

doi:10.17746/1563-0110.2022.50.3.092-102

**A.V. Vybornov¹, S.G. Skobelev², E.A. Alekseeva³,
A.N. Bagashev⁴, S.M. Slepchenko³, and I.A. Grachev⁵**

¹*Institute of Archaeology and Ethnography,
Siberian Branch, Russian Academy of Sciences,
Pr. Akademika Lavrentieva 17, Novosibirsk, 630090, Russia
E-mail: vybornov@archaeology.nsc.ru*

²*Novosibirsk State University,
Pirogova 1, Novosibirsk, 630090, Russia
E-mail: sgskobelev@yandex.ru*

³*Institute of Northern Development, Tyumen Scientific Center,
Siberian Branch, Russian Academy of Sciences,
Chervishevsky trakt 13, Tyumen, 625008, Russia
E-mail: alekseeva.elena.ae@gmail.com; s_slepchenko@list.ru*

⁴*Tyumen Scientific Center,
Siberian Branch, Russian Academy of Sciences,
Malygina 86, Tyumen, 625026, Russia
E-mail: bagashev@ipdn.ru*

⁵*Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), Russian Academy of Sciences,
Universitetskaya nab. 3, St. Petersburg, 199034, Russia
E-mail: lugavka@mail.ru*

Medieval Burials at Ryabchikov Klyuch-1, the Kansk-Rybinsk Basin

Previously, burials at Ryabchikov Klyuch-1 on the Kan River near Kansk were dated to the Late Middle Ages (pre-Russian period) and attributed to an autochthonous group. In 2015, two burials were discovered at the cemetery, with the remains of an adolescent girl and a child. A comprehensive analysis of the burial rite and grave goods suggests that the burials date to the 12th century. Numerous archaeological and ethnographic parallels were found. Morphologically, the girl's cranium reveals generally eastern traits, specifically those common in Western Siberian (Uralic and Ob-Irtysh) populations. The cranium was restored, and a graphical reconstruction of the face was made. Burial practices of the 17th–19th century Middle Kan populations are described. They were Ket-speaking Kotts, Turkic-speaking Karagas, and Samoyed-speaking Kamasins. The analysis of sources suggests that the buried people were likely ancestors of the Kotts.

Keywords: Siberia, Middle Yenisei, Kansk-Rybinsk basin, Kan River, Middle Ages, flat graves, Kets.

Introduction

The medieval period of the forest-steppe part of the Middle Yenisei is illustrated by a very limited set of sources (primarily archaeological). These sources

quite unevenly describe the cultural and chronological features of the history of the population of this vast region from the 5th to 17th centuries AD, which features are interpreted by the results of studies of several dozen archaeological sites. The general ethno-cultural

characteristics of the Middle Yenisei basin were proposed by O.A. Mitko (1995). The chronological classification of the medieval period of the Krasnoyarsk forest-steppe was developed by S.M. Fokin (2007). The main theoretical inferences of these authors have not undergone significant changes since the defense of the respective dissertations. Materials from the southern taiga zone of Central Siberia pertaining to the early 2nd millennium AD were studied by P.O. Senotrusova (Senotrusova, Mandryka, 2018). The Late Middle Ages (from the Mongolian period to the ethnographically modern period, the 13th to 18th centuries) of the Middle Yenisei were addressed by S.G. Skobelev, who issued a series of publications (Skobelev, 2009; Skobelev, Vybornov, 2019; Skobelev, Zelenina, 2019).

The understanding of this, more than thousand-year long, historical period of a large region of North Asia has to be changed with the accumulation of new findings. The discovery and research of new sites imply the refinement of the chronology of sources, and identification of local variants and new components in the ethno-cultural situation. We believe that the motley ethnic picture of the Middle Yenisei region in the 17th–18th centuries, described in various ethnographic publications, was generated by similarly heterogeneous processes, which could be traced only through archaeological studies.

Among the forest-steppes of the Middle Yenisei, the Kan River basin is a special ecological area. The Kansk-Rybinsk basin, located in the northeast of the Middle Yenisei region, has been one of the northernmost outskirts of the forest-steppe belt of Eurasia for the last 2000 years. The population of this region has historically been closely associated both with the densely populated Khakass-Minusinsk basin, and with the inhabitants of the Eastern Sayan Mountain range, the Cis-Angara taiga, and the western part of the Krasnoyarsk-Achinsk forest-steppe. There are few known medieval archaeological sites in this area. The Kansk burial on Rzhavy Island

(Saveliev, Svinin, 1978), and the flat-grave burial grounds of Krasnopolyansky (Kungurov, Kungurova, 2018) and Antsir-1 (Fokin, 2020a) have been studied. Random finds suggest the influence of the Khakass-Minusinsk basin population of the 13th–14th centuries (Kansko-Perevozinskoye) (Kyzlasov, 1983: 75).

This article focuses on the materials from two medieval burials at the site of Ryabchikov Klyuch-1, in the middle reaches of the Kan River (Fig. 1). In the course of archaeological excavations, these objects were identified as late medieval sites and attributed to the third quarter of the 2nd millennium AD (Vybornov et al., 2015). Subsequent research has made it possible to estimate the age of the burials more precisely.

Archaeological materials

The site of Ryabchikov Kluch-1 (recorded as: Karapsel. Ryabchikov Kluch-1 site) was found in 2011 by E.V. Knyazeva, the researcher from the Siberian Federal University. The site is located on the right bank of the Kan, 3.2 km upstream of the boundary of modern town of Kansk and 4.3 km to the southwest of the village of Karapsel. The site occupies a sloping area of the above-floodplain altiplanation terrace. This lies between the eastern face of the ravine of a nameless stream and a high floodplain (about 12–17 m above the water edge). In 2015, an expedition of the IAET SB RAS worked at the site. In the excavation trench, two cultural horizons were established on the basis of the stratigraphy and recovered artifacts associated with a range of chronological periods: from the Neolithic to the Bronze Age and the Early Iron Age, from the Middle Ages to the ethnographically modern period.

