

**GENERAL CHARACTERISTIC AND INTERNAL STRUCTURE OF KURGANS IN
AFANASIEVO CULTURE**



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**GENERAL CHARACTERISTIC AND INTERNAL STRUCTURE OF KURGANS IN
AFANASIEVO CULTURE**



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**MASTER THESIS
HISTORY DEPARTMENT**

YEDITEPE UNIVERSITY

PLAGIARISM PAGE

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

In this research, the internal structure and general characteristics of kurgans in Afanasievo culture are tried to be emphasized. In this context, the monuments that belong or can belong to this culture and the geographies in which they are located were mentioned and besides the materials that were found in them were analyzed by using Russian and many foreign sources. When the properties of the materials are analyzed, it was mentioned that which culture or cultures they show affinity with, their contribution to the history of humanity, chronology, and origin. The chronological problem was tried to be overcome by comparing the traditional method LSC (Liquid scintillation) and modern method AMS (Accelerator mass spectrometry) techniques and the origin problem was tried to be clarified through the genomes that were obtained from the human bones which were found in the monuments in recent years and cultural continuity/similarities. The Afanasievo culture is a very important culture for human history which serves as a kind of bridge between the east and west of Eurasia, where the main elements of the productive economy such as cattle breeding and metallurgy were observed for the first time in Southern Siberia and the construction of an advanced structure such as kurgan and the sacred structure. It is an important phenomenon in that it is the culture in which the formations of the area are defined for the first time. Chronologically, posterior cultures can be defined as a touchstone in that they were influenced by the Afanasievo culture and have kinship characteristics with Yamnaya Culture and older cultures which were found in similar chronologies in Eastern Europe. In this thesis, contrary to many scientists, the theory that Afanasievo culture is of Turkic origin rather than an Indo-European culture will be tried to be put forth.

Keywords: Afanasievo, Yamnaya, kurgan, Haplogroup R1b, Turkic, Indo-European

ÖZET

Bu arařtırmada Afanasyevo Kltr'ndeki kurganların i yapısı ve genel zellikleri zerinde durulmaya alıřılmıřtır. Bu baėlamda Rus ve birok yabancı kaynaktan yararlanılarak, bu kltre ait olan, olabilecek anıtlar ve buldukları coėrafyalara deėinilip, ierisinde bulunan materyaller incelenmiřtir. Materyallerin zellikleri incelendiėinde, hangi kltr veya kltrler ile akrabalık ya da yakınlık gsterdiėi, insanlık tarihine kattıkları, kronoloji ve kken sorununa deėinilmiřtir. Kronolojik sorun, geleneksel yntem olan LSC ve modern yntem olan AMS teknikleri ile karřılařtırılarak giderilmeye alıřılmıř; kken sorunu ise, anıtların ierisinde bulunan insan kemiklerinden son yıllarda elde edilen genomlar vasıtası ve kltrel devamlılık-benzerlikler ile bir netlik kazandırılmaya alıřılmıřtır. Afanasyevo Kltr, Avrasya'nın doėusu ile batısı arasındaki bir nevi kpr grevini gren, insanlık tarihi iin olduka nemli bir kltr olup, Gney Sibirya'da; sıėır yetiřtiriciliėi ve metalurji gibi retici ekonominin ana unsurlarının ilk defa gzlemlendiėi ve kurgan gibi bir geliřmiř yapının inřasının ve kutsal alan oluřumlarının ilk kez tanımlandıėı kltr olması bakımından nemli bir olgudur. Kronolojik olarak daha sonra oluřan kltrlerin, Afanasyevo Kltr'nden etkilenmesi ve Doėu Avrupa'da benzer kronolojilerde bulunan Yamnaya Kltr ve daha eski kltrler ile akrabalık zellikleri ve analogiler barındırması aısından mihenik tařı olarak tanımlanabilir. Bu tezde, birok biliminsanın aksine Afanasyevo Kltr'nn bir Hint-Avrupa kkenli kltrden ziyade Trk kkenli olduėu teorisi ortaya konulmaya alıřılacaktır.

Anahtar Kelimeler: Afanasyevo, Yamnaya, kurgan, Haplogrup R1b, Trk, Hint-Avrupa

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INTRODUCTION

Afanasievo culture, named after the materials and graves that were studied by S.A. Teploukhov in the Afanasievo Mountain in the Yenisei region in 1920 and 1923 were identified taken. The first tomb was excavated by V.V. Radlov in the mid-19th century that it is thought to be in the Altai Mountains in Onguday Village around the Ursul River. Although 5 graves were excavated in Yenisey by A. V. Adrianov in 1903, the term Afanasievo culture was first put forth by Teploukhov and periodized. Initially, because of the similarity of ceramic forms, Teploukhov attributed this culture to the Andronovo culture, and M.N. Kamorova upheld this idea. In the 1950s, together with the monuments that discovered by A.N. Lipsky (such as Tas-Khazaa, The Great Ring, Piltir), the combination of Afanasievo products with Okunev culture materials brought about to new views. Studies were conducted in 1970 and after gained speed(accelerate); V.I. Molodin, S.V. Tsyb, M.T. Abdulganiev, P.I. Shulga, O.V. Larin, E.B Vadetskaya, N.F. Steponova, V.I. Soenov, A.V. Polyakov, and M.P. Gryaznov who are important scholars such as conducted deep research, field, and excavation studies on this culture, compared the chronological framework of Afanasievo, its origin, and the analogies of materials with other cultures, and put forward new views, presented many works and published monographs on this subject.

It is thought that the Afanasievo culture emerged after the migration of the Yamnaya culture population to the east which is seen as the cornerstone of the "*Kurgan Theory*" and "*Pit-Grave*" cultures put forward by some scholars. As a matter of fact, genomes obtained from Afanasievo populations and Haplogroup R-based studies reveal that this view should be discussed. It has been argued that this culture is the production of Indo-European society that arises from the lack of technology and due to the dominance of the western point of view, and unfortunately, it has not been done the comparison and questioning different theories which are the basis of scientific research methods. For this reason, the view we are dealing with is coming up with new ideas by using these methods and try to be proven them.

1. Memorials of the Afanasievo Culture in Russia

1.1. Memorials of the Afanasievo Culture of the Mountain of Altai

Mountainous Altai is the region where most of the monuments belong to the Afanasievo culture in the Bronze Age are located. Most of the Afanasievo culture monuments in Mountainous Altai are in Central Altai, Middle Katun. Although many settlements and monuments have been identified in some areas, it is thought that there are more settlements and monuments that have not been discovered

1.1.1. Ongudai District

1.1.1.1. Bektiek Settlement

In 1989, the Boytigem squad of the Katun archaeological expedition of the Altai State University conducted a survey about the settlement in downstream which locates 9,4 km distance from Katun's estuary. Three pits of 2x2 meters were excavated and the depth was measured as 0.2-0.6 meters. Some stone products, ceramic, and animal bone fragments were found. This settlement is temporarily dated to the Afanasievo culture.

1.1.1.2. Bichiktu-Bom Settlement

Bichiktu-Bom was discovered by the Gorno-Altay archaeological group of the Altai State University. The settlement is located in the tract of Altı-Aırı near the village of Bichiktu-Bom, on the foot of the mountain. No excavations were carried out but artefacts were collected in the plowed field and besides, they have different times. The main part of the collections (about 20 vessels- fig.1; 4-12) belongs to the Afanasievo culture. The collections get exhibited in The Museum of Archaeology and Ethnography which is in the city of Barnaul.

1.1.1.3. Boytigem-I, burial ground

Boytigem-I is located 1.5 km distance from the mouth of the Boytigem river and on the right bank of the Katun river. In the ground, there were 77 objects that they belong to different times. In the Northern group, there were four kurgans which locate parallel to the flow of river, in contrast to the mounds of the Scythian time. In 1989, the archaeological team

of the Altai State University and the Gorno-Altay University excavated one of them for archaeological research. The structure was a ring of stones stacked in two layers. The kurgan diameter is 7.5 m, height is 0.4 m. The grave which was found in this research is oval in shape, measuring 1.75x1.05 meters and 1.6 meters deep. The skeleton was laid on his/her back and his/her feet bent through the knee and his/her head was turned form to the southeast (painted with ocher) (fig.1; 1-3) (Vadetskaya, Polyakov & Stepanova, 2014, p.6-7).

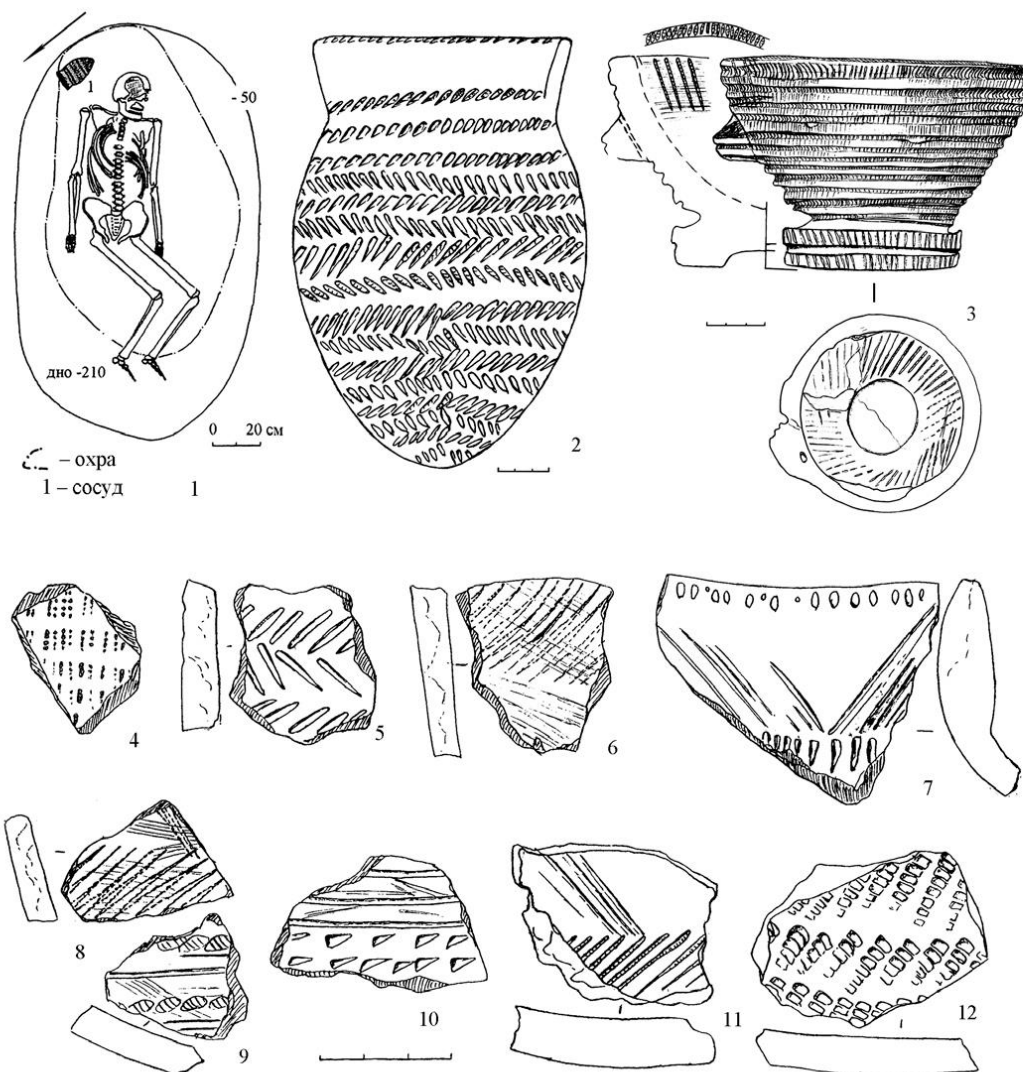


Figure 1: Biçiktu-Bom Settlement; (4-12), Boytgem-I-kurgan 1; (1-3)

(Vadetskaya, Polyakov, Stepanova, 2014, p.45)

1.1.1.4. Boytigem-II, burial ground

This monument which was found by researchers is located between the burial ground Boytigem-1 and the mouth of river Boytigem. Between 1989 and 1991, 10 kurgans which belong to Afanasievo culture were excavated; 8 of them are on the south side and others are on the north side. Six kurgans (11, 12, 13, 14, 16, 20) are clustered from the northwest to the southeast. Two of them on the eastside is adjacent to the kurgan of the early Scythian time (fig.2). The size of the structures is from 3 to 8 meters. The size of the graves is from 0.9 to 2.0 x 0.9 meters (some taper to the bottom). The depth of graves in the mainland is from 0.5 to 1.6 meters. There was no burial in kurgan 17, and 2 graves were found in kurgan number 7. The deads were laid on their backs and their legs bent through the knees. Ochre was recorded in three burials. All burials are single: 2 women (25-30 and 40-45 years old), 1 man (40-45 years old), 1 teenager (15-17 years old), 2 children (in other cases, gender and age are not defined) (Vadetskaya, Polyakov & Stepanova, 2014, p.7,102).



Figure 2: Boytigem-II; plan of burial ground (black square markings belong to the Early Scythian period) (Vadetskaya, Polyakov, Stepanova, 2014, p.46)

1.1.1.5. The Second Mejelik, a burial ground

In 1980, The Second Mejelik was examined by S.V. Tsib. It is located on the right side of the Kayarlık River, 0.2 km southeast of Yelo Village. Afanasievo burial structures are located in two parts of the terrace. In the North-Western part, there is a circular fence with a diameter of 8 meters, was vertically dugged into the ground shale slabs that protrude from under the turf at 0.01-0.1 meters. Another three similar structures are located in the South-Western part of the terrace. One of them is 18 meters in diameter, the others are 8 and 10 meters in diameter. The monument was not excavated.

1.1.1.6. The Second Mejelik-I, burial ground

The Second Mejelik is located 1.5 km to the Southern East of the village and on the right-bank terrace of the Kayarlık river, under the southern slope of the Second Mejelik rock. According to the type of tombstone structures, the burial ground is attributed to the Afanasievo culture. No excavations were carried out.

1.1.1.7. Yelo-I, burial ground

Yelo-I is located 1-1.5 km West of the Yelo village, on the right bank of the Yelo river, opposite the mouth of the Tobota river. Due to the fact that the monument is plowed, the exact number of structures can not be established. The structures are divided into 2 groups, separated by 0.5-1.0 km. In 1976-1977, the archaeological expedition of the Altai State University excavated 3 kurgans in the Western and 2 kurgans in the Eastern. The skeletons of men and women were found in two kurgans that were excavated on the West Side. The rectangular graves consisting of vertically placed plates with a diameter of 5.6-6.2 meters are 1.7x 0.8 and 2.2 x 2.05 meters in size and 1.05 and 1.5 depth. The two graves were robbed. Radiocarbon dates for kurgans were obtained from tree samples as 4750 ± 50 and 4720 ± 25 .

Kurgans in the Eastern group consist of torn stones and those laid horizontally. Grave 1 was named Kurota type when researchers looked at the burial shape. The grave 4, is 8 meters in diameter, and the male skeleton inside was found to have knees bent, its head is turned from to southwest-west and painted in ochre. A decorated ceramic pot near his right shoulder and a copper wire earring were found near the skull (fig.3; 1-3). Radiocarbon tests obtained from tree samples were dated to 4410 ± 50 and 4420 ± 30 years ago.

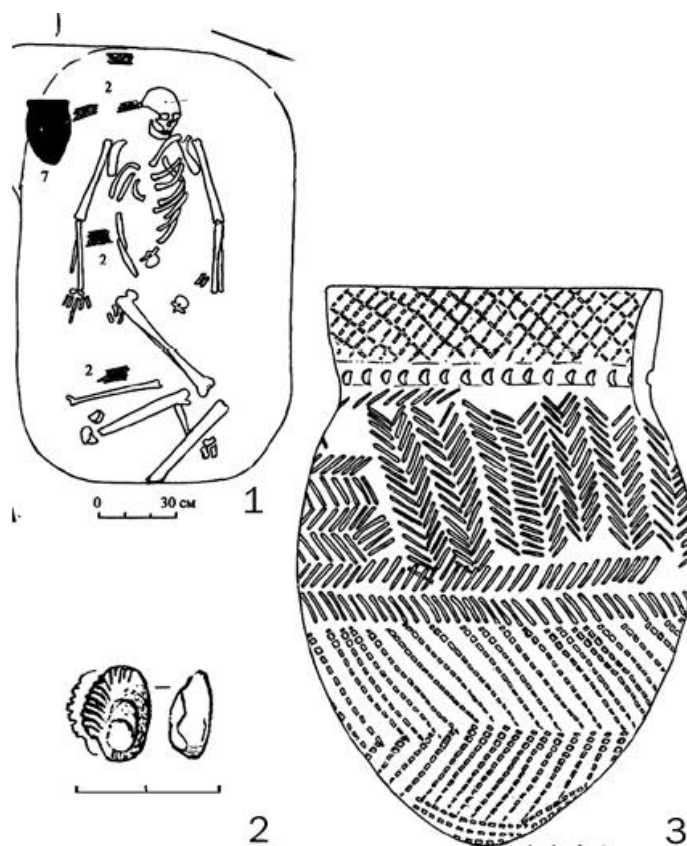


Figure 3: Yelo-I, Grave 4; (1-3) (Vadetskaya, Polyakov, Stepanova, 2014, p.50)

1.1.1.8. Yelo-II, burial ground

Yelo-II is located 1 km northwest of Yelo village. There are kurgans from different periods in the cemetery. In 1977, an archaeological expedition of the Altai State University excavated 1 kurgan that made of vertically placed slabs, 3.6 m in diameter, covered with stone. A woman that is buried (35-45 years old). On the right side, the legs bent at the knees, the head is on the left. All the bones, especially the legs, are colored with ochre. There were no items (fig.4; 1-2).

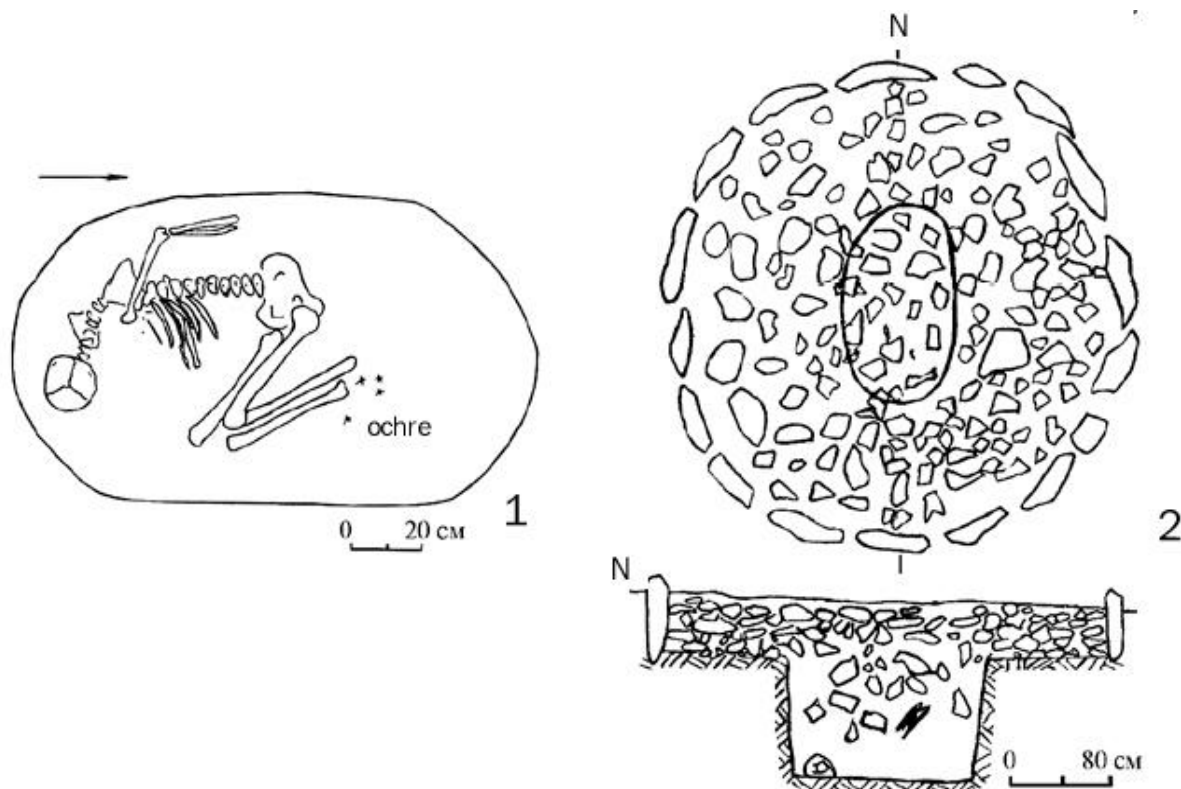


Figure 4: Yelo-II; (1,2) (Vadetskaya, Polyakov, Stepanova, 2014, p.48)

1.1.1.9. Yelo 3, burial ground

Yelo 3 is located in the Yelo villiage, on the left bank of the river Kayerlik approximately 200 meters from the riverbed. The monument is now completely destroyed but according to observations in the mid-1970s, it is known to have 4 kurgans here.

1.1.1.10. Yelo, settlement

Settlement of Yelo is located 4 km West of the Yelo village, on the cape of the right bank over-floodplain terrace of the Yelo river. Ceramics pieces, a stone scraper and several animal bones were found. The materials are not published.

1.1.1.11. Yelo-Bashi, burial ground

Yelo-Bashi is located 3.5 km from the Yelo village, on the left bank of the Yelo river. With the expeditions of the Altai State University in 1977-1978 and 1980, there are unearthed

6 Afanasievo kurgans. The graves were built in three clusters far apart. Kurgan 1, 2, 3, 6 are in the east, kurgan 5 is in the west and kurgan 4 is in the middle of the two (fig.5; 4). In 2011, V. I. Soenov and P. I. Shulga conducted the researching on the monument. The diameter of the kurgans in the eastern group is 4 to 8 meters. All tombs are covered with plates and they are 1.5 x 0.8 and 2.4x1.5 meters in size, 1-1.9 deep. Kurgan-3 is separated from the other three structures and its size is 3 x 2.4 meters at the top and 1.85 x 1.2 meters at the bottom. Kurgan 1 has the skeletons of a woman and her child. In Kurgan 3, a woman is buried (fig.5; 5). In Kurgan 2 and 6 that is located in the eastern group are buried teenagers (fig.5; 6-7). Kurgan 4 in the middle group was built with a torn stone with a diameter of 8.8 x 8.6 meters. The burial pit had a wooden floor, oriented along the northeast-east and southwest-west line. The grave was disturbed, only the leg bones were preserved. No items were found. The kurgan 5 in the western group is 15 meters in diameter and an adult and a young man buried inside. Skeletons are completely painted in ochre. Sharp and flat bottomed clay pots were found in the grave (fig.5; 1-3). In the radiocarbon test for Kurgan 5, 4920 ± 50 date was obtained (Stepanova, 2012b, p.9-10., Vadetskaya, Polyakov & Stepanova, 2014, p.8-10).

1.1.1.12. Kayarlık-II, burial ground

Kayarlık-II was discovered on the first terrace above the floodplain on the left bank of the Kayarlık River. It is located 2.5-3 km southwest of Yelo Village in the area where Kayarlık and Yelo rivers meet. The grave area is located at the end of south of the terrace and has a shape extending from west to east. Two types of grave structures were seen. The first type is dated to the Afanasievo period and it has circles that get conducted round shape stones and large plates of nine fences. Their diameters is 6-18 meters, and the sheets forming the fence rise 0.05-1.1 meters above the modern surface (Stepanova, Vladimirov & Tsib, 2005, p.23).

1.1.1.13. Kara-Koba I, burial ground

Kara-Koba I lies 1-1.5 km southeast of the Kara-Koba Village. In 1977, 17 kurgans were identified and 11 kurgans were excavated between 1977 and 1980. A child skeleton and bone arrowhead were found in the number 3 kurgan. In the kurgans 1 and 2, women and children's skeletons were identified. Child skeletons are placed on the right side of the women. Thus, almost half of the kurgans, there are child burials. Single burials predominate; only kurgan 1 and 2 have women and a child. In total, 12 people are buried, including 2 women, 2 men, 1 teenager, 5 children and the gender and age of the dead from the kurgan 7 is not defined.

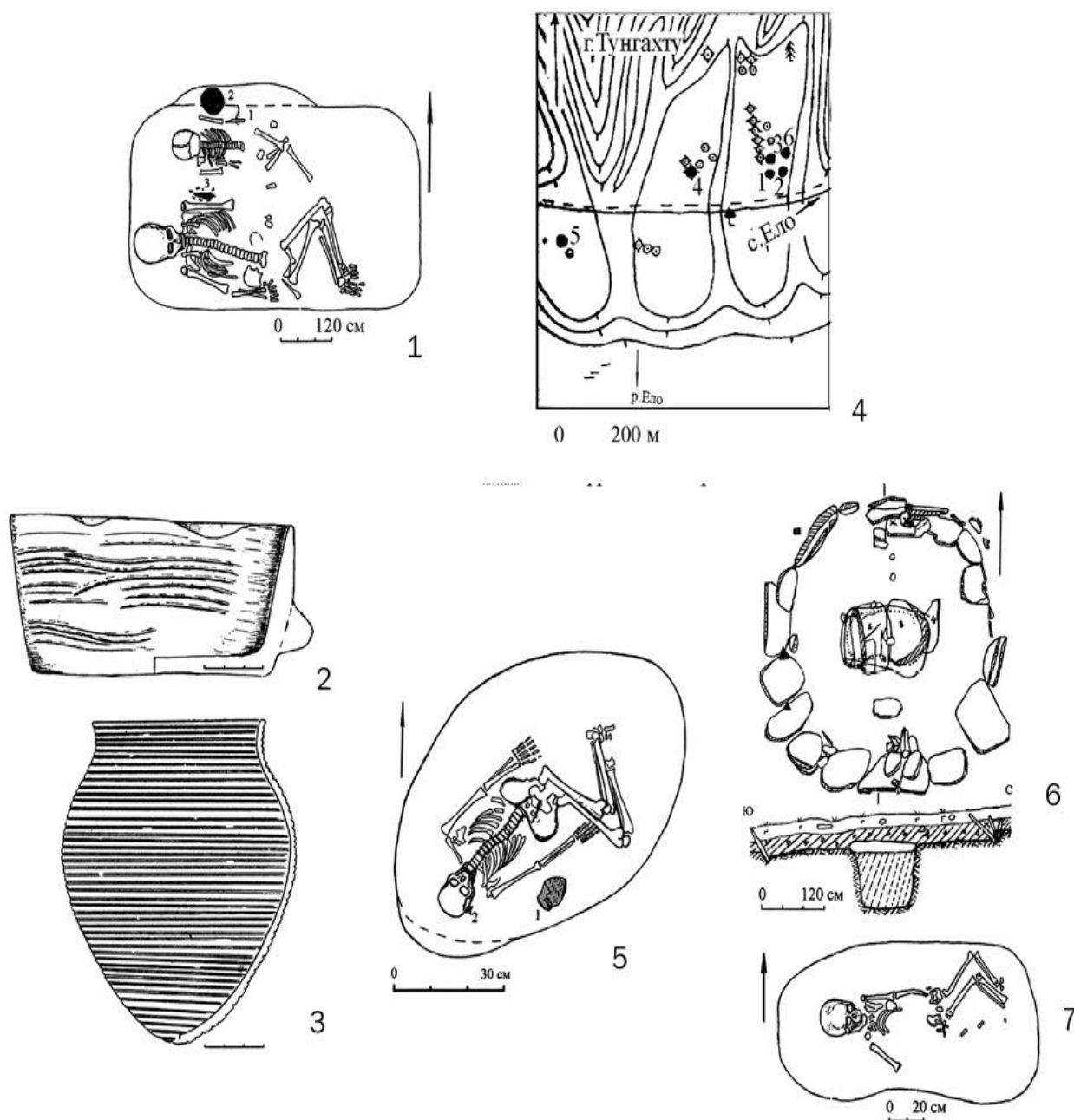


Figure 5: Yelo-Bashi - kurgan 5; (1-3), plan; (4), kurgan 3; (5), kurgan 6; (6,7) (Vadetskaya, Polyakov, Stepanova, 2014, p.51)

Metal products were found in Kurgan 1 and 12. There are 10 vessels, 4 of them are sharp-based, 3 of them are round-based, 1 of them is pointed-based, 1 of them is flat, 1 of them is flattened-based. In general, we have data to date the Southern group inventory of the

Mountainous Altai to the late Afanasievo Period (Samples were taken from logs with a diameter of 20-25 cm and 2 radiocarbon dates were obtained, 5100 ± 50 and 4965 ± 80 years.). When we look at the general characteristics and structures of the ships, the idea that the products of Kara-Koba-I (grave 7, 8, 10), First Mejelik-I (grave 1), Saldyar-I (grave 17) and Lower Tyumechin-I (grave 10, 14) came out of three groups of potters. The short chronology difference between them also led to the defense that the monuments were processed at the same time.

1.1.1.14. Kara-Koba, burial ground

Kara-Koba is located 0.3 km southwest of Kara-Koba Village, it was analyzed in 1981 and the excavation report was published by Surazakov. With Kurgan is a diameter of 1.8 meters, it is built of vertically placed slabs. The grave is covered with a slab that is measured 1.8 x 0.94 meters. The grave pit is 0.7 meters deep from the floor that is measured 1.1 x 0.75 meters, and is oriented with a long axis from the South to the North. The deceased, believed to be a teenager, is laid on his back with his arms stretched out along the torso, his legs bent at the knees, initially, apparently, put his knees up, his head on the southwest. The buried person and the burial ground were painted in dark yellow and a reddish clay vessel was found (Stepanova, 2012b, p.10., Vadetskaya, Polyakov & Stepanova, 2014, p.10-12).

1.1.1.15. Karakol, burial ground

In 1985, a kurgan was discovered in the Karakol village during excavation. The monument was investigated by the East Altai squad of the North Asian expedition of USSR Academy of Sciences. The burial ground is located in the center of the village of Karakol which is located on the left bank of the Ursul river, between the Kurata river and the Karakol river's tributaries. The kurgan was built on top of a hill. The female skeleton in Kurgan was laid on her back with her legs bent at the knees and her head was turned east and in addition, there was a child skeleton on her feet and both were painted with ochre. There were vessels made of earthen soil and oxidized with copper pieces. The excavation report was published by V.D. Kubarev.

1.1.1.16. Kayancha, burial ground

Kurgan which was excavated in 1989 is located at the terrace on the second floodplain that is localized right bank of the Katun river near the Kayancha road. It is formed boards

placed vertically and contains second ring of stones and tiles lies in several layers. According to the scholars who made the excavations discovered that the tomb was looted for the first time in the Iron Age.

1.1.1.17. Small Bulunduk

Small Bulunduk is located on the left bank of the Tenga river. No excavations were carried out and the area was identified by Kubarev.

1.1.1.18. Lower Tobotoy-I

3 km from Yelo village in Onguday region. It is located in the west and was explored by Altai State Universtiy in 1977. The area of kurgans belong to Afanasievo culture and different periods, but excavation was not done.

1.1.1.19. Lower Tobotoy II, burial ground

Lower Tobotoy II is located at the terrace on the left side of the Tobotoy River, 3 km northwest of Yelo village. Research was carried out in 1976-1977 and 2011. Currently, due to the fact that there is a farm on top of the monument, no excavations were carried out.

1.1.1.20. Lower Tyumechin-I, burial ground

Lower Tyumechin-I is located at 0.5–0.6 km Southerneast from the village Yelo, on the right bank of the river Kayarlık and near where it merges with Yelo river - Ursul river. The monument was opened in 1976 by the Astrakhan State University expedition. In 2011, the burial ground was surveyed by V. I. Soenov and P. I. Shulga. It was determined that the territory of the burial ground is currently used as a pasture. In the voyage which was organized by Altai State University in 1977-79, 15 kurgans that belong to Afanasievo culture and consist of vertically placed plates with a diameter of 1 to 11.5 meters were excavated. Burial pits mostly get narrow straight down. Two people were identified in 4 kurgans, in other kurgans are single. An adult man and a child were identified in Kurgan 1 and 9, and two children were buried in kurgan 2 and 8. In other graves, a total of 5 men, 5 women and 9 children were observed. The age and gender of the a skeleton in a only grave could not be determined. The knees of the skeletons were often bent and ochre paint was nominated (fig.6). With the samples that taken from human bones, it was obtained that the ages of Kurgan 7 and

Kurgan 9 is respectively 4860 ± 60 and 3960 ± 80 . With the sample that was selected by V. D. Slavnin, 4550 ± 80 collagen dates were obtained for kurgan 6.

1.1.1.21. Lower Tyumechin-II, burial ground

Lower Tyumechin-II is located 200 m East of the Lower Tyumechin-1 burial ground. In 2011, the monument was analyzed by V. I. Soenov and P. I. Shulga in order to classify the current state of the monument. The territory of the burial ground is used as a pasture. No excavations were carried out.

1.1.1.22. Lower Tulchin-3 burial ground

Lower Tulchin-3 is located at 1.5-1.8 km Northeast of the Yelo village and near 200 meters East of the first Mezhelik rock elevation. It stretches for 250 meters from the Northwest to the Southeast. Only one kurgan, located in the North-Western part of the burial ground, stands out in size. It has a diameter of 50 meters, and inside of it there are two smaller kurgans. According to the tombstone structures, the monument is attributed to the Afanasievo culture.

1.1.1.23. Lower Tyumechin-IV, burial ground

The burial ground is located 2.5 km South of the village Yelo, 1 km South of the elevation of the First Mejelik, opposite the confluence of the river Yelo and Kayarlık and on the right bank of the Ursul river. The archaeological and ethnographic expedition of the Astrakhan State University which is under the leadership of V. D. Slavnin excavated 2 Afanasievo kurgans that made of vertically placed slabs with dimensions of 2.8×3.8 and 7.2×8.2 meters. The grave pits were covered with slabs. A 25-30 year-old-man and a child are buried, laid on their back with their legs bent at the knees and their head are on the southwest. The color is marked with ochre. No items were found.

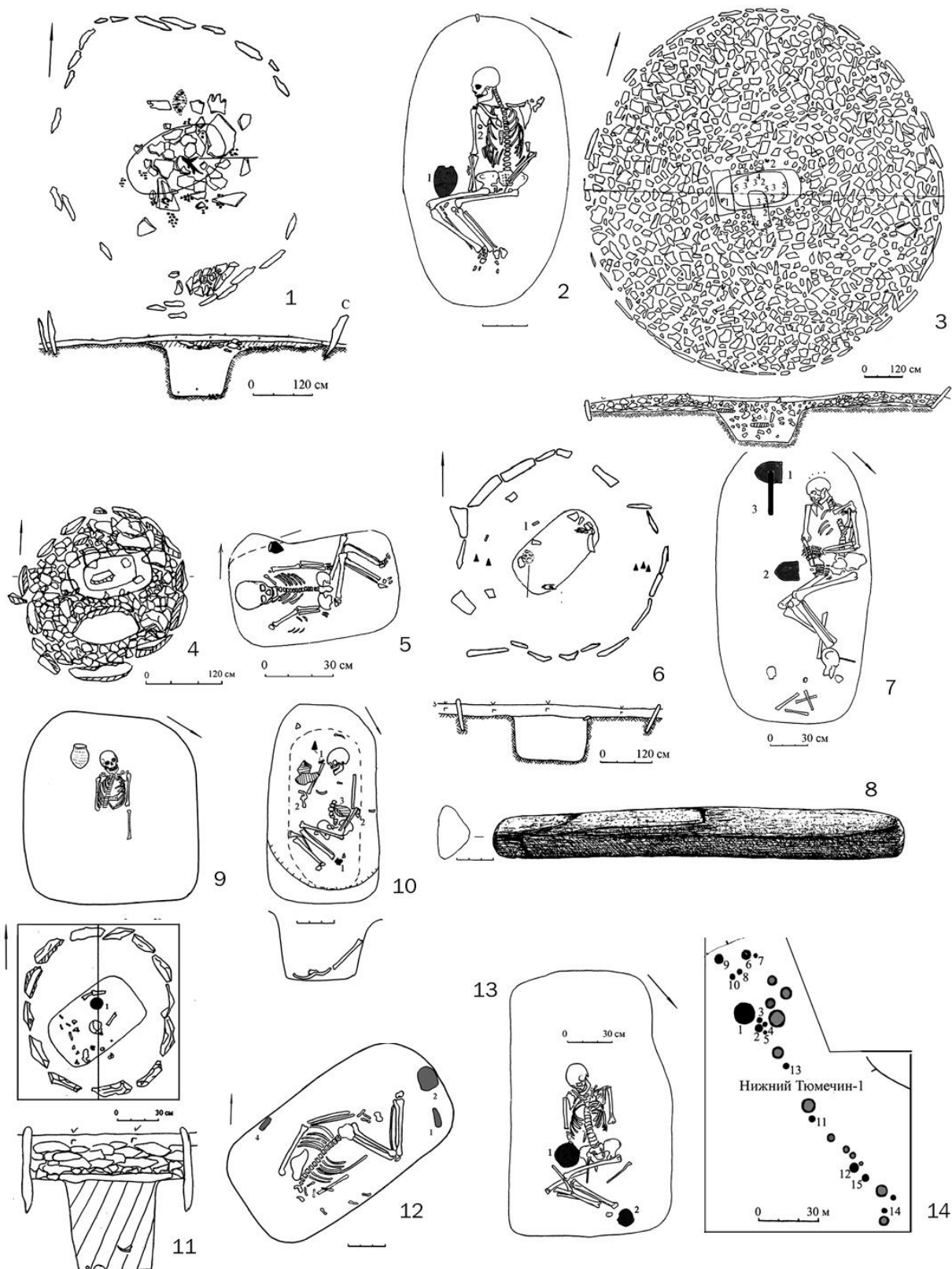


Figure 6: Lower Tyumechin-I - kurgan 6; (1,2), kurgan 1; (3), kurgan 2; (4,5), kurgan 9; (6-8), kurgan 7; (9), kurgan 15; (10), kurgan 4; (11), kurgan 3; (12), kurgan 10; (13) and plan; (14) (Vadetskaya, Polyakov, Stepanova, 2014, p.57-58)

1.1.1.24. Lower Soory, the settlement

The settlement is located 3 km south of the village Kulada, on the first over-floodplain terrace of the Karakol river. The settlement was discovered in 1994 by O. V. Larin. The thickness of the cultural layer on the excavated part is about a 16 cm rectangular structure. Finds include ceramics, stone products, and animal bones. Approximately, 25 different vessels that includes a korchaga and incense burner were identified. Besides, the study of osteological materials provided us some insights about the economy of the Afanasievo population through (fig.7).

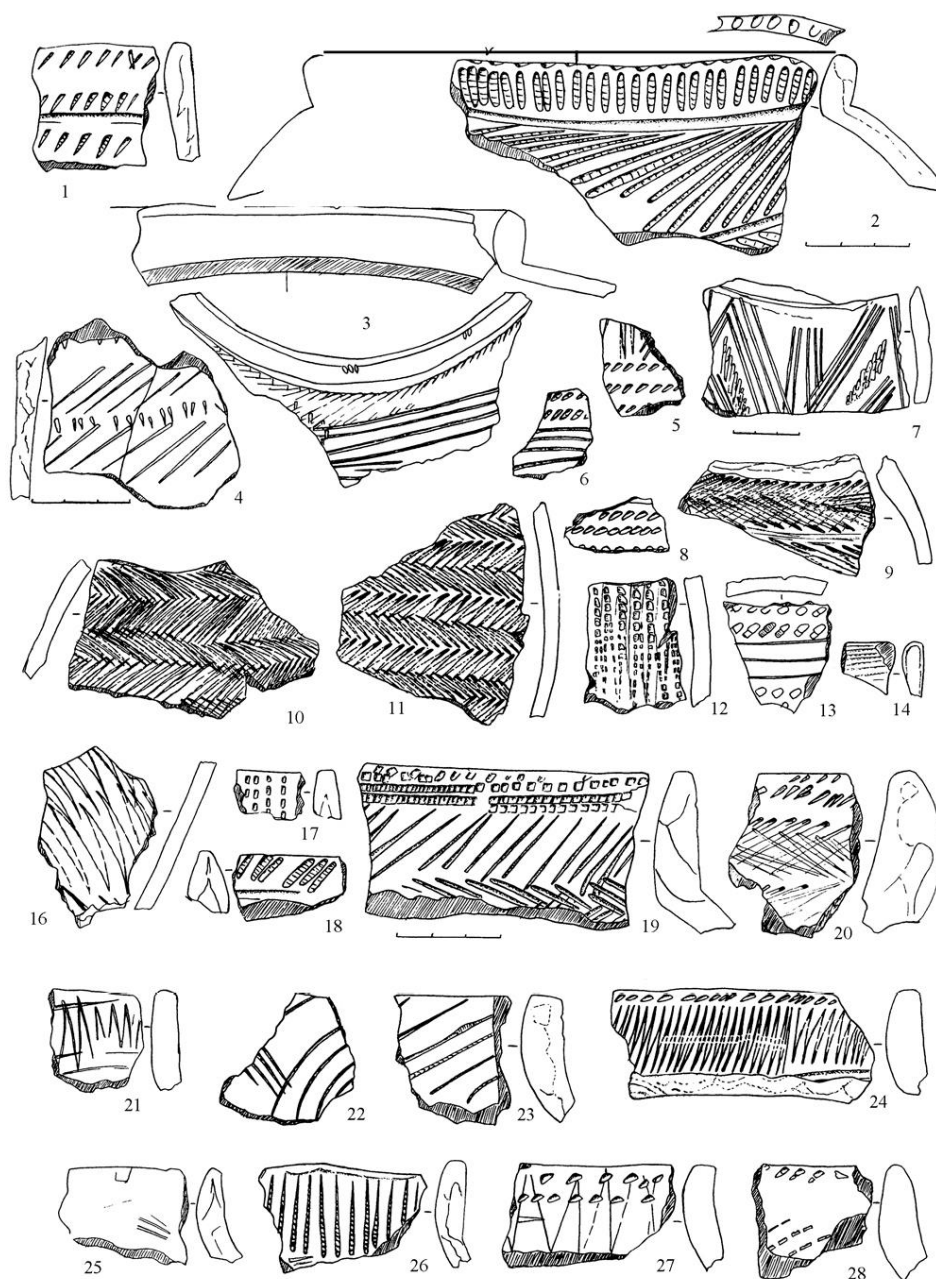


Figure 7: ceramics of Lower Soory; (1-28) (Vadetskaya, Polyakov, Stepanova, 2014, p.59)

1.1.1.25. Ozernoye II, burial ground

The cemetery is located 6 km north of Tenga village in the Onguday region. In 1980, under the leadership of V.A. Mogilnikov, a kurgan with a diameter of 7 meters was excavated and the excavation report was published by same person. A 40-45-year-old male skeleton who was identified laid on his back, his feet were bent at the knee and his head was turned in the northeast direction. There is ochre on the skeleton and no items exist.

