohen, 1985), and the ornithomorph motif could have become the symbol of a new identity. This would explain its abundant presence in Western Trans-Baikal and rare occurrence in Eastern Trans-Baikal. Thus, the blooming of the ornithomorph motif may be related to the alien impact as a reaction to a threat to ethno-cultural continuity, and the enclosure motif in some sense is a symbol of a bounded community.

This threat appears to be significant since the penetration of the alien culture of khirigsuurs was deeper than that of the Karasuk influence. The presence of Mongolian-Trans-Baikal style in the petroglyphs of the Kyakhta group is more formidable than the Karasuk component identified for the previous period. Moreover, the style reaches the northernmost area of khirigsuurs, the Uda River basin. One site yielded a classic figure of deer in Mongolian-Trans-Baikal style, but striking is that this figure is painted thus indicating the fusion of two art traditions. Another site exhibited a large painted composition featuring animals in a modified deer stone style together with anthropomorphs, ornithomorphs and rows of dots characteristic for the Selenga tradition. Thus, rock art provides evidence for the evolution of the ethno-cultural relationships and negotiation of identities.

The third wave took place in the Early Scythian time. Many petroglyphs in the Kyakhta group can be related to this period, although the Selenga tradition does not yield any apparent stylistic impact. It is possible that some dynamic zoomorphs can be related to this period since they feature a slight resemblance to the art of the Scythian period. Although this motif is not common in the Selenga tradition, possibly its more abundant presence in Western Trans-Baikal may indicate a sounder Scythian influence and incorporation of some ideas in this part of the region. However, many items of the Scythian animal art were uncovered from the graves of the Dvortsovskaya culture in Eastern Trans-Baikal which remain largely unpublished. Some pieces from Trans-Baikal are mentioned as analogues in works devoted to the Scythian art of other regions, but unfortunately, no comprehensive study of the early nomadic art in Trans-Baikal has been carried out.
Interestingly, even though several waves of impact were identified, all the alien styles recognised remained in the marginal sphere of the tradition. The strongest impact appears to be that which is related to the culture of khirigsuurs. Although there are a few examples of fusion of two traditions, it hardly can be concluded that the animalistic deer stone style was incorporated in the Selenga tradition. Instead, a motif of ornithomorph which appears to be indigenous in Trans-Baikal rose to prominence.

Interestingly, all, except one, archaeological analogues for the ornithomorphs come from later Early Scythian or Late Scythian complexes. Some objects depicting birds-of-prey were unearthed from Scythian elite contexts. Thus, could this motif be a marker of social identity as well? Ethnicity is a social identity and in dynamic daily life may overlap or be overlapped by other identities such as gender, age, status and religion. Ethnicity is situational, and in some situations ethnic identity is not relevant, and agents themselves can manipulate their numerous statuses and identities depending on social context (Eriksen, 2010, pp. 37-38). Possibly people of that time had to manage numerous identities related to different levels of social associations. Motifs of rows of anthropomorphs and assemblages of dots are linked to the all-Trans-Baikal identity with origins in the before-nomadism era. Birds, and possibly enclosures, are associated with the Western Trans-Baikal identity emergent in the period of threat to ethno-cultural continuity. However, the reason why this motif was chosen may be related to a broader Central Asian identity since depictions of birds-of-prey are characteristic for the Scythian animalistic art. Thus ornithomorphs are not just markers of ‘hot’ ethnicity, they are also “a shared field for interethnic discourse and interaction” necessary for communication to take place (Eriksen, 2010, pp. 33-34). It was already put forward above that Western Trans-Baikal appears to be a contact zone of two large rock art traditions, and reciprocal infiltration of motifs and styles supports this notion.

As archaeological records indicate, two areas, Western and Eastern Trans-Baikal, were involved in different networks of contacts which also impacted the rock art traditions. Western Trans-Baikal was closely related to the development of early nomadic cultures of Central Asia and South Siberia while Eastern Trans-Baikal was turned to the south-east. The Selenga tradition of Eastern Trans-Baikal yielded one composition stylistically similar to the Karasuk petroglyphs. No rock art in Mongolian-Trans-Baikal or Arzhan-Mayemir style was identified, although objects of Scythian animalistic style art found in complexes of Dvortsovskaya and slab grave culture. Thus, the rare occurrence of ornithomorphs and possibly enclosures in Eastern Trans-Baikal is related to ethno-cultural processes that occurred in Western Trans-Baikal rather than Eastern. The Eastern Selenga tradition
appears to be more conservative and less diverse which is possibly a reflection of more stable ethno-cultural processes.