The burials are located on the edge of a relatively flat ground on the western outskirts of the above-floodplain altiplanation terrace. This ground rises above a vast

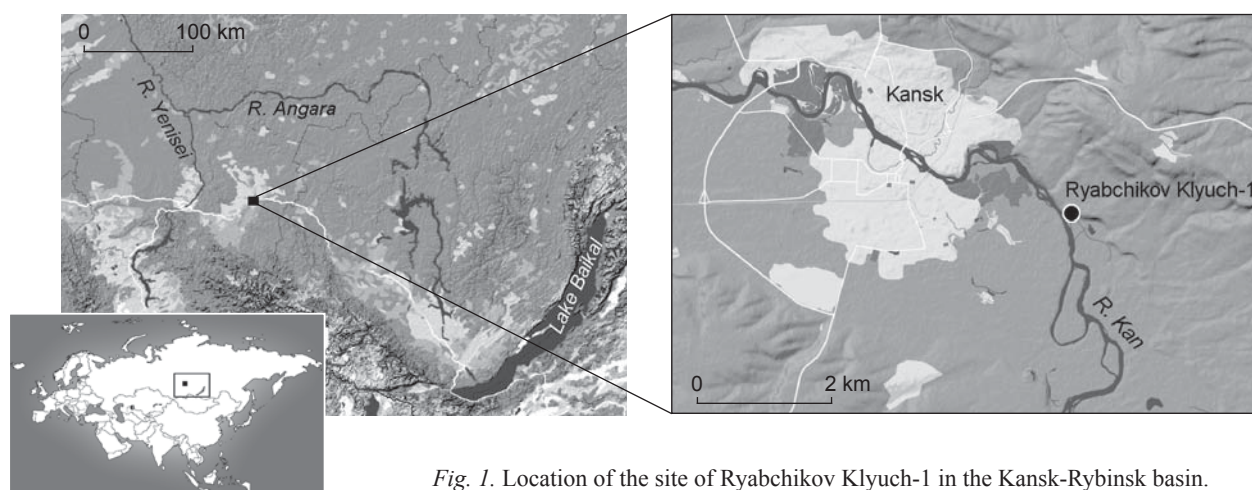


Fig. 1. Location of the site of Ryabchikov Klyuch-1 in the Kansk-Rybinsk basin.

ravine and is close to the turn of the river at a large island. Before the start of excavations, at the level of the daylight surface, there were no signs of burials observed.

The grave-pit of burial 1 (Fig. 2) is rectangular in plan view; its long axis is oriented along the W-E line, with a slight shift to the NW-SE. Its dimensions are 1.8×0.9 m, the depth from the level of the modern surface is 0.50–0.55 m. The pit was dug out in the top of a layer of grayish-brown loam. The grave filling contains clods of dense light-yellow loam interlayered with humic gray sandy loam; pieces of charcoal were also noted. The roof of the layer contains remains of wooden planks and birch-bark that covered the grave-pit across its long axis. Along the perimeter, the grave was framed by a rectangular cribwork (the corners have not been preserved) consisting of small poles (5 cm in diameter). The floor was lined with birch-bark, of which small fragments have been preserved.

The grave contained the remains of an adolescent girl aged 14–16, buried in an extended supine position, with her head to the east. The skull is crushed, with its

foreface turned to the north. The hands of the deceased were widely spaced (perhaps she was wearing a fur coat) and extended along the body, with the palms down. The anatomical order in places of articulation of the arm bones is disturbed (a consequence of sliding down the slope). The legs were extended, with the feet towards the north.

At the head of the buried girl, two white barrel-shaped beads made of vitreous paste were found (Fig. 3, 6); a large, eight-petaled convex beige bead (Fig. 3, 7) was noted in the area of the upper thoracic vertebrae, this bead possibly served as a button for outerwear (fur coat). A string of six cowrie shells (Fig. 3, 5) was found on the wrist of the left hand. In the area of the right elbow-joint, an openwork cast bronze double-sided disk bearing two dragon images (Fig. 3, 1), a fragment of an iron item (heavily corroded), a pipe-shaped bead (needle-case?) (Fig. 3, 2, 3), and a small fragment of animal rib were discovered. Two articulated caudal vertebrae of a cow were located north of the right knee-joint of the buried girl. A stemmed iron knife was found near the left knee-joint (Fig. 3, 4).

Burial 2 (Fig. 4) is located 10 m west of burial 1. The grave-pit, rectangular in plan view, is oriented with its long axis along the W-E line. Its dimensions are 1.2×0.65 m, the depth is 0.30–0.35 m from the level of the modern daylight surface. In the filling of the pit, clods of dense light-yellow loam, interlayered with humic gray sandy loam, were recorded. The roof contains remains of wooden planks and birch-bark that covered the grave-pit across its long axis. Along the perimeter, the grave-pit was framed by a rectangular cribwork (the corners have not been preserved) consisting of small poles (5 cm in diameter). At the floor, there were fragments of birch-bark.

The buried child, 5–6 years old, was laid on his back, with the head to the east. The skull is crushed, with its foreface turned up. The arms of the buried were bent at the elbows: the right arm was at an angle of 45° , the elbow was laid aside, the hand was on the stomach; the left one was folded and pressed to the body, with the hand over the shoulder. The child's legs were widely spread (more than 90°) and bent at the knees.