1.1.1.26. Onguday, burial ground

Onguday is located near the Ursul river in the Onguday region. In 1865, V.V. Radlov dug a kurgan and found a skeleton with legs bent at his knees. There is also sharp-bottomed vessel above the head of the skeleton (from black burnt clay) (Vadetskaya, Polyakov & Stepanova, 2014, p.13-16).

1.1.1.27. The First Mejelik-I, burial ground

The burial ground is located on the right bank of the Ursul river, 1.5-2 km South of the village Yelo. It is located on the same mountain also known as Lower Tyumechin-1 but it is at Eastern foot of it. Excavations were carried out by Astrakhan State University archaeological expeditions in 1980, 1984 and 1990. In 2011, to clarify the geographical coordinates and identify its current state, a survey of the monument was conducted by V. I. Soenov and P. I. Shulga. It is established that the territory of the burial ground is used as a pasture and is divided into 2 parts by a fence. The entire South-Eastern part is behind the farm. All of 44 objects were recorded. The kurgan 10 in the northern group is about 10 meters in diameter, and a skeleton of a 30-35-year-old man was found. 4315 ± 85 date was obtained, according to samples that were taken from human bones. All graves are burial single. Exceptionally, in Kurgan 2, another skeleton that is thought to be about 1 year old was found at the entrance of the grave of a 10-year-old child. All of 13 skeletons were found and 4 of them were children, 2 were male, 2 were female, and 1 were female(?). The gender and age of 4 people could not be identified. The legs of most of the dead are bent towards the knees and their heads are in the southwest-west direction. As an exception, the orientation of the burials in Kurgan 2 is northwest and northeast. All skeletons are painted with ochre. Although most of the objects are vessels, things as stick, awl, bone clove, gold earrings and 2 stone arrowheads were identified. The monument differs from other monuments by the numbers of incense burners

and ostrodon products with flat bottom (fig.8-9 and fig.10; 5) (Vladimirov, Mamadakov, Tsib & Stepanova, 1999, p.31-32., Vadetskaya, Polyakov & Stepanova, 2014, p.16-17).

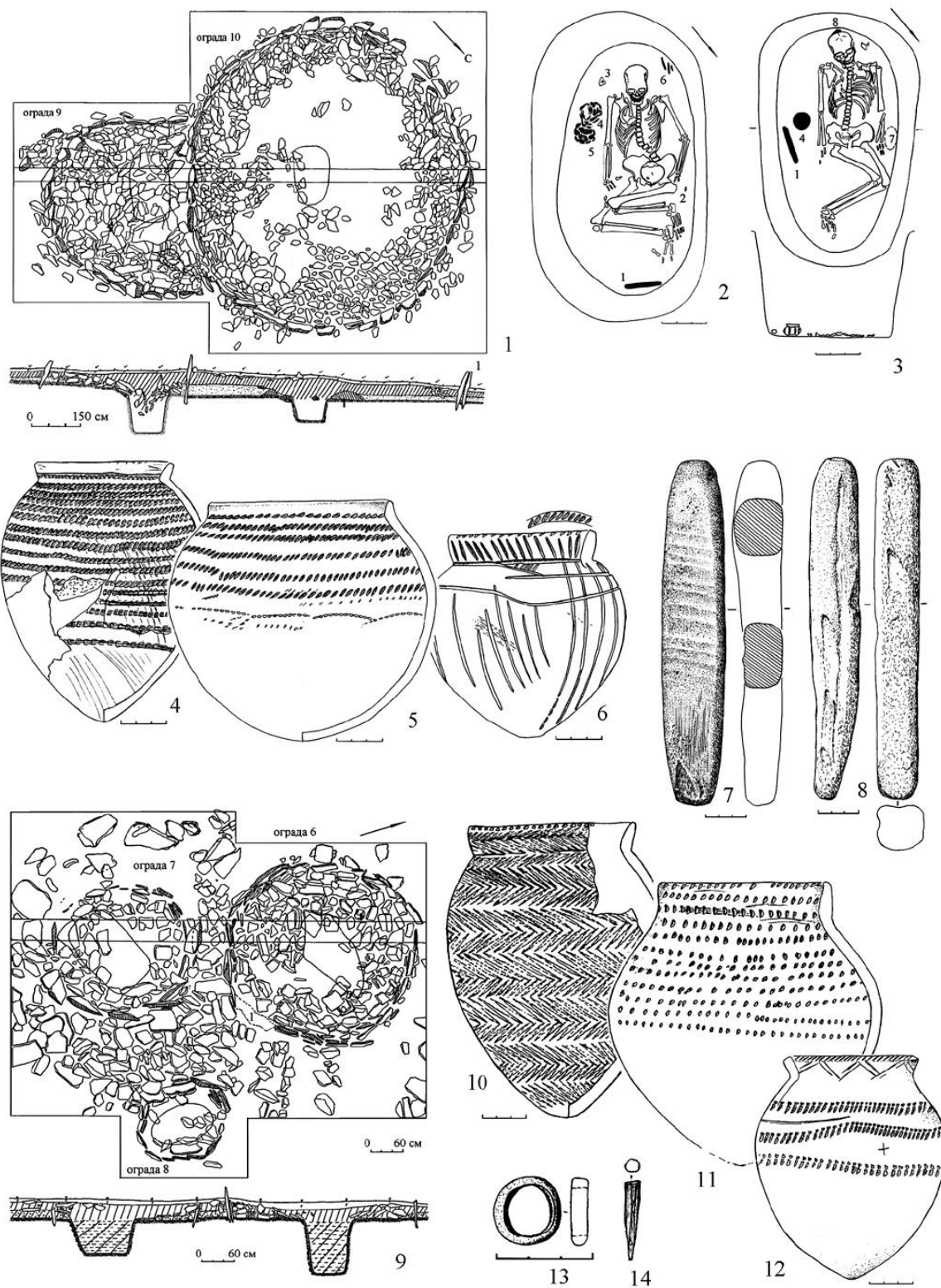


Figure 8: First Mejelik-I - kurgan 9-10; (1), kurgan 9; (2,4,5,8,13,14), kurgan 10; (3,6,7), kurgan 6-8; (9) (Vadetskaya, Polyakov, Stepanova, 2014, p.60)

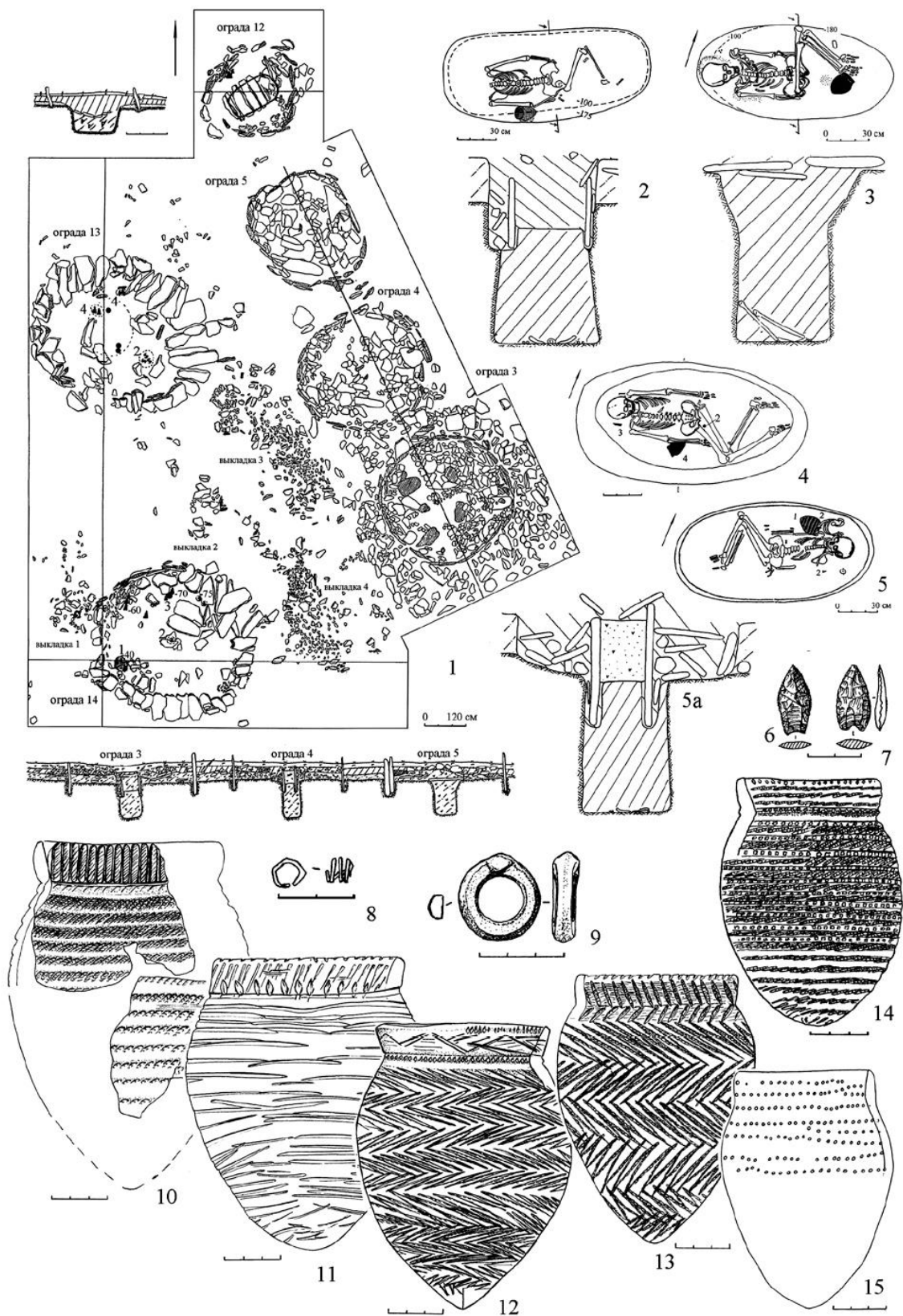


Figure 9: First Mejelik-I – kurgan 4-5 and kurgan 12-14; (1), kurgan 3; (2,14), kurgan 5; (3,11), kurgan 12; (4,8,9,13), kurgan 4; (5-7,12), kurgan 14; (10), kurgan 13; (15) (Vadetskaya, Polyakov, Stepanova, 2014, p.61)

1.1.1.28. Saldyar-I, burial ground

Saldyar-I is 6 km from Small Yaloman village on the right bank of Katun river. The length of the valley which is from the south to the north is 4.5 km, its width is 0.5-1 km and the height of the bank where the monument is located is 18-21 meters from the Katun River. In the region, more than 100 different types of kurgan objects from different times were recorded. Due to prolonged farming, the outer surface of many objects were destroyed. In 1988-1991, O.V. Larin dug 42 kurgans in the Saldyar-1 area and the great majority of these belong to the Afanasievo culture. Saldyar-1 cemetery is one of the most studied monuments in Mountainous Altai. It was displayed that the number of monuments before the excavations started was approximately 3 times more than it was considered and geophysical studies were showed that more than 40 structures were reached. According to Larin, the formation of the monument began where vessels have sharp and round-bottomed and this place is known as Northern part. Cluster and chain formations are observed in the grave structures. Most tombs concentrate in the middle of the kurgan.

The diameter of the kurgans varies between 0.8-1 meters and 8-10 meters. The graves are single at 87% but in Kurgan 36, 3 tombs, one young and two children were found (fig.11; 5,6). Two graves were found in the center of Kurgan 42. There were no burial pits or graves in kurgan 1, 6 and 12. All of 41 skeletons were accessed. As follows, its distribution is formed 21 children, 13 adults, 7 young people. The graves of children and young people were built with separate fences. Especially, in the northwest of the monument, kurgan 2, kurgan 4 (fig.10; 1-4) and kurgan 6 come to the forefront about their designs as more different than others and the heads of the skeletons inside of it differ with their orientation towards the east. Except for the kurotin type ceramic in Kurgan 2, no material was found in this group. The kurgan 25, 28, 30, 31 and 32 on the east side of the monument are another cluster; they attract attention with vertically placed plates without stones. Kurgan 3, 5 and 7 were built the similar way. Kurgan 20, 22 and 24 (fig.11; 2-4) come from attention with their embedding similarities and the location of the buried people. On the other hand, Kurgan 19, 25, and 36 show difference in Afanasiyev Culture with animal tooth ornaments and there is no ceramic in this kurgan group (fig.12; 1-3). There is not any inventory in the Saldyar-1 complex, but the similarity of the detected products with other monuments is also an important consideration. The egg-shaped vessel with a flattened bottom in Kurgan 17 is very similar to the inventory in Kurgan 10 in the Kara-Koba 1 cemetery. The unusual edge of the decorated ship in Kurgan 37 has analogies with some monuments in Boytigem-2 and Yenisey. In addition, the analogies that made from animal teeth match those ornaments in Uruskin Log-1

and Ust-Kuyum. Despite there are many differences, it is quite close to the Kara-Koba-1 and Boytigem-2 monuments chronologically. Such that, according to K.V. Solodovnik; kurgan 17, 18, 20 and 37 in the Saldyar-1 monument have a special similarity with the Kara-Koba-1 monument.

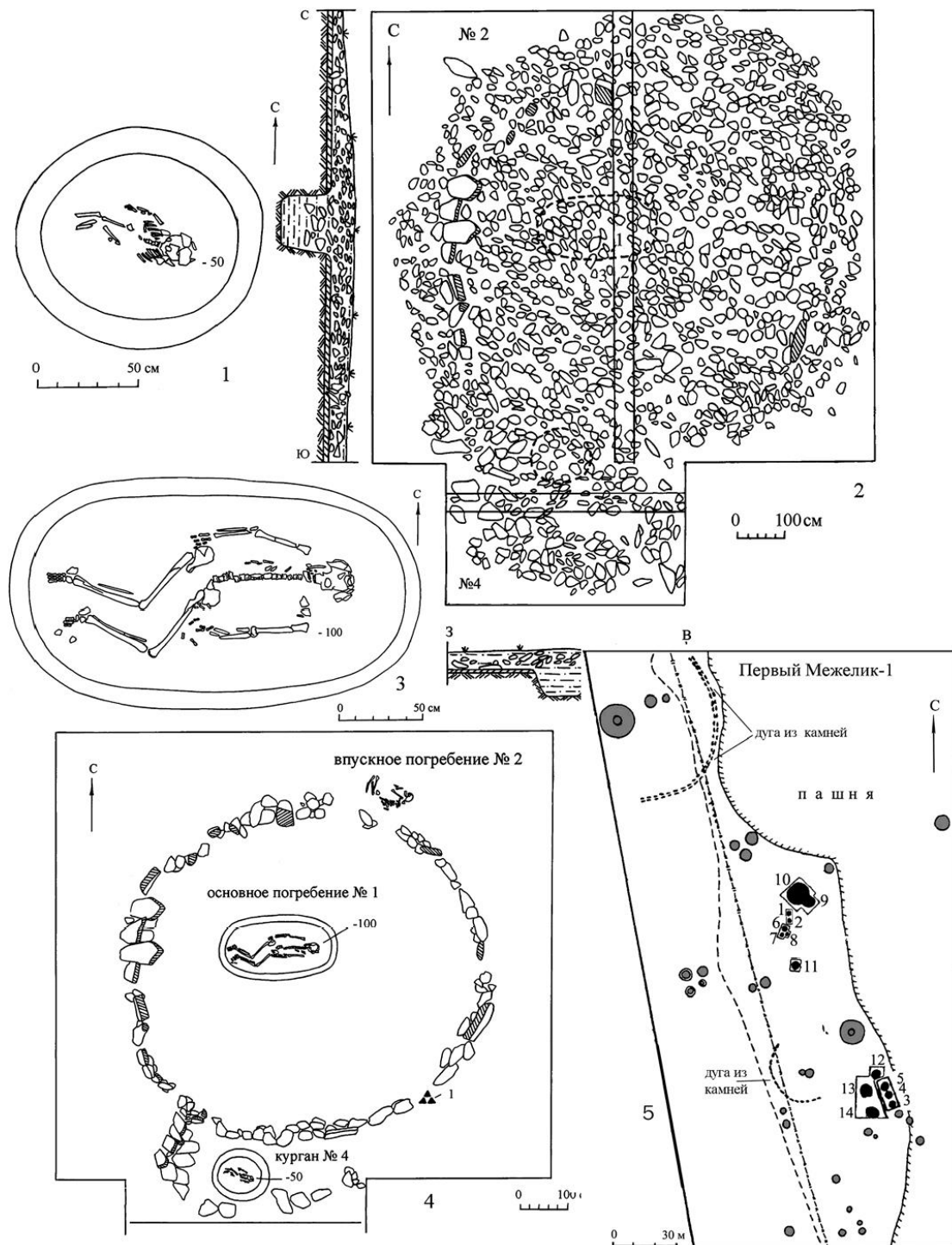


Figure 10: Saldyar-I – kurgan 2 and 4; (2,4), kurgan 4; (1), kurgan 2; (3), cemetery plan of First Mejelik-I; (5) (Vadetskaya, Polyakov, Stepanova, 2014, p.62-63)

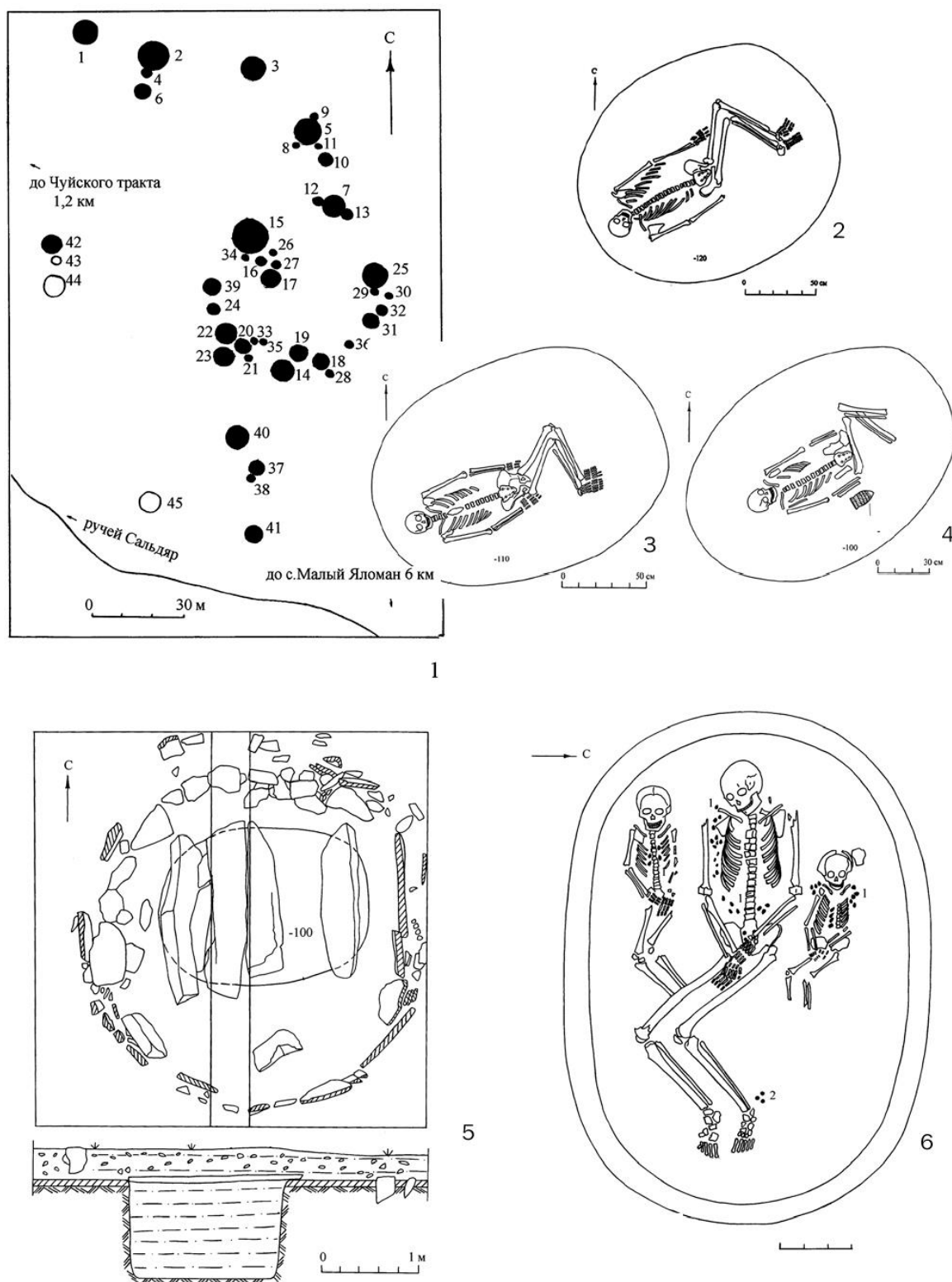


Figure 11: Saldyar-I – plan; (1), kurgan 20; (3), kurgan 22; (2), kurgan 24; (4), kurgan 36; (5,6) (Vadetskaya, Polyakov, Stepanova, 2014, p.64,68,71)

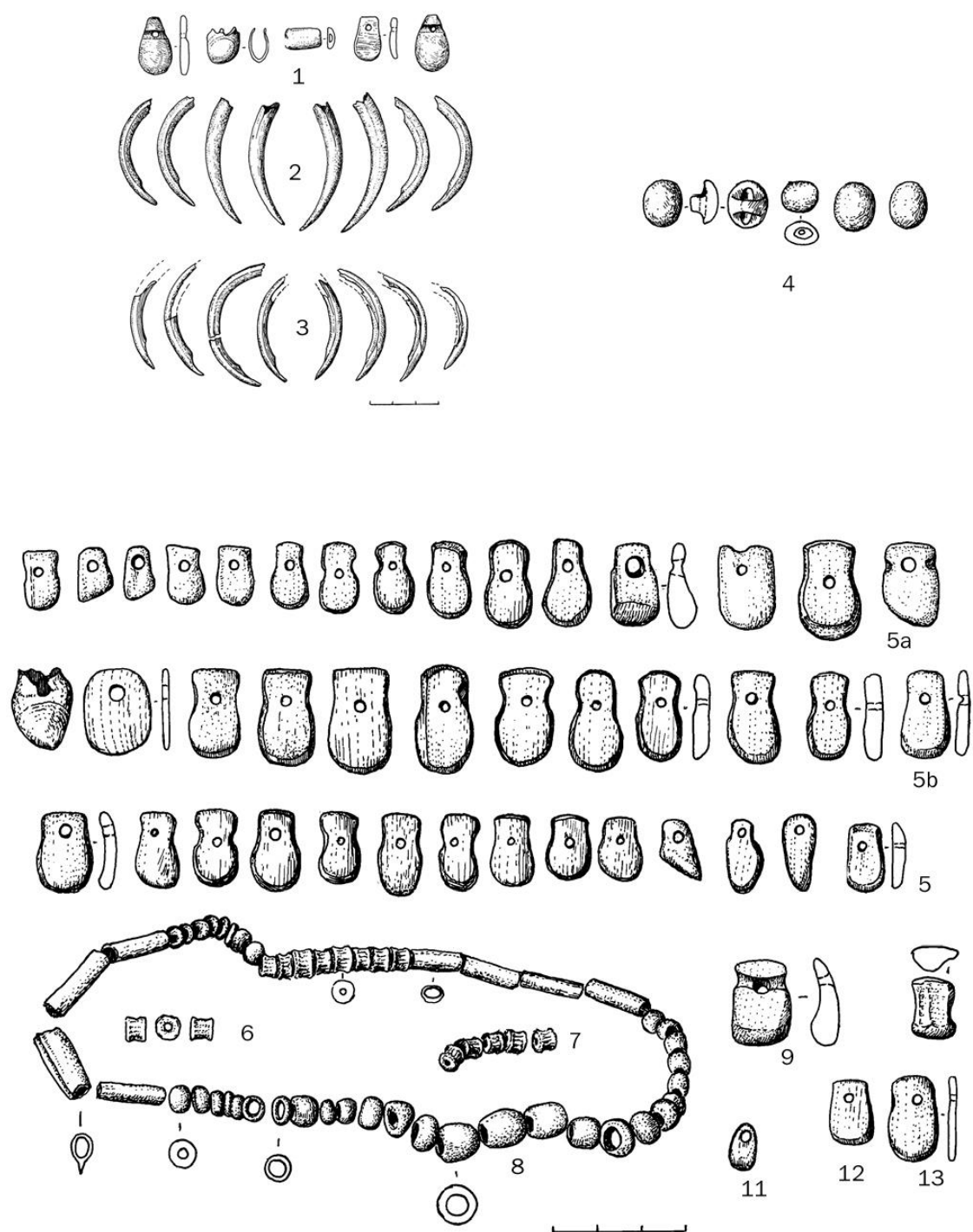


Figure 12: Saldyar-I – kurgan 19; (1-3), kurgan 25; (4), kurgan 36; (5-13) (Vadetskaya, Polyakov, Stepanova, 2014, p.69-71)

1.1.1.29. Semisart-II, burial ground

The cemetery which is 4-5 km from Yelo village is located in the southeast (fig.13; 3). There are around 60 kurgan and ritual works from different periods. There are two types of objects that resemble Afanasievo culture and structures in appearance. One type of construction is represented by kurgans that are made of vertically placed slabs around the circumference. They form two groups in the southern part of the burial ground. The diameter of the kurgans is from 2 to 7 meters, the height of the slabs is 0.5-1.0 meters in 1980. In order to clarify the dating, V. N. Vladimirov and S. V. Tsib excavated a kurgan of vertically placed slabs with a diameter of 4 meters.

In the center of it, the remains of a central structure in earthen hill and traces of a fire pit are recorded. The grave which its measurement is 1.8x1.15 meters and 0.75–0.8 meters deep in the mainland is covered with slabs. A female skeleton was found lying on her back with her knees bent and her head was turned west. Copper or bronze oxides are marked on the skull (Vadetskaya, Polyakov & Stepanova, 2014, p.17-19).

1.1.1.30. Semisart-III, burial ground

Semisart-III is located on the banks of the Semisart river (fig.13; 2). In 1980, 6 structures were traced. Three of them are vertically placed slabs kurgans with a diameter from 11 to 13 meters. Nowadays, it was come to light that the height of slabs is the from 0.1 to 0.5 meters. The other three kurgans diameter is from 10 to 15 meters, and their height is 0.15-0.5 meters. No excavations were carried out.

1.1.1.31. Semisart-IV, burial ground

Semisart-IV is located on the first and second above-floodplain terraces of the Semisart river. In 1980, 17 tombstones were recorded, 15 of them are made of ragged stone of various sizes. The diameter of the rings is from 3 to 15 meters, the height is 0.3–0.6 meters. Presumably, the burial ground is attributed to the Afanasievo culture. No excavations were carried out.

1.1.1.31. Semisart-V, burial ground

Semisart-V is located on the first right-bank terrace of the Semisart river, 2-3 km south of the village of Kayarlik (fig.13; 1). The terrace's surface was plowed. Twelve grave structures that arranged in a compact group were preserved. 11 of them are circular rings with a

diameter of 3-15 meters and a height of 0.07-.055 meters. The tomb which is different is 12 meters in diameter and 0.15 meters in height. Presumably, the monument is attributed to the Afanasievo culture. No excavations were carried out.

1.1.1.32. Semisart-VI, burial ground

Semisart-VI is located on the first above-floodplain terrace of the Semisart river (fig.13; 4). There are three kurgans that were made of vertically placed slabs. The diameter of the kurgans is 8-12 meters, the height of the slabs is 0.4-0.5 meters. No excavations were carried out.

1.1.1.33. Semisart-7, burial ground

Semisart-7 is located on the first over-floodplain terrace of the Semisart river, 2-3 km South of the village of Kayarlık (fig.13; 5). All 19 structures are arranged in a compact group. The diameter of the kurgans is from 1 to 12 meters, the height of the slabs is between 20-30 cm. No excavations were carried out.

1.1.1.34. Semisart-IX, burial ground

Semisart-IX is located on the first over-floodplain terrace of the Semisart river, 2-3 km south of Kayarlık Village. 8 tombstone structures were discovered. Four of them are with a diameter of 2-3 meters and chained from west to east. The other four kurgans were severely destroyed and there are 4 fences of plates that were placed vertically. The diameter of the fences is 8-10 meters and the height of the plates is 30-40 cm. No excavations were carried out (Stepanova, Vladimirov & Tsib, 2005, p.21-22).

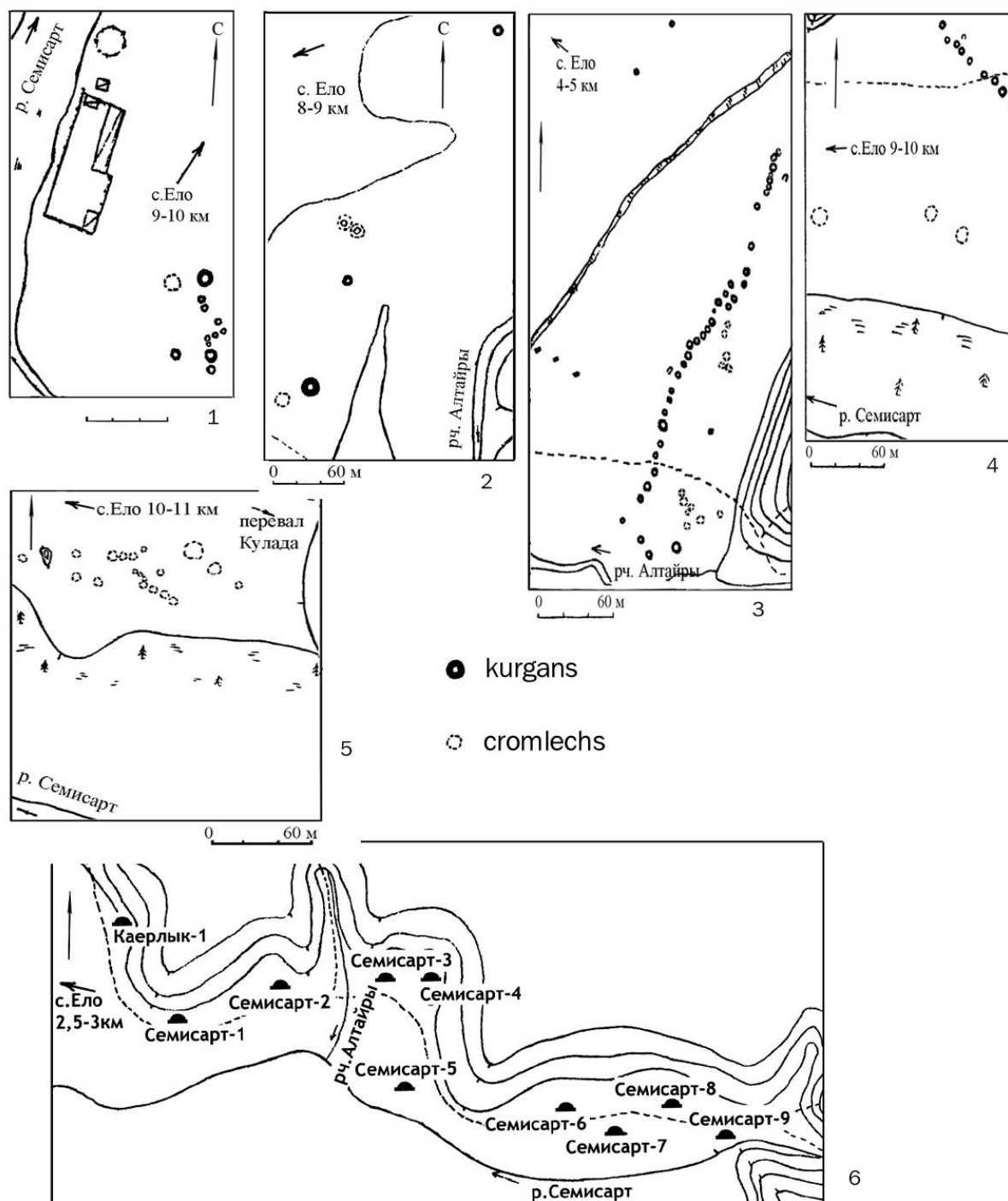


Figure 13: Semisart monuments – Semisart-V; (1), Semisart-III; (2), Semisart-II; (3), Semisart-VI; (4), Semisart-7; (5), area; (6) (Stepanova, Vladimirov, Tsib, 2005, p.29, (Vadetskaya, Polyakov, Stepanova, 2014, p.49,74)

1.1.1.35. Tenga-I, burial ground

Tenga-I is located on the second over-floodplain terrace, on the right bank of the Ursul River, 1 km southwest of Tenga Village. There are two different tomb structures in the area. Presumably, the first type of graves belongs to the Afanasievo period.

1.1.1.36. Tenga-III, burial ground

The monument is located on the terrace above the first floodplain of the Ursul River, 2-3 km southwest of Tenga Village and 1-2 km northeast of Kara-Koba Village. The terrace was plowed. There are 8 types of structures in the complex area. The most significant of these structures are the round fences formed by 22 objects which are formed vertically and shale plates-cromlechs. The diameter of cromlechs is 3-11 meters and the height of the plates is 0.05-0.6 meters. They are grouped in clusters in the central part of the grave soil. The second type of structure has 22 kurgans. Each other's diameter is 15 meters, the height of the boards is 0.2-0.9 meters. They are grouped in the southeast and southwestern parts of the grave zone. The third type consists of 6 ring-shaped fences arranged in circles in several rows and sometimes in several layers. The height of the rings on the modern surface is about 0.4 meter. Their diameters are about 5-12 meters. The fourth type has a structure similar to the third type but smaller stones than the third. Its diameter is 7 meters and its height is 0.3 meter. The fifth type is in order with stone structures that are made of slate in the center. It has a rectangular shape and is 1.3 meters in diameter and 1.6 meters in length. The interior is covered with stone. The sixth type is rectangular stone kurgans that consisting of placed small shale stones as filling form in a row rising in the center. It is 1.5 meters long, 1 meter wide and 0.18 meter high. It is located next to the cromlech fences in the northwestern part of the burial ground. The seventh type is 2.0 x 1.0 meters in size and made of slate plates. Finally, the eighth type is a rectangular fence that consisting of vertically placed slate plates. The dimensions of the plates are 0.25 x 0.15 and 15 x 0.03 meters. On the other hand, there are six stone steles of 0.4-1.35 meters in height in different areas of the grave area. The first and fourth types of monuments belong to the Afanasievo period.

1.1.1.37. Tenga-IV, burial ground

Tenga-IV is located on the first right-bank terrace of the Ursul River, 2.5-3.5 km southwest of Tenga Village, and 1.5-2.5 km east of Kara-Koba Village. Since most of the grave area was exposed to farming, many structures were destroyed. 6 types of grave

structures were observed. The second and third types were attributed to the Afanasievo period. The second type; they are round-shaped chrome fences made of shale plates placed vertically. There are 9 in total. 6 of them are located in the southwestern part, 2 of them are among the first type structures and 1 of them is in the western part. Their diameter is 3-11 meters, and the heights of the plates are 0.1-0.7 meters. (The interior of the structures blacked.) The third type; They are round fences that are made of small slate stone, placed in a circle in several rows and layers. It is 4-8 meters in diameter and 0.15-0.5 meters in height (Stepanova, Vladimirov & Tsib, 2005, p.23-25). There are 22 kurgans that are made of vertically placed slabs and one fence wall. In 1979-1980, Astrakhan State University archaeological team under the leadership of S. V. Tsib and V. N. Vladimirov excavated 2 kurgans. Skeleton's knees bent and head turned west. An 25-35-years-old-adult male was detected in Kurgan 1 and was heavily painted with ochre. No products were found (Vadetskaya, Polyakov & Stepanova, 2014, p.21).

1.1.1.38. The Third Mejelik, a burial ground

The monument was explored by S. V. Tsib in 1980. The burial ground is located 2-2,5 km to the south of the Yelo Village and at the South-Eastern foot of The Third Mezhelik rock elevation. Grave structures are presented two types of different-times. The Afanasievo culture includes 8 round-shaped kurgans that are made of vertically placed slabs. The diameter of the kurgans is from 2 to 16 meters, the slabs rise above the modern surface by 0.03–0.88 meters. No excavations were carried out.

1.1.1.39. Tuekta, burial ground

In 1935, the burial was excavated by A. T. Kuznetsova on the Ursul river, in near the village of Tuyakhta, on the way to the village of Karakol. A stone mound is with a diameter of 8-10 meters, a height of 0.5 meter, and at a depth of 1.4 meters. In a round burial pit, a male skeleton and an egg-shaped clay pot were found.

1.1.1.40. Ulita, burial ground

Ulita is located 4-5 km south of the village of Yelo, on the left bank of the Ulita river. Kurgan was excavated in 1986. Two graves were found, one of them belongs to the Afanasievo culture. The kurgan is made up of vertically dug into the ground stone slabs and it was a round cromlech with a diameter of up to 5 meters. There was a stone cabin in northeast

of the kurgan, the skull of the skeleton inside was scattered. Grave were disturbed by robbers. The grave contains individual human bones, fragments of an Afanasievo vessel with a significant ornament, and a stone product.

1.1.1.41. Urmulik-I, burial ground

Urmulik-I is located 2 km to the south of the Tenga village and on the right above-floodplain terrace of the Ursul river, 150 meters to the south of the Tenga-II burial ground. Includes more than 40 different times objects. Inside the fence 3 belongs to Afanasievo culture, a skeleton was found with knees bent and the head turned to the southwest.

1.1.1.42. Ursul

In 1927, a burial was excavated on the bank of the Ursul river by L. P. Potapov. The skull was found at a depth of 2 meters. The skull is facing south. The skull and bones are painted red. The skeleton was covered with larch bark. M. D. Khlobystina mentions that the skeleton had copper ornaments. However, there is no mention of such finds in the archive of G. P. Sosnovsky (Vadetskaya, Polyakov & Stepanova, 2014, p.22-23).

1.1.1.43. Kurota-II, burial ground

Kurota-II is 1.5 km away from the unification of the Ursul river. In 1937, 7 kurgans and 2 rings were excavated. The sizes of their structures are between 2 and 8 meters, and the depths of the graves vary between 1 and 2 meters. The knees of the buried people were bent and their heads were tilted towards northwest, west, east, and northeast.

Three skeletons were found in the grave in Kurgan 1 and one was placed opposite to the others. The presence of 3 people in a single tomb was only seen in Kurgan 2, in the Bertek-33 monument and Kurgan 36 in the Saldyar-1 monument, but it was not seen before in the opposite direction (fig.14; 1). Owing to the fact that the Kurota-2 monument differs from the Afanasievo tombs and there are two flat-bottomed ostrodon pots (fig.14; 2,3), scholars put forward the thought that the Afanasievo population interacted and mixed with a different population (Vadetskaya, Polyakov & Stepanova, 2014, p.103).