The Late Scythian period is problematic in Trans-Baikal since no archaeological record is available for the 5th-3rd Centuries BC, and it is assumed that the slab grave culture disappeared in the 5th Century BC. Few petroglyphs from the Kyakhta group demonstrate stylistic resemblance characteristic for the Late Scythian monumental art of Central Asia and South Siberia. As for the Selenga tradition, although there is no evidence of its continuation, the active functioning of these sites in later periods indicates that the importance and sacred power of these places have never been forgotten, and depictions of birds with spread wings are found at the medieval Sarbaduy site and in the Buryat ornaments (Okladnikov, 1954a).

8.5. Conclusion

This chapter focused on the Bronze Age rock art of East Siberia which tells a story of a transition from the hunter-gatherer to early nomadic lifeways that took place in a context when by the Late Bronze Age, the Steppe belt had become a zone through which innovations rapidly spread throughout Eurasia. In East Siberia, such territory was Trans-Baikal which appeared to serve as a contact zone between the Taiga and Steppe cultures. What is more important for this research is that Trans-Baikal yields a large body of multi-componential rock art associated with the early nomadic cultures. Its manifold nature allows for the unravelling of multiple identities embedded in the rock art.

Two major traditions, painted and petroglyphic, are present in the Trans-Baikal rock art. The painted tradition refers to all painted rock art, and such definition is justified by the evidence of the continuous usage of many rock art sites during millennia. While styles and traditions associated with the earlier periods were considered previously, in this chapter the dominant Bronze Age Selenga tradition was better defined as a result of stylistic and spatial analysis of all designs recorded during PhD research fieldwork. The Selenga tradition is present in both Eastern and Western Trans-Baikal and includes non-figurative motifs such as rows of dots and chaotic assemblages of dots, simple and stick anthropomorphs which are often depicted in rows, ornithomorphs, and enclosures. Two regional variants, Eastern-Trans-Baikal and Western-Trans-Baikal are defined. Zoomorphs appear to be a rather marginal type of imagery since they do not constitute a significant proportion in the tradition and do not feature any specific style found throughout Trans-Baikal. The petroglyphic tradition is represented by the Kyakhta group which yields multiple styles and traditions characteristic for the rock art of Central Asia.

The placement of the Selenga tradition and Kyakhta group in the broader Asian archaeological and rock art context revealed that Trans-Baikal was intimately connected
with other cultures of the Late Bronze-Iron Ages. These relationships were not always peaceful, and it was inferred that the Trans-Baikal rock art experienced the most dramatic impact in the early 1st Millennium BC which is possibly related to the appearance of the migrant culture of khirigsuurs. Firstly, the evolution of styles and mutual incorporation of alien motifs was revealed and, secondly, it was suggested that the ornithomorphic motif came to a prominence as a reaction to the heated ethno-cultural situation in this period.

In total, four chronological periods were identified in the Trans-Baikal rock art, in both the Selenga tradition and Kyakhta group, which are related to major cultural changes in Central Asia and South Siberia. The territory of South Buryatia appears to be a contact zone which was first to encounter with invasions from the west. At the same time, Eastern Trans-Baikal was more closely linked to processes taking place in ancient China.

Notwithstanding these influences and invasions, the Selenga tradition, having its roots in the deep past of the Baikal region, exhibits continuity and conservatism over millennia. Many motifs have links to the art of the Early Bronze Age and even the Neolithic. Rock art sites of Trans-Baikal yielded evidence of ritual activities as early as in the Neolithic, and some sites feature various styles associated with different historical periods. Undoubtedly, the rock art sites were believed to be loaded with enormous sacred power which has been attracting worshippers up to the present day. But this story is for future research.
CHAPTER 9. CONCLUSION

This thesis aimed to better understand prehistoric social and ethno-cultural processes in Siberia through the notion of dynamic and subjective ethno-cultural identity. This allowed looking behind crucial historical events to see how they were perceived and impacted people’s well-being and self-perception. A fundamental question whether it is possible to unravel such a fluid impalpable phenomenon as ethno-cultural identity was answered through the analysis of rock art styles and traditions in an archaeological context, the results of which were further scrutinised in the light of anthropological ideas on ethnicity and ethno-cultural identity. Such an interdisciplinary approach revealed how rock art was actively engaged in the construction and negotiation of identities at turbulent times as well as during long stable periods of cultural continuity. The higher the resolution of record archaeology provides the better rock art can be placed in time and therefore understood in terms of its role in building past identities. Importantly, rock art was not considered as just a passive reflection of ancient beliefs but as an active agent in ethno-cultural and social processes. This view allowed unravelling the evident prominence of rock art in prehistoric societies which is often neglected.