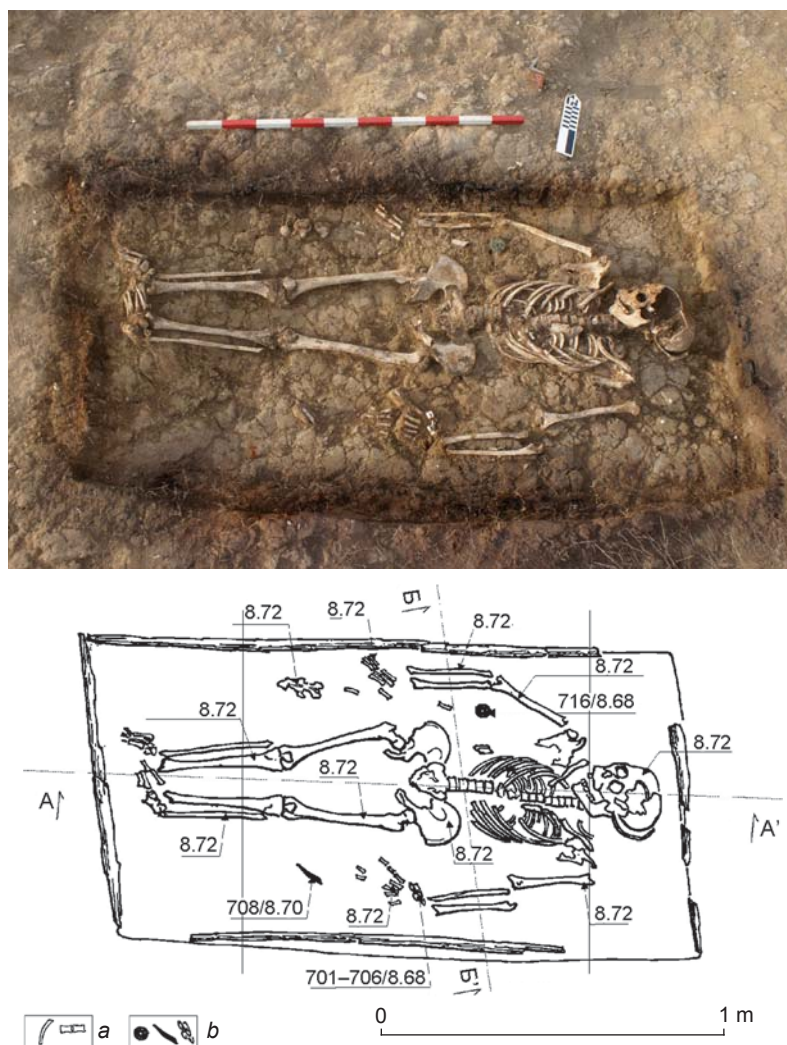


Fig. 2. Burial 1 at Ryabchikov Klyuch-1. a – fragments of human bones; b – grave goods.

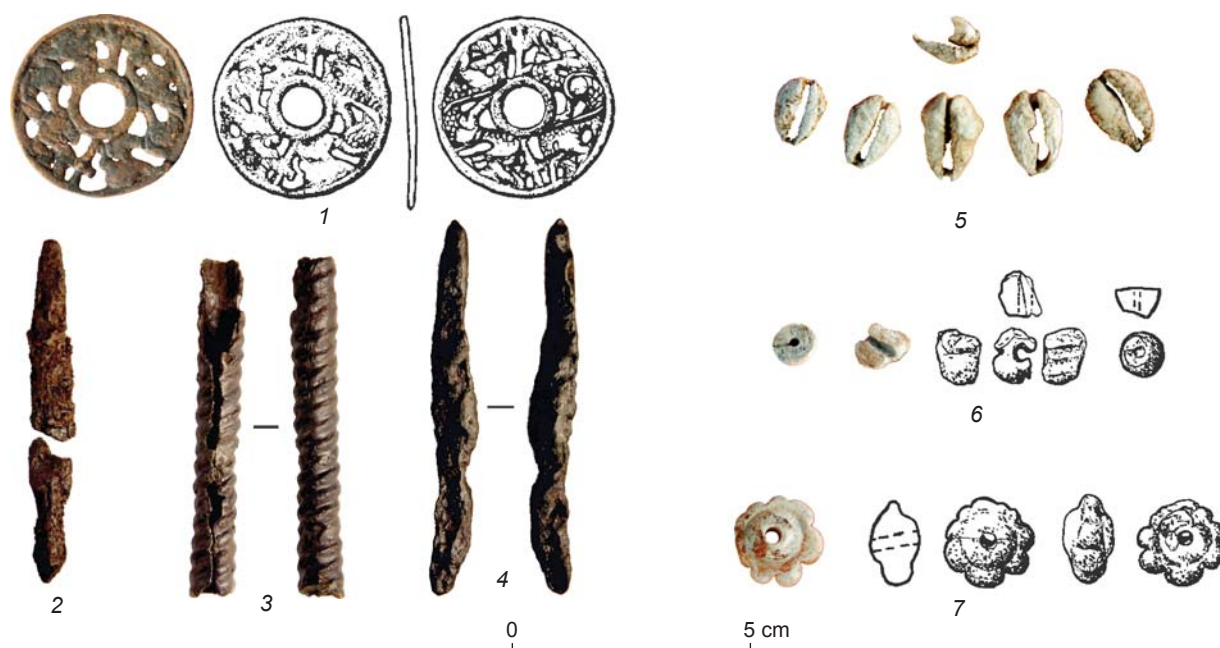


Fig. 3. Items from burial 1.

1 – bronze amulet; 2 – fragment of an iron item; 3 – iron pipe-shaped bead; 4 – iron knife; 5 – cowrie shells; 6, 7 – paste beads.

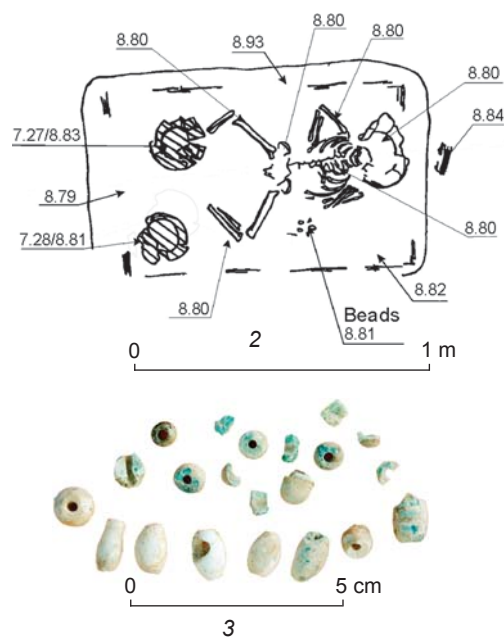


Fig. 4. Burial 2 at Ryabchikov Klyuch-1 (1, 2) and paste beads therefrom (3).

Near the left elbow-joint of the buried, 25 lenticular turquoise-colored beads made of vitreous paste were found. At the feet of the buried, there were two open-shaped, hand-made, clay vessels, with rounded rims and flattened bottoms, without decoration.

In sum, the key features of the burials are as follows. The graves are located at the site overlooking the river and distinct in the relief. The grave-pits are rectangular and shallow (0.5 m). There are traces of covering the

walls near the bottoms with small beams. Above-ground burial structures are missing, but they could have existed: they probably burned down shortly after the interment, which is why the upper part of the wood cover shows traces of charring, and the grave-pit's filling contains pieces of charcoal. The buried were laid on their backs, with their heads directed upstream to the east. There are grave goods—clothing items, ornaments, ceramic vessels, a knife (household), and cow vertebrae.

Morphology of the skull from burial 1 and facial reconstruction of the deceased

The cranial vault of the young female is of a rounded shape and a medium length; it is very narrow and short, sub-dolichocranial according to the cranial index (Fig. 5). The outline of the parietal bone displays the shape of a convex curve. The enthestral sites are smooth. The mastoid processes are small and smooth, weakly protruding and facing forward. The supramastoid ridge is weakly pronounced. The frontal part of the outline of the vault is rounded. The shape of the vault in the axial plane is ovoid. The occipital bone is not protruding nor

refracted. The nuchal lines are smooth, the external occipital protuberance is not pronounced (1 grade). The vault in general displays some asymmetry. The forehead is fairly sloping, medium-wide, and eurymetopic according to the frontal-transverse index. The frontal eminences are weakly pronounced. The brow-ridges are not protruding with respect to the nasal bridge.