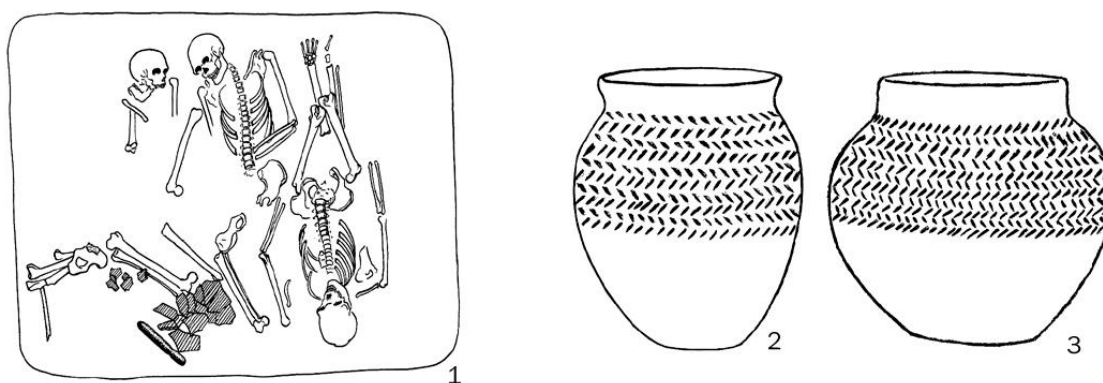


Figure 14: Kurota-II - kurgan 2; (1,3), kurgan 7; (2) (Vadetskaya, Polyakov, Stepanova, 2014, p.114)

1.1.2. Kosh-Agach District

1.1.2.1. Bertek-33, burial ground

Bertek-33 is located approximately 3.2 km south of the Bertek rural settlement, on the first low terrace of the first stone bed of the left bank of the Ak-alakha River and at the mountain skirts and slopes swept by the Ak-alakha River (fig.16). In 1991, the Western Siberian squad of the North Asian complex expedition of the Institute of Archeology and Ethnography of the USSR Academy of Sciences made excavations in this area and 4 kurgans were found out. The dimensions of the structures are 5-6 meters and the width of two concentric plates that consist of rocks and stone plates each other is almost 0.7-0.8 meters. The gap between them is completely filled with large pebbles and small chopped tiles.

The dimensions of Kurgan pits range from 1.7 x 0.9 meters to 2.1 x 1 meters, and their depth ranges from 0.91-1.05 meters. One grave was identified in three kurgans. (Kurgan 1, 3 and 4) Those who were buried; It is thought that there is a man between the ages of 40-45 and two women between the ages of 25-30 and over 60. Only in Kurgan 2 was found a woman between 20-25 years old, a man and a 1.5-year-old child (fig.16; 2, 4-6). The knees of the skeletons were raised diagonally towards their trunks and lay on their back and their head turned to the south. Two large flat plates and a vessel that were decorated with fine lines were found in Kurgan 1 (fig.15;1,4). In Kurgan 3, at the bottom of the burial pit are clay lining and birch bark traces and Kurgan 4 measles remnants. In Kurgan 3 and 4, there is a wooden

bucket and a cylindrical vessel with an embroidered top. All graves show traces of soil paint (ochre) and there are vessels that are made of four corners of soil, one for each kurgan. The finds of cloves rather than flat bone beads are rare for the Mountainous Altai region and are generally located in the Yenisey region of Afanasievo culture. In this context, it has analogy with the First Mejelik-1 kurgan.

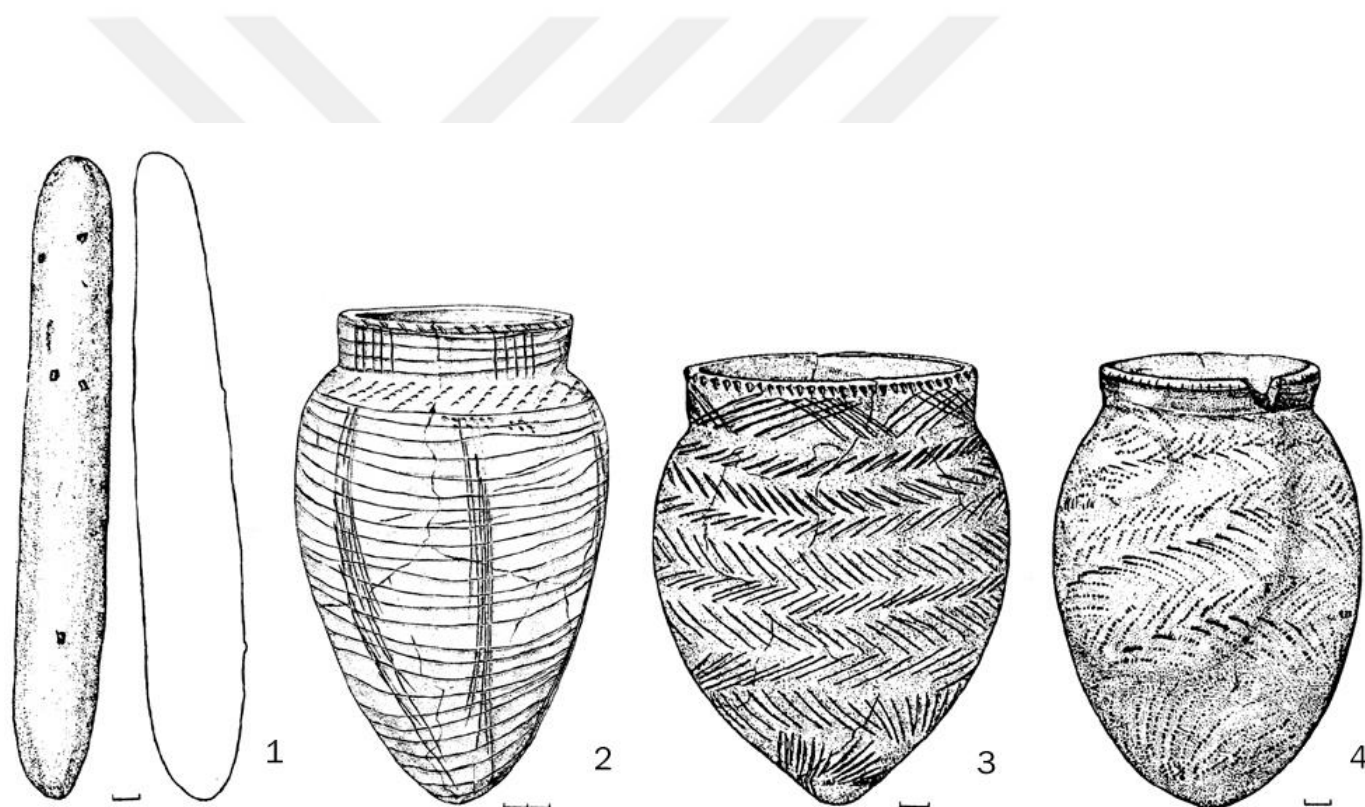


Figure 15: Bertek-33 - kurgan 1; (1,4), kurgan 2; (2), kurgan 4; (3)) (Vadetskaya, Polyakov, Stepanova, 2014, p.43)

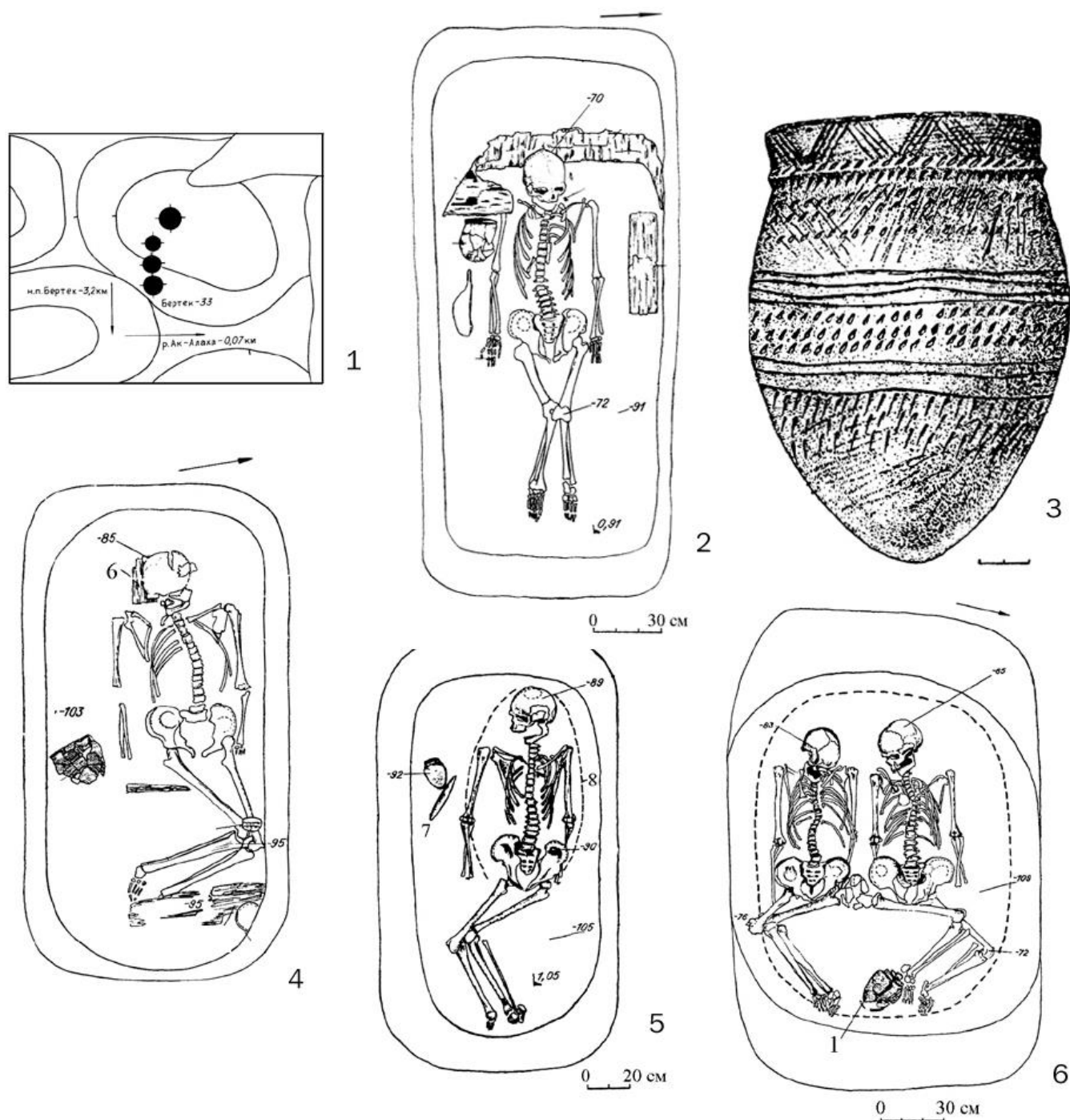


Figure 16: Bertek-33 – plan; (1), kurgan 3; (2,3), kurgan 4; (4), kurgan 1; (5), kurgan 2; (6)
 (Vadetskaya, Polyakov, Stepanova, 2014, p.43-44)

1.1.2.2. Mukhor-Tarkhata-I (Tarkhata-I), burial ground

The monument was researched in 1991 and it is located at an altitude of 1,927 meters above the sea level and 16 km South of the village Tarhata. Kurgan-8 on the edge of the cemetery area is approximately 11 meters in diameter and 0.6 meters high. When it is compared with others, its size is more remarkable than them. Late Middle Age grave was found in the center of Kurgan. The main grave area of Afanasievo culture is located 1.5 meters below the soil, and the buried person is 25-30 years old and male. His legs are laid diagonally with his knees broken, and his head is facing southwest. To the left of the buried person, a necklace that is made of quartzite rock with a hole and a sphere was found (fig.17; 1,2). Similar one of this material is known from the Kızılyar kurgan in Yenisey which belongs to Okunev Culture. While examining the skeleton, it was found that the iliac (protrusion on both sides of the upper part of the pelvis) was fatally injured by the stone arrowhead. The date of radiocarbon is obtained from human bones in the grave was determined to be 3985 ± 60 .

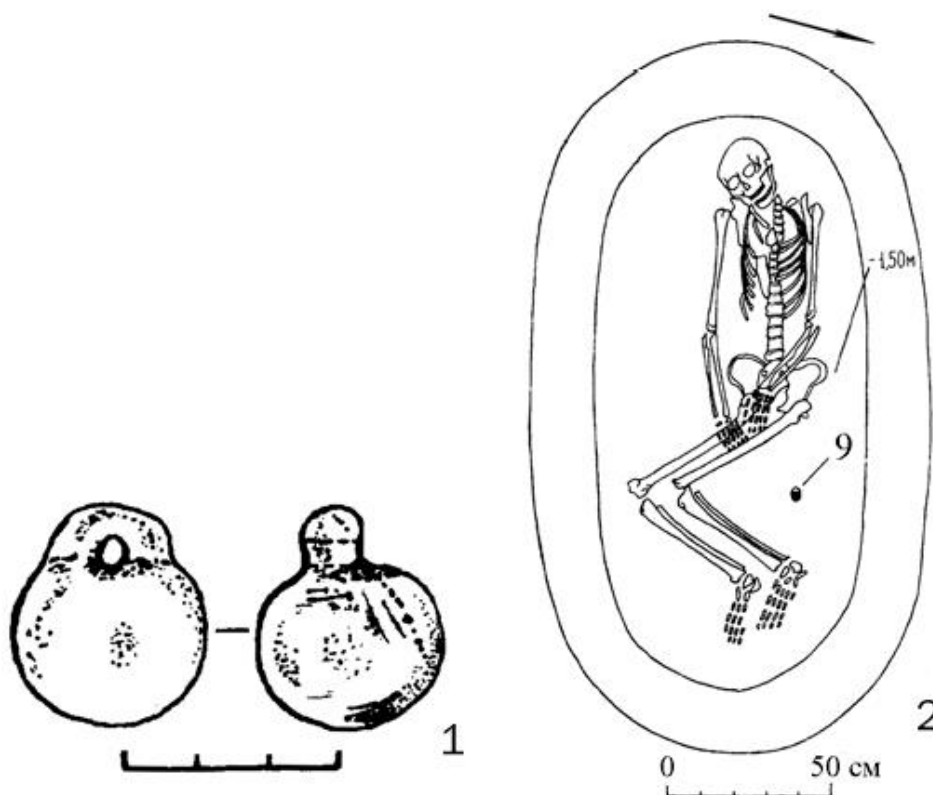


Figure 17: Mukhor-Tarkhata-I – kurgan 8; (1,2) (Vadetskaya, Polyakov, Stepanova, 2014, p.44)

1.1.2.3. Yustid

The Yustid-I area on the right bank of the Yustid River was found within the Paleolithic site area. The area is about 20 square meters in size. Typical Afanasievo ceramics, broken animal paws, bronze needles, and pet bones are identified (Vadetskaya, Polyakov & Stepanova, 2014, p.5-6).

1.1.2.4. Lower Tarkhata-II, burial ground

During the archeology expedition that was conducted by Gorno-Altay State University in 2009, V.I. Soenov; he researched the Chui basin. S. V. Trifonova excavated the Alt-Tarkhata II kurgan complex and Alt-Tarkhata I, IV, V stone slabs. The monuments are located in the southwest of Kosh-Agach village, on the left bank of the Tarkhata River. As a result of the excavations, no pits or finds were found under the three kurgans of the Alt-Tarkhata I, IV, V, and Alt-Tarkhata II monuments, but a skeleton was found in kurgan number 4 of the Alt-Tarkhata II monument. Kurgan 4 is located on the left bank of the Tarkhata River, 13 km southwest of Kosh-Agach Village, and 12 km southeast of Mukhor-Tarkhata Village. According to the Baltic height system, the height is 1855 meters. Kurgan consists of rounded stones with a diameter of 5 meters and a height of 0.25 meters, and old rodent nests were identified on it. The length of the burial pit is 1.8 meters, the maximum width is 1.1 meters and depth is 0.74 meters. Human bones were found at a depth of 0.68 meters, but the upper spine is almost absent (fig.18; 1). The person's legs are bent, but it is not clear whether it is placed on his back or left side. A large number of old rodent feces was found in the northern part of the pit. No other inventory was found in Kurgan (Soenov, Trifonova, 2010 p.172-173). It is similar to the Kurotin type and the only shortcoming is that there are no ochre marks in the burial pit. However, this can be said to occur due to the rodents that go into the grave. The presence of dark brown and dark yellow of the ground can support this idea. Dating of the buried person was found to be 4275 ± 85 in the radiocarbon group of the Geology and Mineralogy Institute of the SB RAS Geology and Paleoclimatology laboratory (fig. 18; 2). The date calibration that was made by the University of Washington program gave embed chronology in the range of 3103-2616 BC. Also, the calibration of history that was made by the Oxford program OxCal V gave a chronology in the range of 3150-2550 BC with a probability of 95.4% (Soenov, Trifonova, 2010 p.176).

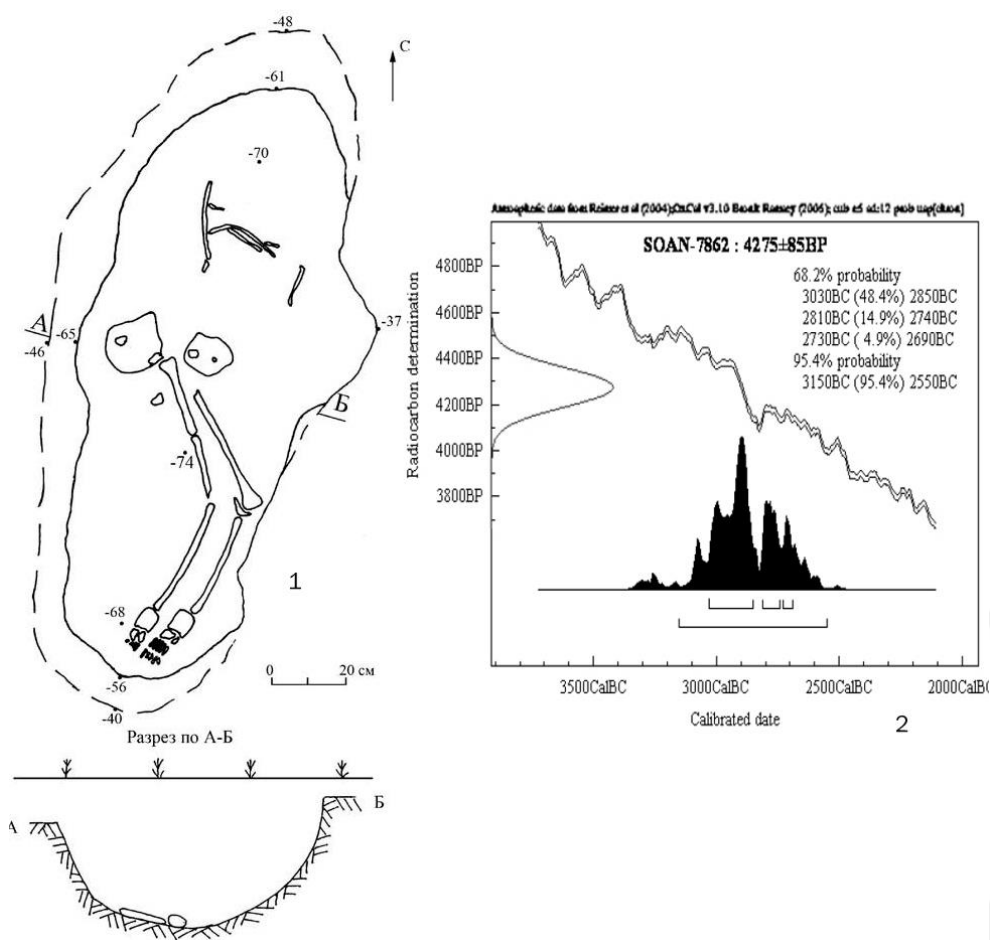


Figure 18: Lower Tarkhata-II – kurgan 4; (1), radiocarbon dating; (2) (Soenov, Trifonova, 2010 p.176)

1.1.3. Chemalsky District

1.1.3.1. Aybarka, settlement

Aybarka is located on the right bank of the Uznezya river, 1.5 km from the village of Uznezya, 400 meters southwest from the Aybarka log and Uznezya-1 settlement. Several fragments of Afanasievo culture pottery were found. No excavations were carried out.

1.1.3.2. Uznezya-I, settlement

Uznezya-I is located on the left bank of the Uznezya River and 1.5-2 km from the village of Uznezya. The monument was heavily destroyed by farming, roads, and two streams. In 1980, It was opened by N.F. Stepanova. More than 1400 square meters were excavated in 1985-1989. The settlement is multi-layered and most of the findings belong to

Afanasievo culture. Although the settlement is multi-layered, the cultural layers do not overlap and therefore the objects of Afanasievo culture come to the forefront. Most of the excavation sites have rocks and clumps of stones. Pebbles, anvils, tampons, featureless scales of amorphous form, animal bones, pestle, grinder, and more than 100 vessels were found. The products differ from each other in their designs, shapes, height, and total dimensions of the corolla. A small part of the collection is spherical, and the main part is oval vessels. Herringbone, zigzag, or triangle figures are seen.

In addition, when ceramic analysis of Uzneya-1, Small Dugan and Kara-Tenesh settlements was conducted, it was understood that most of them worked in the same period and the population was in contact. Afanasievo Mountain and Raspberry Log monuments can also be added to this situation. Also, Uzneya-1 has similar structures and dimensions with Small Dugan, Baliktuyul, Kara-Tenesh, and Podsinyushka settlements (Vadetskaya, Polyakov & Stepanova, 2014, p.29-31., Stepanova, Soenov, 2009, p.14).

1.1.3.3. Uzneya-bridge and Uzneya-school, settlement

The Uzneya-bridge settlement is located in the village of Uzneya, on the right bank of the river Uzneya, near the bridge. The Uzneya-school settlement is located on the high left bank of the Uzneya river on the territory of the school garden. Ceramics pieces were found (Stepanova, Soenov, 2009, p.15).

1.1.3.4. Ayridash-II, burial ground

Ayridash-II is located on the right bank of the Katun river, 3 km south of the village of Kuyus. 223 objects of different times that includes 2 structures, related to the Afanasievo culture were excavated. Kurgan 84 has a structure that consist of torn stones and rocks with a diameter of 7.4 meters. The grave was disturbed. The dead man found with his knees bent and his head turned west. An ochre piece was found next to the skull. In Kurgan 15, there were parts of a vertically erected stele and its lower part was preserved and it was 1.5 meters high. The buried man was on his back with his legs bent. Ochre was found on the skeleton and a knife with a copper handle was found on the leg. These knives are rare for Afanasievo culture (Surazakov, Soenov, 2010, p.37., Vadetskaya, Polyakov & Stepanova, 2014, p.23).

1.1.3.5. Askat-II, settlement

Askat-II is located near the village of Askat on the high right-bank terrace of the Katun river. The monument was opened in 1985 by P. I. Shulga. A total of 212 square meters was unearthed in 1988 and ceramic pieces, animal bones and stone materials were found. The settlement is multi-layered, some of the finds belong to the Afanasievo culture (Stepanova, Soenov, 2009, p.13).

1.1.3.6 Barantal-I, burial ground

It is located North of the village of Chemal. An adult skeleton was in a squatted position at a depth of 40 cm. Kurgan was destroyed.

1.1.3.7. Kara-Tenesh, burial ground and settlement

In 1978, one kurgan was excavated. The materials are not published. Settlement is located on the Kara-Tenesh road, 6.5 km from the village of Kuyus above the river. In 1974, B. Kh. Kadikov collected many materials that include ceramics of Afanasievo. In 1978-1980, A.P. An expedition was carried out under the leadership of Pogojeva. About 700 square meters were discovered on the monument between 1978-1980. The layout is multi-layered. Approximately 80% of Afanasievo culture findings are at the 3-4 bayonet level. With the data that was taken from coal, 4290 ± 20 radiocarbon dates were obtained.

1.1.3.8. Kara-Koby-I (also known as Kara-Koby and the burial ground at the mouth of the Karban river)

Kara-Koby-I is located on the left above-floodplain terrace of the Katun river, 1.5-1.7 km to the North-West from the village of Kuyus. In 1984 and 1989, 4 sites were excavated that include one ritual site. Tombstone structures are different from each other. The dimensions of the buildings range are from 5.5 x 4.5 meters to 8.8 x 8.3 meters. All graves are single. In Kurgan 1, the bones of a small animal were found. The deceased one's skull was oriented southwest-west, his knees slightly bent and painted with ochre. In addition, one entry that belongs to the Scythian period was found in Kurgan 1. The person who is buried in Kurgan 6 was probably oriented north and was partly ochreous. A 30 cm long rod was found at the bottom of the pit. In Kurgan 9, the dead man was found with his knees bent. Cutter that was made of an iron-based meteorite were found.

1.1.3.9. Kızık Telan-I, burial ground

Kızık-Telan-I is located on the right above-floodplain terrace of the Katun river, 7 km south of the village of Kuyus. 3 sites excavated in 1988-1989. The dimensions of the crepid rings are 12x11.4 meters and 6.4x6.7 meters in kurgan 31, a person is buried lying on his back with his legs bent, his head to the west, partially colored with ochre. In kurgan 33, the deceased was found with his knees bent. A bone product that was made of horn and pieces of an ostrodon vessel were found in the grave. In general, the structures belong to objects with mixed characteristics and are close to the kurota type of burial (Vadetskaya, Polyakov & Stepanova, 2014, p.24-26).

1.1.3.10. Small Dugan, a settlement

Small Dugan is located opposite the Ust-Kuyum burial ground and settlement, on the right Bank of the Kuyum river, 0.4-0.5 km from the mouth of the Kuyum river to the West of the Small Dugan log. It was opened in 1987 by N. F. Stepanova (934 square meters). It was partially destroyed.

The settlement is multi-layered and lasts from the Neolithic period to the Middle Ages, but the materials are not layered but there are inventory from different periods at the same level. Afanasievo monuments are dominant in every layer except for the second layer, where Iron Age objects are dense. (Kosintsev, Stepanova, 2010, p.121) In one pit, fragments of Afanasievo vessels that include incense burners, and animal bones were found. In other pits, there were usually no finds. They are located in the lower part of the cultural layer which is associated with the Iron Age, similar in design to the Afanasievo hearths from the settlements of Balıktuyul, Uznezya-1, and Kara-Tenesh. The finds are represented by ceramics, stone products, animal bones, and rarely metal objects. The ceramic complex of the Afanasievo culture is the most numerous and exceeds all others by several times (Vadetskaya, Polyakov & Stepanova, 2014, p.27). The fact that Afanasievo ceramics are the most common in the settlement shows that they stay in the region for a long time. The medium and small scale torn stones which were found in the monuments are thought to were brought by the Afanasievo population. Additionally, in this region, the assumption that an earthquake occurred during the Afanasievo period was put forward by M.T Abdulganeyev and O.V Larin (Kosintsev, Stepanova, 2010, p.123).

The variety of tools indicates that the dishes were made by several potters and the peculiarities in the technology of making ceramics and ornamentations that indicate different cultural and ethnographic traditions. Judging by the number of vessels (a small part of the

terrace was excavated), there is reason to believe that there were at least 2 times more of them. A comparative analysis of the ceramics of the settlements of Small Dugan, Uznezya-1, and Kara-Tenesh suggests that the population was in contact, and these monuments functioned in the same period of time. The revealed differences in the ornamentation of ceramics seem to reflect complex ethnocultural processes in this period. The "rocking chair" ornament that was made with both traditional and unusual tools has complete analogies in the burial complexes of the Altai Mountain.

1.1.3.11. Nizhnetytkeskenskaya cave-I (Lower Titkesken Cave)

It was explored by Astrahan State University between 1991-1992. It is located at the mouth of the Tytkesken river, the left branch of the river Katun. The type of the cave is horizontal and the area of loose beds is about 25 square meters. There are at least 30 vessels, 150 ceramic pieces, 2 pestles and animal bone pieces in Afanasievo culture. The study of ceramics, including technical and technological analysis, concluded that the cave was repeatedly visited by the Afanasievo population. Ornamental traditions have a special similarity with Uznezi-1, Small Dugan and Ust-Kuyum burial ground findings.

1.1.3.12. Toguskhan-IV, burial ground

Togushkan-IV was discovered in 1983 by the archaeological team of the Altai State University. It is located 0.5 km south of the mouth of the stream Toguskhan on a high terrace floodplain right bank of the Katun river. The monument has different times. Of the 12 sites were excavated in 1989, 3 fences belong to the Afanasievo culture. The deceased was lying on their back with their legs bent at the knees. One burial was disturbed, the other did not show any signs of robbery, but some bones are lost, it includes the skull. Ostrogany vessel and the horn were found.

1.1.3.13. Titkesken-VI, burial ground

Tytkesken-VI is located on the left bank of the Katun river and at the mouth of the Titkesken river. The monument was researched in 1983 and it was opened by M.T Abdulganeyev. In 1988-1993 and 2006, more than 100 kurgans were excavated by Altay State University, it only includes 2 kurgans (no. 61 and 96) of Afanasievo culture. They are single graves and the deads are buried with their legs bent (fig.19; 1,2). They are also painted in

ochre. In the samples that were taken from Kurgan 95, two radiocarbon dates were obtained, 4295 ± 85 and 4250 ± 110 (Vadetskaya, Polyakov & Stepanova, 2014, p.28-29).

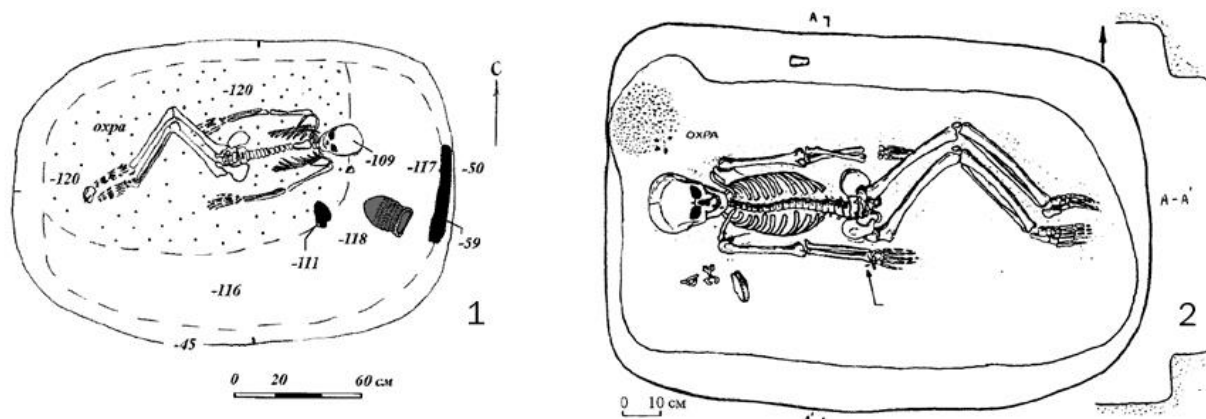


Figure 19: Titkesken-VI – kurgan 95; (1), kurgan 61; (2) (Vadetskaya, Polyakov, Stepanova, 2014, p.87)

1.1.3.14. Ust-Kuyum the burial ground

Ust-Kuyum is located on the right bank of the Katun river, at the mouth of the Kuyum river, on its left bank. In total, more than 20 Afanasievo burials were excavated on this monument. One grave was found in all kurgans except Kurgan 14 (2 graves) (fig.20; 1-4). The vast majority of the graves are single. As an exception, a woman was buried with her child in Kurgan 14 - grave 1, and a man and a child were found in Kurgan 18. In addition, a bracelet that was made of meteorite iron, a pestle, a copper knife and decorations that were made of animal teeth were found in both tombs. In addition, the largest collection of ships with at least 19 numbers was found in the Ust-Kuyum (fig 21-22; 1, 11-14).

Unusual decorations for the Afanasievo culture were found in two tombs and they were excavated by E. M. Bers (fig23). In Kurgan 18, three bone beads that were made of bird bones were found in the middle of the necklace with 13 edged vertebrae beads, a cut edge and a claw-shaped pendant (fig.21; 1-6). There are 2 thin copper rings at the ends of the bead array. Another pendant in Kurgan 19 that consists of maral teeth, red wolf teeth, and marmot incisors. It is possible for Kurgan 18 and 19 that they were left by a different group of people from the Afanasievo population and they were processed in a different chronological period. A series of close analogies are in the decoration of ceramics; The Ust-Kuyum burial ground and the Small Dugan settlements led to suggest that the Denisova cave and the Nizhnetykesken cave are chronologically close.

1.1.3.15. Ust-Kuyum, a settlement

Ust-Kuyum is located at the mouth of the Kuyum river. During the excavations of the burial ground, the settlement was discovered in 1932 by G. P. Sergeev. The monument is multi-layered, it is recorded cultural layers from the Paleolithic era to the middle ages, and it includes the Afanasievo culture. The ruins of vessels and individual fragments were found (fig.22; 2-10). It differs from Afanasievo's in a number of ways, including manufacturing technology. The place where it was found is not known (Stepanova, Soenov, 2009, p.18-19., Vadetskaya, Polyakov & Stepanova, 2014, p.31-33).

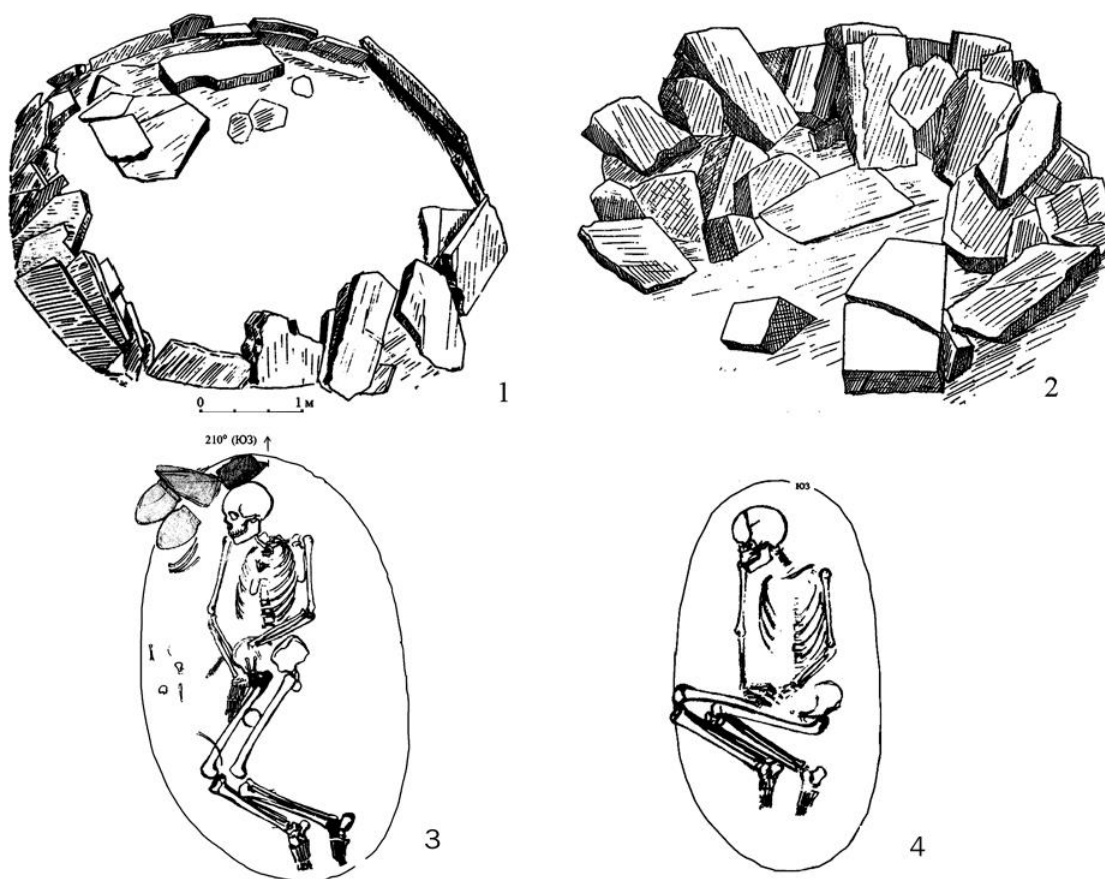


Figure 20: Ust-Kuyum – kurgan 14/grave 1; (1,3), grave 2; (2,4) (Stepanova, Soenov, 2009, p.102)



Figure 21: Ust-Kuyum – kurgan 18; (1,5,6), E.B. Vadetskaya archive; (1-6), kurgan 6; (7), kurgan 8; (8,9), kurgan 3; (11) (Vadetskaya, Polyakov, Stepanova, 2014, p.90-91)

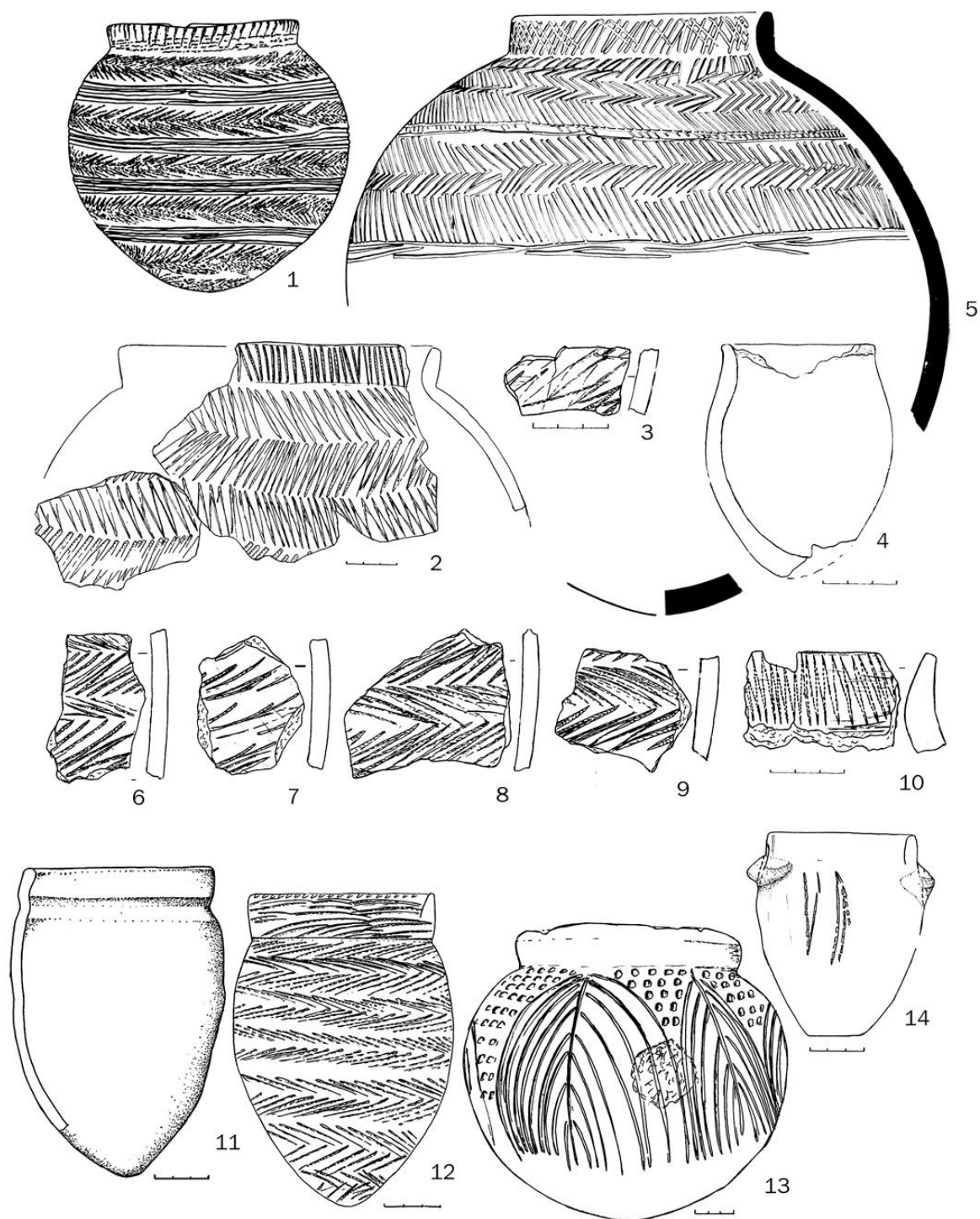


Figure 22: Ceramics found during excavations by E.M. Bers; (2-4, 6-10), E.B. Vadetskaya archive; (1,5), Kurgan 8; (1), vessel found outside the burial; (14), kurgan 14; (11-13) (Vadetskaya, Polyakov, Stepanova, 2014, p.89,92)

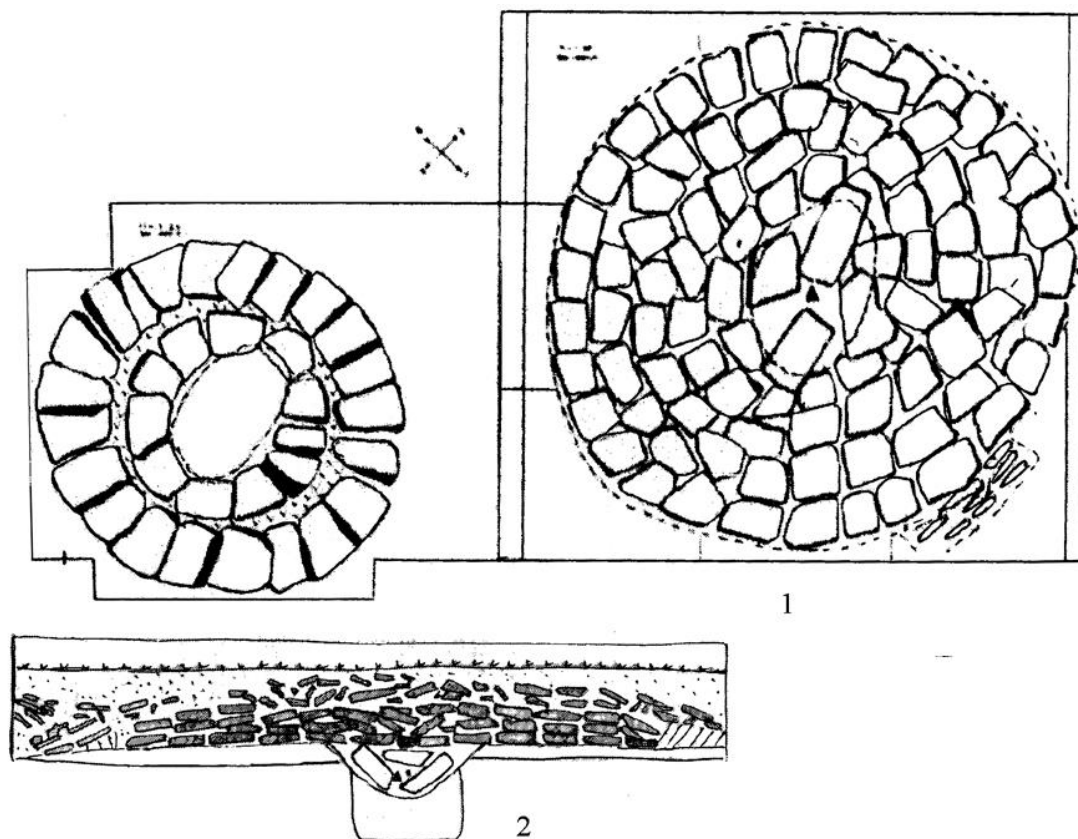


Figure 23: Ust-Kuyum – kurgan 18 and 19; (1,2) (Vadetskaya, Polyakov, Stepanova, 2014, p.91)

1.1.3.16. Chemal-III, burial ground

Chemal-III is located on the southeast edge of Chemal village, near the Krestovaya mountain, on the right bank of the Katun river. It consists of 11 kurgans. In 2003, A. P. Borodovsky excavated one kurgan with a diameter of 10 meters. A female skeleton and sacrifice bones were found in the grave 4 (fig.24; 1) (Stepanova, Soenov, 2009, p.27).