9.1. Summary of the project

A review of the history of rock art research in Siberia and specifically in its eastern part showed that the exploration of rock art has a deep and rich history. While previous research succeeded in outlining rock art provinces and elaborating chronological frameworks for rock art styles and traditions, interpretational frameworks were not very diverse, and when changes in rock art were explained, rock art styles and motifs were by default viewed as passive markers of ancient migrations or bounded ethno-social entities. Such a view could not explain why rock art is created, why specific styles and traditions emerge and why they undergo change in time and space. To explore these issues, relevant anthropological literature was reviewed.

This started with an examination of the Soviet social sciences to understand the theoretical context of Siberian ethno-archaeological studies, and this review explained why rock art has never been considered as an active agent in building ethno-cultural identities. Soviet social sciences were dominated by the primordialist view of ethnicity and were deadlocked in debates on what ethnic markers are crucial for identifying an ethnic group. During the post-Soviet period, Russian scholars became exposed to Western ideas which found their way into contemporary Russian studies on ethnicity. However, archaeological thinking is still dominated by considering ancient ethno-social groupings as rigid bounded objects which can be revealed though the mapping of archaeological categories.
More fruitful ideas were gathered in a review of anthropological literature on ethnicity, identity, symbolism, and community of Anglo-Saxon countries. As a result, a working definition of ethnicity was elaborated. For research purposes, ethnicity was defined as a dialectic phenomenon between self-ascription and external imposition which can emerge only in the processes of social relationships, and in dynamic daily life may overlap or be overlapped by other identities such as gender, age, status and religion. Ethnicity is also dynamic and changing; it is socially constructed, maintained and reconstructed through manipulation with cultural content; ethnic feelings may strengthen or emerge during intense social change or in the condition of threat to cultural distinctiveness.

In order to provide a means for unveiling such dynamic phenomenon as ethnicity, the style concept and its application was discussed. It was suggested that style should be employed as an analytical tool among other taxa which are organised hierarchically in order to be able to investigate patterns on different levels. The next level of analysis is the placement of recognised patterns in a temporal and spatial framework in order to find how style shifts in time and space. However, this should be further investigated in an archaeological context. If it is acknowledged that rock art sites create and maintain a strong connection between people, their past and their land, rock art therefore does not just reflect group or individual identities but, moreover, rock art helps construct them through powerful emotional attachments. Thus, style changes may be a reaction to major social shifts or some kind of threat to the cultural continuity, and in this condition, ethnic identity may emerge or strengthen.

In the Chapter 4 a review of the archaeological record for the periods in focus in East Siberia was undertaken and revealed that the record is uneven throughout the region. While Cis-Baikal provides the most nuanced picture of the Middle Holocene cultures, Trans-Baikal yields a substantial gap in the knowledge of the Neolithic and Early Bronze Ages. The chronology of the Late Bronze-Early Iron Ages is also debatable. However, Trans-Baikal could play a crucial role in transmitting innovations or being a place of origins of some traditions. This area occupies an important position between major prehistoric cultural areas of Central Asia Steppes and East-Siberian Taiga. This is where a large part of PhD fieldwork took place.

The fieldwork was carried out in three subjects of the Russian Federation, namely Sakha Republic (Yakutia), Zabaykalsky Krai and the Republic of Buryatia. In total, 108 rock art sites with more than 6,000 designs were recorded with the majority (63 sites) documented in Buryatia and 10 sites being discovered. This data is representative for reconsidering all rock art styles and traditions of Trans-Baikal. In addition, rock art sites
in the Lower Amur River basin and Tomskaya Pisanitsa in West Siberia were visited during this fieldwork. Prior to this PhD project, I was lucky to visit some rock art sites of the Upper Lena River, including the famous Shishkino site, in company of Larisa Mel'nikova and Vadim Nikolaev, to work with Alexandr Zaika at the Shalabolino rock art site in the Middle Yenisey River, and to help Marina Kilunovskaya to survey several rock art sites in the Tyva Republic. This experience contributed to my expertise and knowledge on Siberian rock art which allowed me to better place East Siberian rock art in a broader culture-historical context.

In the initial design of this project, the earliest, possibly Paleolithic rock art was not part of the research focus, however, some discoveries were made during the fieldwork which revealed the importance and relevance of this topic to discuss. The earliest rock art is the most problematic rock art body since no solid and direct evidence supports its age, but there are other indirect indications of the deep antiquity of these images such as subject matter and cultural accumulations unearthed near rock art panels. Moreover, the number of sites featuring extinct fauna among the motifs depicted is growing. Several sites presumably attributed to the Late Pleistocene-Early Holocene were examined during the fieldwork. 3D recording of the Shaman-Gora site allowed the production of a more accurate tracing showing a herd of extinct bison. Two more sites, Butikha and Byrka, attributed to this period by Mazin, were surveyed, and another site was discovered not far from the Byrka site featuring a zoomorph in a similar style to Byrka depictions. This is an important discovery since the Byrka site is almost totally destroyed by vandals. Most of these sites were also marked by younger imagery which indicates the continuous function of these sites in the cultures of Trans-Baikal, although the chronology is yet to be clarified.