The facial skeleton is of medium width but very tall, leptoprosopic according to the common facial index. The face is prognathic in the vertical plane, and hyperprognathic in the alveolar part. In the horizontal plane, the face is weakly protruding at the level of the orbits, but more strongly protruding in the subnasal area (Table 1). The orbits are of the closed type and display a squared shape. The orbital tubercles are not pronounced. The line of the incision of the eye is slightly inclined internally. The glabellar region is weakly developed (2 grade). The maxillary frontal processes display an oblique frontal orientation.

The nose is of intermediate height and width, mesorhinc and very weakly protruding. The nasal process of the frontal bone is very short, wide and trapezoid. The frontonasal angle is smooth. The nasal bones are narrow and of medium length. The nasal bridge is narrow, moderately protruding at the level of *dacryon*, medium-wide, and flat at the simotic



Fig. 5. Skull from burial 1.

Table 1. Craniometric data of the female skull from burial 1

Variable	Value	Variable	Value
1. Cranial length	170	55. Nasal height	50
8. Maximum cranial breadth	131	54. Nasal breadth	25
17. Cranial height from ba.	123	51. Orbital breadth from mf.	44
9. Minimum frontal breadth	93	51a. Orbital breadth from d.	41
45. Bizygomatic breadth	123	52. Orbital height	34
40. Basion-prosthion length	100	77. Nasomalar angle	143.9
48. Upper facial height	73	∠zm'. Zygomaxillary angle	133.9
47. Full facial height	121	32. Frontal profile angle from n.	77
43. Upper facial breadth	99	72. General facial angle	78
46. Midfacial breadth	94	73. Mid-facial angle	81
DC. Dacrial width	18	74. Alveolar angle	67
DS. Dacrial subtense	9	75. Nasal bones inclination angle	65
SC. Simotic width	8	75 (1). Nasal protrusion angle	13
SS. Simotic subtense	2.5	8 : 1	77
20. Cranial height (from porion)	108.7	48 : 45	59.4

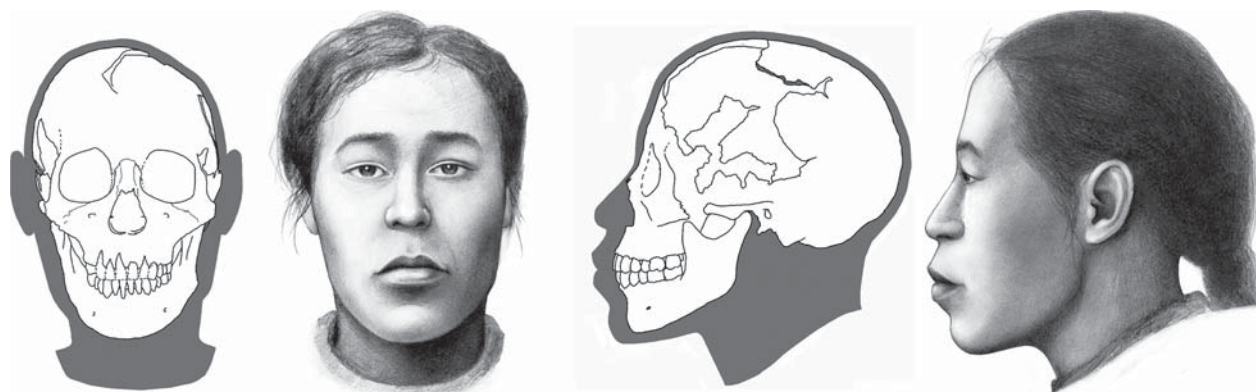


Fig. 6. Facial reconstruction based on the skull from burial 1.

level. The vertical outline of the nasal bridge is straight. The nasal aperture is triangular. The subnasal margin is blunt, of the “infantile” shape. Both sides of the margin are at the same level. The preservation of the anterior nasal spine is poor, but it was likely fairly developed and faced horizontally. The zygomatic bones are small, gracile, and smooth. The canine fossae are shallow.

Both maxillary and mandibular alveolar processes are low and protruding. The teeth are oriented vertically. The skull exhibits a natural form of prognathism of the dental part of the jaws. The dental occlusion is scissor-shaped. The mandible is of medium size. The mental eminence is of an intermediate width in the anterior plane. The frontal outline of the chin is rounded, while it is weakly protruding in the profile view. The mandibular ramus is inclined. The mandibular angles are weakly flared. The lower margin of the mandible is smooth.

The anatomical and morphological description of the skull was carried out following the protocol of the Russian school of facial reconstruction (Gerasimov, 1949, 1955; Lebedinskaya, 1998; Nikitin, 2009). As a result, we obtained a portrait of a girl with a tall but relatively narrow face, an inclined forehead of an intermediate width, and a protruding and prognathic alveolar part of the face (Fig. 6). The eyes are of medium size, with a smooth fold of the upper eyelid, with the line of the incision of the eye slightly inclined internally. The nose, of medium size as well, is weakly protruding in respect to the main plain of the face, its base and tip face anterior, or slightly elevated. The mouth is fairly large and the lips are plump. The chin is of an intermediate size and rounded.

In order to trace the main direction of morphological affinity of the female skull from Ryabchikov Klyuch-1 against a background of variation of North Eurasian peoples, a multidimensional statistical analysis of a large craniometric dataset was performed. Supra-population sample means were calculated employing un-weighted population means, in order to stabilize the pattern of variation and to account for the influence of each of the population samples to the general morphological type of

a supra-population mean. In such a way, female samples representing the Baikal, Central Asia, Altai-Sayan, North Altai, Kazakhstan, Ob-Irtysh (Tobol-Baraba Turks), Tom-Narym (Tom-Chulym Turks and Narym Selkup), Ural (Northern Mansi, Northern and Eastern Khanty) anthropological types were summarized. The Yamal-Yenisei anthropological type of the Western Siberian formation included samples of the North Samoyeds (Tundra and Taz Nenets), as well as a composite sample of the North Samoyeds (Nganasan, Nadym Nenets, Yar-sale and Shchuchiya Nenets), and the Kets (after (Gokhman, 1982; Dremov, 1984)). The craniometric data for the populations mentioned above were quoted from (Bagashev, 2017: 356–358, tab. 50).