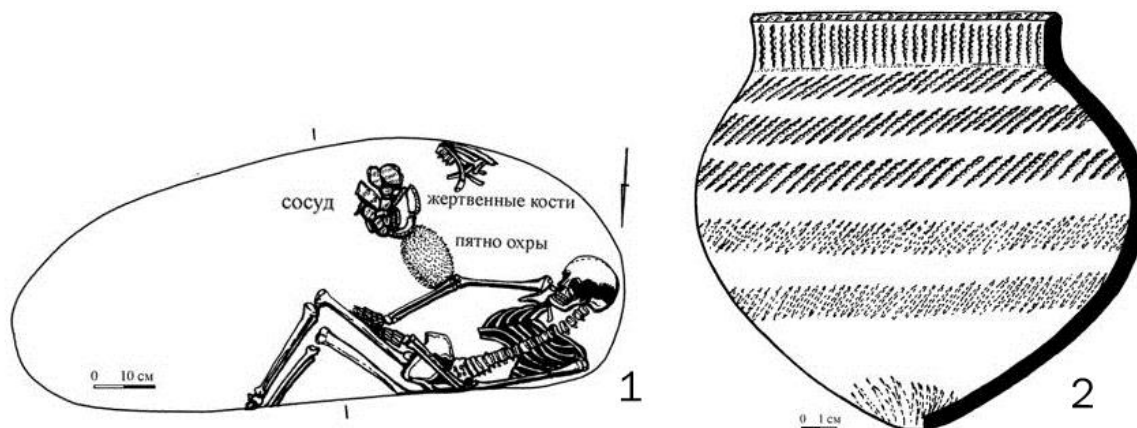


Figure 24: Chemal-III – kurgan 4; (1,2) (Stepanova, Soenov, 2009, p.110)

1.1.3.17. Cheposh-I, Cheposh-III, Cheposh-IV, settlement

Chepos-1 is located 1.5 km south of the village of Cheposh, 300 meters east of the cemetery Cheposh-3, at the foot of the mountain. Chepos-3 settlement is located 150 meters to the South from the settlement of Cheposh-2. Cheposh-4 settlement is located 1.8 km south of the village of Cheposh, on the right bank terrace of the Katun river. It was opened in 1985 by P. I. Shulga. Ceramics of the Afanasievo culture were found in the settlements. In addition, Iron Age findings were found in Cheposh-4 settlement.

1.1.3.18. Cheposh-III, burial ground

Cheposh-III is located on the right-bank terrace of the Katun river, 1 km south of the village of Cheposh. It was opened and surveyed by P. I. Shulga. It consists of three kurgans. In 1987, a structure with 11.5 x 10.5 meters of vertically placed stone slabs and a 6 meters diameter circle around the middle grave was excavated. A grave was found between the outer Kromlech and the tomb structure. The skeleton of a child with a depth of 1.1 meters was bent in it. No material was found. In the central tomb, a man was buried with his legs bent. Sharp and round bottom vessels were discovered on the right shoulder of the dead.

1.1.3.19. Chichka, settlement

Chichka is located in the south of the village of Cheposh on the left bank of the river Chicka. Products of the Afanasievo culture and the early Iron Age were found on the monument. It was opened by P.I. Shulga in 1985 (Stepanova, Soenov, 2009, p.11-12).

1.1.3.20. Edigan-V, settlement

Edigan-V is located on the promontory ledge of the terrace on the left bank of the Edigan river. In 1988, the archaeological team of Ganiyiyal laid a 72-square-meter excavation site. The monument is multi-layered. Some of the finds are dated to the Afanasievo culture (Stepanova, Soenov, 2009, p.53).

1.1.3.21. Ayridash-I, burial ground

Ayridash-I is located on the right bank of the Katun river, 3 km south of the village of Kuyus. The Ganiyiyal excursion expedition excavated the kurgans 6A and 7a, which were

kurgans resembling burial rites of the kurotin type. It consists of rolled rocks and irregular stone rings, and the structures of the objects are similar. Its modern dimensions reach 9 and 11 meters, and its width is between 0.8 and 2.4 meters and 1.4 to 3.2 meters. The deceaseds are knees bent and traces of organic decay were found at the bottom of the grave. Inventory was not found. Both tombs contain one person and there are ochre marks.

1.1.3.22. Bersyukta-1, burial ground

Bersyukta-I is located on the right bank of the Katun river, on the terrace above the second floodplain, 0.8 km above the mouth of the Tytkesken river. In 2007, the Altai State University expedition dug 2 objects. The grave structures with a diameter of up to 10 meters consists of torn stones. In Kurgan 1, an adult skeleton lying with bent knees was found and dense ochre. A jar with a handle was found near the head of the skeleton. The second kurgan was robbed, an adult was buried and ocher remains were recorded. With the data that was obtained from the bones in Kurgan 1, 4380 ± 110 and 4020 ± 95 radiocarbon dates were obtained.

1.1.3.23. Bersyukta-II, burial ground

Bersyukta-II is located on the terrace above the second floodplain on the right bank of the Katun river, 0.8 km above the mouth of the Tytkesken river, 1.52 km south of the burial site of Bersyukta. In the expedition which was organized by Altay State University in 2007, a 9x9 diameter object was excavated. The grave was robbed and a skeleton whose bones were painted with ochre was identified. Two radiocarbon dates were obtained, namely 4500 ± 90 and 4100 ± 100 .

1.1.3.24. Bike-I, burial ground

Bike-I is located on the second terrace on the floodplain on the right bank of the Katun river. 4 kurgans were excavated between 1988-1990. The structures are between 7.5 and 10 meters in diameter, and the tombs are located along the east-west line. The knees of the dead were bent and their heads are turned east and west. Parts of a flattened incense burner were found in Kurgan 10 (Vadetskaya, Polyakov & Stepanova, 2014, p.100-101).

1.1.3.25. Bike II, burial ground

Bike-II is located on the terrace of the second floodplain on the right bank of the Katun river. Two kurgans were excavated in 1989-1990. The size of the kurgans is 11 and 16 meters, and the diameter of the inner rings is 3.8 and 4.5 meters. Grave pits are covered with wood or poles. The knees of the skeletons are bent, their heads are turned east and west, and painted with ochre. A bronze spearhead was found in Kurgan 2. In addition, several pot pieces from different times were identified in the kurgans. Besides, a total of four vessels with three a high rim and a pointed bottom and a biconical vessel were found in the monument.

1.1.4. Ulagan district

1.1.4.1. Aragol, the burial ground

4 kurgans were excavated and Kurgan 3 was thought to belong to Afanasievo culture. M.D. Khlobystina described this structure as kurgan 5. The structure is 6 meters in diameter and a skeleton with bones partially painted red was found inside the grave. His legs are bent, and an ostrodon pot was detected between his left leg and left hand (fig.25; 2,3).

1.1.4.2. Balıktuyul, burial ground

In 1929 V. S. Adrianov excavated 2 kurgans on the right bank of the river Balıktuyul. One mound contained the burial of the Afanasievo culture. Kurgan 1 is circular, earthen mound with a diameter of 8.5 meters, height of 0.5 meter. The south of the center of the Kurgan, at a depth of 1 meters, a deer horn(?) was found. At a depth of 1.75 meters, there are two bones. The bones are colored red. Two men are buried, lying on their backs with their legs bent at the knees, their heads to the South (fig.25; 1). There is no product (Vadetskaya, Polyakov & Stepanova, 2014, p.35).

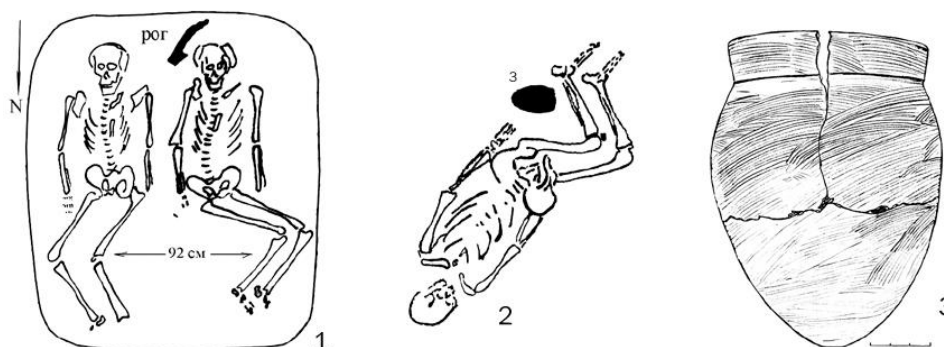


Figure 25: Aragol – kurgan 3; (2,3), Balıktuyul – kurgan 1; (1) (Vadetskaya, Polyakov, Stepanova, 2014, p.94)

1.1.4.3. Baliktuyul, the settlement

Baliktuyul is located 300 meters east of the village of Baliktuyul. In 1980, an area of 80 square meters was uncovered in the study, conducted by Altay State University. Although the monument is multi-layered, fragments of Afanasievo cultural ceramics are in the majority. Most of the findings are animal bones and ceramics. Sheep bones are dominant.

1.1.4.4. Big Ulagan I, burial ground

The monument is located in the south-southwest of the mouth of the Kamey River and includes 14 different types of objects. Structures that are named as 2nd and 4th species are thought to be related to Afanasievo Culture. The 2nd type consists of a 10-meter diameter and 0.4-meter high rocks and an earthen fill, surrounded by a ring of rocks. The fourth type has a structure in the form of a rock and rocks ring with a diameter of 28 meters and a width of 5-6 meters. These two types are close to each other in the form of chains and they were robbed.

1.1.4.5. Ust-Aragol, burial ground

Ust-Aragol is a cemetery in the Ulagan region. There are 11 kurgans and one of them probably belongs to Afanasievo culture (Vadetskaya, Polyakov & Stepanova, 2014, p.36).

1.1.5. Ust-Kan District

1.1.5.1. Vladimirovka, mining

Vladimirovka is located on the left bank of the Charysh river, near the village of Vladimirovka and it was discovered in 1995. Tools that are made of wood, corolla and bull horns are well preserved. A piece of reindeer skin is preserved. A polished stone ax and other stone products were found. For the wooden object, 3756 BC radiocarbon date was obtained (fig.26; 1-9).

1.1.5.2. Karakol, burial ground

The burial ground is located 2 km east of Karakol village, on the cliff on the right bank of Karakol river, the right bank of the Anuy river. The grave was in a bad condition and 1.4 meters deep from the modern surface. Judging by the preserved part of the skeleton inside, the buried person was on his back with his knees is bent and his head is extended to the

southwest. The bones are intensely colored and there is a lot of dark yellow under the bone at the bottom of the pit. An egg-shaped vessel in the form of an ostrich (crane?) was found next to the left shoulder.

1.1.5.3. Lamah-II, the settlement

Lamah-II which was opened in 1983 is located in the high terraces on the right bank of the Kırılık River, 4 km south of the Kayarlık Village. The terrace where the monument is located is cut by a mountain pass. In 1984, a small excavation was carried out by the Gorno-Altai archeology team of Altai State University, and the monument is multi-layered. It includes pieces of korolla, body of vessels and incense burners, and belongs to Afanasiev culture (Vadetskaya, Polyakov & Stepanova, 2014, p.37).

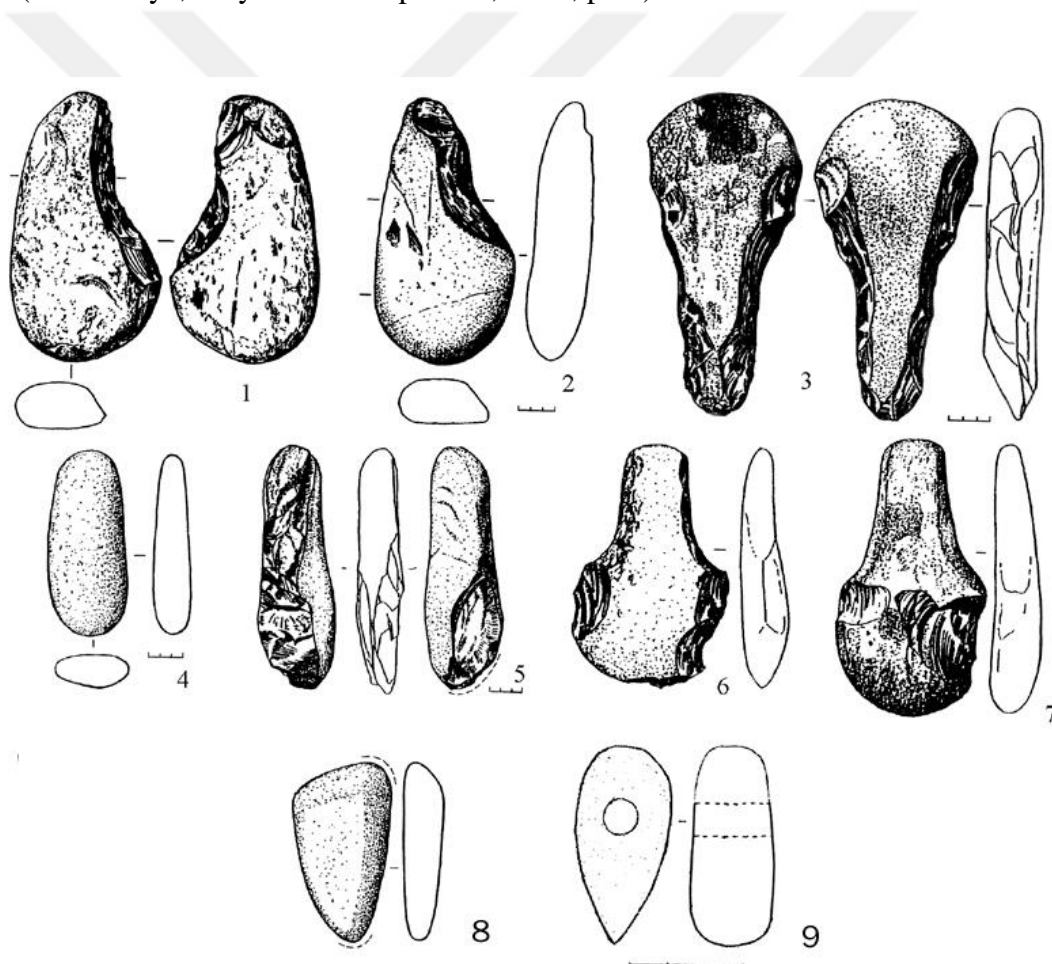


Figure 26: Vladimirovka; (1-9) (Vadetskaya, Polyakov, Stepanova, 2014, p.100)

1.1.5.4. Uruskin Log-I (Karakol-I), burial ground

In the first publications and field reports, the grave floor was named Karakol 1, but later it became known as Ruskin Log. After the discovery of the Bronze Age cemetery area of the same name in the Ongudai region, the name of the monument was updated to Uruskin Log-1. It is located on the second terrace above the floodplain of the Karakol River, 3 km west of Karakol Village. In 1982, A.P. Pogozheva dug 6 structures. The skeleton and pet bones of a woman and a newborn child were found in Kurgan 2. An adult and a child were identified in Kurgan 4. In other kurgans, a skeleton was found (a woman, a man, a teenager and a child). All of the deads were laid on their back with their knees is bent and their heads were faced west. Approximately, 5 vessels were found in all graves. Apart from the vessels; materials such as pendants that were made from drilled maral tooth, a gold earring, a copper knife, bracelet etc. were also encountered. The monument stands out among the Afanasievo tombs because the heads of the skeletons in all the tombs are turned west.

1.1.5.5. Uruskin Log-II (Karakol-II), burial ground

Uruskin Log-II is located in the valley of Karakol River, 300 meters from the Uruskin Log-1 tomb. In 1986, A. P. Pogozheva excavated the monument. The settlement consists of three kurgans that they are form a directed line along the Y line. Their diameter is from 10 to 16.5 meters. Single graves and men are buried. The dead; knees is bent, their heads are directed to the southwest, west and northwest and painted in dark yellow. The found materials are not fully published (Vadetskaya, Polyakov & Stepanova, 2014, p.37-38).

1.1.5.6. Ziryanka, burial ground

Ziryanka is located on the Ziryanka road, at the junction of the Yergal river, in the upper parts of the Charysh river. 1.1 meters deep grave was found in the western part of the valley, and a 7-8-year-old child had a spine at a depth of 0.92-1.05 meters. The knees of the dead were bent and painted with ochre. Next to the skull, a biconical vessel was found (Vadetskaya, Polyakov & Stepanova, 2014, p.102-103).

1.1.5.7. Pesherkin Log-I, burial ground

Pesherkin Log-I is located on the terrace of the left bank of Karakol river, 2 km east of Karakol village. 11 kurgans were identified, grouped in clusters. In 1986, 1 kurgan was studied. The diameter of the fence ring is 10 meters. A dead body was found inside the grave

with knees bent and red ochre paint. In addition, ax, daggers and flat bottom clay vessel were found. Excavating scholars suggested that more research could reveal local variants or features in Afanasievo culture (Vadetskaya, Polyakov & Stepanova, 2014, p.104).

1.1.6. Ust-Koksinsky (Kök-suu) District

1.1.6.1. Kucherla-I, the cult complex

Kucherla-I is located 15 km from the village of Tungur, near Belukha (Muztau) Mountain. The work of the monument was carried out from 1988 to 1990 under the leadership of V. I. Molodin. Due to the recording of cultural layers and rock paintings, the monument is very timed and private. It belongs to the early Afanasievo culture. The capacity of the cultural layer varies in different areas. Parts of at least 12 vessels belong to Afanasievo culture.

1.1.7. Shebalin District

1.1.7.1. Apshuyakhta-II, burial ground

The burial grounds are located on the left bank of the Apshuyakhta river, on the northern edge of the village of Verh-Apshuyakhta. The monument was opened by V. I. Soenov. The cemetery area consists of 4 straight kurgans with a diameter of 3 to 6 meters and 2 fences with a diameter of 7.5 and 3.5 meters. No excavations were done. Probably, the cemetery area belongs to the Afanasievo culture.

1.1.7.2. Apshuyakhta-V, burial ground

The monument is located on the western outskirts of Verkh-Apshuyakhta village, 1 km southwest from the center of the village of Apshuyakhta, on the right bank of the Apshuyakhta river and on the left bank of the Edor River. The monument was opened in 1992 by V. I. Soenov and in 2011, it was further studied to clarify its current state (Soenov, Oynoshev, 2016, p.19). The diameter of the kurgans is from 7 to 18-20 meters. The main part of the objects probably belongs to the Afanasievo culture. No excavations were done.

1.1.7.3. Big Tolgoyek, burial ground

Big Tolgoyek is located on the southeast edge of the village of Apshuyakhta, on a ledge with a high terrace. Between 1990 and 1991, 4 Afanasievo kurgans were studied under the leadership of V. I. Soenov. The graves are broken. The legs of the dead are bent and their

heads are oriented towards the southwest. There are traces of ochre in the graves. The three graves are single, and the skeletons of 2 children and 1 adult were found. There were 2 young people in one grave (Vadetskaya, Polyakov & Stepanova, 2014, p.39).

1.1.7.4 Kara-Daryik, burial ground

The monument is located 2 km west-northwest of the village of Verh-Apshuyakhta. The monument was opened in 1989 by V. Sotovik. It includes three plowed kurgan chains. The cemetery area is probably attributed to Afanasievo culture. No excavations were done.

1.1.7.5. Small Tolgoyek, settlement

Small-Tolgoyek is located on the eastern edge of the village of Verh-Apshuyakhta, on the right bank of the river Maly Tolgoek, the right bank of the Apshuyakhta river. The monument was opened in 1991 by V. I. Soenov. Ceramics which are thought to belong to Afanasievo culture were obtained (Soenov, Oynoshev, 2016, p.20-21).

1.1.7.6. Peschanaya Bridge, location

The monument is located on the left bank of the Peschanaya river, 150 meters west of the bridge, 7.5 km southwest of the village of Ilyinka, opposite the mouth of the Berkh-Aybarta river. The monument was researched in 2006 under the leadership of V. I. Soenov. Potsherds and part of the jaw of an animal were found. It probably belongs to Afanasievo culture (Soenov, Oynoshev, 2016, p.24-25).

1.1.7.7. Lower Ayri-Tash, burial ground

Lower Ayri-Tash is located on the left bank of the Baragash river, 4.5 km southwest of the center of Baragash village. It was opened in 2003 by V. I. Soenov. 2 kurgans were detected and the size of the burial pits was defined as 220x125x95 and 175x120x90 centimeters (fig.27; 1-3). The deads are bent legs and the graves are painted in dark yellow. Radiocarbon dates were obtained from tree remnants and human bones. The date of Kurgan 1 that was obtained from bone is 4225 ± 60 . The ones that were obtained from the tree are 4480 ± 50 , 4780 ± 85 and 4840 ± 95 . The dating of Kurgan 2 from the bone is 4725 ± 40 (Vadetskaya, Polyakov, Stepanova, 2014, p.40).

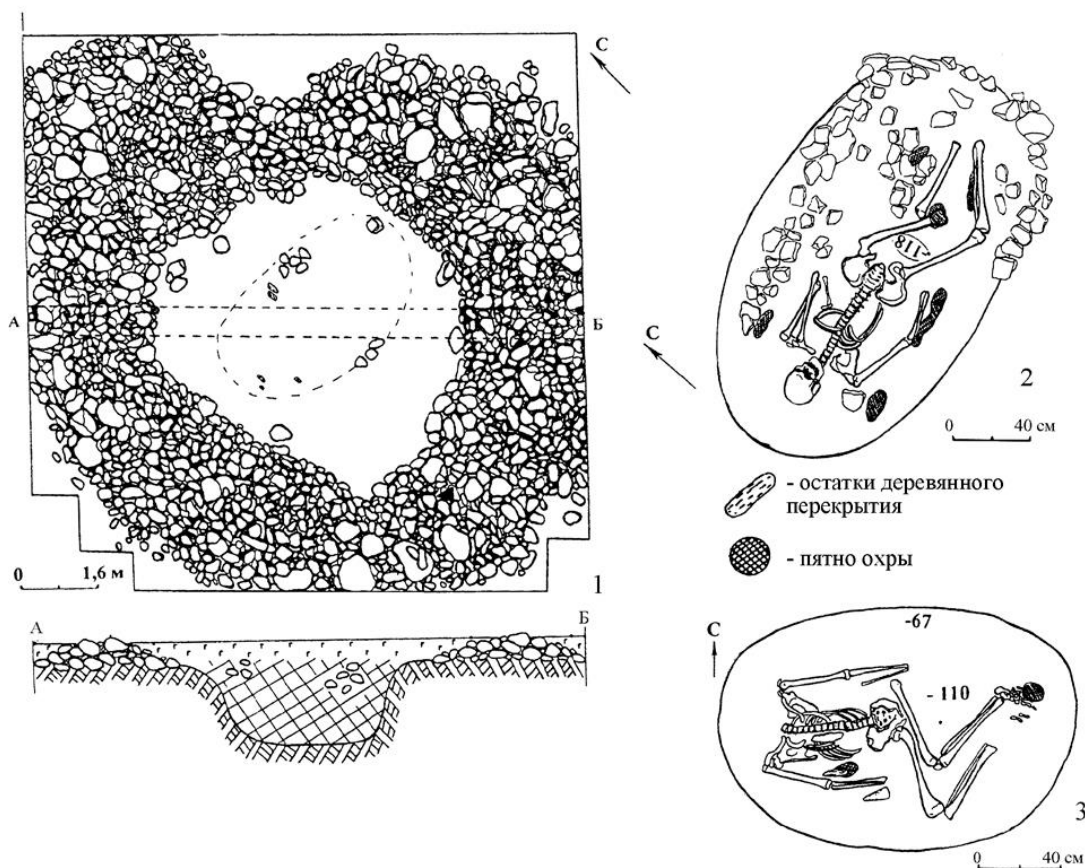


Figure 27: Lower Ayri-Tash – kurgan 1; (1,2), kurgan 2; (3) (Vadetskaya, Polyakov, Stepanova, 2014, p.99)

1.1.7.8. Tolgoek-I, single kurgan

The monument is located 50 meters north of the Tolgoek River, 600 meters west of the Tolgoek petroglyph and on the slope of the village of Shabalin. It was analyzed by T. A. Vdovina in 2002. The diameter of the structure is 7 meters. The deceased was with his knees bent and his head was turned west. Ceramic pieces, ochre spots, four-sided copper awl pieces and coal were found in the grave (Soenov, Oynoshev, 2006, p.33-34).

1.1.8. Mayma District

1.1.8.1. Ilbik, burial ground

Ilbik is located on the territory of the village of Ust-Muny, near the Chuysky tract. It was destroyed. According to local residents, the buried man was laid in a crouched position.

1.1.8.2. Manjerok-III, settlement

Manjerok-III is located on the terrace of the old riverbed of the Katun river, in the southeast region of the village of Manjerok. It was discovered by A.P. Borodovsky and A.N. Politov in 2001. Afanasievo ceramic pieces were found.

1.1.8.3. Manjerok V and Manjerok VII, settlement

The Manjerok-V settlement is located within the borders of the village of the same name, near the river Katun. In 2003, during the construction of the foundations of the houses, the Afanasievo cultural layer emerged.

The Manjerok-VII settlement is located on the right bank of the river with the same name and 500 meters south of the village. It was opened by A.P. Borodovsky. Ceramics were collected.

1.1.8.4. Muny-I, settlement

Muny-I was opened in the late 1970s by V. I. Molodin and V. T. Petrin. It is located on the road of the marshes 2 km upstream from Muny village. From 1992 to 2000, the monument was explored by A. P. Borodovsky. The layout is multi-layered. The ceramic complex has analogies on Afanasievo complexes (Vadetskaya, Polyakov & Stepanova, 2014, p.41).

1.2. Memorials of the Afanasievo Culture of the Valley of the Yenisei River (Minusinsk basins)

1.2.1. Afanasieva Mountain, burial ground

The grave area is located on the terrace above the narrow first flood bed under the Afanasievo mountain, on the left bank of the Yenisei river, near the old Bateni village. There are approximately 40 structures which spread over an area of 250 meters long and 15 meters wide among which 35 structures that they belong to Afanasievo Culture were excavated (fig. 28). 18 Afanasievo kurgans were researched by S. A. Teploukhov between 1920-1923. The graves on the ground surface are 2-7 meters in diameter. The cemetery area of Afanasieva Mountain is the place and monument where Afanasievo culture is defined and named.

Between 1963-1964, M. P. Gryaznov and M.N. Komarova did some excavations and they found that remnants were characterized by the cemetery floor, the construction of grave structures, large pits filled with stones, uniform orientation the posture of the dead and the

predominance of egg-shaped ships in the tombs. Many tombs are quite preserved. The spread of the grave area in a very large area shows the presence of several Afanasievo monuments, which may differ chronologically. Especially, large and small clustered structures in the east side are encountered (Vadetskaya, Polyakov & Stepanova, 2014, p.121).

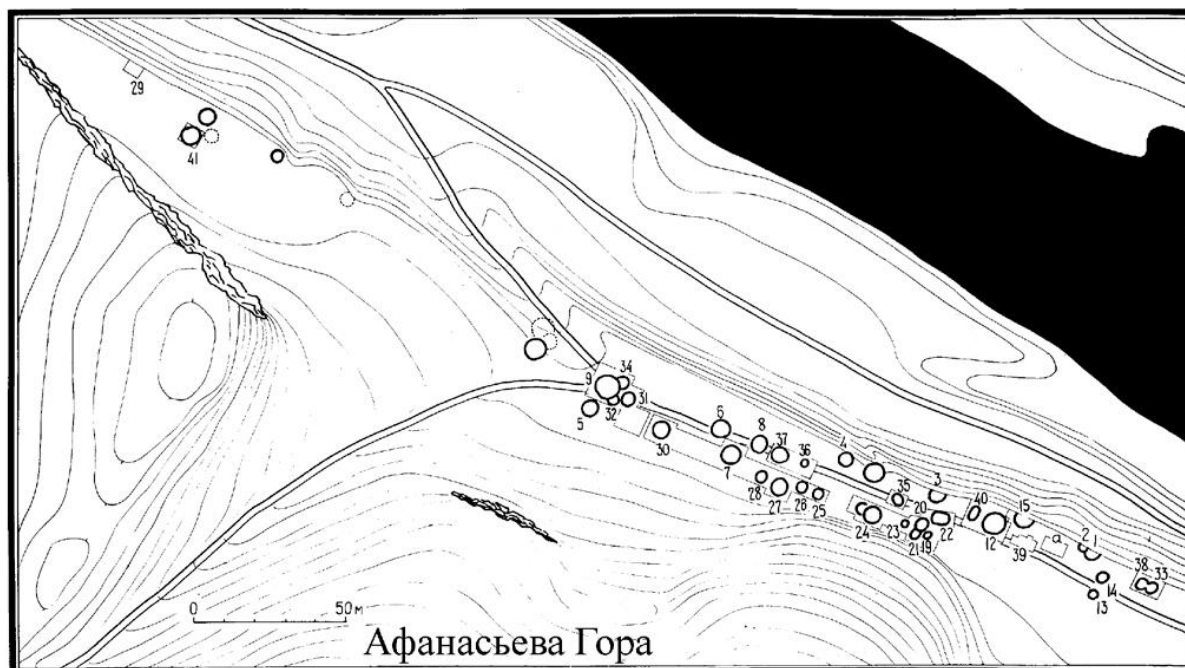


Figure 28: Plan (Vadetskaya, Polyakov, Stepanova, 2014, p.121)

All of 66 people were identified in the excavations and 24 of them were women, 15 of them were men and the others sexes could not be determined. Babies are the majority among the children that were detected. A few people between the ages of 8-10 were identified. In the age range of men and women, it is dominant between 40-60. These statistics may change as a matter of fact that all graves were not excavated. The tombs are seen in groups and clusters, and there are adult, young and infant skeletons that raise the idea that the dead in the same group belonged to a common ancestor or family. In addition, 25 adult graves have a collective structure and consist of two people. The number of individual adult graves is 15 (fig.29-30).

According to bone data from Grave 25, two radiocarbon dates were obtained. These are 4077 ± 39 and 4037 ± 31 . Calibrated calendar ages are determined as 2861-2488 BC and 2832-2473 BC respectively. 4092 ± 27 radiocarbon dating was obtained from grave 27. When it was calibrated, the calendar age corresponded to 2859-2501 BC.

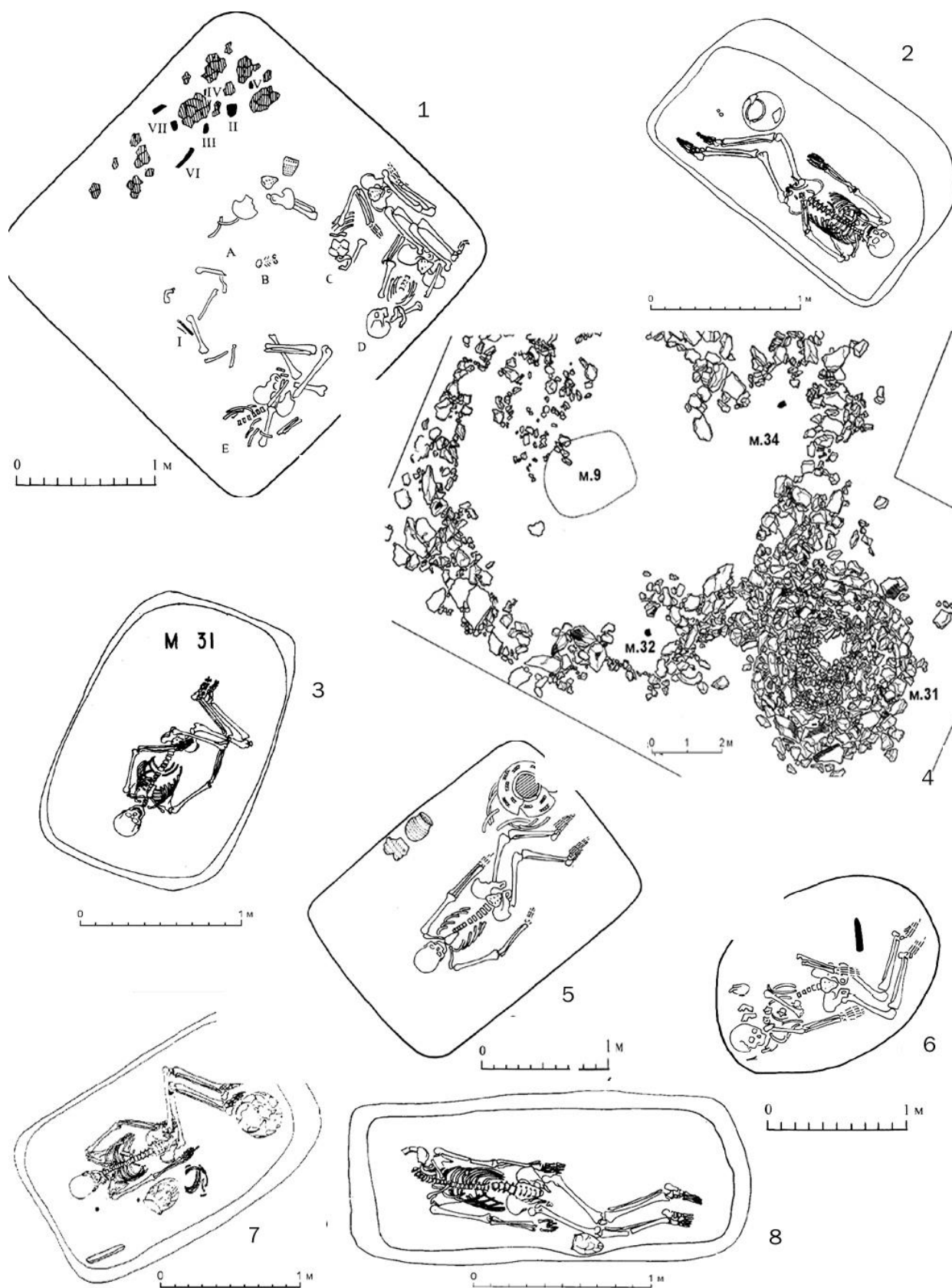


Figure 29: Afanasieva Mountain - Grave 9, 31, 32, 34 plan; (4), grave 9; (5), grave 31; (3) grave 30; (2), grave 6; (1), grave 4; (6) grave 37; (7), grave 25; (8) (Vadetskaya, Polyakov, Stepanova, 2014, p.123-127)

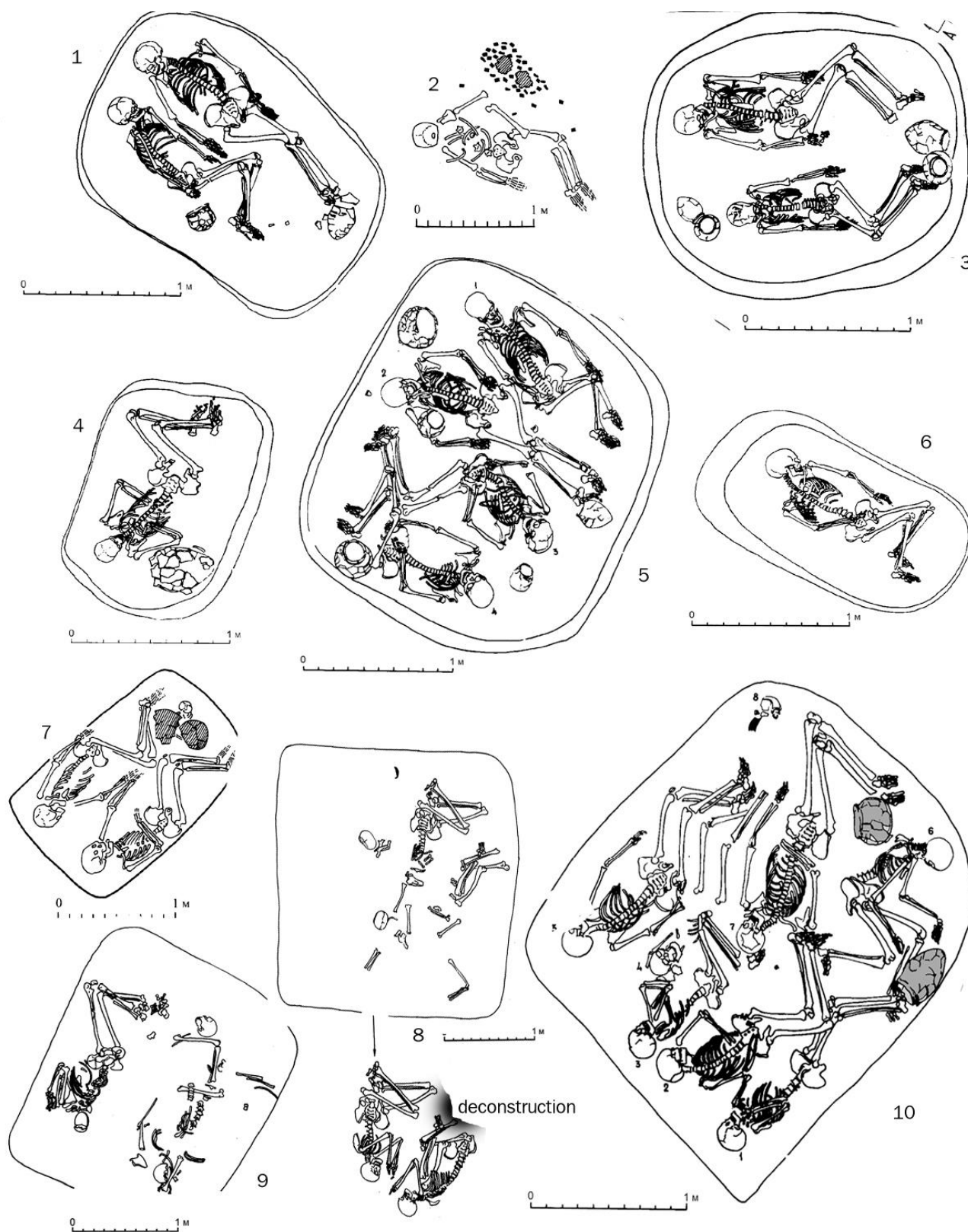


Figure 30: Afanasieva Mountain - Grave 26; (1), grave 27; (3), grave 28; (4), grave 24; (5), grave 35; (6), grave 2; (7) grave 5; (2) grave 33; (8), grave 38; (9), grave 41; (10) (Vadetskaya, Polyakov, Stepanova, 2014, p.127-133)

During the excavations, all of 40 vessels were found (fig.31; 2,3). Unlike other monuments, Korchaga taper to the bottom with a sharp line is not spherical (fig.31; 4). The egg-shaped vessels in this cemetery area are more diverse than other monuments. In addition to these containers, a censer with a broken stem was found. Incense burner height is 8.8 cm, bowl diameter is 13.5 cm, base diameter is 7.5 cm (fig.31; 6). One container was wooden, covered with birch bark (fig.31; 1). 3 stone mortars that were made of pebbles and rocks, a mallet was found. Rare tools are a piece of a copper awl, a gold earring, a stone necklace, a necklace made of fish vertebrae, a very rare leather bracelet that was adorned with argillite beads, and individual stone beads and cylindrical beads (Vadetskaya, Polyakov & Stepanova, 2014, p.134-135).