A more nuanced picture of rock art development from the Final Pleistocene-Early Holocene was drawn in a study of petroglyphs of the Lower Amur River. A substantial number of analogues from archaeological contexts allowed for the elaboration of the chronology of this rock art which revealed a continuity in the rock art tradition during the Early-Middle Holocene which also implies a continuous ritualistic use of the space where rock art was placed. Anthropological perspectives on the longevity and persistence of the Amur rock art tradition has given some hints for understanding the role which rock art sites played in prehistoric societies. It was concluded that the area of the Lower Amur basin was a territory where processes of intercultural communication occurred which could have caused the emergence of ethno-cultural identities, and where the rock art sites could have served as places for communication and interaction between communities. Numerous similar designs indicate the repetition of artistic events, which could be evidence of ritualistic practice. Therefore, the sites, and especially the ‘face’ motifs, could
have been used as symbolic devices in building communities and establishing and maintaining their symbolic boundaries, even though the meaning attached to the place and to the art changed over time. The stylistic development could be an indication of this change. The rock art sites as powerful and meaningful places, and the art as the expression of cultural distinctiveness, were structured by social practice, and at the same time, structured social identities.

While the Amur rock art represents a case of ethno-cultural continuity across millennia, the Taiga Neolithic rock art tells a story of increased mobility and intensification of contacts. Such context implies the necessity of expressing and maintaining cultural identities and belonging. A key case study exploring the issue of dynamic ethno-cultural identities in the Neolithic is the analysis of the Angara rock art style. Its better placement in time and space using analogues in portable art from dated archaeological contexts and then the consideration of changes of the rock art style within culture-historical situations as seen from the archaeological record allowed answering the question of why these changes occurred and even why a new style emerged. It appears that the Angara style appeared in the Cis-Baikal region in the Early Neolithic. In the Late Neolithic, a migration or infiltration from the Cis-Baikal region to the west occurred which brought eastern influences into mortuary rites, material culture and the art tradition. However, interaction with the inhabitants of the Kuznetsk Basin was complex, and it appears to have affected the perceptions of the people of this area and their identity. The appearance of newcomers with different cultures and traditions may have influenced the emergence of their ethno-cultural identity. Although the adoption of some cultural elements could occur, inter-cultural communication and the threat to cultural continuity may have caused the use of art to maintain cultural distinctiveness.

A distinct Tom rock art style, although similar to the Angara in a few aspects, could have been a means through which the local population affirmed and reaffirmed the connection with their past and their land. The effect of this was so powerful that the rock art tradition emerged and then flourished during the Bronze Age and possibly well into the Iron Age. Therefore, rock art served as a means of communication about a people and their land not only between locals and newcomers but also between generations conveying the connection of past and present. Major rock art sites such as the Tom site may have been strong focal points on the crossroads of time and space.

Yet another story is told by the Bronze Age rock art of Trans-Baikal which represents a case study on a conversation and interplay between two large contrasting rock art traditions exhibiting both changes and continuities in stylistic development. Trans-Baikal is the eastern area of the greater Eurasian Steppe belt which in the Bronze Age
became a corridor connecting various cultures and through which innovations rapidly spread throughout Eurasia. The Late Bronze Age is marked by the emergence of early nomadic cultures, and in Trans-Baikal these are the slab grave culture which is believed to be indigenous, but it may have included some eastern component, and the culture of khirigsuurs and deer stones which migrated here from the West. The Trans-Baikal rock art is dominated by the Selenga tradition which was better defined in this thesis based on stylistic and spatial analysis of extensive data gathered in the field. The Selenga is a painted rock art tradition which is present in both Eastern and Western Trans-Baikal and includes non-figurative motifs such as rows of dots and chaotic assemblages of dots, simple and stick anthropomorphs which are often depicted in rows, ornithomorphs, and enclosures. Two regional variants, Eastern-Trans-Baikal and Western-Trans-Baikal are defined. Zoomorphs appears to be rather a marginal type of imagery since they do not constitute a significant proportion of the tradition and do not feature any specific style found throughout Trans-Baikal. A petroglyphic tradition of Central Asian origins is also present in Western Trans-Baikal and is known as the Kyakhta group. This group includes multiple styles and traditions which are not characteristic of the dominant painted tradition of Trans-Baikal.