The first two canonical vectors (CV) of the analysis account for more than 63 % of the total dispersion. The highest values of CV I will be found in samples displaying a wide skull-vault, a tall and horizontally flattened (at both levels) facial skeleton, and a relatively low nasal bridge; and the lowest values vice versa. This combination of traits differentiates Mongoloid and Caucasoid samples. The variation of CV II is associated with the height of the cranial vault and of the nasal bridge.

The distribution of the samples in the morphospace of the first two CVs (Fig. 7) shows that the girl's skull from burial 1 at Ryabchikov Klyuch-1 displays a specific combination of cranial traits and does not show morphological similarity to the reference samples*. Such an outcome of the analysis can be explained by the high intragroup craniometric variation typical of modern humans. All the dimensions of the skull from burial 1, excluding the upper facial height and cranial width, fit into the range of the intergroup variation of the reference female samples.

Summing up the results of the present analysis, it can be broadly concluded that the main morphological features

*The values of the cranial dimensions of the individual from burial 1 were employed “as is”, without recalculation to “adult” values. All the reference samples employed were female.

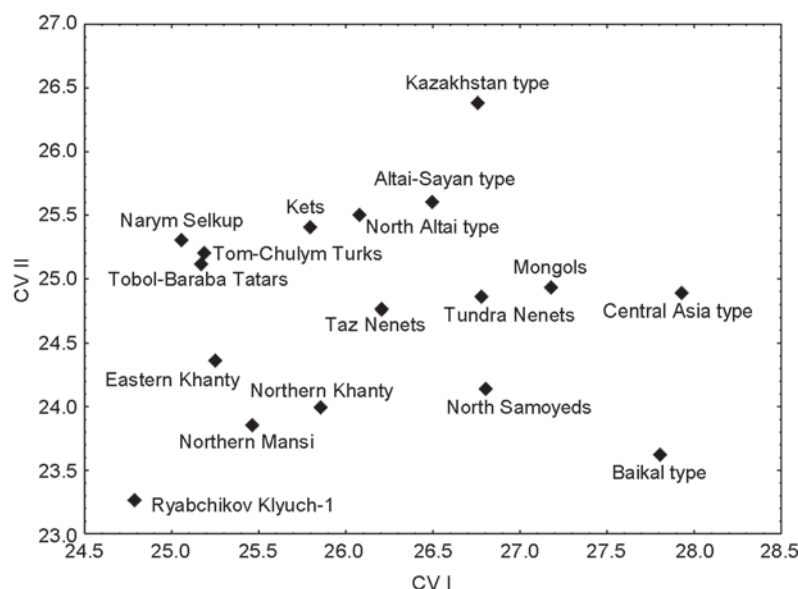


Fig. 7. Location of North Eurasian female groups in the correlation field of canonical vectors I and II.

of the girl's skull from Ryabchikov Klyuch-1 are similar to those of predominantly Mongoloid populations: in particular, the groups of the Uralian and Ob-Irtysh anthropological types of the Western Siberian formation (Table 2).

Discussion

Dating of the burials. Radiocarbon dates* were generated for burial 1 – 906 ± 43 BP (GV-02781), and for burial 2 – 1048 ± 50 BP (GV-02768). The calibrated date ($\pm 2\sigma$, 95.4 %) for burial 1 is 1035–1220 AD, that for burial 2 is 886–1153 AD (11.1 %).

Among the grave goods, an openwork plaque (amulet) with images of dragons deserves special attention. Parallels can be found in the Mongolian period, younger than the 13th–14th centuries. A review of similar Siberian finds was made by P.O. Senotrusova (2021). We can agree that such an item could have appeared in the Kansk-Rybinsk basin no earlier than the 13th century. However,

*Radiocarbon analyses were carried out on the fragments of the ribs of the deceased. Dating was executed at the AMS Laboratory of Budker Institute of Nuclear Physics SB RAS (Rastigeev et al., 2018). Bone samples were subjected to chemical processing and graphitization at the Laboratory for Isotopic Studies of IAET SB RAS and Laboratory for the radiocarbon analyses of the Novosibirsk State University (Lysikov et al., 2018), which currently belong to the Center for Collective Use “AMS Golden Valley”. Calibration of the radiocarbon age was carried out through the calibration curve IntCal20 (Reimer et al., 2020) and the program OxCal 4.4 (Bronk Ramsey, 2009; Bronk Ramsey, Lee, 2013).

the even earlier appearance of the plaque with dragon images in the Yenisei basin cannot be excluded either, because manufacture of such items began prior to the 13th century. The youngest date of existence for such items is difficult to determine. Such plaques could have been in use until the 17th–18th centuries.

The beads from Ryabchikov Klyuch-1 are close in shape to those from the graves of the 13th–14th centuries at the cemetery of Prospikhinskaya Shivera IV, which varied in composition and possible origin (Valiulina et al., 2017). Cowrie shells have been widely known in the archaeological materials of Siberia since the Early Iron Age; the shells were used for decorating clothes among the peoples of North Asia in the ethnographic period. They were also used as money both in the ethnographic period and in the Middle Ages (for example, in the Yunnan

Province (“Kniga”..., 1956: 137)). Ceramic vessels have no decoration, and are open-shaped, with straight rims and flat bottoms. No chronological parallels of such pottery in Siberian archaeology are known.

Thus, the grave goods are younger than the derived radiocarbon dates. The 12th century seems to be the most

Table 2. Mahalanobis-Rao distances between the skull from burial 1 at Ryabchikov Klyuch-1 and the reference (female) samples

Ethnic groups, ethnic types	Value
Tobol-Baraba Tatars	17.1441
Tom-Chulyum Turks	18.4247
Narym Selkup	19.8798
Eastern Khanty	17.1657
Northern Khanty	16.5969
Northern Mansi	23.5801
Tundra Nenets	22.4949
Taz Nenets	23.0934
North Samoyeds	23.2670
Kets	25.9278
Altai-Sayan type	20.6783
North Altai type	18.8462
Kazakhstan type	28.8972
Central Asia type	26.2945
Baikal type	25.4165
Mongols	22.1000

reasonable date, well-correlated with both radiocarbon determinations and the items' features.

Ethnocultural attribution. The set of grave goods could be associated with a group of pastoralists (judging by the presence of cow bones in the burial) of the pre-Mongolian period. This group should have been included in the system of connections between the population of the forest-steppe region of the Middle Yenisei and the surrounding territories, which is evidenced, most likely, by imported cowrie shells, a bronze amulet, and glass beads. Ceramic dishes do not show evident distinguishing features. It is currently impossible to attribute the buried individuals to any archaeological culture, because no medieval cultures in the Kansk-Rybinsk basin are known. There are also no exact parallels to the discovered burials.