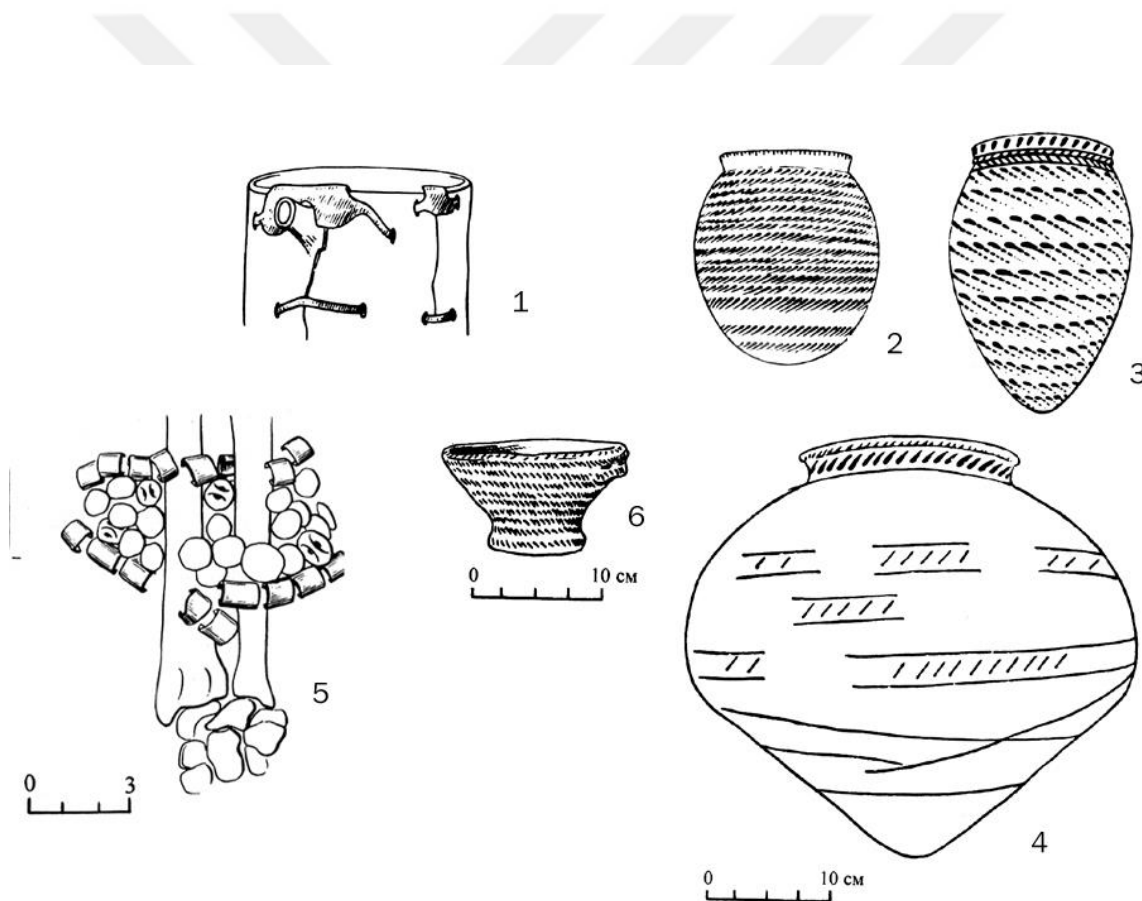


Figure 31: Afanasievo Mountain – remains of bracelet/grave 26; (5) vessels and korchaga style; (3-5), incense burner; (6), wooden container; (1) (Vadetskaya, Polyakov, Stepanova, 2014, p.123,124,127,131)

1.2.2. Barsuchikha-IV, burial ground

The monument is located at the foot of the Barsuchikha mountain, on the old edge of the second terrace on the floodplain on the left bank of Yenisei, at the exit of the Karasuk river valley. In 1967, 2 kurgans that belong to Afanasievo culture were excavated from the area and they were about 100 meters from each other. There are also structures from different periods in the place where the excavated kurgans are located.

Kurgan 22 (grave 1) is 10 meters in diameter and inside, it is rectangular. It is 270x150 cm in size at the top and 250x130 cm in size on the floor, it has a depth of 130 cm from the modern surface (fig.32; 1). It contains skeletons of an adult man and possibly a woman aged 16-18. A piece of herringbone-shaped vessel was found in the grave (fig.32; 2).

Kurgan 23 was excavated and grave 12 was a rectangular pit measuring 200x140 cm and 130 cm deep from the modern surface (fig.32; 3). The skeleton of a 20-30 year-old-man was found and his legs were bent and his head were extended to the southwest. He had a large vessel that was decorated at his feet (fig.32;4). Later, in the burial number 11 on the North-West side of the fence, a man of 40-60 years old that his legs were bent at the knees and his head was buried in the southwest was found. A few pieces of ceramic were found. All of 11 babies were detected near the inner wall of the fence and outside the fence (Vadetskaya, Polyakov & Stepanova, 2014, p.135-138).

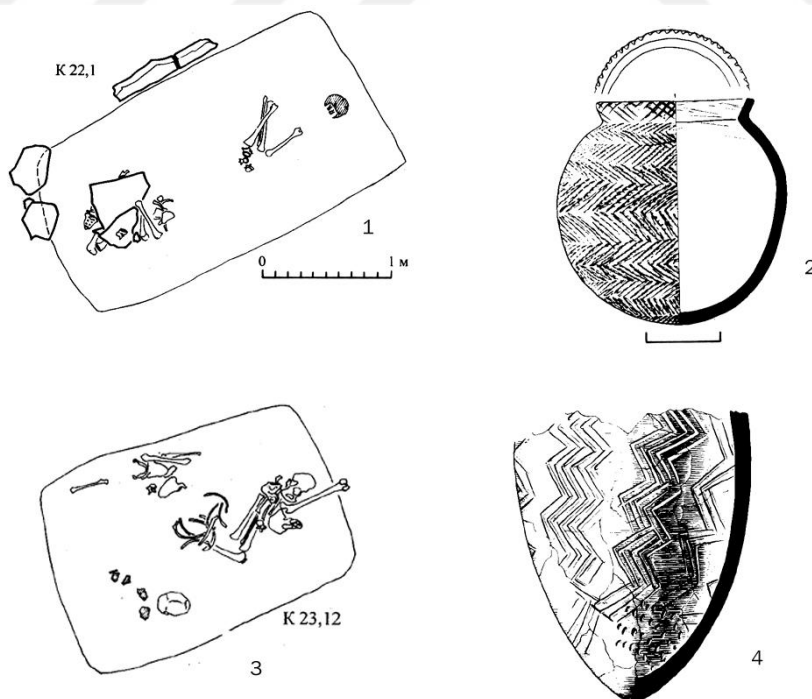


Figure 32: Barsuchikha-IV – Kurgan 22-grave 1; (1,2), kurgan 23-grave 12; (3,4) (Vadetskaya, Polyakov, Stepanova, 2014, p.136-137)

1.2.3. East, a single mound

To the north of Turan Mountain, a few kilometers from the right bank of the Yenisei river, 3 km from the modern village of Vostochnoye, Afanasievo culture had a large stone kurgan. Over time, it was covered with sand, and the soil is overgrown with grass that turned into a hill. After the formation of the Krasnoyarsk reservoir, when the coast advanced deep into the mountains, the kurgan was on the shore of the gulf which is filled with water every year in the summer. Because of the accumulated layer of water, sand and soil from the artificial hill got washed and a substantial stone structure appeared under it. The original date is unknown. Two tombs have been identified. There are 2-5 rows of large untreated stones and block fences up to 5 meters wide around these two graves. In Grave 1, the corpses of a man and a woman between the ages of 50 and 60 were found. Their knees were bent and their heads were placed towards the southern side of the pit. The man is closer to the middle of the tomb. A spiral earring of white metal, possibly silver was detected on the man's left ear. A baby less than a month old was found near the feet of the dead. A soil point with a diameter of 70 cm and a depth of 15-20 cm was found on the southeast edge of the large grave. It contained stones and two burnt bones. It was probably the stove where the dishes were cooked. It was proved that the bones belonged to a moose by the bones of a roe deer when filling the large pit. In addition, the thigh bone of the rabbit and the bone of a bird were found in the grave fill, but these bones were thought to fall into the hole during the robbery.

The kurgan has all the signs that indicate deads in the main tomb were noble. This structure is not monumentally similar in comparison to other structures that were found so far. While the largest is 120-150 cm, the average width of the fence walls of other graves is 70 cm. It is only 5 meters wide on the wall in the eastern part of the kurgan. In addition to the kitchenware, a korchaga and a stick that were covered with bone cloves for folk food also supports this view. It was also suggested that the person in grave 2 had an accompanying funeral and perhaps a loyal servant. Scholars say that this person who was in the same victim and the same grave, was deliberately killed and buried for the noble people. It was also stated that because of the earring, in his ear the maid could be noble. The absence of skulls among the noble dead remained a mystery. In addition, 3880 ± 30 radiocarbon dates were obtained from the coal sample taken from the furnace where something was cooked, and the date of

2468-2236 BC was reached after calibration. This date is one of the latest dates for Afanasievo monuments in Yenisei (Vadetskaya, Polyakov & Stepanova, 2014, p.138-140).

1.2.4. Karasuk III, burial ground

Karasuk III is located on the right bank of the Karasuk river which is the left bank of the Yenisey river, 350 meters from the valley exit. Between 1961 and 1963, excavations were made with the Krasnoyarsk expedition which is led by M. P. Gryaznov.

Karasuk-IIIa

There are monuments belonging to the Neolithic period in the grave area. At least half of the excavated 11 fences are very close to each other in pairs. Fences 8 and 4, 7 and 9, 13 and 14 were identified in pairs in the northern half of the region. Fence 7 and fence 9 were placed side by side, Fences 4 and 8 were found in parallel.

Fence 7 and 9 are 11 meters in diameter and have different structure structures. Inside the fence 7, a grave measuring 3.8x2.9 meters, along the northwest-southeast line, was detected. An old man and an egg-shaped vessel were found inside (fig.33; 10,11).

On the fence 9, made of flat plates up to 70 cm wide, there are two large graves (fig. 33;7,8). In the southeast of the larger tomb, an old female skeleton was found and the head was placed in the southwest with the legs bent. Next to his head, an object made of four marmot teeth was reached on a dark yellow piece. In addition, a korchaga with a flattened base and an egg-shaped container were identified (fig.33; 6). In the second grave, the bones of a 40-60-year-old woman and an unborn baby were found. Baby bones were identified in the entrance grave of both fences.

Fence 13, which is parallel to Fence 9, has a diameter of 9.4 meters and a large grave with a dimension of 3.1x2.4 (fig.33; 9). The skeleton of an adult closer to the southern half of the burial pit and partially in the middle of his knees bent was discovered. It is covered with dark yellow. Close to the north wall, two round and two egg-shaped vessels and an incense burner were found (fig.33; 1-5). In the south corner, bones and 5 bear bones of two men between the ages of 20-25 were identified. All of them have a large amount of ochre.

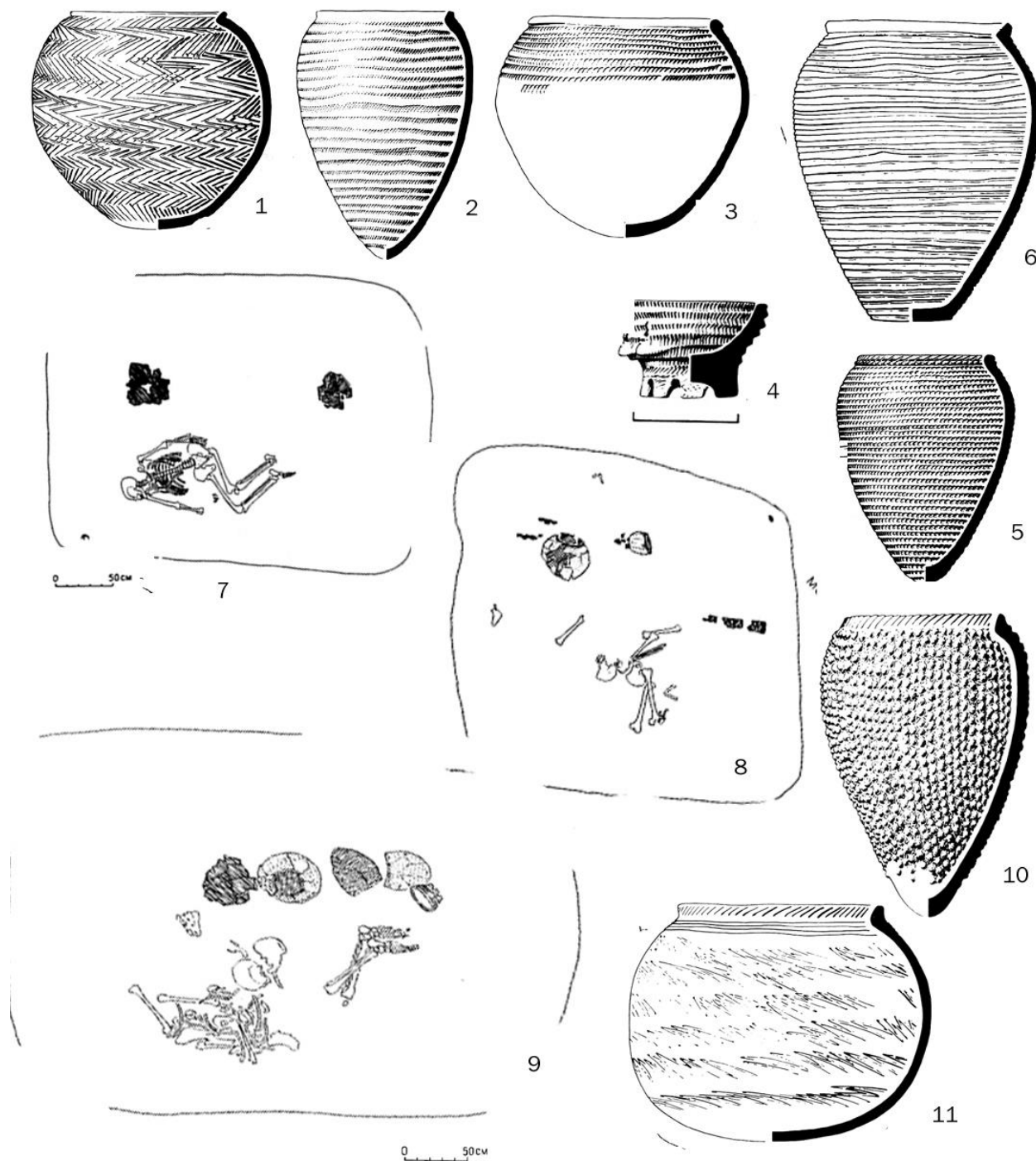


Figure 33: Karasuk III – Grave 3; (1-5, 9), Grave 2; (7), Grave 1; (8), Grave 39 ceramics; (6) (Vadetskaya, Polyakov, Stepanova, 2014, p.145-146)

1.2.5. Krasny Yar I, burial ground

The monument is located on a high terrace above the left slope of the Yenisey river, under the southern slope of Mount Oglakhty. Apart from the Afanasievo population, the

Okunev, Tagar, Hun populations left their mark in this region. The cemetery area was discovered in 1930. E. B. Wadecki continued his work in this region in 1969. At that time, the coastline was heavily eroded by the Krasnoyarsk reservoir. As a result, excavations started in 1969 and the area was fully explored in 1972 (Vadetskaya, Polyakov & Stepanova, 2014, p.160).

All of 25 people were identified during the excavations. 6 women and 8 men were found, 7 adults with undefined sex. 9 individual graves and 16 complex graves were identified. Three people were found inside the two graves. In addition, bones of animals such as deer, sheep, cow and horse were reached.

More than 40 vessels were found inside the graves. Three types of ceramics with sharp, round and flat bottom were identified. Decorations such as herringbone, zigzag and carved figures were found and three vessels with the same ornaments were found in different tombs (Vadetskaya, Polyakov & Stepanova, 2014, p.164-166).

4080 ± 40 BC and 4170 ± 50 BC radiocarbon dates were obtained from kurgan 7 and 9, two adjacent structures on the west side of the grave area. From the kurgan 12 and 15 in the eastern part of the grave area, 4240 ± 60 BC and 4160 ± 40 BC radiocarbon dates were reached. Academics contradict that they belong to Afanasievo culture (Vadetskaya, Polyakov & Stepanova, 2014, p.171).

1.2.6. Letnik VI, burial ground

Letnik VI is located on the first terrace of the left bank of the Yenisey river, near the village of Letnik. In addition to Afanasievo kurgans, there are also monuments of Tagar culture in the same area. The excavations were conducted by Yu I. Trifonov in 1973-1974, M. N. Pshenitsyna in 1975 and 1979 and A. V. Polyakov in 1978 (Vadetskaya, Polyakov & Stepanova, 2014, p.173).

There are 53 graves in the area. Adult graves are generally rectangular pits that were measured 2.5x1.5 meters and 0.8 to 1 meter deep. Rocks and pebbles are stacked in several rows on the graves. Due to the stone plates, the graves are partially or very well preserved. Children's tombs are oval pits with a dimension of 0.6x0.5 or 1.4x0.8 meters, 0.2-0.3 or 0.5 meters deep. Things that look like light cover like birch bark, twig are covered with rocks and gravel. Babies are usually buried in separate graves and small holes outside the fence. The skeletons of the majority of the people in the graves were not preserved. Only a complete skeleton was reached at graves 25, 28 and 29. Usually, only the remains of the legs are

encountered. The legs of all skeletons are bent. There are 12 individual graves, and there are 9 women, 1 man and an adult of undetermined sex, and a young person between the ages of 12-14. Women are more than men in the grave area.

The number of ceramics in the graves is more than 66 and 44 of them are intact or restored. Generally, small and miniature oval vessels with a pointed or flat bottom are predominant. Miniature objects are often found near children's skeletons. Large objects stand out in individual graves.

Three samples were taken from the charred billet in Kurgan 14 and were obtained 4410 ± 50 (two identical), 4380 ± 50 radiocarbon dates. The date of the sample taken from Kurgan 13 is 4250 ± 40 . Date obtained after calibration of the results while it is 3330-2704 BC (Vadetskaya, Polyakov & Stepanova, 2014, p.173, 175-176).

1.2.7. Raspberry Log, burial ground

The cemetery is located on the right bank of the Yenisey River, under the sand dunes 3 km below Tepsey Mountain, on a high terrace at the end of the Raspberry Log (fig.33;1) (Vadetskaya, Polyakov & Stepanova, 2014, p.173, 175-176).

In 1977 and 1989's excavations, Fence 1 has an average diameter of 8.5 meters, and the height of the wall from buried soils is 0.35-0.5 meters, but it can be said that the original of the fence is higher considering the sliding on the plates. Three graves were found inside the fence and the embankment was encountered, and an expansion towards the northeast direction was observed on the pavement. The size of the pit is 3.2 x 2.5 meters and the depth is 1 meter. It was built along the northeast, southwest axis. The old woman in the grave was located in the southeastern part and was plundered by the robbers. The female skeleton was headed northwest, her knees were bent, and her legs were raised towards her back. A silver earring was found next to the skull (fig.34; 9). A bronze, diamond-shaped awl was found to the north of the chest (fig.34; 8). Two vessel fragments were found in the northwestern part. The vessel was worn out, unadorned and egg-shaped (fig.34; 7). Two logs were destroyed inside the grave by burning outside. Under the southwestern tip of this tree, a broken ear on a pallet, two holes for hanging, and a clay incense burner with a "christmas tree" decoration outside the trunk were found (fig.34; 5). One child skeleton was found in graves 2 and 3. The skeleton of the boy in grave 3 was thought to returned from rodents traffic. In the same tomb, an egg-shaped pot that was decorated with short notches which is considered characteristic for Afanasievo culture, was found (fig.34; 6) (Bokovenko, Mityaev, 2010, p.16-18). Fence 2 is

located 0.3 meters northeast of Fence 1 (fig.34;3). The fence has a round shape with a diameter of 3 meters and its height ranges from 0.1-0.5 meters. The southeast part was completely destroyed. The grave was located in the middle of the fence and two bones of a baby were found on the southeast side.

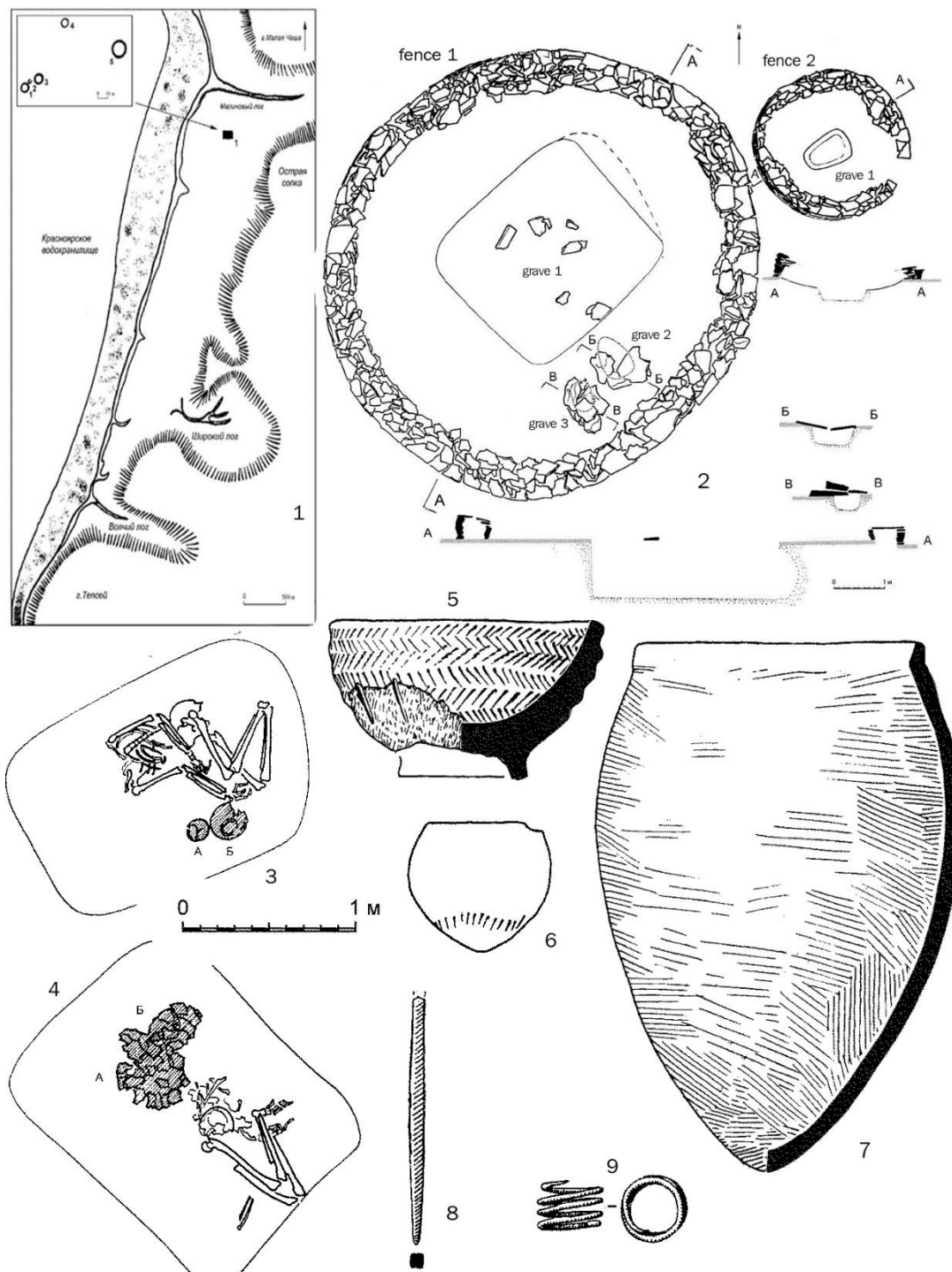


Figure 34: Raspberry Log – plan of burial ground; (1), plan of fence 1 and 2; (2) fence 4-grave 1,2; (3), fence 3-grave 3; (4) clay pot; (5) grave 3; (6), grave 1; (7,9), bronze awl; (8) (Bokovenko, Mityaev, 2010, p.18-21)

Fence 3 is located 7 meters northeast of Fence 1. Before the start of the excavation, its appearance was almost the same as the others, the north part was covered with sand and the borders were almost unclear. The diameter of the fence on the outer edge is 8.5-9 meters, height from the level of buried soil is 0.4-0.6 meters, and the width of the fence is up to 0.9 meters. Three graves were found inside the fence. Grave 1 is located in the middle of the kurgan with a slight deviation to the northwest (fig.35; 1). A female skeleton found to be 25-40 years old was found. His head was directed towards the southeast, his knees were raised up, towards his back. Containers that were decorated with "herringbone" were found. In Grave 2, a 7-year-old boy had long bones and ribs. Small and large tibia of a 12-15 year old girl were found in the northeast part. Two crushed vessels were found in the northeastern part of the grave. It was observed that it was decorated with oval and horizontal rows of notches with a flat base. The other bowl has a round shape with a slightly pointed base and there are again notch-shaped ornaments. Tomb 3 is located in the southeast part of the fence and next to the wall (fig 35). The grave was plundered by robbers, and therefore, the upper part of the northwest wall was partially destroyed. Pottery, sherds and bone fragments of the buried person were found (Bokovenko, Mityaev, 2010, p.19-21). The burial pit is rectangular in shape and is oriented with long edges along the northwest-southeast axis along with rounded corners. The grave was disturbed by looters and was found in the southeastern part of the ruined grave of a man that is thought to be over 60 years old. His head turned to the southwest, his knees are lifted, and then fell to the right (fig.34; 4). There are two fragmented vessels on the northwestern part. There is a round-shaped container with a worn surface close to the skeleton. The other one is an egg that was decorated bowl and there is an "herringbone" type ornament at the bottom.

Fence 4 is located 46 meters northeast of fence 3 (fig.34; 1). The appearance before excavation is the same as the others. As a difference, the material from which the fence was made of irregular stone and only a small part of it was Devonian Sandstone slabs. The outer edge of the fence is 7.5 meters and its width is about 1.5 meters. Tomb 1 is located in the middle of the fence (fig.35; 2). At the bottom of the grave, a female skeleton was found to be aged. Except for the skull, almost all bones of the skeleton are preserved. His head is faced southwest, his legs are bent and his knees are bent upwards (fig.34; 3). A vessel and incense burner were found south of the skeleton's knees. In addition, a round-shaped vessel, decorated with a leaf-like figure, was found in a vertical row.

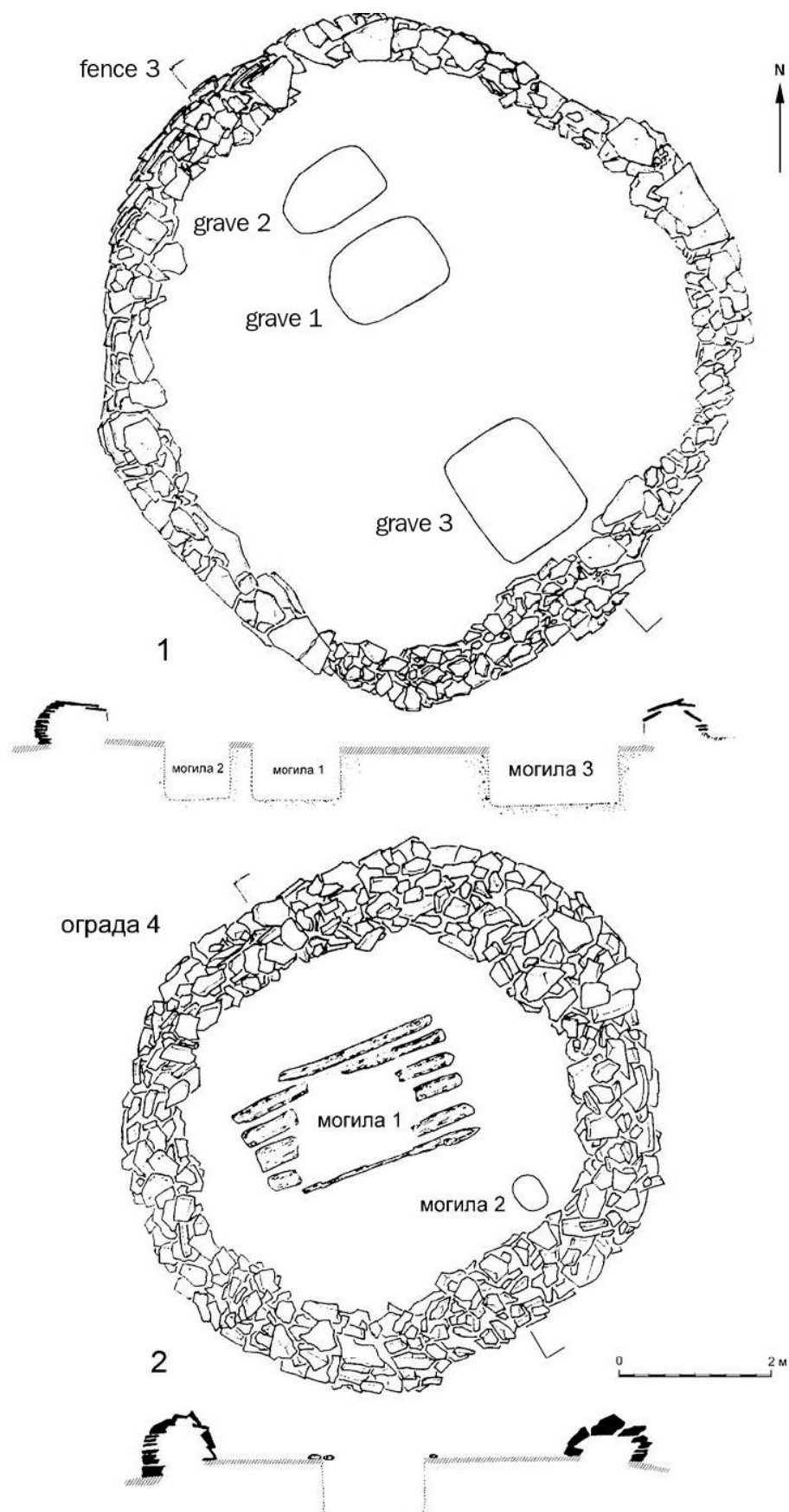


Figure 35: Raspberyy Log – fence 3; (1), fence 4; (2) (Bokovenko, Mityaev, 2010, p.22)

Another vessel was decorated with a four-legged incense burner with a pattern that can be called horizontally "herringbone". Grave 2 is located on the southeast wall. A small egg-shaped vessel that was decorated vertically was found. No bones were found in the grave. It was thought that a child whose bones could not be preserved in the sand for a long time was buried. Spear pieces that were made of flintstone, a stone mallet that was made of large pebbles and primitive shale unilateral scraper 2 meters westward were found.

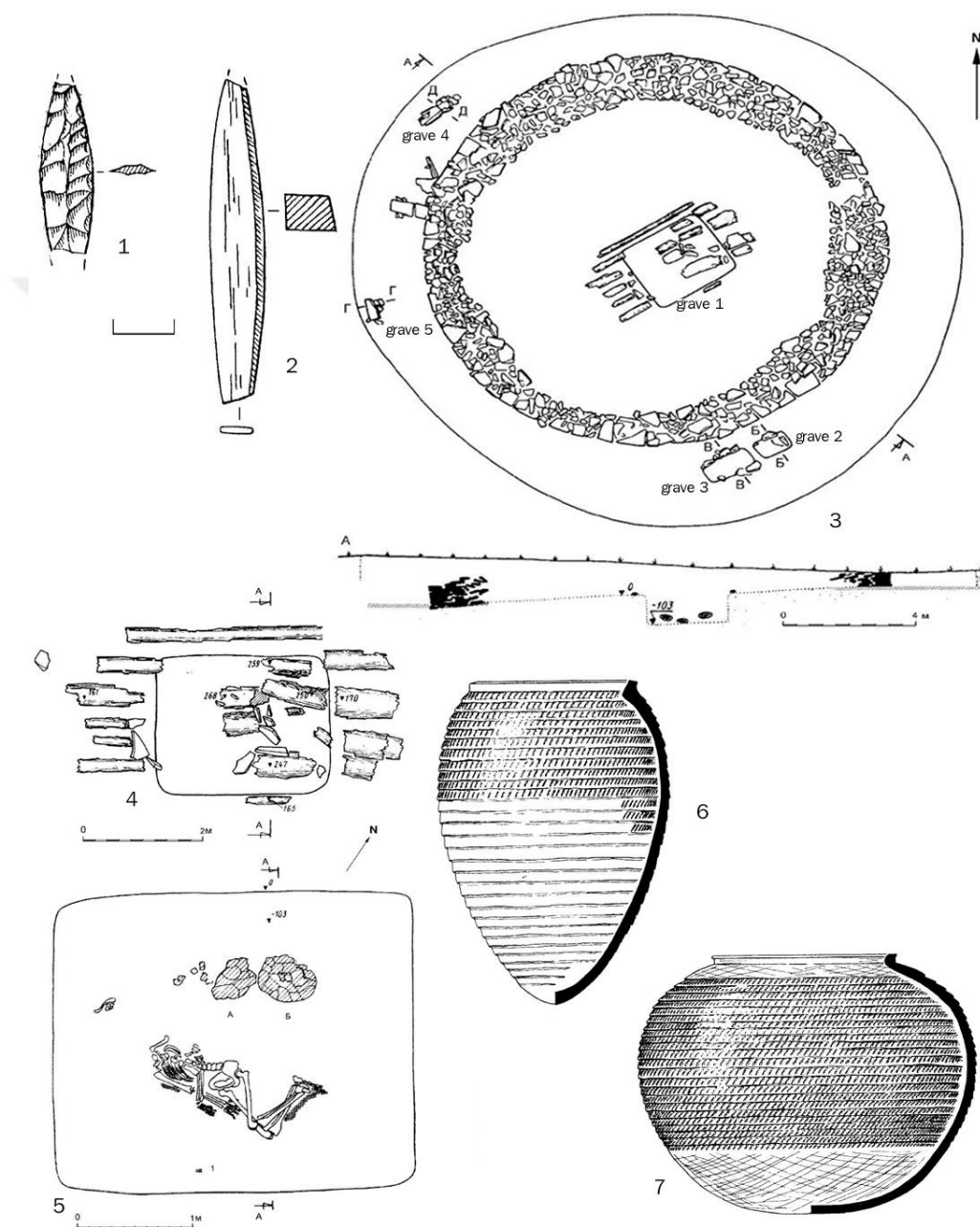


Figure 36: Raspberry Log – fence 5; (3), fence 5- grave 1- floor plan; (4) bottom plan; (5), fence 5- grave 1- bone arrowhead; (1,2), clay vessels; (6-7) (Bokovenko, Mityaev, 2010, p.26-

Fence 5 is located 50 meters from fence 4 to east-southeast. The fence is 14 meters in diameter and circular. It consists of plates that were placed horizontally up to 1-meter height and 1.5-1.8 meters width. There are 5 graves in the complex. An adult (fig.36; 4,5) and four children's graves were found in the middle of the fence on the southeast and northwest sides (fig.36; 3). The grave where the adult skeleton is located in the middle of the fence is 1 and the skeleton has no skull. The left side of the chest was destroyed by rodents. His knees are bent as a characteristic feature of Afanasievo Culture. There are traces of red ochre on the legs (Bokovenko, Mityaev, 2010, p.23-24). Near of head which was turned to the southwest, two arrowheads, a flint (fig.36; 1,2) and red vessels which is one being plain-bottomed and the other round-bottomed (fig.36; 6,7) were found. Tomb 2 is located 0.75 meters from the southeast wall of the fence. The grave is rectangular and its long sides are in southwest-northeast orientation. Tomb 3 is located 0.2 meters west of tomb 2, its shape and orientation is the same as tomb 2. Nothing was found on the ground. Grave 4 is located behind the fence's northeastern wall and 0.9 meters from the wall. Finally, in grave 5, a slab cluster was found 1.4 meters behind the western part of the fence, and no materials were found in its content (Bokovenko, Mityaev, 2010, p.25).

1.2.8. Small Kopeny-II, burial ground

The burial ground is located near Small Kopeny Village in Bograd district of Hakasya and on the left bank of Yenisey River. In 1939-40, three Afanasievo fences which are located in the north of the Chaatas Period settlement were discovered on the terrace under the slope of Korova Mountain by L.A. Evtjuchova. In 1960, another expedition was made under the leadership of Zyablin and discovered the fourth fence that belongs to Afanasievo Culture in this region and created a new template by marking the structures that belong to Karasuk and Tagar cultures (fig.37; 1). Fence 4 is 25 meters north of fence 1 (fig.37;2) (Vadetskaya, 2012, p.85).

Fence 1 is 10.5 meters in diameter and contains 3 graves. The grave 1 is a rectangular structure with a size of 1.8 x 0.9 meters and a depth of 80 cm. It was robbed. A woman's skeleton was probably found inside. His head is faced west and his knees are bent. Two vessels which were decorated were found. One of them is corolla type egg-shaped and the other one is with a slightly retouched base embroidered with horizontal carved lines on the Christmas tree motif. The first of the vessels is light brown and sometimes reddish.

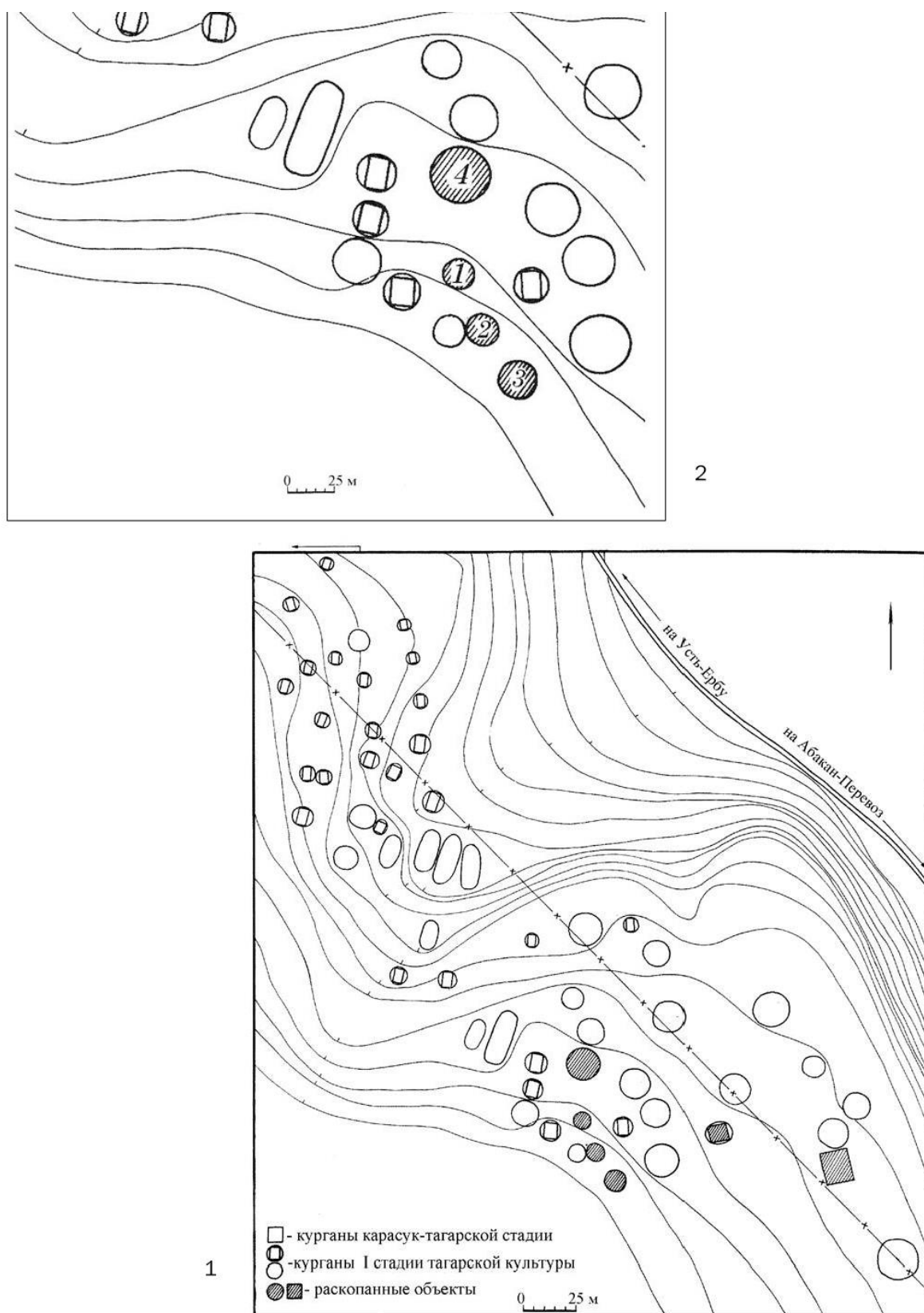


Figure 37: Plan of the Small Kopeny-II burial ground with Afanasiev, Karasuk and Tagar kurgans; (1) kurgans that belongs to Afanasievo; (2) (Vadetskaya, 2012, p.86-87)

The other one is reddish and heavy fog inside. Grave 2 is a 2 x 1 meters in size, 90 cm deep rectangular rounded corners. It was robbed and there is no inventory other than human bones. Remains of a child's skeleton and a stone box were added to the fence in the eastern part. Grave 3 is 2.4 x 2 meters in size, 1 meter deep and 3 ceramics were found in it. A bronze earring specific to the Afanasievo culture type was also found.