The placement of the Selenga tradition and Kyakhta group in the broader Asian archaeological and rock art context revealed that Trans-Baikal was intimately connected with other cultures of the Late Bronze-Iron Ages. These relationships were not always peaceful, and it was inferred that the Trans-Baikal rock art experienced the most dramatic impact in the early 1st Millennium BC which is possibly related to the appearance of the migrant culture of khirigsuurs. Firstly, the evolution of styles and mutual incorporation of alien motifs was revealed, and secondly, it was suggested that the ornithomorphic motif came to a prominence at that time, possibly being a reaction to the heated ethno-cultural situation. In total, four chronological periods were identified in the Trans-Baikal rock art, in both the Selenga tradition and Kyakhta group, which are related to major cultural changes in Central Asia and South Siberia. In addition, it was suggested that the Selenga tradition features some inheritance from the Early Bronze Age Taiga rock art. Regional differences in the Selenga tradition can be explained by the fact that while the territory of South Buryatia appears to be a contact zone which was the first to encounter invasions from the west, Eastern Trans-Baikal was more closely linked to processes taking place in ancient China.

9.2. Key contribution to the field

The main finding of this thesis is the understanding of the active role that rock art played in ethno-cultural processes and constructions and negotiations of identities.
Looking into various rock art traditions in their historical and cultural contexts revealed how rock art was engaged in building communities and their symbolic boundaries. To unravel this fluid dynamic phenomenon, instead of constructing rigid entities it is necessary to look at ethno-cultural situations, such as (1) continuity; (2) change, and (3) co-existence of two or more different cultures/traditions/groups. Interestingly, all three situations occur simultaneously which is explicitly present in rock art.

The most important observation made in this research answers the question of why rock art is created, why specific styles and traditions emerge and why changes in rock art occur. Previous researchers treated rock art as a passive object and specific styles and motifs were considered as markers of bounded ethno-cultural groupings which implies that styles must have origins somewhere, and if a new style appears or a substantial change occurs, it is explained in terms of bringing and borrowing. While borrowing of ideas and styles do occur, it is not the main factor in changes of rock art. This research shows other ways of explaining such changes. It is suggested that the emergence of rock art styles occurs in a situation of major cultural change, the reasons and dynamics of which may vary. The important factor is that people had to protect their tradition, culture and well-being in a situation of threat to their ethno-cultural continuity. By protecting continuity, inevitable change in a rock art tradition occurs. It becomes highly important to mark rocks with symbols of now 'hot' identity thus expressing the belonginess to this place and to the line of succession, and those marks remain there for millennia continuing to structure identities of those who claim their belonginess to this place afterward. The next question is why specific styles and motifs become these symbols. They do not appear randomly and from nowhere. Symbols of identity need to be threefold – exhibiting connections with the past, expressing aspects of new identity and being able to be perceived by both those inside the community and outsiders. Therefore, a rock art tradition/style simultaneously features continuity, change and similarity to other synchronous traditions/styles. This view explains why rock art styles do not correlate with archaeological cultures, do not fit into neat culture-historical frameworks and do not have clear-cut time and space limits. Rock art is timeless and a path to comprehending its nature is ongoing.

9.3. Future directions and perspectives

The observations made on the nature of rock art styles and traditions in Siberia are applicable elsewhere. Rock art is found in all continents but Antarctica and is represented by various styles which feature changes and continuities related to different ethno-cultural situations. A rare community lives in isolation, and when contact between communities takes places the negotiation of identity occurs. Since rock art is an important
factor in constructing ethno-cultural identities, the explanatory framework developed in this thesis can be used in any other study on rock art and identity.

The chapter on the earliest rock art in East Siberia presented some discoveries made which point to the importance of future research in this domain. The number of sites featuring depictions of extinct fauna has grown in recent decades, and scientific dating of these pictures is of high importance. Previously, researchers carried out excavations at some of the oldest rock art sites which yielded rich archaeological material, but these works lack scientific analysis available today. Thus, it is promising to re-access these sites.

Although this thesis aimed at considering all major prehistoric rock art traditions and styles of East Siberia, much of them, especially those from the area of South-Central Yakutia, Amur Oblast and Eastern Zabaykalsky Krai, were briefly reviewed. The reason is that this research is primarily fieldwork based, and it was impossible to cover such a big area in this project. However, rock art sites in this Taiga area need re-assessment since no major research has been carried out since Mazin’s seminal work there. This region constitutes a rock art province featuring quite peculiar styles and imagery located in-between other rock art provinces that were examined in detail in this thesis.