Medieval burials of the population of the Kansk-Achinsk forest-steppe are represented mainly by small cemeteries and single graves. The ethnocultural identification of the youngest burial sites (2nd millennium AD) is based on the historiographic tradition (cremation – the Yenisei Kyrgyz, inhumation – the Kyshtyms), supplemented by the data from written sources and maps of the dispersal of the peoples of Siberia. A grave is usually attributed to a certain ethnic group on the basis of the following information: the grave location, information about the collection of tax (yasak) in the 17th–18th centuries, the areas of dispersal of individual seeks (clans), and the adoption of Christianity by the local population. In the Kansk-Achinsk forest-steppe, there are known burials of the Turkic-speaking Kachins (the Ezerts, according to D.G. Messerschmidt (1962: 165)) and Ket-speaking Arins: Innokentyevsky (Nikolaeva, 1963), Badalyk, Berezka, Vysokoye, Monashka, Solontsy, Shishka (Skobelev, Zelenina, 2019), Startsevo-1, and Antsir-1 (Fokin, 2020b). The cemeteries are located mainly on hills and other high landforms. These are flat-grave burials, some of which are associated with low mounds and masonries. Burials were made through the inhumation rite, in some cases—with the use of fire in the grave (this feature is common for the burials of the Turkic-speaking Kachins and Ket-speaking Arins). The grave-pits are shallow, contain the remains of wooden structures (roof, covering of the bottom and walls) and whole coffins; the use of birch-bark is noted. The buried individuals, with rare exceptions, were placed in graves in the supine position, with their heads to the west, rarely to the east; no connection with the direction of river flows has been recorded. The graves yielded sheep bones and grave goods: pottery, weapons, elements of horse equipment and clothing, ornaments, and cult items.

According to ethnographic data limited by consolidated information from the map by B.O. Dolgikh (1960), in the 16th century, various ethnic groups lived in the Kansk-Rybinsk basin: the Kamasins (Kashins), Kotts, and Karagas. The Kamasins are the Samoyed population of

the forest-steppe and taiga zones on the right bank of the Yenisei in the basins of the Kan and Mana. The Karagas (Tofalars) belong to the Turkic peoples of the northern forest-steppe and the Eastern Sayan range. The Kotts are the Ket-speaking population of the Middle Yenisei. It is known that Fort Kansk was set up by the Krasnoyarsk ataman Nikifor (Miloslav) Koltsov in “Kott’s land” in 1636 (Prokushev, 1986: 12). Apparently, the Kansk area was called Kott’s land, which unequivocally indicates the ethnicity of the majority of its population. Information about the penetration of Turkic-speaking groups (Karagas) into this region dates back to the time of the Russian colonization of Siberia (after the 16th century).

A review of the features of the burials of the Kets, Samoyeds, and Turks of the Late Middle Ages and the Early Modern Age recorded in ethnographic and archaeological materials does not provide solid grounds to identify criteria for a strict ethno-cultural classification of burials made according to the rite of inhumation in the Middle Yenisei. The burials of the Ket-speaking Arins have been studied in the vicinity of Krasnoyarsk. The Arin burials are considered those that do not show the use of fire. These include, for example, the Monashka cemetery, where some of the burials were provided with small masonries and some were not distinguished in relief. The latter had shallow pits with wooden structures (covering of the walls’ bottom, roofing, including birch-bark). The buried was placed in the supine position, with the head to the west. Downstream of the Kan River from Ryabchikov Klyuch-1, the Antsir-1 flat-grave burial is known, which has a stone above-ground burial structure and a partial intra-grave cover. The buried person was laid in a narrow pit in the supine position, with the head to the east. The grave goods include stone beads and other ornaments, and an axe. The burial is preliminarily dated to the 16th–18th centuries (Fokin, 2020a).

The burial rite of the Kets was described by B.O. Dolgikh (1961). The common features of the burials and graves at Ryabchikov Klyuch-1 described by him are location of the graves near rivers, orientation of the head to the east, wooden structures, and possibly traces of fire (it was made near the body of the deceased when they started to dig a pit; charred soil and pieces of charcoal were recorded to the north of burial 1 at Ryabchikov Klyuch-1). The distinctive features of the Ket burials: grave-pits are rather deep (about the height of an adult), the bottom and the body are covered with boards; the face of the deceased is turned to the west. Dolgikh noted that, according to A.P. Dulzon, the Chulyms buried the dead in the way similar to the Kets, but before placement of the body in the grave, a fire was made in it. Dolgikh considers burial rites of the Shors and Chulyms to be the most similar to those of the Kets.

Late Turkic (judging by the occurrence of the leather case for the umbilical cord—“kin”) burials of the

Krasnoyarsk forest-steppe were found at the Badalyk cemetery, in the vicinity of Krasnoyarsk. The Turks of the Minusinsk basin and the adjacent regions practiced cremation (Kyrgyz mounds, Askiz culture), as well as inhumation, sometimes with elements of cremation. A burial in mound 3 at Badalyk (apparently, of the Kacha culture) was topped with a low rounded stone pile. In the grave, there was a structure made of wooden boards (with a bottom and a roof), oriented along the W-S-W – E-N-E line. Birch-bark was used in the roof construction. The buried, in the supine position, was oriented with the head to the west-southwest. The face was turned to the south (materials of excavations by S.G. Skobelev, 1985).

A.Y. Tugarinov (1926: 81) provided a brief ethnographic description of the Kamasin burials. His interviewees informed him that the Kamasins (Kalmazh) practiced inhumation of the dead dressed in their best clothes and with a whole set of grave goods; the buried was wrapped in birch-bark, laid with the head to the west; external structures were absent. Samoyed burials are described in ethnographic records about the northern groups (Selkups) and supported by the data from archaeological excavations of sites associated with the Samoyed population in the Ob region. A common feature of the burials of the Narym Selkups (Tiskinsky cemetery) of the 18th–19th centuries (Bobrova, 2007: 40) and the burials at Ryabchikov Klyuch-1 is shallow graves. The differences are significant: occurrences of group burials (including those in kurgans), orientation of the head to the west, predominance of burials in coffins of various types. However, the Tiskinsky cemetery showed a modified rite of the Ob Samoyeds. G.I. Pelikh (1972: 62–63) identified a type of a more traditional and common burial rite, which reveals features close to those that of Ryabchikov Klyuch-1: the orientation of the buried with their heads upstream the river, the construction of a cribwork.