Fence 2, (fig.38; 2) is located 6-7 meters south of Fence 1 and is a structure consisting of thin slabs with a diameter of 7.5 meters. In the middle of the fence, there is a rectangular grave measuring 2.7 x 1.95 meters in size and 90 cm deep with rounded edges. At the bottom of the grave, especially in the southern half, a skeleton scattered charred bones. Behind the skull is a flat bottom vessel that were decorated with Christmas tree motif (fig. 39; 3). A jagged, decorated incense bowl was found outside this bowl inside the grave (fig.39; 4). There was a trace of holes in the northern part of the pit which is thought to be opened by a thief. There are also many potsherds dating from the Chaatas era. In addition, a burned animal skull was found (Vadetskaya, 2012, p.86-87).

Fence 3 (fig.38; 1) is located 5 meters south of Fence 2 and its north-south orientation is 10.8 meters and east west is 10.6 meters in diameter. Ceramic pieces from Afanasievo, Tagar and Chaatas, a cow, sheep and horse bones were found inside the fence. In the center of the fence (grave 3), there is a large pit measuring 2.9 x 1.8 meters, 1 meter deep from the ancient surface. Its limits are not clear. There are also objects belong to Tagar culture. Two skeletons, one is preserved, were identified (fig.39; 1). A pot with a Christmas tree decoration and a stone pestle were found inside (fig.41; 4). Grave 1 which we can define as the entrance grave of the fence was identified. It is close to the northwest wall of the kurgan and has a child skeleton inside (fig.39; 2). A bowl with an oval and sharp base that was decorated with herringbone and stick recesses was found on the leg (fig.39; 5). There is Grave 2 in the southeast of the fence, and a baby's skull was found inside.

Fence 4 consists of outwardly bent sandstone slabs with a diameter of 14-14.5 meters. 12 tombs were identified in the Kurgan. Grave 6 is a building with a dimension of 2.4 x 1.55 meters and a depth of 65 cm which can be called partially rectangular and almost square with rounded corners. It is the largest tomb. Bones of an adult with preserved bones were found. Ceramic pieces were identified. Grave 7 is located to the north of grave 6 and is parallel. It is rectangular in size of 1.8 x 1.05 meters and 50 cm depth. Skeleton fragments were found, but no inventory exists. Grave 1 is an oval pit measuring 1.1 x 1.7 meters, 50 cm deep. The bones of the skeleton were found scattered and two skulls were detected. Ostrodon type vessel was found (Vadetskaya, 2012, p.88).

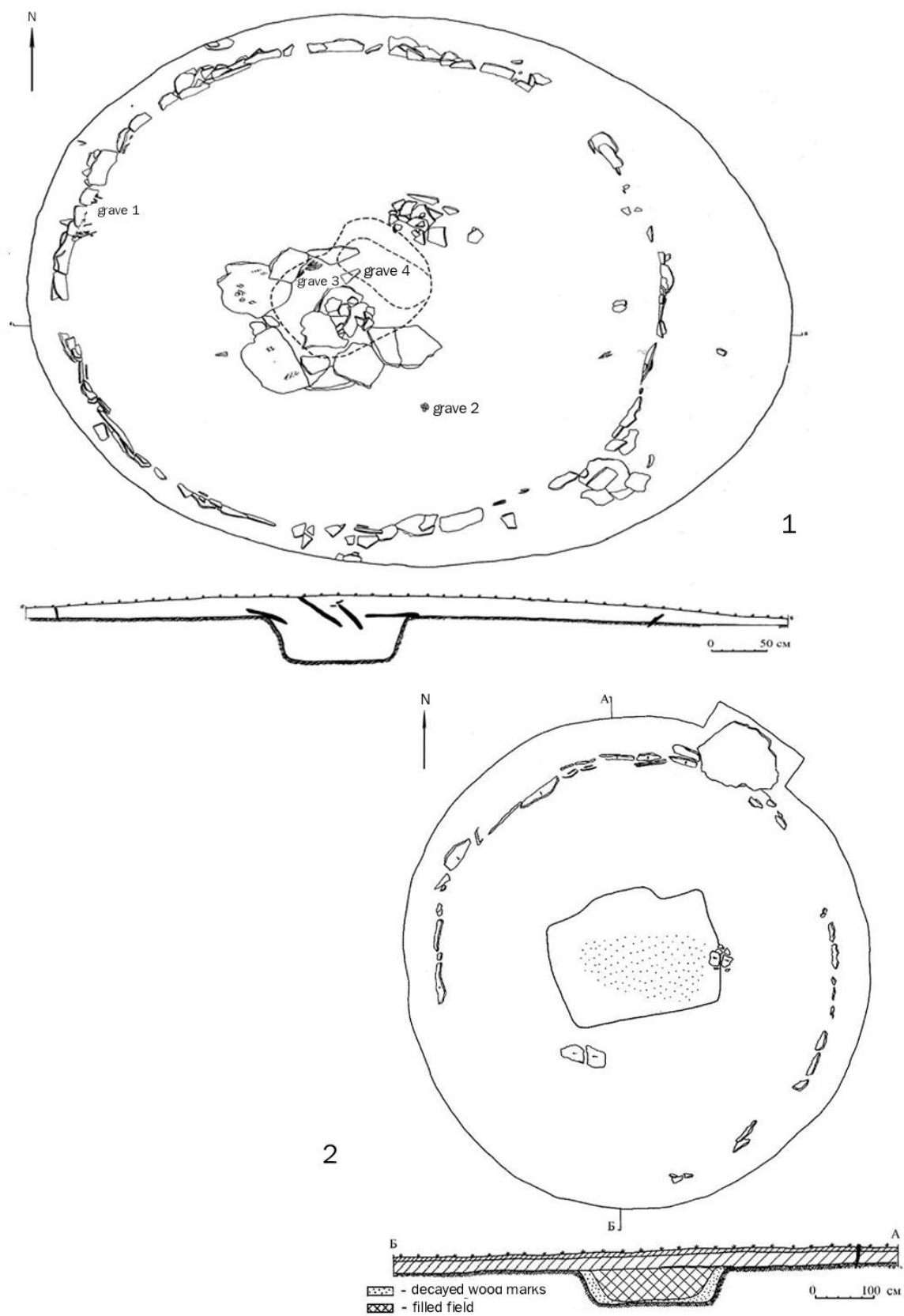


Figure 38: Small Kopeny-II – fence 2; (2), fence 3; (1) (Vadetskaya, 2012, p.90, 92)

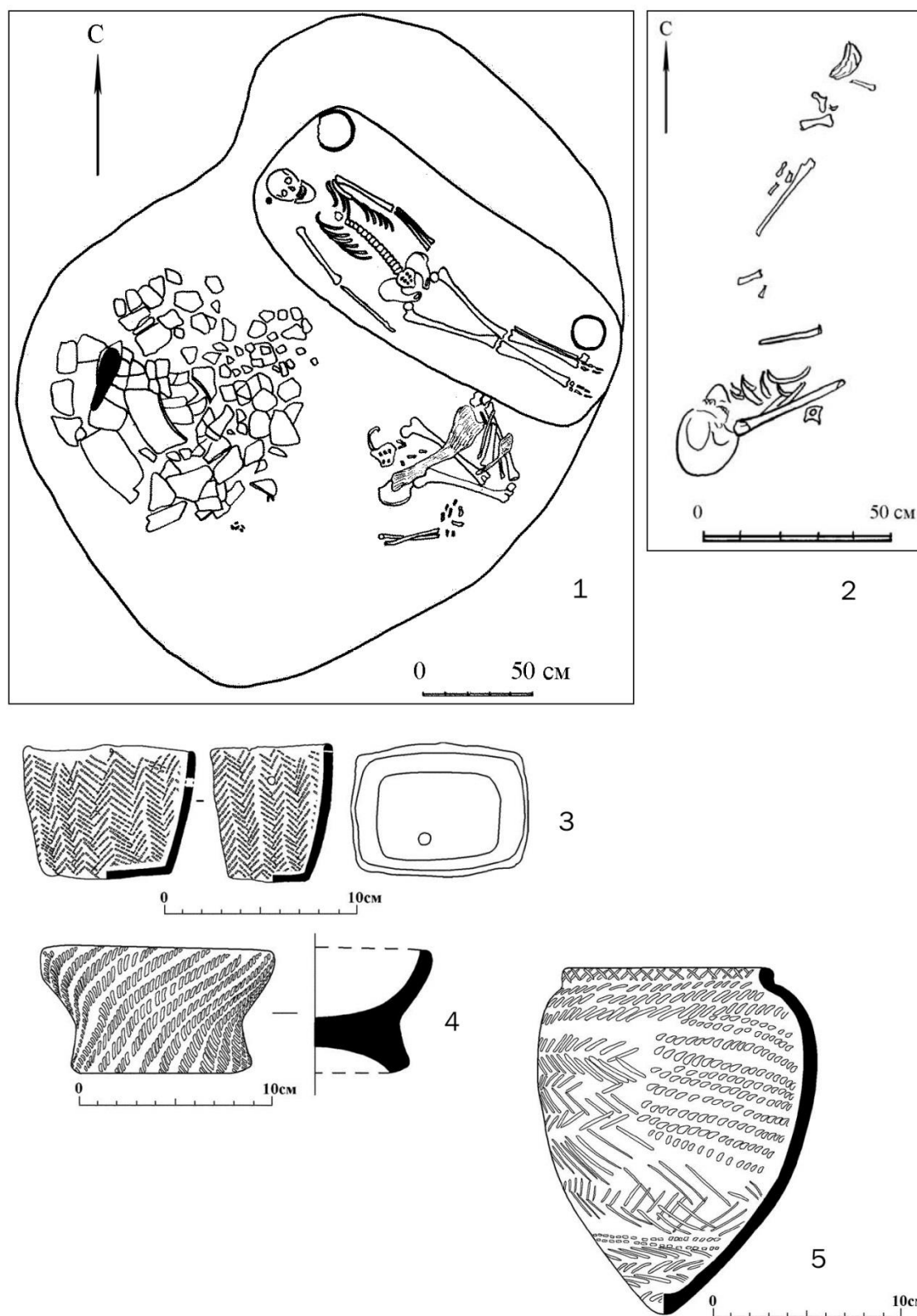


Figure 39; Small Kopeny-II - Afanasievo grave in the center (Tagar grave); (1) fence 3-grave 3; (2), fence 2; (3-4), fence 3-grave 1; (5) (Vadetskaya, 2012, p.94, 98)

Grave 10 is located in the south of grave 6 and in parallel. It is an oval pit measuring 1.75 x 0.90 meters in size and 60 cm deep. A man has bones in the lower part of his body. Grave 12 is located in the southern part of the fence. It is 1.7 x 0.75 meters in size and 17 cm deep. During the robbery, it was found covered with scattered plates. The bones of the skeleton are near the northwest wall (fig.40). Grave 9 is located opposite Grave 6 and to the west of the kurgan. It is 2.25 x 1.35 meters in size and 50 cm deep and rectangular in shape. It contains bones and container fragments of two skeletons. In addition, a six-foot incense burner (fig.41; 3) and a herringbone pattern were completely covered with a scalloped washer. Grave 3 is located opposite Grave 7 in the eastern part of the kurgan. It is 1.9 x 1.1 meters in size, rectangular in 75 cm depth. Three pelvis bones from two skeletons were found in the filling (fig.41; 5). The grave 4 is located in the eastern part of the fence and is a rectangular pit measuring 1.85 x 1.1 meters, 55 cm deep. There is the skeleton of an adult man whose skull and arm bones missed, his knees bent and laid on his back. An egg-shaped, pointed, gray clay pot was found on the foot. Grave 8 is located under the plates between graves 1 and 9, next to the western wall of the kurgan. It is 1.4 x 0.85 meters in size and 45 cm deep. A child's skeleton was found inside. In addition, a spherical and round-bottomed reddish, christmas tree figure-shaped vessel (fig.41; 2) and a vessel decorated with notches made of oval, gray clay were found (fig.41; 1). Grave 2 is located in the middle of the north half of the kurgan and is a northwest-southeast burial measuring 0.86 x 0.60 meters and 5 cm deep. The skeletons of two children aged 5 and 8 were found. The grave 5 is a grave with a size of 0.65 x 0.70 meters and a depth of 10 cm between graves 6 and 4, and a child's skeleton was found inside. Grave 11 is in the eastern half of the kurgan, between the graves 10 and 4, 1 x 0.45 meters in size and 48 cm deep in oval shape. A child is buried inside, and there is a herringbone patterned vessel that is covered with triangles on the lower half (Vadetskaya, 2012, p.90-91).

The total number of graves is 18, 16 adult skeletons were reached in 13 graves (5 children's graves were reached.). For the most part, graves that were excavated for children were placed on the surface and covered only with plates. The knees of the adult dead are bent and usually laid on their backs to the right. The children were placed in a crouching position.

During the first excavations in 1961, L. S. Zyablin took a coal sample from the Fence 2 grave and used it for radiocarbon analysis and 2490 ± 150 date was obtained. In the calculations that were made in, the date range for Small Kopeny, it was stated as 3628-2696 BC by Vadetskaya. During the robberies, earlier dates are thought to be due to turmoil (Vadetskaya, 2012, p.94-96).

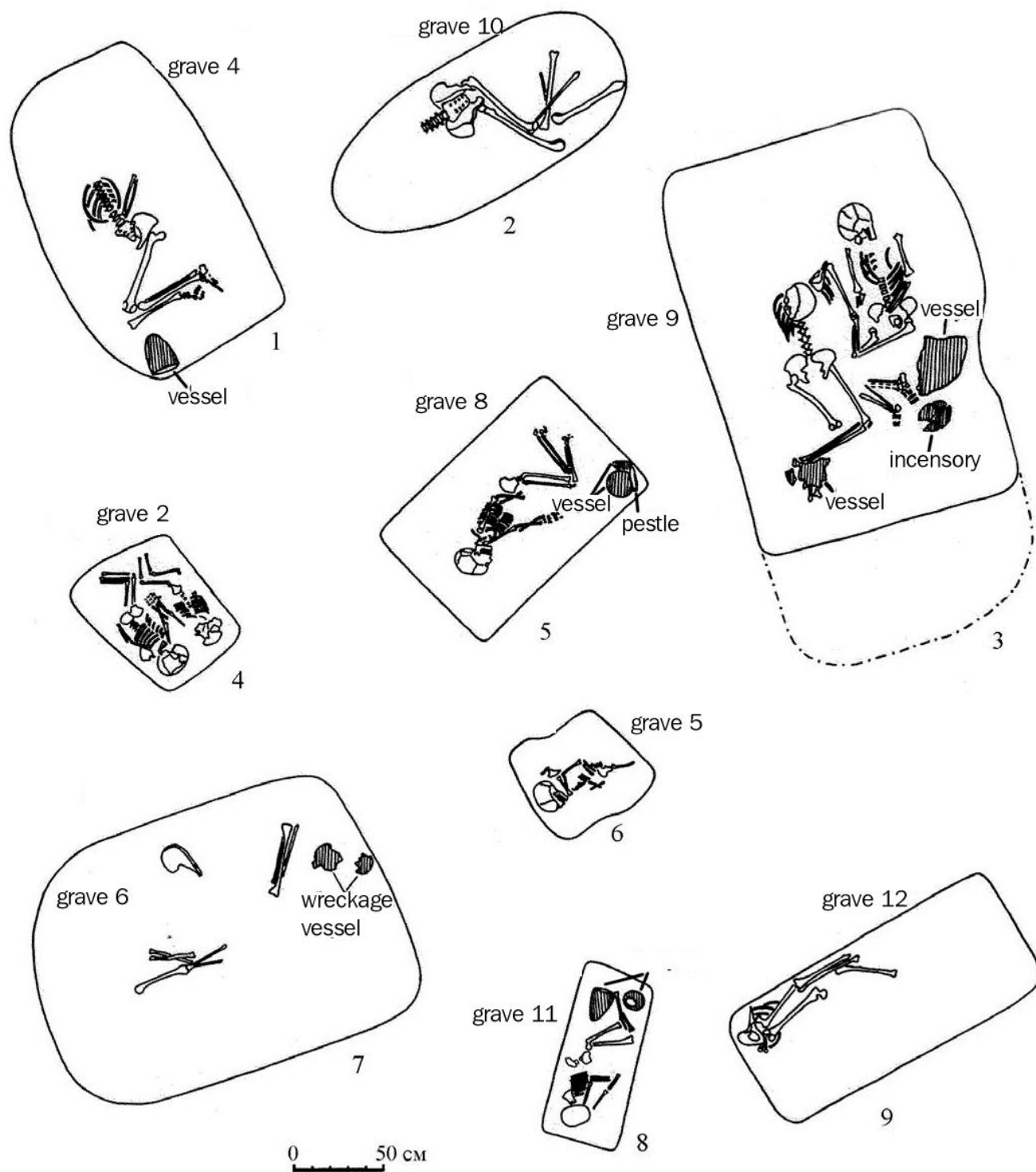


Figure 40: Small Kopeny-II – graves of kurgan 4; (1-9) (Vadetskaya, 2012, p.96)

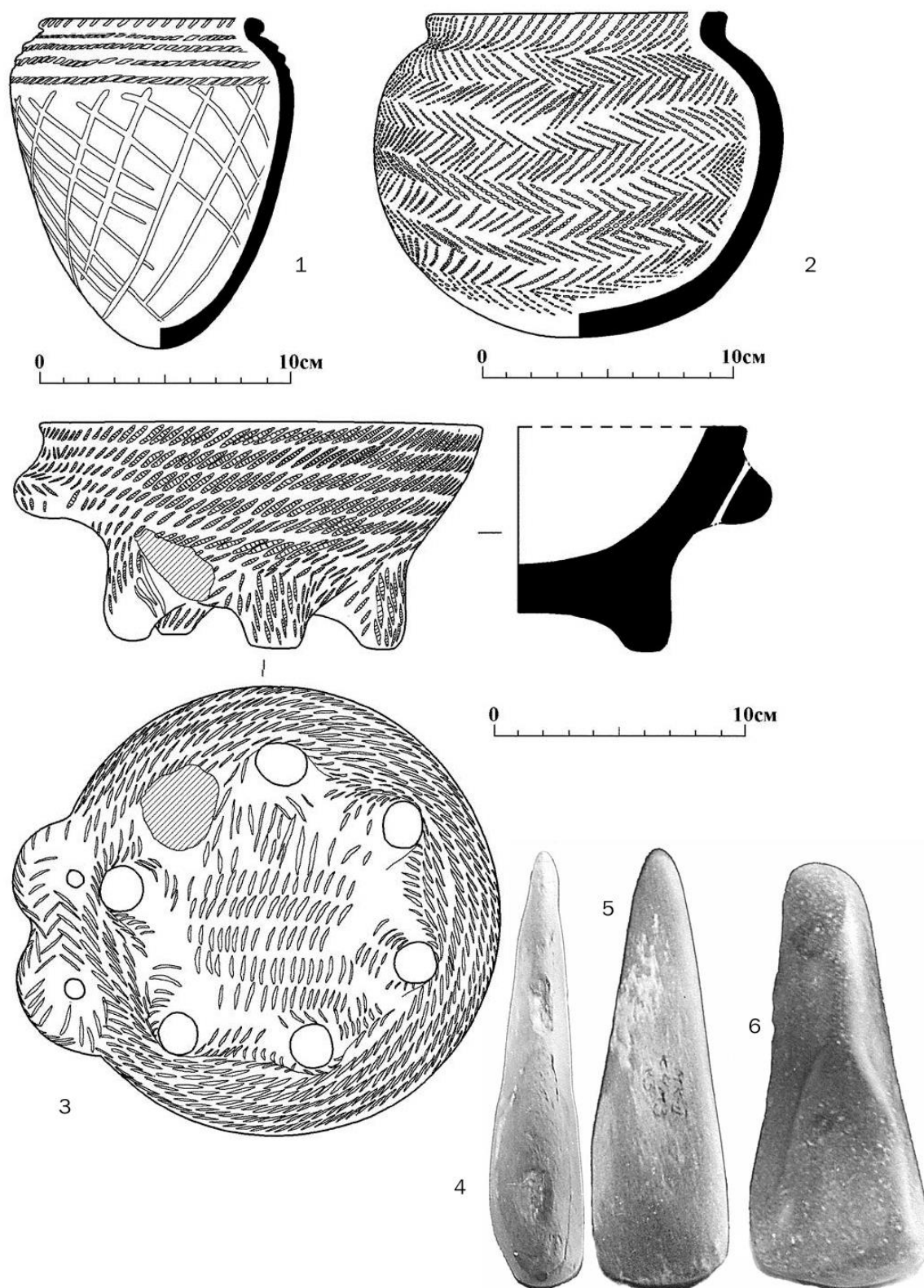


Figure 41: Small Kopeny-II – kurgan 3-grave 3; (4), kurgan 4-grave 3; (5), kurgan 4-grave 8; (6), kurgan 4-grave 8; (1,2), grave 9; (3) (Vadetskaya, 2012, p.99-102)

1.2.9. Moiseika, burial ground

In 1959, the grave area that belongs to Afanasievo Culture was excavated near Potroshilovo Village of Minusinsk Basin. Originally, the grave area was thought to belong to the late Bronze Age, but during the excavations; It turned out to belong to Afanasievo, Okunev and Tagar cultures. Kurgan group; It consists of 40 kurgans that belong to Afanasievo and Tagar culture, 2 km from the left bank of the Tuba River, 5 km east of Potroshilovo Village, near the Krasnyy Mayak farm and between the Moiseyeva and Namelss mountains. 26 kurgans were excavated and 19 of them were attributed to the Afanasievo culture (fig.42; 9).

Kurgan 4 is located 5-6 km from kurgan 2. It was made of small sandstone tiles and is in the shape of a large circle with a diameter of 16 meters. Two tombs were found in the Kurgan. Bones that belong to a child were found in grave 1 and no material was found. The entrance type of the grave led to the idea that it belongs to Okunev. In Grave 2 in the center, parts of a small incense burner were observed and only half were preserved. The grave was robbed. A large number of thick walls and fragments of korchaga were found in the grave and ground flooring. In grave, the bones of an adult were scattered.

Kurgan 5 is located 7.5 km from Kurgan 1. A 2.1x1 meters grave was found and it was decorated with cluster of sandstone slabs, but the borders of the tomb walls were not identified. Animal bones, human bones and a chin that were thought to belong to the sheep were found. During the cleaning of the grave, a skeleton with a head facing west was found at a depth of 1.45 meters (fig.43; 1). His legs are bent and small flat bottom clay pot was found between the femur and pelvis. A spearhead in the form of a bronze bullet 21.4 cm long was detected 20 cm south of the skull (fig.42; 4). Both sides are marked with 17 notches. Corolla type and different types of vessels were found.

Kurgan 6 is located 33 meters south of kurgan 3. It is an oval structure that composes of sandstone slabs, 8.1 x 6.1 meters in north-south axis (fig 42; 2). Ceramic vessels, animal and human bones were found.

Kurgan 7 is located 27 meters south of kurgan 3. The ring that forms in sandstone slabs has a diameter of 12.4 meters (fig.42; 3). A grave was found in its center and some human bones were found with 3 ceramic vessels (Kovaleva, Leontiev, Amzarakova, 2010, p.108-110).

Kurgan 8 is located 55 meters south of kurgan 3. A sandstone slab ring appeared, with clusters and large stones standing separately (fig.42; 1). Parts of the ostrodon bowl that are decorated with zigzags were found inside (fig.44; 8). It was determined that there was a 0.75

meter deep grave in the center of the kurgan and that there were ceramic and human bone fragments due to the peeling of the grave (fig.44; 3).

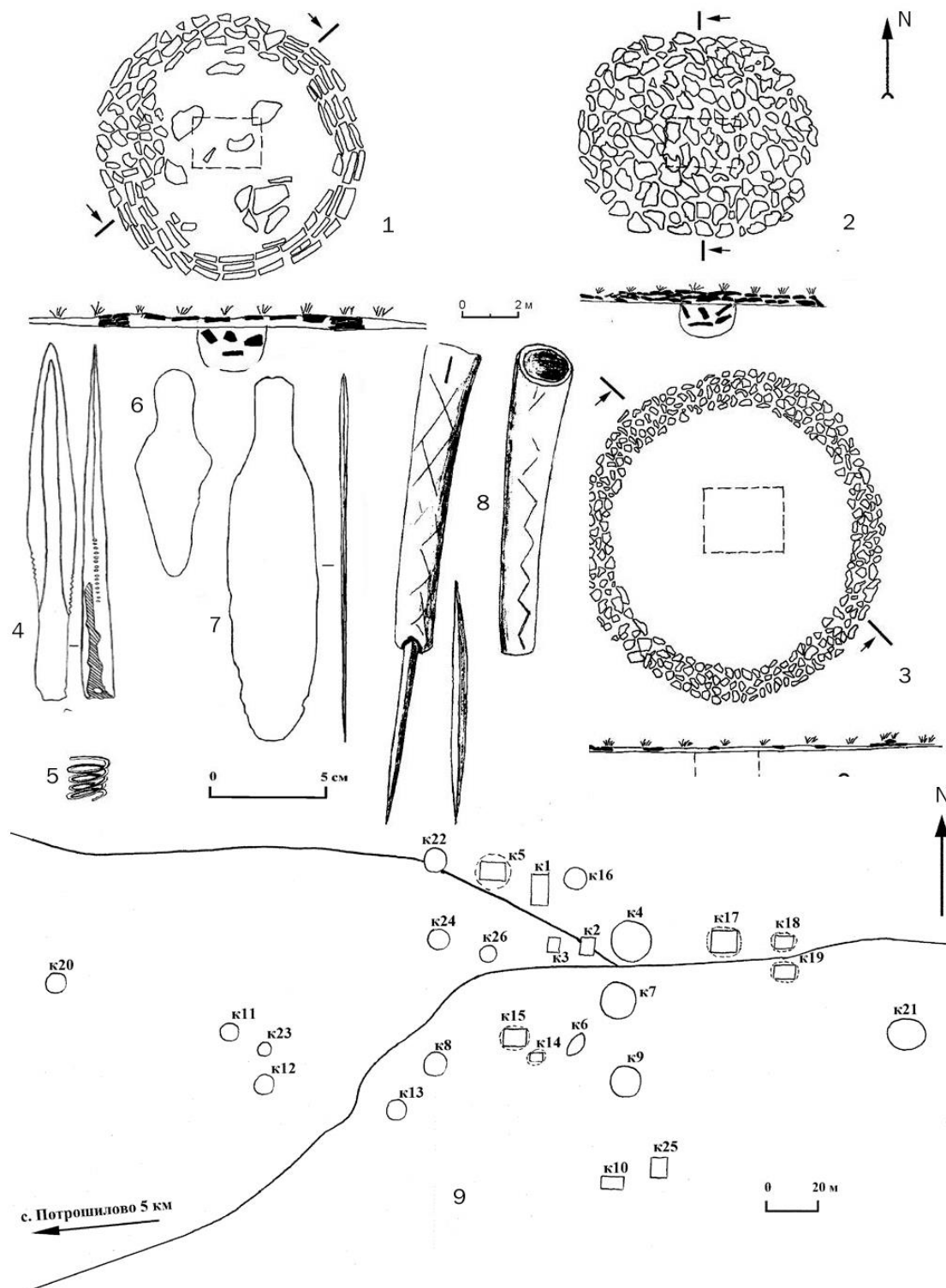


Figure 42: Moiseika – plan; (9), kurgan 8; (1), kurgan 6; (2), kurgan 7; (3), kurgan-grave 1; (4), kurgan 16; (5), kurgan 21-grave 1; (6), kurgan 24-grave 2; (7), kurgan 21-grave 1; (8) (Kovaleva, Leontiev, Amzarakova, 2010, p.111,113,120)

Kurgan 9 is located 48 meters south of Kurgan 3. Long bones, the bone of the herbivorous animal and the blade were discovered under the surface filling. A trapezoidal ceramic pot with a small band handle, a height of 11.4 cm and a diameter of 9.8 cm was found under the stone rubble in the eastern part of the kurgan (fig.44; 2). In addition, fragments of the human skeleton were identified at various levels of the grave, and two ceramic fragments were identified in the embankment.

Kurgan 11 is 6.5 meters west-northwest of Kurgan 8. A small ostrodon pot with a height of 6.5 cm and a diameter of 4 cm which is decorated with vertical dotted lines was found in the western part of the kurgan (fig.44; 6). On the upper part of the grave, a decorated 18 cm high round ceramic vessel was found (fig.44; 4). The grave of an adult person was discovered in the middle part of the kurgan and the bones are scattered. In addition, almost, the crushed ceramic vessel was identified (fig.44; 5). Two ceramic vessels without an adornment were found in the northeast and northwest sections of the Kurgan (fig.44; 1). The one of adorned vessels is 10 cm long, 8 cm in diameter and it was decorated with Christmas tree figures (fig.44; 7). Outside the kurgan, there is an ostrodon ceramic pot that was decorated with 13.5 cm height and 8 cm diameter under the rubble on the northeast side.

Kurgan 13 is located 4.1 meters south of Kurgan 8. After cleaning, its appearance became the same as Kurgan 8. Four ceramic vessels and many small sherds were identified. In the center, the grave was discovered and fragments of human bones and ceramic vessels were seen inside.

Kurgan 15 is 3 meters from Kurgan 14. The dimensions of the kurgan are 6.3 x 8.4 meters. A rectangular tomb structure, measuring 2.3 x 1.6 meters was discovered in the southern part of the Kurgan. There were a lot of burnt ash mass, burnt wood and soil around and inside the grave. The grave was covered with ochre sand at each end. Except for the human bones that were scattered inside, no material was found.

Kurgan 16 is located 5.8 meters south of Kurgan 1. It is a circular structure that consists of flat sandstone slabs with a diameter of 7.8 meters. Two oval-shaped tombs, measuring 3 x 2.5 meters and 3.5 x 2.5 meters in the middle of the kurgan were discovered. In grave 1, an adult had a skeleton and his head was turned in the west-southwest direction and his knees were bent (fig.43; 2). A ceramic vessel was also found in the same grave. When removing the skeleton, a small spiral ring that was made of silver was found (fig.42; 5). In Grave 2, another adult has the skeleton at a depth of 1.35 meters.

Kurgan 17 is located 18 meters east of Kurgan 4. It is a circular structure that consists of narrow long plates with a diameter of 8.9 meters. A burial, measuring 2.3x2.1 was found in the middle of the kurgan and it was reached human bones. On the side of the skeleton, a ceramic bowl with a round base and without ornaments was seen (fig.43; 3).

Kurgan 18 is located 14 meters east of Kurgan 4 and has a small circular structure with a diameter of 6.2 meters. There are sharp bottomed ceramic vessels that were decorated with Corolla type (fig. 43; 7). There is a 2.1 x 1.8 meters grave, lying along the east-west line in the center of the Kurgan, and human bones, two teeth of a herbivore and two ceramic vessels were found at a depth of 0.65 meters.

Kurgan 19 is located 5 meters east of Kurgan 18 and it has a rounded rectangular structure with dimensions of 5.8 x 7.8 meters. There are scattered human bones all over the kurgan and just under the grass.

Kurgan 20 was 58 meters away from Kurgan 11 and near the sheep farm, Kurgan has a round structure that was made of well-worked narrow long plates with a diameter of 7.8 meters (Kovaleva, Leontiev, Amzarakova, 2010, p.112-116). A rectangular grave, measuring 3 x 1.5 meters in the east-west axis was found in the middle of the Kurgan. In the grave there was a ceramic vessel that was decorated, human bones, and a herbivore animal's tooth (fig.43; 6).

Kurgan 21 is located 40 meters south of Kurgan 19 and is 7.5 meters in diameter. A rectangular grave, measuring 3.6 x 2.5 meters in size, extending in the southeast-northwest direction was detected and human bones and two vessels were found inside the grave. In the southeast corner, there was an adult skeleton at a depth of 2.4 meters and his knees were bent. The skull and humerus were missing. There was a gray-green stone spearhead (fig.42; 6) and a four-sided awl with bone handle that was decorated with zigzag stripes (fig.42; 8).

Kurgan 22 was found on a field road 10 meters away from Kurgan 5 in the west-northwest direction. A fence of 9 meters in diameter was found of the same type as Kurgan 16 and Kurgan 20. A tomb, measuring 2.8 x 2.2 meters was found in the middle of the kurgan and the grave was robbed. There were human bones and two potsherds.

Kurgan 23 is located 8 meters south of Kurgan 11 and is 6 meters in diameter.) In the center of the Kurgan, 2x1.5 meters sized graves and human bone fragments were found inside the grave.

Kurgan 24 is located 24 meters south of Kurgan 22 and has a circular structure with a diameter of 9 meters. A grave of 1.8x1.1 meters was found in the west-northwest part of the Kurgan, and the bones of a teenager were scattered. A 0.65 meter deep skull and a flattened

bowl with a flattened base and open holes were found (fig.43; 5). In the southern part of the Kurgan, Grave 2 of 2.2x1.3 meters was found and it contains a Corolla type vessel that was decorated with double lines (fig.43; 4). A bronze knife (fig.42; 7) and a sharp bone were seen between the bones.

Kurgan 26 is 11 meters west of Kurgan 24 and has a circular structure with a diameter of 9.8 meters. A 2.6x1.8 meters grave was found in the center of the Kurgan, and except for human bones and fragments of a bowl, there is no inventory in the grave.

With the recent excavations in this region, the structures of Okunev Culture were also observed (Kovaleva, Leontiev & Amzarakova, 2010, p.118-121).

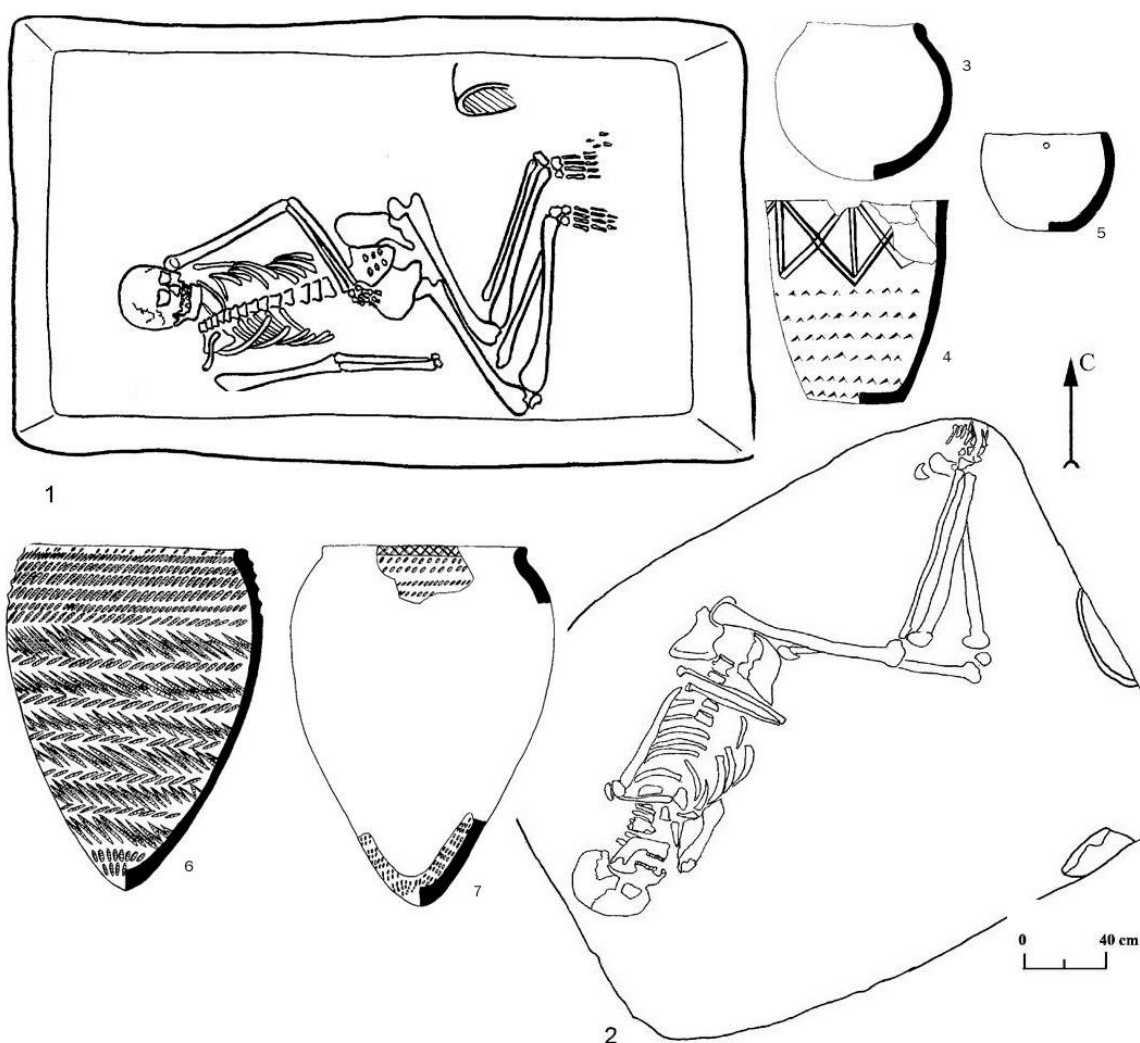


Figure 43: Moiseika – kurgan 5-grave 1; (1), kurgan 16-grave 1; (2), kurgan 17-grave 1; (3), kurgan 24-grave 2; (4), kurgan 24-grave 1; (5), kurgan 20-grave 1; (6), kurgan 18; (7) (Kovaleva, Leontiev, Amzarakova, 2010, p.116,119)

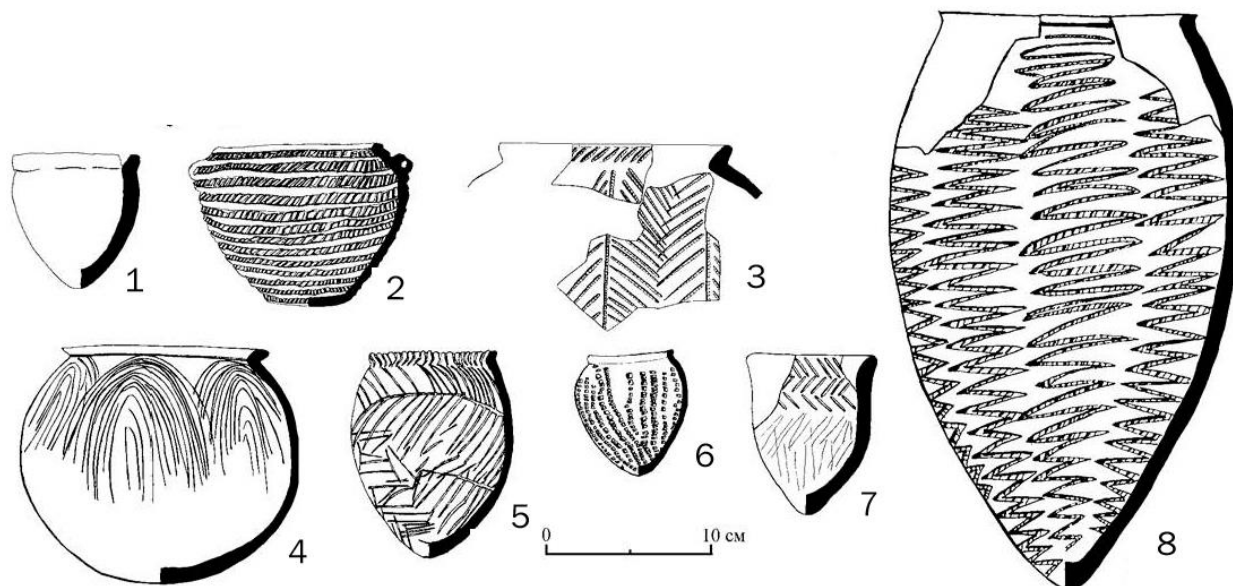


Figure 44: kurgan 11;(1,7), kurgan 9; (2), kurgan 8-grave 8; (3) kurgan 11-grave 1; (4), kurgan 11; (5,6), kurgan 8; (8), (Kovaleva, Leontiev, Amzarakova, 2010, p.117)

1.2.10. Macherkina Slide, settlement

The settlement is located 1 km South of the village of Shushenskoye, on the first over-floodplain terrace of the Yenisei. N. V. Leontiev in 1964 cleared the cultural layer. The Minusinsk Museum contains 2 fragments of the Corolla and 3 vessels (Vadetskaya, Polyakov & Stepanova, 2014, p.173, 196).