This research revealed a close relationship between the Selenga tradition, one of the central focuses of this thesis, and the Kyakhta group. The latter was not fully recorded since initially it was not within the tasks of the PhD fieldwork. This group includes petroglyphs executed in various techniques, and methods of 3D recording are necessary for accurate documentation. Since this group is culturally related to the rock art of Central Asia, further research on the rock art of Mongolia is needed, especially its eastern and north-eastern regions, to better comprehend its role and influence in Trans-Baikal rock art.

While in field, it was noticed that rock art sites are still worshipped and play an important role in contemporary religious practices. The theme of the use and re-use of prehistoric rock art is a barely touched area of enquiry in Siberia. Just recently some research started in this direction promising a lot of discoveries which will also contribute to the understanding of how we can better preserve rock art in Siberia.

Many prehistoric rock art sites in Buryatia, Trans-Baikal, are marked by Buddhist inscriptions. Previous researchers considered this practice as vandalism. However, the issue of Buddhist rock art markings can be studied in a context of historic and contemporary religious practices, and this also corresponds with the previously discussed issue of use and re-use of rock art.
In the second chapter it was noted that quite a large amount of data on rock art sites in the Arctic of East Siberia has accumulated to-date, although this consists of short articles and reports in local journals and newspapers. This rock art can be studied in a broader Arctic context to identify the role it could play in adaptive strategies to the extreme polar climate.

To conclude, this PhD research is not only significant but also ground-breaking in its scope, novelty of approach, outstanding findings and promising perspectives. A significant number of rock art sites were surveyed and documented as a part of PhD fieldwork; key East Siberian rock art styles and traditions were reassessed, better defined and a more nuanced picture of ethno-cultural processes was drawn; a novel theoretical framework was developed which can be applied elsewhere. Much work has been done, but even more awaits promising further discoveries and revelations.
APPENDIX 1. Paul S. C. Taçon’s Site Recording Checklist

ESSENTIAL
1. Unique site number.
2. General and specific site location and type data.
3. Orientation of site/direction site faces.
4. Rock-art inventory.
5. Key superimpositions.
6. Site dimensions (length, other basic).
7. Panel/motif dimensions.
8. Site, panel, motif photographs.
9. Associated artefacts/deposits/other.
10. Unusual/outstanding art or other features.

OPTIONAL
11. Additional landscape details, e.g. distance to water (if applicable).
12. Plan/profile details (if applicable).
13. Tracing, digital video, other recording (if applicable).
14. Oral history (if applicable).
15. Site and image conditions; conservation threats.
17. Sample for dating purposes.
18. Excavation.
20. 3D digital still and video photography.

REFERENCES CITED


Alkin, S. V. (2010). K voprosu o svyazi kul'tury plitochnykh mogil Zabaykal'ya i kul'tur epokhi rannego metallia Vnutrenney Man'chzhurii [On the problem of the relations between the Slab Grave Culture of Trans-Baikal and Early Metal cultures of Inner Machuria]. In
Evraziyskoe kul'turnoe prostranstvo. Aktual'nye problemy arkheologii, etnologii, antropologii (pp. 4-11). Irkutsk: Izd-vo "Ottisk".


Debets, G. F. (1930). Opyt vydeleniya kul’turnykho komplekov v neolite Priabaiykal’ya (paleoetnologicheskiy etyud) [On the definition of cultural complexes in the Neolithic of Cis-Baikal (a paleoethnological essay)]. Izv. assotsiatsii NII pri fiz.-mat. fak-te Mosk. un-ta, 3(2A), 151-169.


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Eding, D. N. (1940). Novye nakhodki na Gorbunovskom torfyanike [New findings at the Gorbunovo peatbog]. In Materialy i issledovaniya po arkeologii SSSR.


Fedoseeva, S. A. (1975). Drevnie kul'tury doliny May [Ancient cultures of the May Basin]. In Yakutiyi i ee sodstvo v drevnosti (pp. 53-78). Yakutsk: YAF SO AN SSSR.


Formozov, A. A. (1967). O naskalnykh izobrazheniyakh epokhi kamnya i bronzy v Pribaikalie i na Eniseye [The rock art of the Stone and Bronze Age in the Baikal region and on the Yenisey River]. Sovetskaya Etnografiya(3), 66-82.


Francis, J. E. (2001). *Style and Classification.* In D. S. Whitley (Ed.), *Handbook of rock art research* (pp. 221-244). Walnut Creek, Calif: AltaMira Press.


Garkovik, A. V. (2014). *Izobrazitel'naya deyatelnost' drevnego naseleniya Primor'ya* [The Art of the Prehistoric Maritime Territory]. In *Arhaicheskoe i tradicionnoe iskusstvo: problemy nauchnoy i hudozhevnnoy interpretacii: materialy Vserossiiskoy (s mezhdunarodnym uchastiem) nauchnoy konferencii,* (pp. 19-25). Novosibirsk: Izd-vo In-ta arheologii i ehtnografii SO RAN.