The available ethnographic data (Olenny narod, (s.a.)) indicate that burials of the Karagas (Tofalars) show similarities to the burials under consideration: shallow graves, covering with bark, building a cribwork (for winter burials), orientation of the dead with the heads to the east, the feet downstream the river, burial in everyday clothes and with a small set of grave goods. A burial of a child at Ryabchikov Klyuch-1 presents a striking difference from the well-known Tofalar burial practices. According to ethnographic data, the Karagas buried children in coffins carved out in logs or hollows of trees. The child's grave in question revealed traces of wood, but this was probably the joisting of the wooden structure in a shallow grave-pit, similarly to that in the girl's burial.

The features of burials of various ethnic groups of the Siberian population in the Late Middle Ages and the Early Modern Age do not provide any unambiguous

criteria for determining the ethnicity of the people who left the Ryabchikov Klyuch-1 cemetery. The most important features of the Ryabchikov Klyuch-1 burial rite have parallels in the burial practices of all the main inhabitants of the Kansk-Rybinsk basin prior to the Russian colonization. Apparently, attempts to identify relationships between people living in the same region in the 12th and 16th centuries should take into account the possibility of a complete change of inhabitants. The processes of changing the ethno-cultural situation in Central Siberia during the medieval period are identified by indirect signs that are distinguished in the archaeologically studied burials (anthropological type, processing of the remains, orientation, grave goods, mutual arrangement of structures, etc.). On this basis, generalized groups of “local” and “migrant” populations are described. Apparently, at Ryabchikov Klyuch-1, burials of the ancestors of one of the three main ethnic groups mentioned in the 16th century written sources were found. Comparison of archaeological, ethnographic, and anthropological data makes it possible to attribute the described complexes to the Ket-speaking population.

Conclusions

The burials of a girl and a child found at Ryabchikov Klyuch-1 reflect the traditions of a part of the Kansk-Rybinsk basin population of the 12th century AD. Burial rite is the most important indicator of the ethno-cultural affiliation of the people who made these burials. But a strict classification of burials according to this indicator should be carried out taking into account the fact that the differences, including the ritual ones, between groups of people who spoke the same language, may be more significant than those between neighboring populations speaking different languages.

Burials at Ryabchikov Klyuch-1 were made following the rite of inhumation in shallow pits with wood covering. The dead were oriented with the heads upstream the river, to the east. A comparative analysis of the materials makes it possible to affiliate the buried with the ancestors of one of the ethnographic groups populating this area in the third quarter of the 2nd millennium AD: the Ket-speaking Kotts (who were the most widespread at the early stages of the Russian colonization in the Middle Kan), the Turkic-speaking Karagas, and the Samoyed-speaking Kamasins. The shortest list of the main archaeological and ethnographic features of the burials of these groups shows the complexity and mixed character of their ritual practices and the ambiguity of the archaeological evidence of the burial rite at Ryabchikov Klyuch-1. Most likely, the buried individuals belong to the population that was the ancestor group of the later Ket-speaking people of the Kansk-Rybinsk basin.

Acknowledgements

Cultural and chronological attribution and interpretation of materials from archaeological field work were carried out under the IAET SB RAS R&D Project FWZG-2022-0007 “Geochronology of Cultural and Historical Processes in the Pleistocene-Holocene of North Asia Based on a Comprehensive Study of Geoarchaeological Objects”.