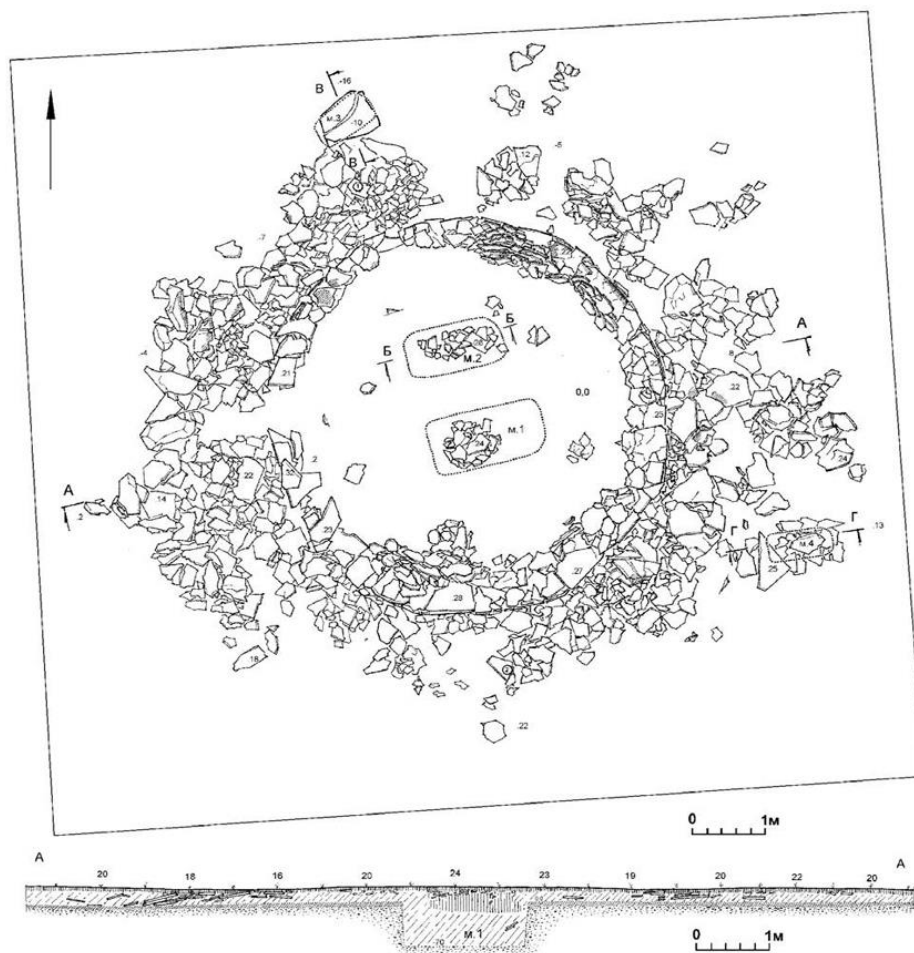
1.2.11. Numakhir, burial ground

The Numakhir cemetery is located 4 km south of the village of Kovylnoye, on the eastern slope of the Numakhyr Mountain, on the right bank of the Bidja River (fig.45; 1). After examining the area, it turned out to be a grave area with a not clear cultural identity. For this reason, a kurgan was investigated in 2000. The cemetery area covers the northern part of the terrace above the floodplain of the soft slope of Numakhir which is not too high. There is a structure that consists of 31 circular fences, which can barely be seen on the lawn, and a kurgan that belongs to the Tagar Culture is located in the central part. Fences with a diameter of 3-20 meters are located in narrow rows from southeast to northwest.

Kurgan 1, the diameter of the fence is 5.5 meters, the height of the wall that is visible from buried soil is 0.35-0.5 meters. Two tombs were found inside the Kurgan (fig.45; 2).



1



2

Figure 45: Numakhir – Middle Yenisei (number 1); (1), grave 1; (2) (Bokovenko, Lengrand, 2010, p.30-32).

The grave was disturbed by the robbers. A skeleton of a teenager between the ages of 13-14 were found in grave 1. The small bones of the skull and hands are missing, the vertebral column (spine) was bent in an unnatural way. A wire earring was found where the skull has to be (fig. 46; 2). Two vessels were found, one of them has a worn surface, is egg-shaped and has no ornaments on it (fig. 46; 1). The other is a circular structure and is decorated with vertical rows of zigzag lines (fig. 46; 3). Grave 2 is located 95 cm north of grave 1. At the center of the burial pit, a scantyfish of an 8-year-old child who was almost fully preserved was found. Probably, due to the destruction of rodents, There were no small leg bones and arm bones under the elbows. The buried person's knees were raised and his head was tilted west-southwest (fig. 46; 6). An egg-shaped vessel which was decorated with a horizontal Christmas tree was found on Corolla in the right knee (fig. 46; 4). The other container was still at the foot of the skeleton and unadorned (fig. 46; 5). Grave 3 was found 1.5 km from the northern part of the kurgan (fig. 46; 7). Nothing was found in the grave and possibly a baby was buried. Grave 4 is 1.6 km from the southeastern part of the kurgan (fig. 46; 8). Nothing was found in the grave and possibly a baby was buried.

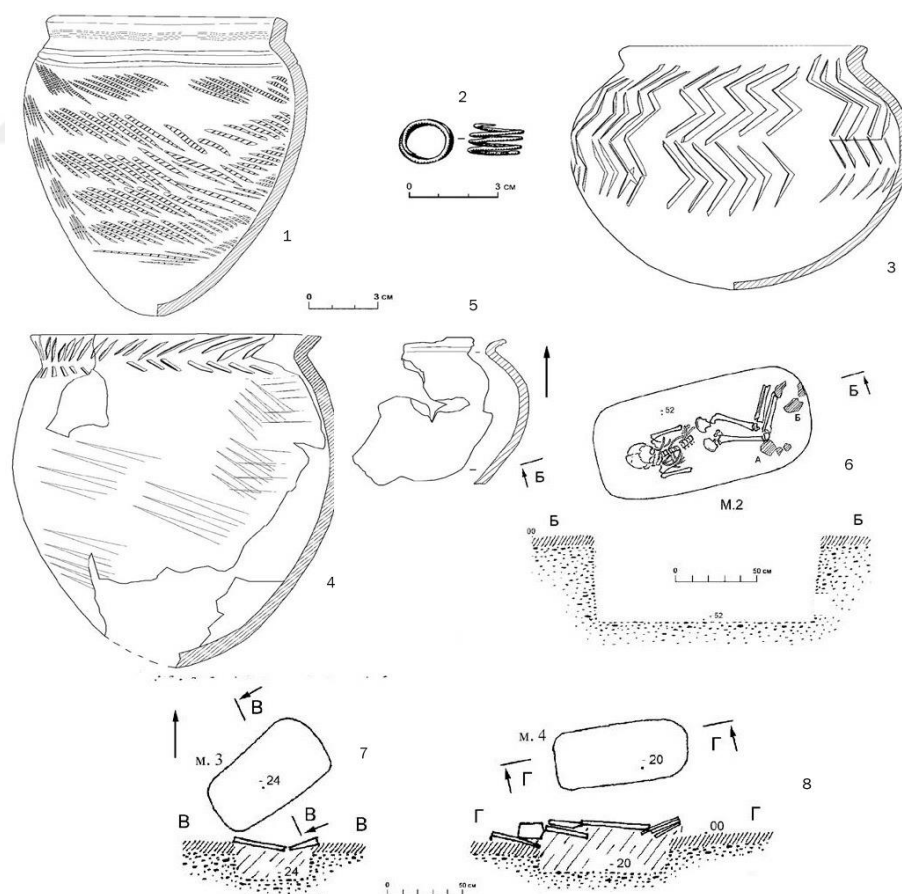


Figure 46: Numakhir - grave 1; (1-3), grave 2; (4,5), kurgan 1; (6-8) (Bokovenko, Lengrand , 2010, p.33-34)

When all the graves are examined, it is seen that it is a complex where all four children are buried. The authors attribute the Numakhyr complex to the Afanasievo culture. In radiocarbon tests obtained from human bones in grave 1, 4160 ± 90 date was obtained. In Grave 2, it was determined as 2920-2490 BC. The fact that this complex is adjacent to the Krasny-Yar Afanasievo monuments on the left bank of Yenisei and its proximity to the monuments of Karasuk-III and Afanasievo, the proportions of the vessels, the ornaments in it, and the silver earrings on it, makes the thought of the authors even stronger (Bokovenko, Lengrand, 2010, p.29-34).

1.2.12. Tepsey, complex monuments

Tepsey Mountain is located at the junction of Tuba River and on the right bank of Yenisey River. The western and southern slopes of the mountain face these two rivers. On a wide terrace at the foot of the mountain and on the floodplain of Yenisei, archaeologists identified numerous kurgans, tombs, settlements, memorial sites and rock carvings with different chronology. The most comprehensive studies were carried out in the 1960s and 1970s. Archaeological work was carried out in approximately 19 places on the terrace. From the Afanasievo period to the Kyrgyz period, monuments that belong to 11 different periods were identified. A few petroglyphs were also discovered and Tepsey's oldest layer of rock images was thought to related to styles that combine Minusinsk, Angara and both. Drawings of this type were recorded on the southwest slope and in the southern coastal areas and also observed in the upper parts of the mountain. However, the chronology problem of these petroglyphs still continues (Cultures such as Afanasievo, Okunev, Andronova, Karasuk etc.). In addition to being monuments of different cultures, some petroglyphs belong to the early Bronze Age (Sovetova, Shishkina, 2017, p.132-133).

On the other hand, during the excavations were carried out by M. N. Komarova and M. P. Gryaznov in 1968 and 1976, four monuments that belong to Afanasievo culture were found. The burial grounds of Tepsey VII and Tepsey VIII are closer to each other. Tepsey X, on the other hand, is the first settlement in Yenisey to belong to Afanasievo Culture. In Tepsey XIII, rather than a burial ground, several pots and scattered stone tools that were buried in the ground were found.

Tepsey VII burial ground, it was discovered in 1968 by detecting fragments of a large Afanasievo pot. In 1976, the remains of a round fence were unearthed, the fence was

made of limestone and preserved 4-5 rows with a height of 40 cm. In addition, two pots that one was decorated, were found.

Tepsey VIII burial ground, Two hedges (fence 4 and 14) were discovered in total.

Fence 4 has a round structure that was made of limestone and only a quarter of it is preserved. Its diameter was 10 meters (indeterminate) and its width was almost 1 meter. There were 3 tombs inside but there could be more graves due to the excessive damage of the fence. In Grave 1, the skeleton of a man who was thought to be 40-60 years old with a depth of 40 cm was found (fig.47; 1). The bones of the skeleton were largely destroyed and scattered with a form of his right leg is bent (no left leg), his head was tilted to the southwest and right. The charred remains of a burnt log were also observed. Apart from a few ceramic pieces, he also found pieces of a bowl that was decorated with a Christmas tree. Grave 2 is next to Grave 1 and an adult 70 cm deep has scattered bones. 2 pieces of pot and 4 cloves were found in the grave 1. Likewise, there is a semi-charred billet. The grave 3 were found with a pelvis at a depth of 130 cm and the leg bones of three male skeletons which are thought to be between the ages of 30-40 and 40-60. All threes' legs are bent, and their heads are directed southwest or west. So much so that, the skulls were side by side and none had lower jaws. Between the scattered bones, the lower jaw of a roe deer and the cow tooth were found. In the northern corner of the grave was an oval and pointed vessel. Grave 3 is thought to be the main tomb and the others were placed later.

While digging a silo trench, Fence 14 was heavily destroyed by the bulldozer. The fence which is made of limestone, has a round structure, the northern part and the floor of the square-shaped burial pit are preserved. In the northeastern part of the fence, three young people were found with their legs are bent and they are all tilted to the right. Head parts were facing southwest (Gryaznov, Komarova, 1979, p.20-22). In addition, along the northwest wall which are thought to be brought by robbers: ribs, arm bones and four sheep legs and skins were found. The sacrificed animal skin may be the first finding of early time in Siberia.

Tepsey X, It is located on the 3 meters above the steep bank on the right side of the Yenisey River. Due to its high flood deposit, it was rarely flooded. The excavation was carried out and an area of 80 square meters was scanned in 1968 by Komarova (fig.48).

A layer 1-1.2 meters thick was observed and the remains of Afanasievo Culture were found 10-15 cm above this layer. Probably, after the formation of the layer, the Afanasievo population came here shortly. The cultural layer that forms the Afanasievo ruins in the northern part of the excavation is divided into two parts. In the upper layer; ceramic fragments that poorly get preserved animal bones, small burnt bone fragments, and tile fragments which

are made of sandstone and pebbles were found. The remains are not spread evenly across the layer and there are clusters. In the lower layer, there is less material, and not much clustering (fig.47; 2). There are pottery fragments, animal bone fragments, small burnt bone fragments, pebbles and burnt stones. A polished ax and a piece of flint intermediary were found in 16b square and 12a square.

Animal bones are rarely preserved. A total of 27 bones and fragments could be identified in the two carbon layers. (22 of them are teeth and jaw fragments) From these defined bone fragments; 22 pieces belong to sheeps, 4 pieces to the cow and one piece to the horse.

The most valuable discovery in the cultural layer is the hearths which can be called primitive furnace type. Probably, the hearths' hole that was drilled in the form of a cup; it was filled with ash, coal and sand, and large containers that were placed there to cook food (fig.47; 3,4). Such that the Afanasievo ceramics are the type of vessels suitable for placing in these hearths.

The layer of sand that was mixed with ash and unburned coal in these quarries proves this. Due to floods, ash and coals in the upper layer have gone under the sands. The 10-15 cm thick calcined sand layer is also important in this context. In addition, it is understood that while it cook about two-thirds of the height of the container is filled with sand from hot ash, coal and hearth (fig.47; 5).

Finally, sharp egg-shaped vessels and Christmas-tree that were decorated vessels were found in the settlement. It is interesting to find a stone ax. The Afanasievo population is probably settled here for the fishing season, but the fish bones are thought to be not preserved to this day since their hunting grounds are far away.

Tepsey XIII, It lies 200 m north of the Afanasievo tombs on the terrace of the floodplain. The most striking finding is the korchaga, 40 cm in diameter, with a sharp base. The bottom is preserved. A rectangular pebble with a length of 18 cm was found above the fractures in the vessel (Gryaznov, Komarova, 1979, p.22-27).

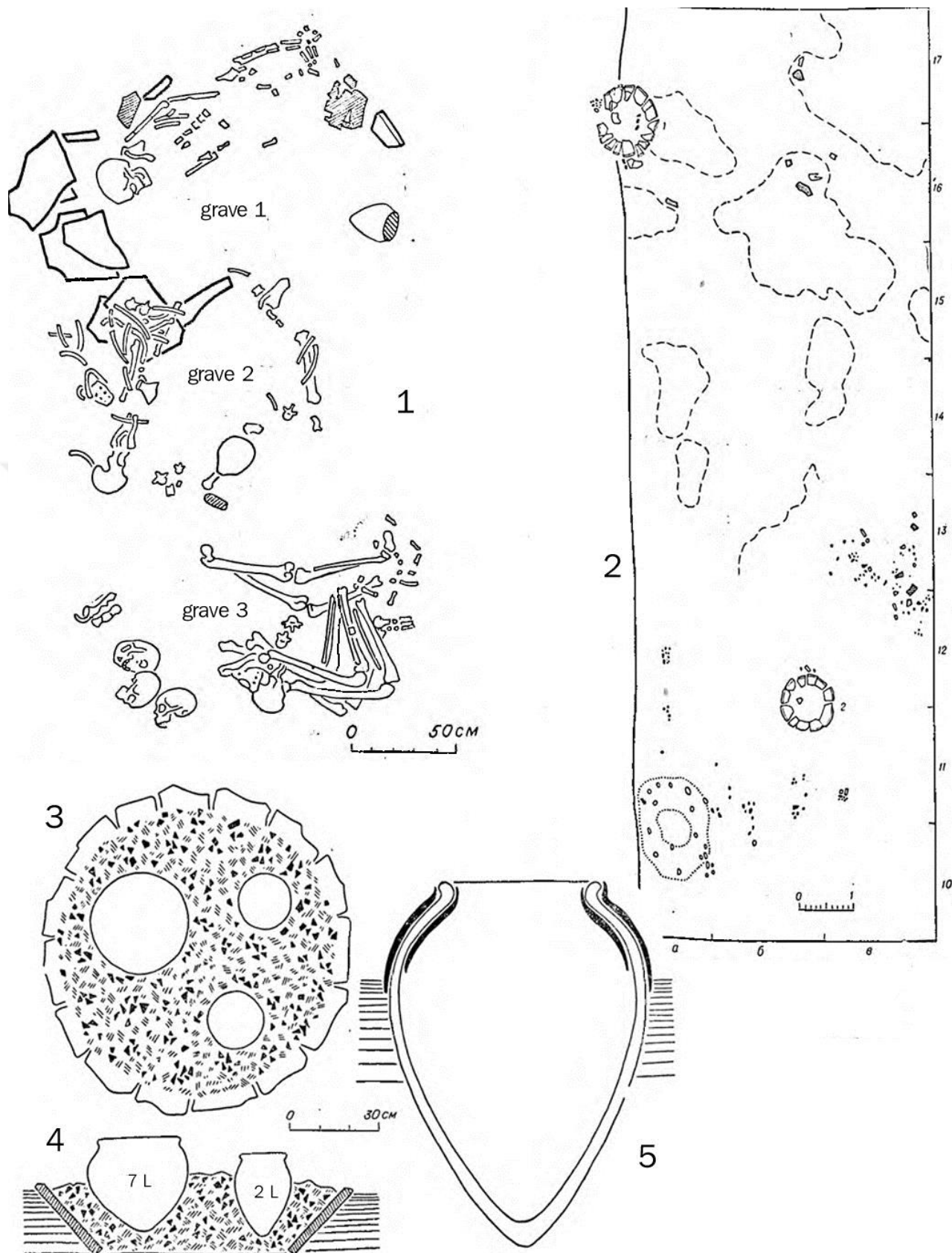


Figure 47: Tepsey-VIII-Fence 4-plan of Grave 1-3; (1), plan of Tepsey X; (2), Afanasievo hearths; (3-5) (Gryaznov, 1979, p.22,24,26)

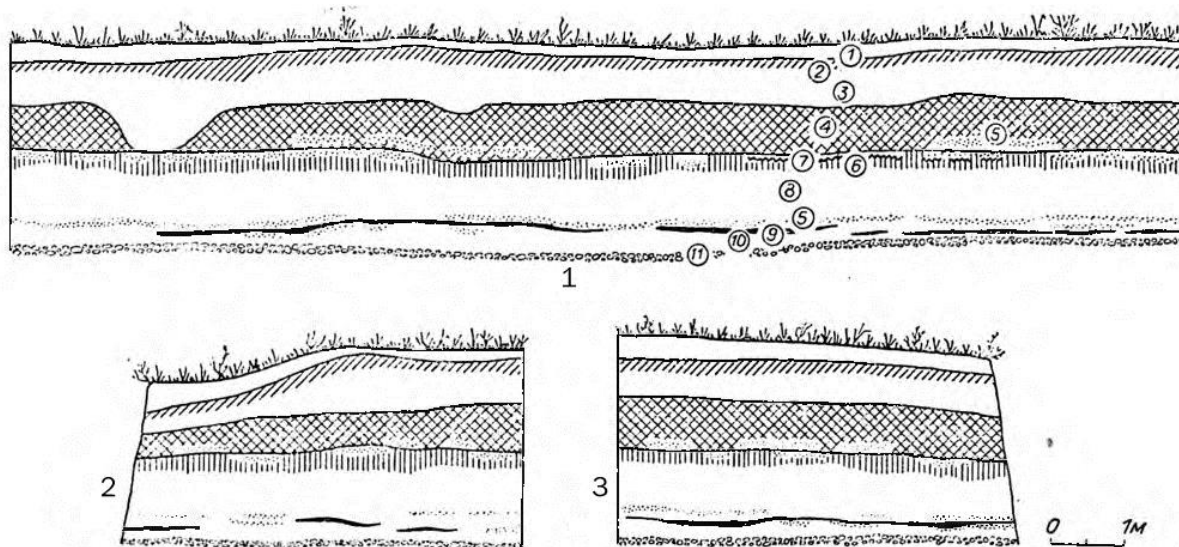


Figure 48: Tepsey X – East side; (1), South side; (2), North side; (3) (Gryaznov, 1979, p.23)

1.2.13. Chernobaya VI, burial ground

The cemetery was excavated in 1962 by G.A. Maksimenkov. In general, due to the decomposition of the dead, it was not easy to reach the original positions of the skeletons. Thanks to the Krasnoyarsk expedition, the primary position was achieved together with skeletons which get protected from complexes such as Mount Afanasievo and Karasuk-III. It was located on a dry terrace on the right bank of the Chernovaya River, 1-2 km from the area where it joins the Yenisey River.

Four Afanasievo kurgans were found among the fence of the Chernovaya VIII burial area that belongs to Okunev culture.

Kurgan 1 (fig.49) there were a few blackened stones on the southern part of the fence which protruded on the ground surface. When the stones were removed and cleaned, a round-shaped fence that consists of narrow and flat sandstone slabs up to 2 meters long, 60x70 cm in size, appeared. The inner diameter of the fence is 8 meters, and the width is 1 meter (Vadetskaya, 2010, p.35-36).

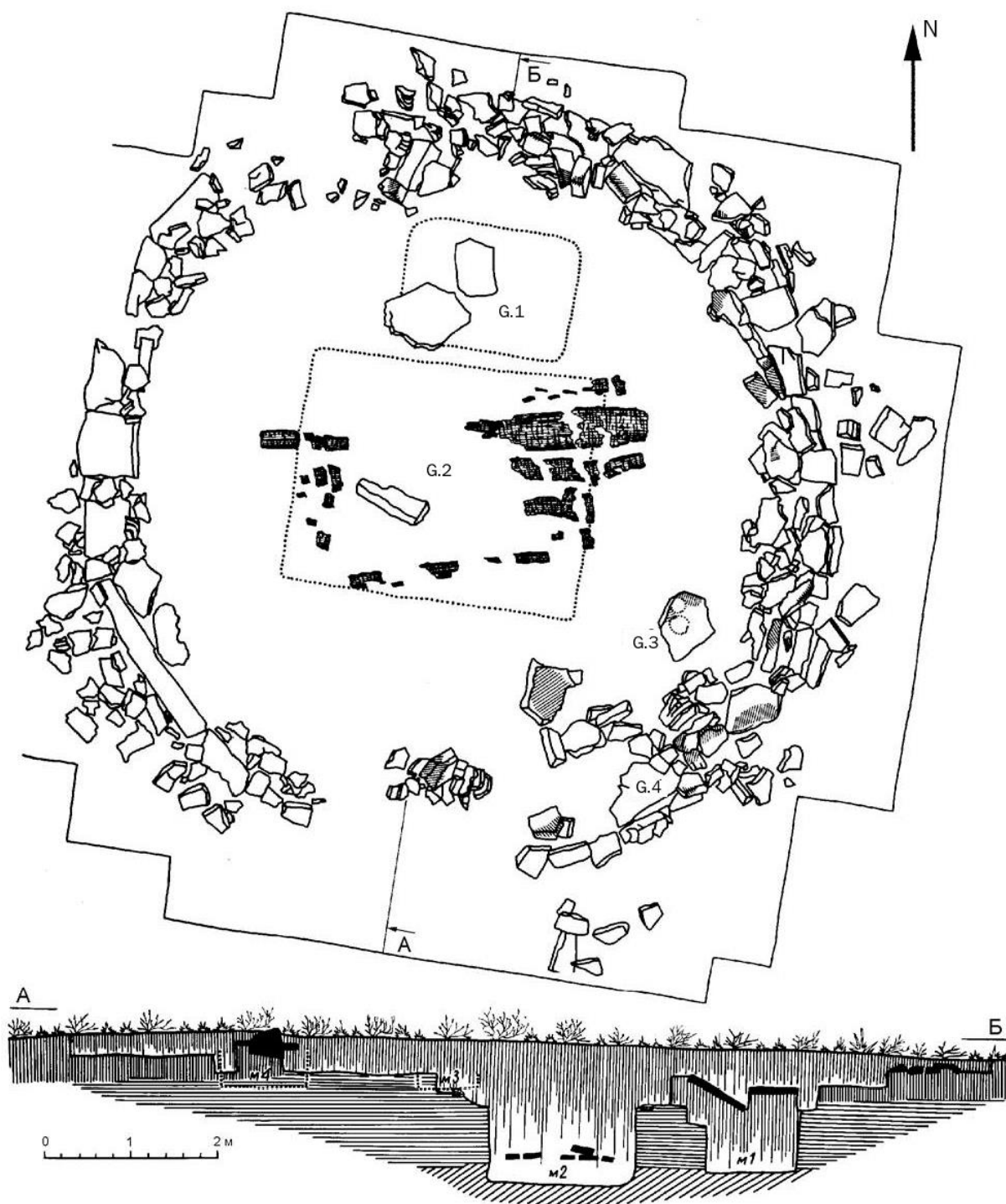


Figure 49: Chernobaya VI- kurgan 1 (Vadetskaya, 2010, p.36)

Grave 1 was a rectangular pit that was obviously made for a child on the north edge of the central grave structure. Its borders are 140x135 cm and its depth is 80 cm. Its orientation was west-northwest and east-southeast. A damaged skeleton, estimated to be 7-8 years old, was found inside. An egg-shaped vessel with a pointed base was detected on the leg. It was observed that part of the legs and the pelvis is not where it has to be. On the embankment, a

shell fragment and a corolla type 18.5 cm high and 11 cm diameter vessel that was decorated with oblique notches were observed (fig.55; 2). The lower half of the bowl was decorated with “herringbone” stripes. Grave 2 is located in the middle of the fence and is a rectangular pit. The bones of an adult were found inside. The lower jaw, sacrum pelvis side (the anterior part), shoulders, ribs and thighs of the dead were preserved. Shattered pottery pieces were found. Grave 3 was built near the southeast wall of the fence. The skull of a 6-month-old baby and a miniature oval corolla type vessel 12 cm high and 6.5 cm in diameter were found (fig.55; 1). Grave 4 is covered with a plate in the southeast part of the fence. A baby's bones were found, but no other material (fig.53; 1-4).

Kurgan 2 (fig.50) consists of flat laid stones 1 meter wide. The diameter of the fence was considered to be 7 meters. Grave 1 was in the center of the kurgan and its corners were identified as 300 x 260 cm (fig.53; 5). A male skeleton which is thought to be 40-60 years old was found inside the grave. His knees were bent and his head was turned to the west. The skull, arm bones, part of the pelvis and vertebrae were not in a whole. There was a crushed korchaga to his left. A copper clamp was seen next to the pelvis. There were wood marks on the shackles and birch bark on the outside. A bowl with an oval bottom with vertical engraved lines which can be called miniature was found in the grave with an unadorned figure (fig.55; 3,4). It was thought that a piece of one of the vessels was thrown out of the grave by the robbers. Grave 2 was a small tomb, 60 x 40 cm, guided along the northeast line, with a child's skull and a container (fig.53; 6).

Kurgan 3 (fig.51) was found at the edge of a valley, under arable land. An extended chain of 6-meter-long that consists of broken plates was found in the place which corresponds to the northern edge of the grave structure. Two adult males, two teens and one child were buried together. Possibly, due to the collapse of tombstone structures, the burial sites of two child skeletons could not be identified. Skeleton 1 was estimated to be a man of 40-60 years old. At about 1 meter from the northwest wall, his knees were bent and his head turned to the southwest. Skeleton 2 was a 9-year-old child and his head was facing northwest, crouching in the man's right foot. Skeleton 3 was a teenager 12-13 years old. Skeleton 4 was a 40-60 year old man on the south wall of the kurgan, and his hand bones, lower leg, and skull were displaced. Skeleton 5 was an 8-year-old boy. In the 6th and 7th skeletons, where burial sites were not determined, a child's skull and bones of a newborn baby were found (Vadetskaya, 2010, p.37-39).

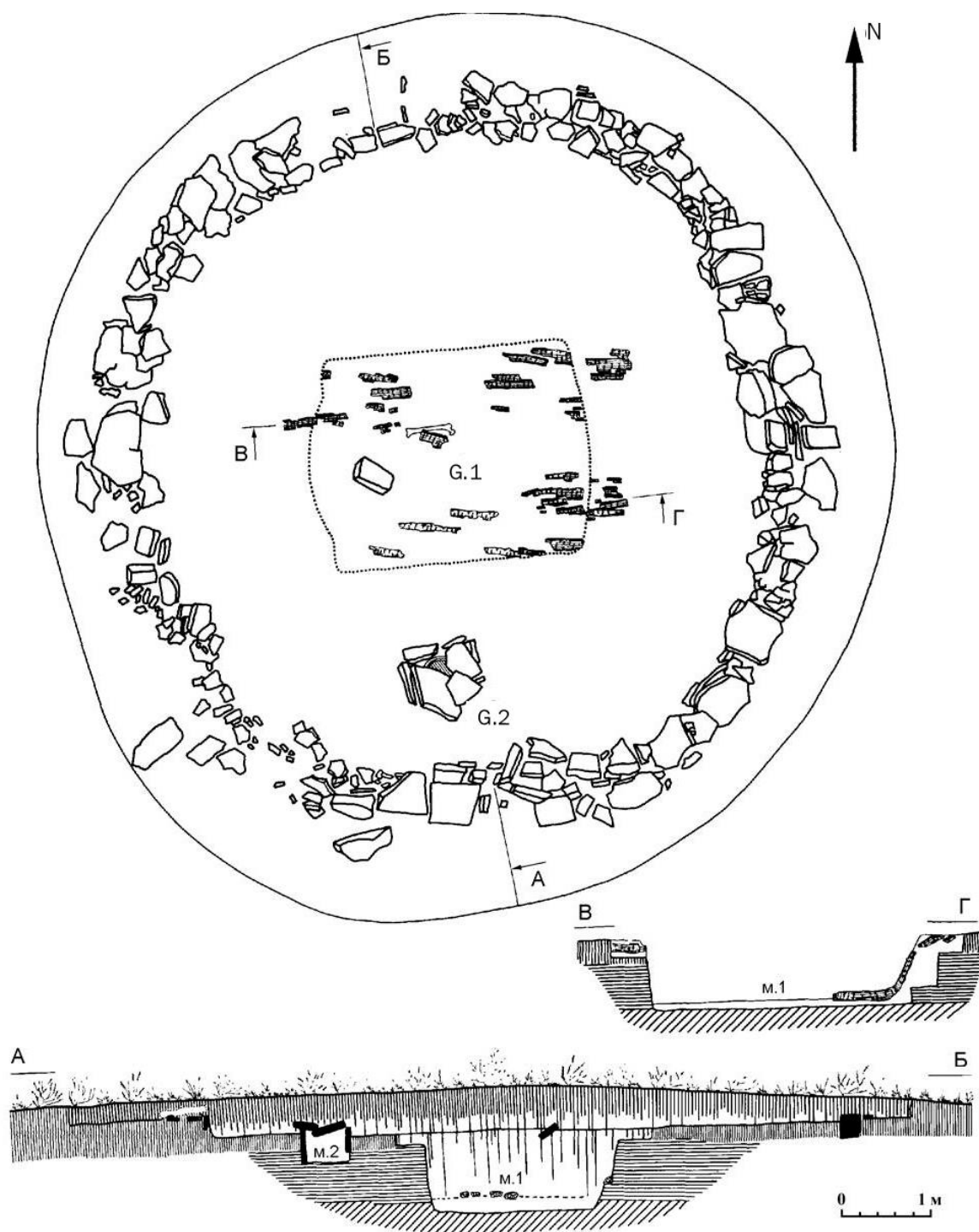


Figure 50: Chernobaya VI – kurgan 2 (Vadetskaya, 2010, p.38)

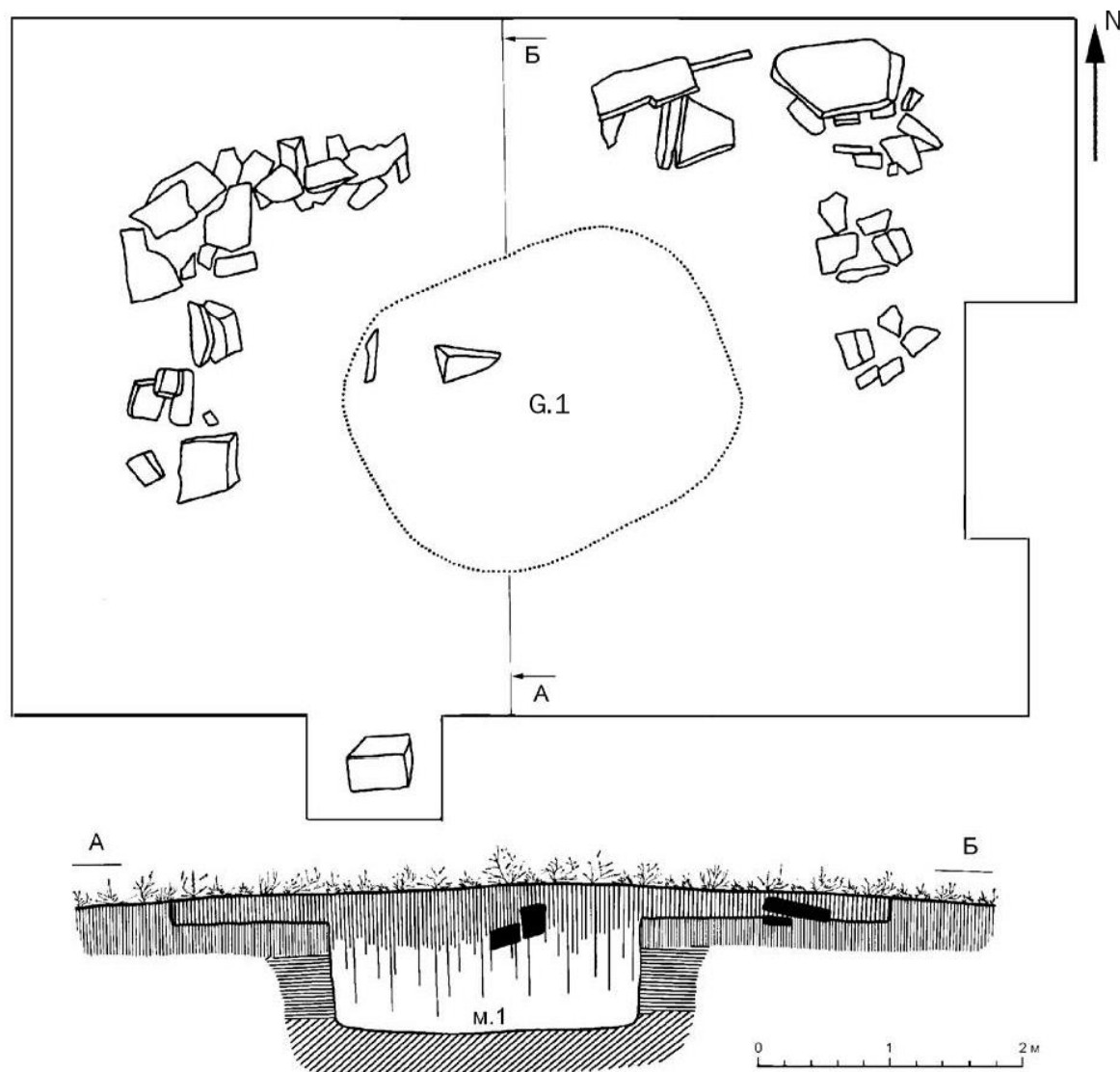


Figure 51: Chernobaya VI, kurgan 3 (Vadetskaya, 2010, p.39)

Although the northern and southern edges of the kurgan were partially destroyed, Kurgan 4 (fig.52) was better preserved than others. Inner diameter; the north-south edge is 9 meters and the west-east edge is 7 meters. The width of the western edge is up to 1 meter and the eastern edge is 1.2 meters. There are two main tombs and three entrances in the Kurgan. The grave 1 was found in the northern part of the kurgan, as the first entrance grave at a depth of 20 cm from the modern surface, and two children, aged 5 and 7 turned heads to the South (fig.54; 1). The second entrance grave is the grave 2, 40 cm deep from the modern surface, on the northwest corner of the kurgan, and a young skeleton of 14-18 years old was found inside (fig.54; 2). Grave 3 is on the north side from the center of the kurgan and is 80 cm deep and it has the shape of a square with 2.5 x 2.5 meters (fig.54; 3). Two skeletons were identified

inside the grave. The first skeleton is thought to be an old woman and her knees bent outwardly to the west. The second skeleton was a teenager between the ages of 12 and 13, almost parallel to the first. His head is directed to the west and his knees are bent. In addition to these skeletons, the hip of an adult man who was thought to have come as a result of robbery near grave 4 was found.

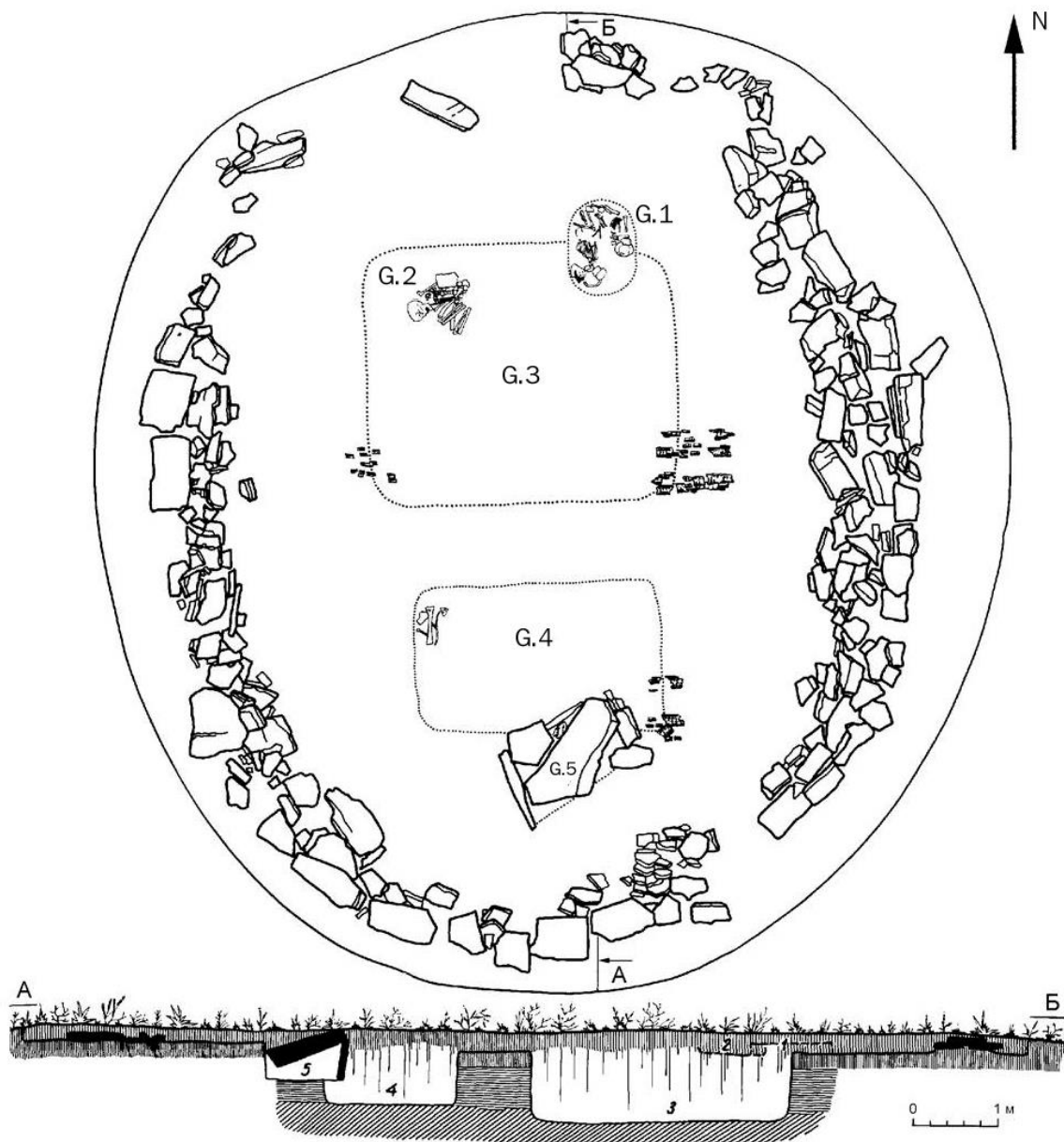


Figure 52: Chernoboya VI – kurgan 4 (Vadetskaya, 2010, p.40)

Grave 4 (fig.54; 4) is in the southern part of the kurgan and parallel to the grave 3 was found at a distance of less than 10 meters. Its corners are rounded to 2.3 x 1.7 meters and 0.8 meters deep. The skeleton of four adults was found in the grave and in the grave fill, three

childrens' skeletons were found. Skeleton 1 is a man who is estimated to be 25-40 years old, and the upper half of the skeleton is fragmented and his left leg is missing. Skeleton 2, a teenager aged 14-18, laid parallel to the first skeleton. Skeleton 3 is a man, aged 25-40 years. Skeleton 4 is a teenager between the ages of 12-13 and his spine and ribs are broken. In the skeleton 5-6-7, the skulls of 4-6-year-old two children and the child thought to be two years old were found. It was thought that the children were buried later (Vadetskaya, 2010, p.39-44).