German, P. V., & Leontiev, S. N. (2012). *Neolithic sanctuary on Sergushkin Island in Northern Angara Region (results of the studies in 2010).* *Cenozoic Eurasia. The Stratigraphy, the paleoecology, the cultures*(1), 78-85.


Gryaznov, M. P. (1933). *Boyarskaya pisanitsa [Boyarskaya rock art site]*. *Problemly istorii material’noy kul’tury*(7-8), 41-45.


Imenokhoev, N. V. (2017). Naskal'nye risunki na yuge Buryatii [Rock art images in the south of Buryatia]. In B. V. Bazarov & N. Kradin (Eds.), *Aktual'nye voprosy arheologii i etnologii Tsentral'noy Azii: mat-ly II mezhdunar. konf., posvyashch. 80 -letiyu d.i.n., prof. P.B. Konovalova (g. Ulan-Ude, 4-6 dekabrya 2017 g.)* (pp. 42-45). Ulan-Ude: Izd-vo BNTS SO RAN.

Ineshin, Y. M., & Teten'kin, A. V. (2011). Problema opredeleniya arkheologicheskikh svyazey v basseyne r. Vitim (Vitimskoe ploskogor'e, Baykalo-Patomskoe nagor'e) [The problem of defining archaeological relations in the Vitim river basin (the Vitim Plateau, Baikal-Patom Highlands)]. In A. V. Kharinsky (Ed.), *Ancient cultures of Mongolia and Baikalian Siberia: Book of scientific papers* (pp. 96-105). Irkutsk: Irkutsk State Technical University Press.


Kiselyov, S. V. (1933). Razlozhenie roda i feodalizm na Enisee [Decay of clan and feudalism on the Yenisey River]. Izvestiya GA IMM(65), 1-34.


Klemm, F. G. (1858). Pis'mo doktora Klemma (s risunkom) [A letter from Doctor Klemm (with a drawing)]. Vestnik Imperatskogo Russkogo geograficheskogo obschestva(22), 79-80.


Kolpakov, E. M. (2013). Klassifikacija v arheologii [Classification in archaeology]. Saint-Petersburg: IIMK RAN.


(XVIII) Vserossiyskogo arkheologicheskogo s”ezda v Suzdale (Vol. III, pp. 45-49). Moscow: IA RAN.


Kozlov, V. I. (1967). O ponyatii etnicheskoy obshhnosti [on the definition of thr ethnic community]. Sovetskaya Etnografiya(2), 100-111.


Novikov, A. G. (2013). Pogrebal'naya praktika naseleniya bronzovogo veka Priol'khon'ya (po materialam mogil'nika Khadarta IV) [The mortuary practice of the Ol'khon area population in the Bronze Age (according to the materials of the cemetery Khadarta IV)]. In A. V. Konstantinov & M. V. Konstantinov (Eds.), Ancient cultures of Mongolia and Baikalian Siberia (Vol. 1, pp. 319-325). Chita: Zabaykal. gos. univ-t.

Novikov, A. G., & Gorunova, O. I. (2005). Drevnee rybolovstvo na Baykale (po materialam poseleniy perioda mezolita - bronzovogo veka) [Ancient fishing in Lake Baikal (according to the materials of the Mesolithic and Bronze Age settlements)]. Reports of the Laboratory of ancient technologies(3), 125-134.


Okladnikov, A. P. (1955a). Neolit i bronzyev vek Pribajkal'ya. Chast' III (Glazkovskoe vremya) [The Neolithic and Bronze age of the Baikal region. Part III (the Glazkovo period)]. Moscow-Leningrad: Izdatel'stvo Akademii nauk SSSR.


Okladnikov, A. P. (1968a). Iz predistorii iskusstva amurskikh narodov (petroglify na r. Kiya, Ussuri) [Prehistory of the art of the Amur peoples (petroglyphs of the Kiya at the Ussuri River)]. Soviet Archaeology(4), 46-57.


Ovchinnikov, M. P. (1890). *Poyasnitel'naya zapiska k veshcham, naydennym u g. Olekminska Yakutskoy oblasti i prislannym v Antropologicheskiy otdel* [A commentary to the findings made in the vicinity of the Olyokminsk city, Yakutia]. *Trudy Antropolgoschego otdela, XII*, 93-94.


Popov, N. I. (1875). Obshhiy vzglyad na pisanitcy Minusinskogo kraya (Okonchaniye gl. o pisanitcakh) [General view at the rock art sites of the Minusinsk area (End of the chapter about rock art)]. *Izvestiya Sibirskogo otdela IRGO, 6*(5-6), 200-211.