References

- Bagashev A.N. 2017**
Antropologiya Zapadnoy Sibiri. Novosibirsk: Nauka.
- Bobrova A.I. 2007**
Selkupy XVIII–XIX vv. (po materialam Tiskinskogo mogilnika). Tomsk: Izd. Tom. Gos. Univ.
- Bronk Ramsey C. 2009**
Bayesian analysis of radiocarbon dates. *Radiocarbon*, vol. 51 (1): 337–360.
- Bronk Ramsey C., Lee S. 2013**
Recent and planned developments of the program OxCal. *Radiocarbon*, vol. 55 (2/3): 720–730.
- Dolgikh B.O. 1960**
Rodovoy i plemenny sostav narodov Sibiri v XVII veke. Moscow: Izd. AN SSSR.
- Dolgikh B.O. 1961**
O pokhoronnom obryade ketov. *Sovetskaya arkheologiya*, No. 3: 102–112.
- Dremov V.A. 1984**
Rasovaya differentsiatsiya ugorskikh i samodiyskikh grupp Zapadnoy Sibiri po dannym kraniologii. In *Problemy antropologii drevnego i sovremennogo naseleniya severa Yevrazii*. Leningrad: Nauka, pp. 106–132.
- Fokin S.M. 2007**
Kulturno-istoricheskiye protsessy v rannem i razvitom Srednevekovye Krasnoyarskoy lesostepi: Cand. Sc. (History) Dissertation. Tomsk.
- Fokin S.M. 2020a**
Arkheologicheskiye issledovaniya Krasnoyarskogo krayevogo krayevedcheskogo muzeya. In *Arkheologicheskiye otkrytiya 2018 goda*. Moscow: IA RAN, pp. 456–457.
- Fokin S.M. 2020b**
Noviye srednevekoviy pogrebeniya v Krasnoyarskoy lesostepi. In *Mezhdistsiplinariye arkheologicheskiye issledovaniya drevnikh kultur Yeniseiskoy Sibiri i sopredelnykh territoriy: Tezisy Mezhdunar. konf. (Krasnoyarsk, 20–22 okt. 2020 g.)*. Krasnoyarsk: Sib. Feder. Univ., pp. 54–56.
- Gerasimov M.M. 1949**
Osnovy vosstanovleniya litsa po cherepu. Moscow: Sov. nauka.
- Gerasimov M.M. 1955**
Vosstanovleniye litsa po cherepu: (Sovremenniy i iskopayemiy chelovek). Moscow: Izd. AN SSSR. (TIE. Nov. ser.; vol. 28).
- Gokhman I.I. 1982**
Antropologicheskiye aspekty ketskoy problemy: Rezultaty antropometricheskikh i kraniologicheskikh issledovaniy. In *Ketskiy sbornik*. Leningrad: Nauka, pp. 9–42.
- “Kniga” Marko Polo. 1956**
I.P. Minaev (trans. from Old French); I.P. Magidovich (ed. and intro.). Moscow: Geografiz.
- Kungurov V.A., Kungurova N.Y. 2018**
Nekropol pervoy poloviny II tys. v basseynе r. Kan. In *Drevnosti Sibiri i Tsentralnoy Azii: (Elektronnaye nauch. izd.)*, V.I. Soenov (ed.). Gorno-Altaysk: Gorno-Alt. Gos. Univ., pp. 69–92.
- Kyzlasov I.L. 1983**
Askizskaya kultura Yuzhnoy Sibiri: X–XIV vv. Moscow: Nauka. (SAI; iss. E3-18).
- Lebedinskaya G.V. 1998**
Rekonstruktsiya litsa po cherepu: Metod. rukovodstvo. Moscow: Stariy sad.
- Lysikov A.I., Kalinkin P.N., Sashkina K.A., Okunev A.G., Parkhomchuk E.V., Rastigeev S.A., Parkhomchuk V.V., Kuleshov D.V., Vorobyeva E.E., Dralyuk R.I. 2018**
Novel simplified absorption-catalytic method of sample preparation for AMS analysis designed at the Laboratory of Radiocarbon Methods of Analysis (LRMA) in Novosibirsk Akademgorodok. *International Journal of Mass Spectrometry*, vol. 433: 11–18.
- Messerschmidt D.G. 1962**
Forschungsreise durch Sibirien 1720–1727, E. Winter, G. Uschmann, G. Jarosch (eds.). Bd. 1: Tagebuchaufzeichnungen 1721–1722. Berlin: Akad.-Verl.
- Mitko O.A. 1995**
Naseleniye territorii Srednego Yeniseya v epokhu srednevekovya (VI–XVI vv.): Cand. Sc. (History) Dissertation. Novosibirsk.
- Nikitin S.A. 2009**
Plasticheskaya rekonstruktsiya portreta po cherepu. In *Nekropol russkikh velikikh knyagin i tsarits v Voznesenskom monastyre Moskovskogo kremlya*. Vol. 1: Istoriya usypalnitsy i metodika issledovaniya zakhoroneniy. Moscow: Izd. muzeyev Mosk. kremlya, pp. 137–167.
- Nikolaeva I.B. 1963**
Raskopki na territorii byvshego Krasnoyarskogo ostroga. In *Materialy i issledovaniya po arkheologii, etnografii i istorii Krasnoyarskogo kraya*. Krasnoyarsk: Kn. izd., pp. 115–123.
- Oleny narod – pokhoronnaya obryadnost karagasov ili tofalarov. (s.a.)**
URL: http://etnografia.ru/aborigen/1_tofa/death/tofa_death.htm. (Accessed December 23, 2021).
- Pelikh G.I. 1972**
Proiskhozhdeniye selkupov. Tomsk: Izd. Tom. Gos. Univ.
- Prokushev V.I. 1986**
Kansk. Krasnoyarsk: Kn. izd. (Goroda Krasnoyarskogo kraya).
- Rastigeev S.A., Frolov A.R., Goncharov A.D., Klyuev V.F., Konstantinov E.S., Parkhomchuk V.V., Petrozhitskii A.V. 2018**
Radiocarbon analysis of samples by a 1-MV AMS spectrometer at ion charge state 3+. *Physics of Particles and Nuclei Letters*, vol. 15 (7): 986–989.
- Reimer P., Austin W., Bard E., Bayliss A., Blackwell P., Bronk Ramsey C., Talamo S. 2020**
The IntCal20 northern hemisphere radiocarbon age calibration curve (0–55 cal kBP). *Radiocarbon*, vol. 62 (4): 725–757.
- Saveliev N.A., Svinin V.V. 1978**
Pogrebeniye zheleznogo veka na reke Kane. In *Drevnyaya istoriya narodov yuga Vostochnoy Sibiri*. Irkutsk: Irkut. Gos. Univ., pp. 135–149.

Senotrusova P.O. 2021

Nakhodki monetovidnykh amuletov v Sibiri. In *Arkheologiya Severnoy i Tsentralnoy Azii: Noviye otkrytiya i rezultaty mezhdistitsiplinarnykh issledovaniy: Sbornik. st., posvyashch. 75-letiyu prof. Y.F. Kiryushina*. Barnaul: Izd. Alt. Gos. Univ., pp. 221–224.

Senotrusova P.O., Mandryka P.V. 2018

Cultural ties across taiga and steppe: Material culture from Medieval Lower Angara River and Prospikhinskaya Shivera IV. *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 46 (3): 92–99.

Skobelev S.G. 2009

Predmetnoye sodержaniye russkikh vliyaniy na materialnuyu kulturu korennoy naseleniya yuga Priyenseiskogo kraya v pozdnem Srednevekovye – nachale Novogo vremeni (po dannym arkheologii). *Vestnik Novosibirskogo gosudarstvennogo universiteta*. Ser.: Istoriya, filologiya, vol. 8 (3): 231–250.

Skobelev S.G., Vybornov A.V. 2019

Sredniy Yenisey v mongolskoye vremya. In *Genuezskaya Gazariya i Zolotaya Orda*, vol. 2. Kishinev: Stratum Plus, pp. 145–156.

Skobelev S.G., Zelenina E.V. 2019

Arkheologicheskiye pamyatniki arintsev i kachintsev v Krasnoyarskom lesostepnom rayone (XVI–XVIII vv.). In

Narody i kultury Sayano-Altaya i sopredelnykh territoriy: Materialy VI Mezhdunar. nauch. konf., posvyashch. 75-letiyu Khakass. nauch.-issled. inst. yazyka, literatury i istorii (26–27 sent. 2019 g.). Abakan: Khakas. kn. izd., pp. 48–58.

Tugarinov A.Y. 1926

Posledniye kalmazhi. *Severnaya Aziya*, bk. 1: 73–88.

Valiulina S.I., Mandryka P.V., Senotrusova P.O.,**Trifonov A.A. 2017**

Busy naseleniya Nizhnego Priangarya v razvitom Srednevekovye (po materialam mogilnika Prospikhinskaya Shivera IV). *Stratum plus*, No. 5: 311–324.

Vybornov A.V., Grachev I.A., Zolnikov I.D.,**Kartozhiya A.A., Markovsky G.I., Slavinsky V.S.,****Slepchenko S.M., Tsybankov A.A. 2015**

Spasatelniye arkheologicheskiye raskopki na mestonakhozhdenii Ryabchikov Klyuch-1 pod gorodom Kanskom v 2015 godu. In *Problemy arkheologii, etnografii, antropologii Sibiri i sopredelnykh territoriy*, vol. XXI. Novosibirsk: Izd. IAET SO RAN, pp. 567–570.

Received January 10, 2022.

Received in revised form April 6, 2022.