Rozwadowski, A., & Knurenko, P. (2003). Reconsidering the rock paintings at Sinsk Village, Middle Lena River (Yakutia). In A. Rozwadowski & M. M. Kosko (Eds.), Spirits and Stones. Shamanism and Rock Art in Central Asia and Siberia (pp. 163-172). Poznan: Institut Wschodni UAM.


Rudenko, S. I., & Rudenko, N. M. (1949). *Iskusstvo skifov Altaya* [The art of the Altai Scythians]. Moscow: GMII.


Savel’ev, N. A. (1989). *Neolit yuga Sredney Sibiri* (istoriya osnovnykh idey i sovremennoe sostoyanie problemy) [The Neolithic Age of the Southern part of the Middle Siberia [The history of research and the modern state]]. автореф. дисс. на соиск. учен. степ. канд. ист. наук. IIFF SO AN SSSR. Novosibirsk.


Savinov, D. G. (1984). Ob odnoy traditsii v iskusstve zverinogo stilya (K voprosu o mestnom komponente) [About the one tradition in the art of the animal style (on the question of a local component)]. In *Skifo-sibirsky mir. Trudy arkheologichesk. konf.* (pp. 135-137). Kemerovo: Izd-vo KemGU.


Siberia (Russia). *Quaternary International, 419*, 140-158. doi:http://dx.doi.org/10.1016/j.quaint.2015.11.075


Sovetova, O. S. (2005). *Petroglify tagarskoi epokhi na Enisee: (Syuzhety i obrazy) [Petroglyphs of the Tagar epoque in the Yenisei region (Subjects and motifs)]*. Novosibirsk: Izd-vo IAET SO RAN.


Studzitskaya, S. V. (1981). Skulptura epokhi ranney bronzy na Verkhney Angare (po materialam mogil’nika Shumilikha) [The Early Bronze Age sculptures of the Upper Angara area (on
the materials of the Shumilikha cemetery). In Bronzovyy vek Pribaykal'ya. Mogil'nik Shumilikha (pp. 38-45). Irkutsk.


Studzitskaya, S. V. (2004). Izobrazheniya losya v melkoy plastike lesnoy Evrazi (epokha neolita i ranney bronzy) [Elk depiction in the mobiliary art of the forest zone of Eurasia (the Neolithic and Bronze Ages)]. In Izobrazitel'nyye pamyatniki: stil', epokha, kompozitsii (pp. 25-30). Saint-Petersburg: Izd-vo SPbGU.


Timofeev, D. A. (1965). Srednyaya i Nizhnyaya Olyokma (geomorfologicheskiy analiz territorii basseynya) [The Middle and Lower Olyokma River (geomorphologic analysis of the basin)]. Moscow-Leningrad: Izd. AN SSSR.


Tivanenko, A. V. (1979a). Drevnie kul'tovye svyatilishha - novyy tip arkeologicheskikh pamyatnikov Zabaykal'ya [Ancient sanctuaries - a new type of archaeological sites of Trans-Baikal]. In Drevnie kul'tury sibiri i Dal'nevostochnogo basseyna (pp. 135-144).


Tsybiktarov, A. D. (2013). Etapy vzaimootnosheniy naseleniya kul'tury plitochnykh mogil i kul'tury khereksurov v Tsentral'noy Azii v "epokhu velikogo pereseleniya narodov" bronzovogo veka [Stages of relationships of populations of slab grave culture and the culture of kirigisurs in Central Asia during the 'Migration Period']. In A. V. Konstantinov & M. V. Konstantinov (Eds.), Ancient cultures of Mongolia and Baikalian Siberia. IV


Tsybiktarov, A. D. (2016b). Specifics of sites of the slab graves culture in Cisbaikalia as a source for the study of communications of ancient groups of population in Baikalian region (the prolongomena of problem). [Specifics of sites of the Slab Graves Culture in Cisbaikalia as a source for the study of communications of ancient groups of population in Baikalian region (the prolongomena of problem)]. Journal of Ancient Technology Laboratory (2(19)), 30-42. doi:DOI: 10.21285/2415-8739-2016-2-30-42


Turkin, G. V., & Kharinsky, A. V. (2004). Mogil'nik Shamanka II: k voprosu o kronologii i kul'turnoy prinadlezhnosti pogrebal'nykh komplekov neolita - bronozovogo veka na Yuzhnom Baykale [The cemetery Shamanka II: on the cultural attribution of the Neolithic and Bronze Age burial complexes in the Southern Baikal area]. *Reports of the Laboratory of ancient technologies*(2), 124-158.