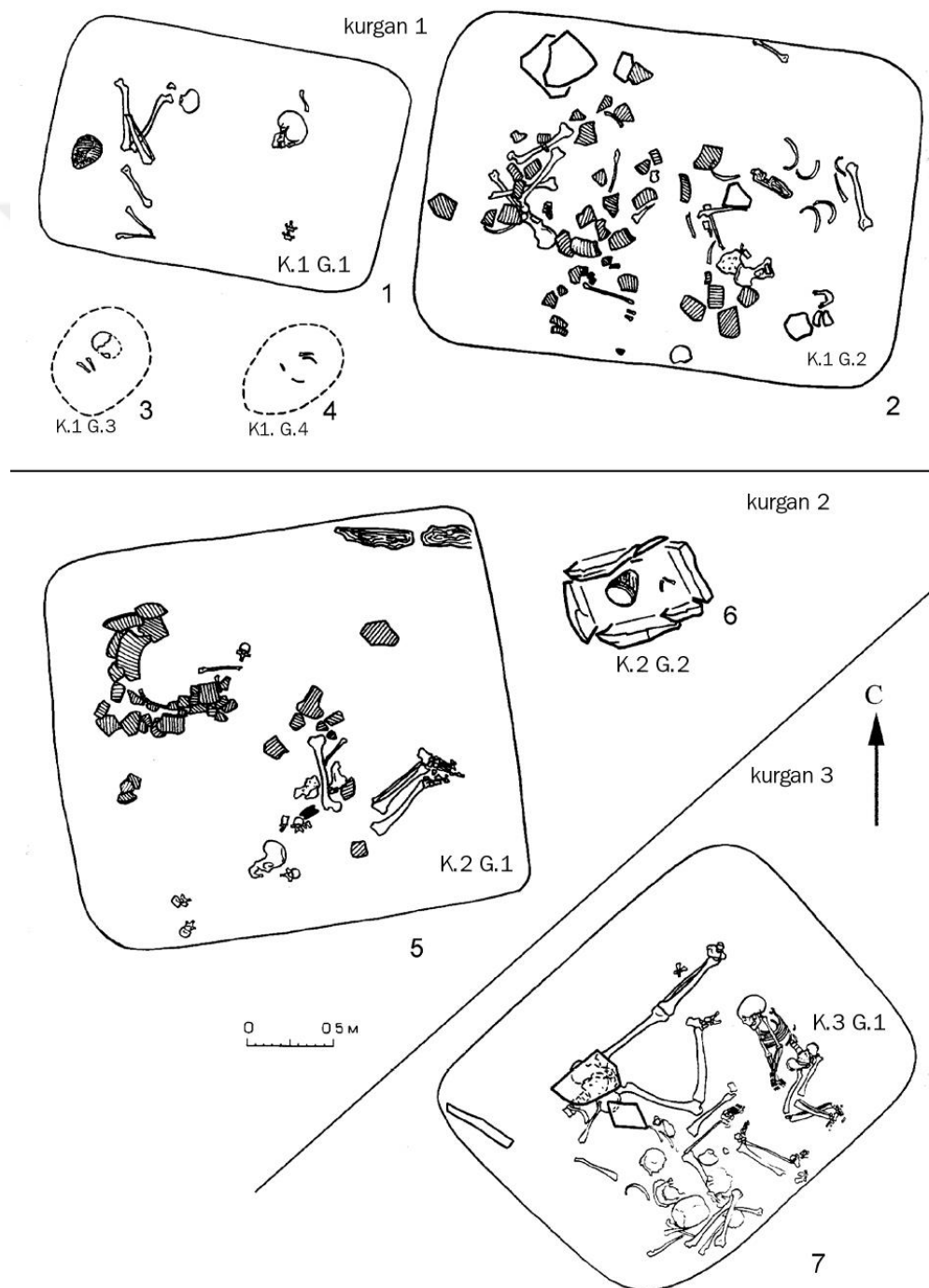


Figure 53: Chernobaya VI – kurgan 1-3 (Vadetskaya, 2010, p.41)

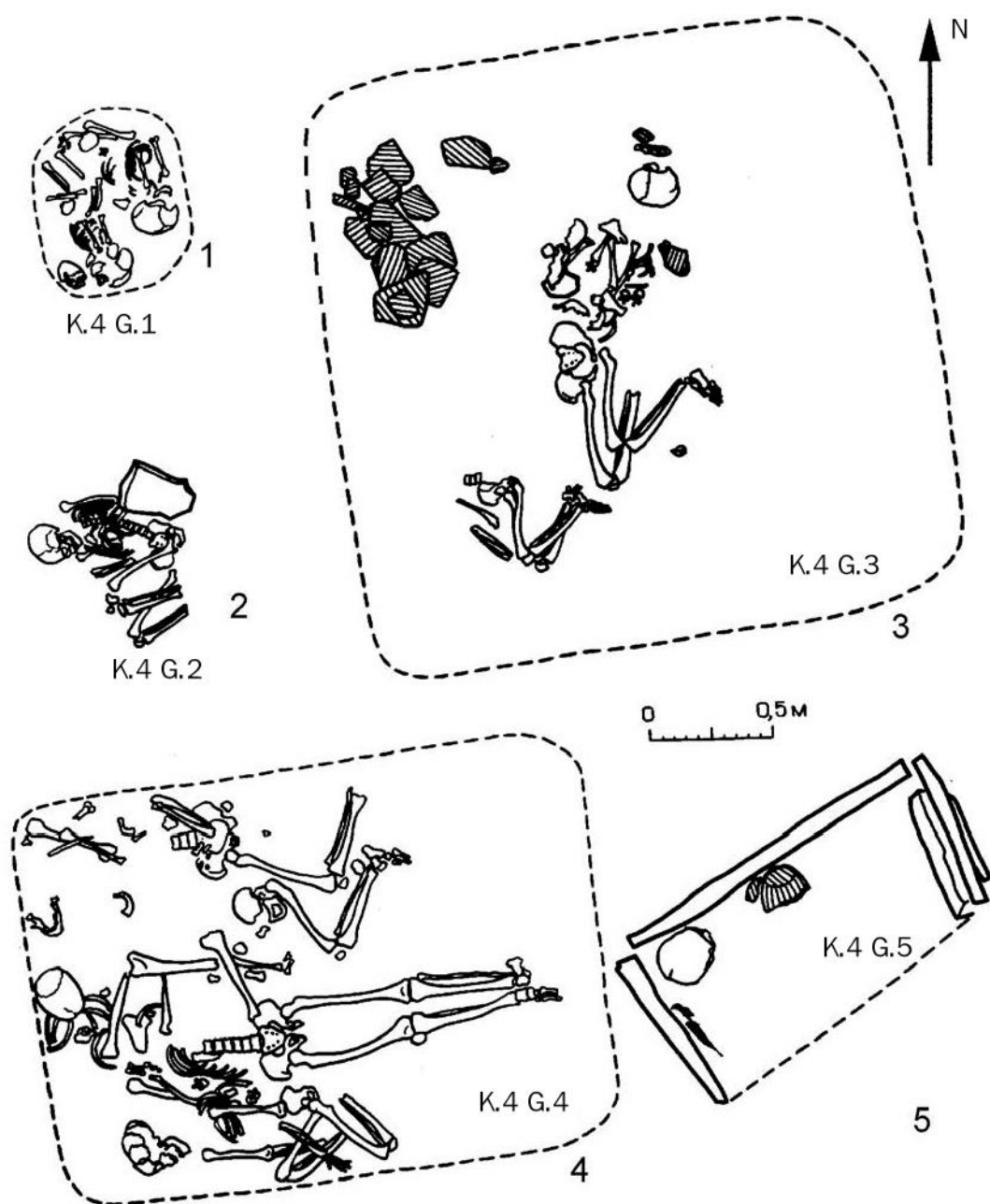


Figure 54: Chernobaya VI – kurgan 4 (Vadetskaya, 2010, p.42)

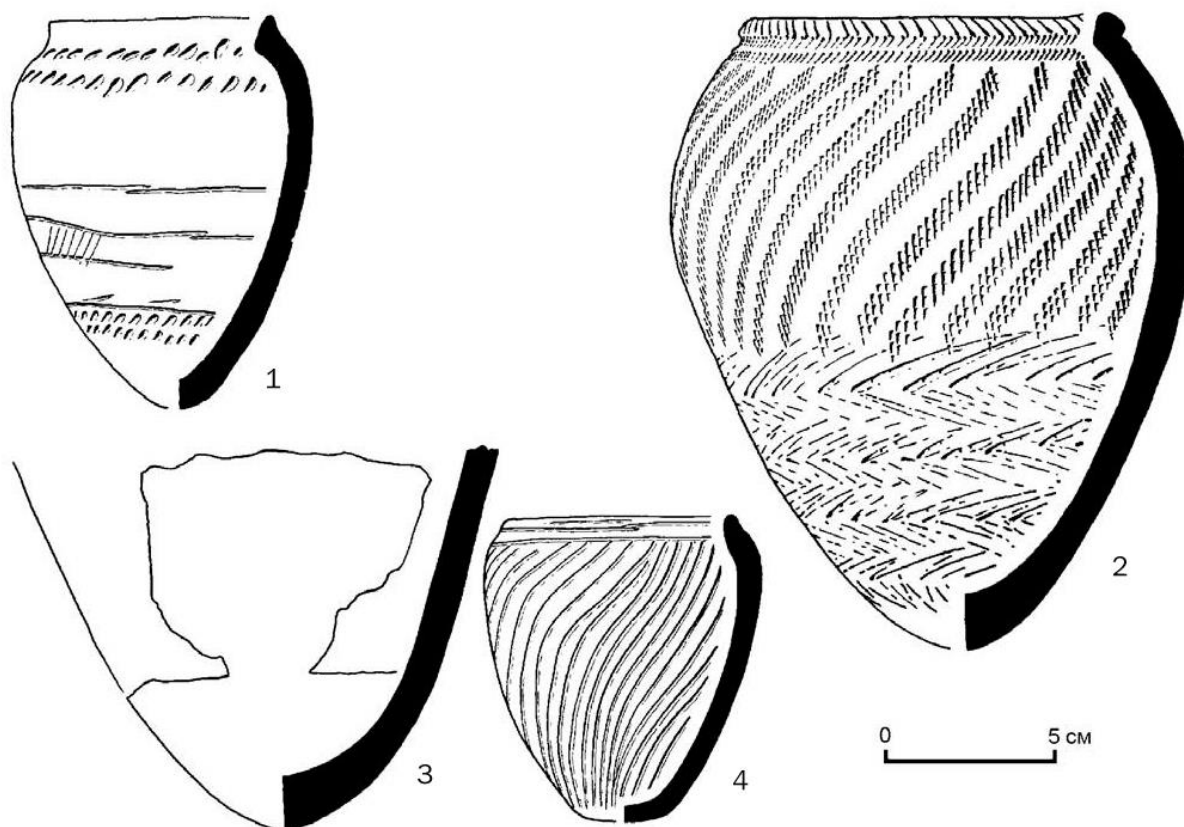


Figure 55: Chernobaya VI – kurgan 1-grave 3; (1), kurgan 1-grave 1; (2), kurgan 2; (3-4)

1.3. Memorials of Afanasievo Culture on the Periphery of the Minusinsk Basins

1.3.1. Piltir (Beltyry), burial ground

The monument is located in the Askiz region of the Republic of Khakassia, 3 km from Piltir village on the left bank of the Abakan river. It was excavated by A.N. Lipsky between 1951-1954 (fig.56). Interaction with Okunev culture is seen intensely. During the excavations, the archaeological research methodology is not sufficient and therefore, many questions have arisen. This situation causes us to define the cultural features of the structure incompletely.

The burial pits are generally large in size and vary. Graves 6 and 11 are 2x1 meters in size, grave 15 is 2x1.85 meters in size, grave 5 is 2.1x2 meters in size and grave 2 is 2.5x1.6 meters in size. Adult tombs which have similar dimensions are characteristic for Afanasievo Culture.

Grave designs create various contradictions. The graves of Afanasievo Culture in Central Yenisei are usually supported with stone slabs at the top and covered with a rolled billet on the grave ground. Small tombs are usually covered with large sandstone slabs

without the use of wood. Piltir monument has similarities to Okunev culture structures in this context, but Okunev culture is considerably larger than grave standards. Probably, during the period of Okunev, the population made additions to the graves.

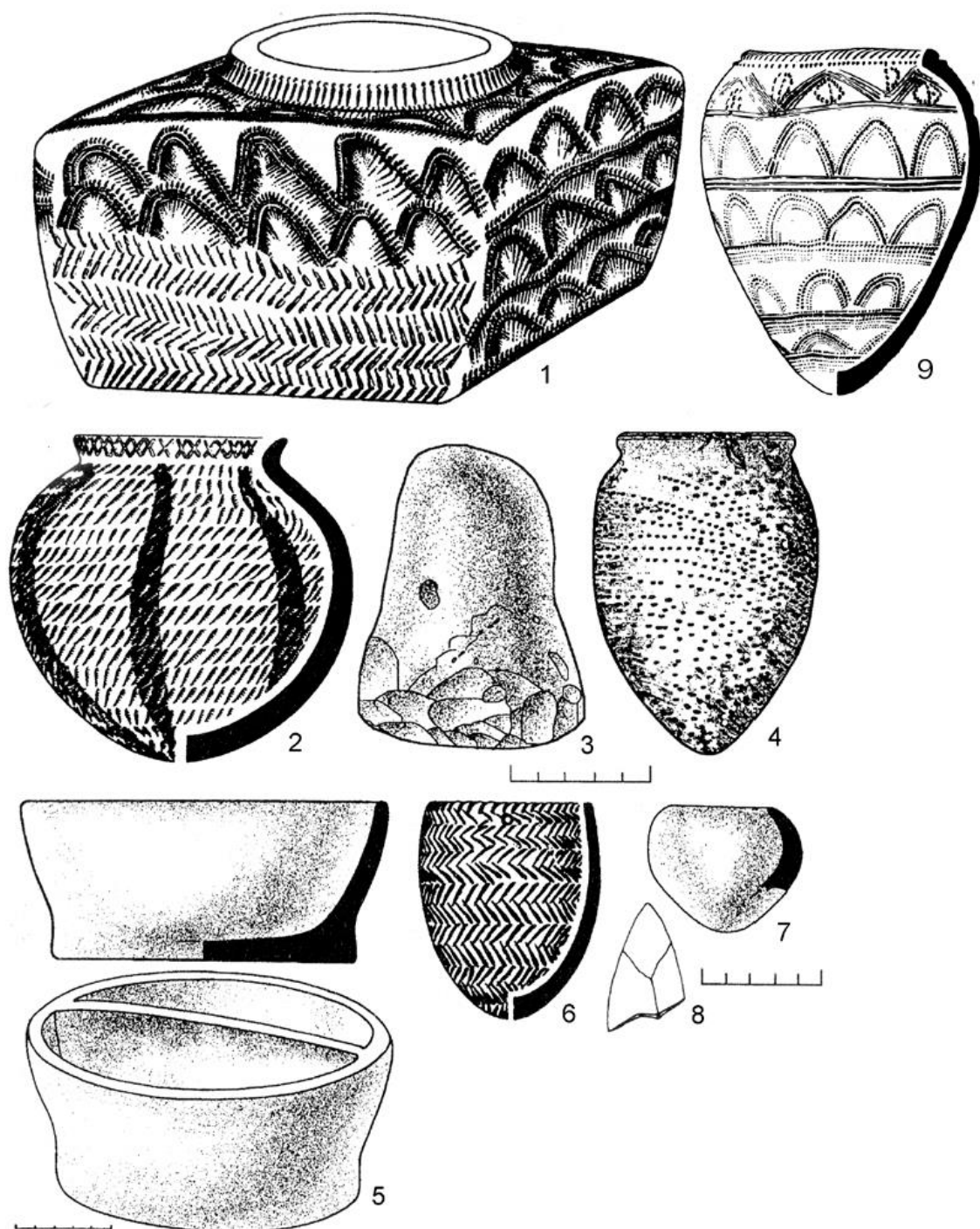


Figure 56: Piltir – fence 2; (1,2), fence 5; (3) fence 7; (4), fence 8/ incense-burner; (5), fence 8/ vessels; (6,7), fence 8/ stone arrowhead; (8), Karasuk-III – grave 1; (9) (Vadetskaya, Polyakov, Stepanova, 2014, p.156-236)

Also, in Fence 2, two vessels with typical Afanasievo ornaments were found. The first of these is in a very special structure (fig.56; 1). This pottery; The Karasuk-III monument is similar to the arched decorations in Kurgan 1-tomb-1 (fig.56;9). In Fence 11 and 6, typical Afanasievo vessels were found. In Fence 5, the situation is a bit complicated. While the pottery belongs to the Afanasievo Culture, the drilled teeth and cutters belong to the Okunev Culture. In addition, the graves in this fence overlap and are laid longitudinally. However, transverse placements are typical in Okunev Culture.

In addition, burned human bones between ashes and embers were found in fences 7 and 8. This was never seen in Afanasievo Culture. In Okunev Culture, it was observed only once. Such rites appear only in Andronovo culture monuments.

Due to the lack of reporting documents, it is impossible to say anything clear about which culture this monument belongs to where (Vadetskaya, Polyakov & Stepanova, 2014, p.236-238).

1.3.2. The Great Ring, burial ground

The monument discovered in 1952 and it was started to be excavated by A.N. Lipsky in 1959. According to Lipsky, the diameter of the kurgan is 36 meters in height and 50 cm in height, and during the construction of a series of dams for fish farming, part of the kurgan was destroyed. One of which was completely destroyed during construction, three graves were discovered. Broken bones were found in the destroyed tomb, but the size of the tomb and the age of the deads could not be determined. While it was named to the Kurgans, the surnames of the scholars who discovered the graves were also added. Lipsky discovered graves, 1-l, 2-l, 3-l names; The graves that were excavated by Maksimenkov were called 1-m, 2-m, 3-m, 4-m, 5-m. On the graves found by Kirginekov in 2008; the names 1-K, 2-K, 3-K are given. In these graves, skeletons of different gender and age groups were discovered and various decorations were found. A rectangular stone with a shortening of a person's face was found in Kurgan 3, Grave 2-l, and it has a wide echo. Due to the proximity of the Grave 2-l to the drawings on the plates in the Tas-Khazaa and Piltir complexes, Lipsky attributed "the Great Ring Kurgan" to Afanasievo Culture (fig.57) (Kirginekov, 2010b, p.80).

It was also seen through the researches of Kirginekov that the Great Ring kurgan is still the largest tomb structure of the Eneolithic period in the Sayan-Altay region. The burial ground of the kurgan is approximately 1256 square meters. The size of the monument can

only be compared to Tas-Khaza. Nevertheless, despite this magnitude of the monument, neither chronological nor cultural reference was identified. There are about 10-20 km between the other monuments in the Khakass-Minusink Basin, and the presence of vertically laid plates and horizontal walls, it is important to be found in the kurgans of Sayan-Altay Afanasievo Culture. However, it cannot be attributed to the last stage of Afanasievo Culture, but Afanasievo can be regarded as a continuation of the kurgan tradition. Some of the graves; It can be attributed to 1-m, 3-m, 4-m, 5-m, 1-k, 2-k Afanasievo. The data such as the presence of coal and ocher, directing the deceased to the west, bending the knees, traditional funeral items, wooden floors and burial of children in entrance tombstones that were attached to the main tombs show us that the Great Ring kurgan probably belongs to Afanasievo Culture.

According to Maksimenkov, the way that the skeleton of the woman in the grave 4-m that belongs to Okunev Culture was buried. Also, as a result of the analysis of the copper dagger in the same grave, it was understood that it belongs to the Okunev metal group and it is characteristic of Uibat type monuments. The fact that the knife and the knuckle in the grave 3-k show the copper composition completely may be a reason to date the kurgan to the early period of Okunev Culture. The “turnip-shaped” Afanasievo pottery and incense burner decoration in the grave 3-L is undoubtedly the characteristic of Afanasievo, but the presence of a chamber in the burner puts it in the category of the objects of the Okunev Culture. In general, it can be said that when Afanasievo Culture exists and the elements of Okunev Culture also penetrate, the kurgan belongs to the period (Kirginekov, 2010b, p.87-89,91).

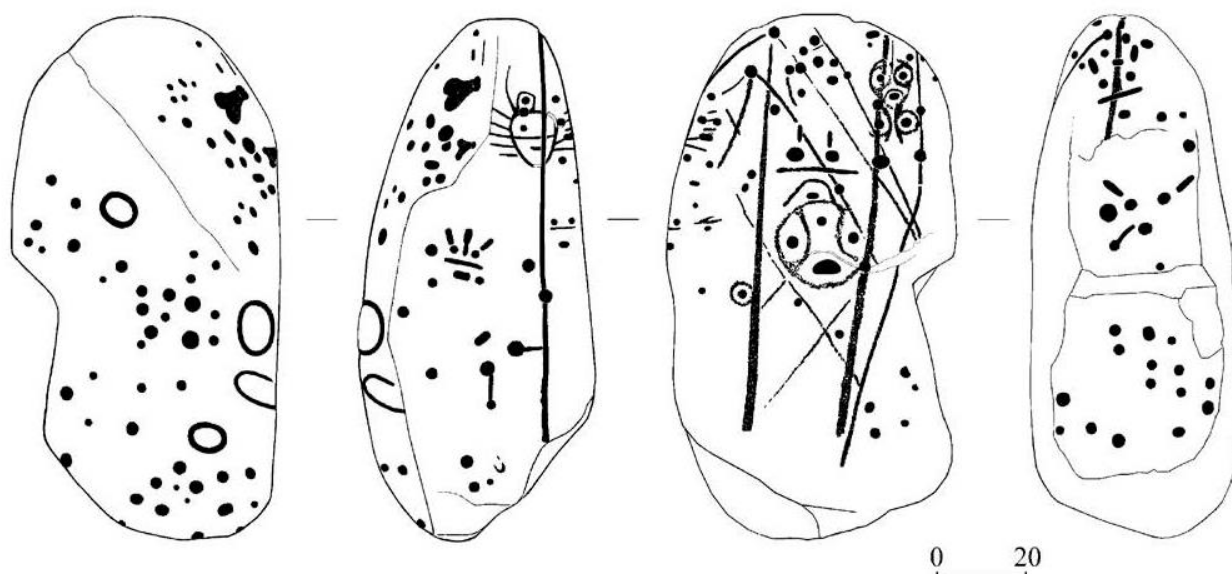


Figure 57: images on a boulder from the ceiling of the Grave 3-k, (Kirginekov, 2010b, p.90)

1.3.3. Byur, burial ground

It is located on the terrace of the left floodplain of the Byur river, about 1 km south of the modern riverbed, under a low hill in the Ust-Abakan region and next to the railway. 7 Afanasievo kurgans were identified. Three are between 12 and 14 meters in diameter, and four are between 3-4 meters in diameter. In 1958 L. R. Kyzlasov excavated kurgan 3. It has a round structure of 12.8-13.1 meters in diameter and 0.55-0.6 meters in height. A hearth was found in the western part of the kurgan, and contains coal, ash and unburned sheep bones. In the center of the kurgan, there is a burial pit with a thick burnt soil layer, ash and coal. The roll that was covered with birch bark is preserved at the edges. The grave pit is 3.6x2.76 meters in size and has a rectangular shape. It contains a skeleton of a man that was scattered and a skull missing. (The grave was robbed.) There are two vessels on the east side of the grave and no other material was found.

1.3.4. Upper Askiz, burial ground

The monument is located 9 km from Askiz station, on the high terraces of the right bank of the Askiz river, under the Kara-Kaya rock. In 1958, A.N. Lipsky worked on three kurgans.

Kurgans are approximately 4 meters in diameter and 0.2-0.4 meters in height. Kurgan 1 and 3 have a round structure that was made of torn stones and kurgan 2 consists of vertically excavated sandstone slabs. A skeleton, legs bent was detected in Kurgan 1. A baby grave and an ostrodon-style vessel were found in Kurgan 3. In Kurgan 2, the bones of an adult and 1 year old were displaced. Due to the presence of a jar-shaped vessel, a bronze knife and a marble ball, this grave is attributed to Okunev Culture. But vertically placed plates are not found in Okunev culture. Therefore, due to its general features, the monument can be dated to Afanasievo Culture (Vadetskaya, Polyakov & Stepanova, 2014, p.243-245).

1.3.5. Itkol-II, burial ground and Itkol-III, settlement

A.V. Polyakov researched the archaeological sites of the Bronze Age on the north shore of Lake Itkol in 2008-2010 and identified several objects of the Afanasievo Culture: 5 kurgans of the Itkol-II complex and the cultural layer of the Itkol-III complex spread over 172 square meters.

The Itkol-II burial ground is located on the left bank of Tushino Lake, once part of Lake Itkol (fig.58). 43 kurgans with various cultures from the Eneolithic period to the

Scythian period were identified (fig.59). Kurgan 14 has a circular structure that formed in 9 meters diameter sandstone slabs. It was observed that Okunev culture representatives used it again for their kurgans. Although the data attributed to Afanasievo Culture cannot be obtained in kurgan, it is evident that there are Afanasievo hedges in terms of structure. So much so that, a few pieces of Afanasievo container were collected in the northern part of the ring of kurgan (fig.64; 1).

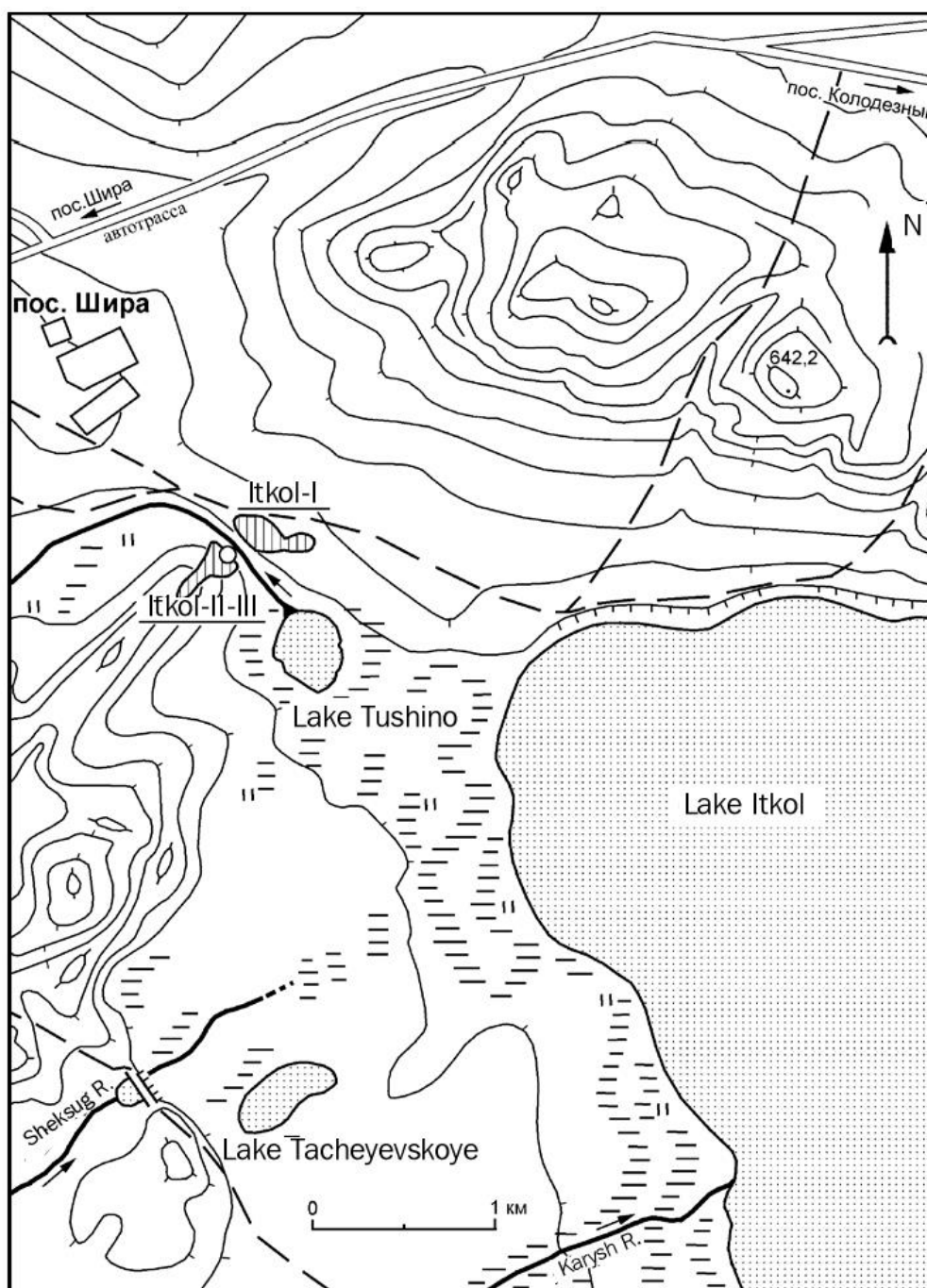


Figure 58: Monuments of Itkol-I-II-II (Polyakov, 2010, p.145)

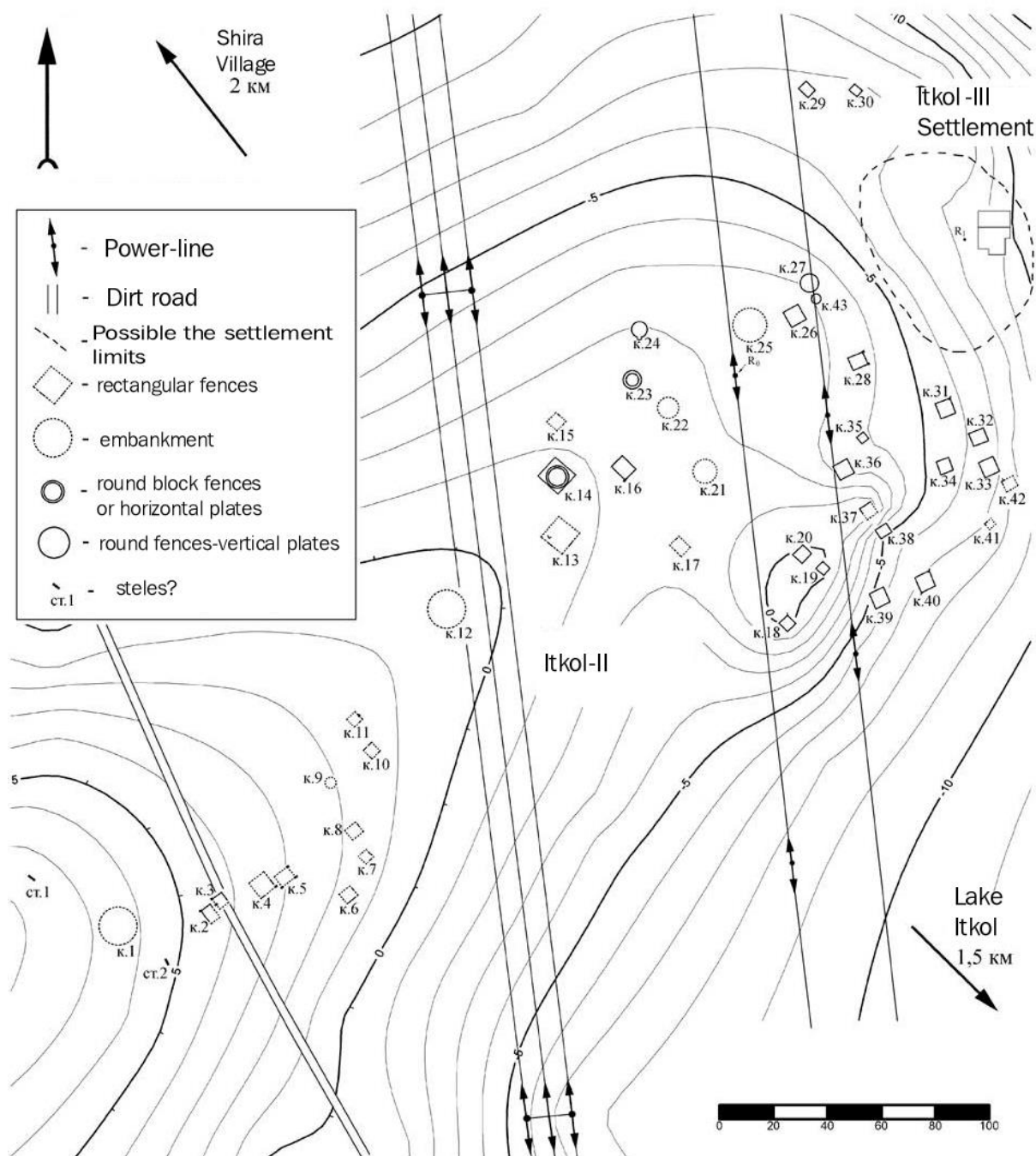


Figure 59: Plan of Itkol II and III (Polyakov, 2010, p.146)

Kurgan 23 which is observed to be constructed from rounded stone blocks and paving stones, has a diameter of 8.5-9 meters and two graves were identified inside (fig.60) (Polyakov, 2010, p.144., Polyakov, Stepanova, 2009, p.377). Grave 1 is located in the center of the kurgan, on the northeast-southwest axis, has dimensions of 2.05 x 1.6 meters and a depth of 0.95 meters. The date of the radiocarbon that was obtained from the wood and this

grave is 4170 ± 35 and that of the human bones is 4270 ± 200 . Human bones were found in different layers. It was probably moved during the robbery. All the bones which were found, belong to a woman who is thought to be 40-55 years old. There were two ceramics in the east corner of the grave. The smaller container was made with a sharper base and decorated in the shape of a "christmas tree" motif (fig.64; 2,3). Grave 2 is located between grave 1 and the southeast wall of the kurgan. It was covered with thin sandstone slabs. It is located on the northeast-southwest axis, 2 x 1.15 meters in size, and a skeleton between the ages of 12-15 (possibly young male) was found (fig.63; 4). There was a ceramic pot on the southeast wall (fig.64; 4) (Polyakov, 2010, p.145-148, 157).

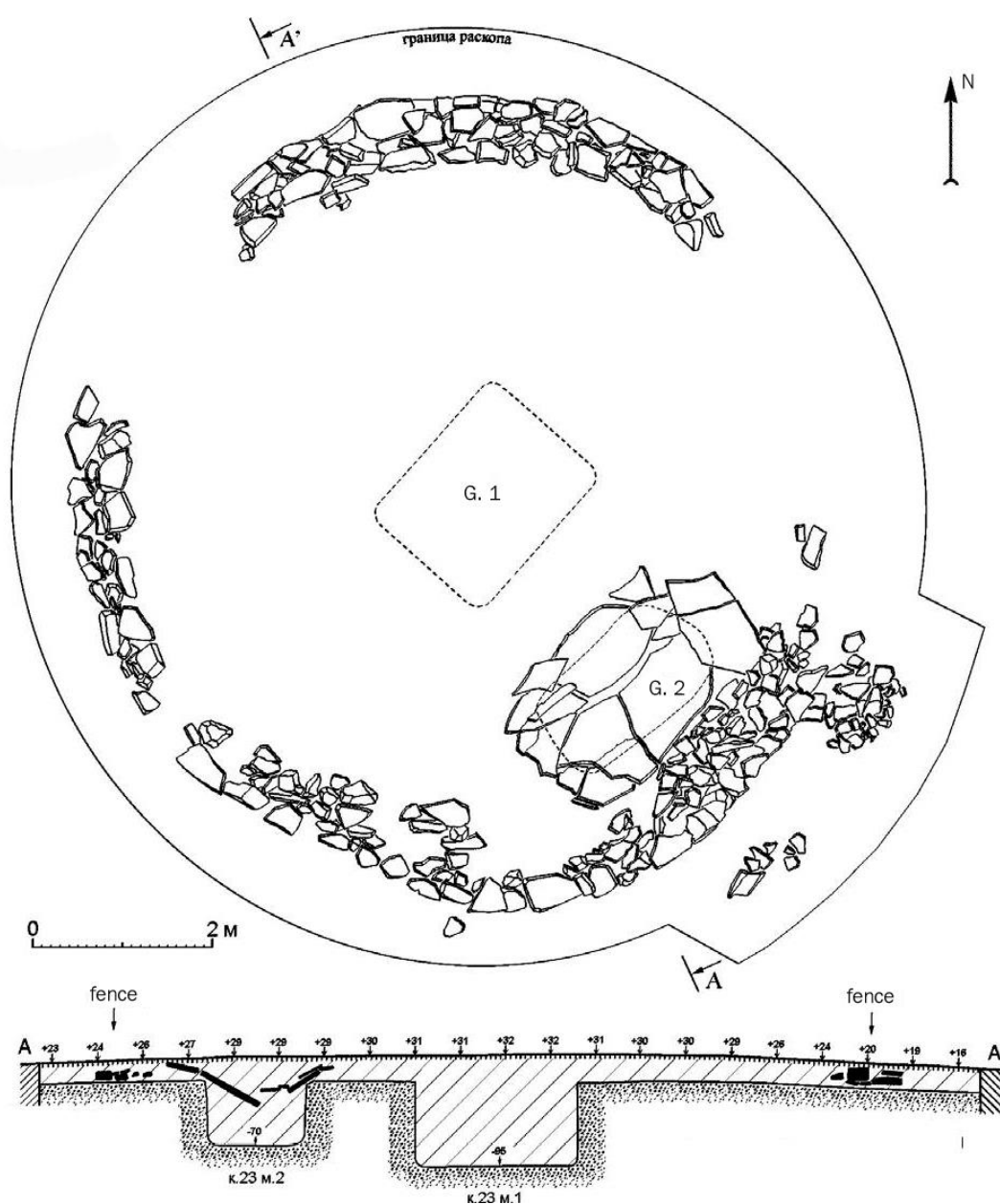


Figure 60: Itkol-II – Kurgan 23 (Polyakov, 2010, p.147)

Kurgan 24 has a round structure with vertically excavated sandstone slabs about 7 meters in diameter (fig.61). There were two tombs inside. Grave 1 is a rectangular structure in the center of the kurgan, 2.65 x 2 meters in size and 0.85 deep with rounded corners along the east-west line. The skull and other bones of an adult at different levels were found. The upper part of the skeleton was thought to be moved by robbers and the skeleton belongs to a woman between the ages of 40 and 50. A very large copper lining of a wooden pot that was decorated with staple ornaments and notches, was found at a height of about 0.3 meters on the north wall (fig.63; 1). Two ceramic vessels which were decorated with Corolla type and zigzag lines were found in the northeast and southeast corners (fig.64; 5,6). In addition, a wooden liner had a copper liner with less massless edges that were decorated with notches (fig.63; 2).

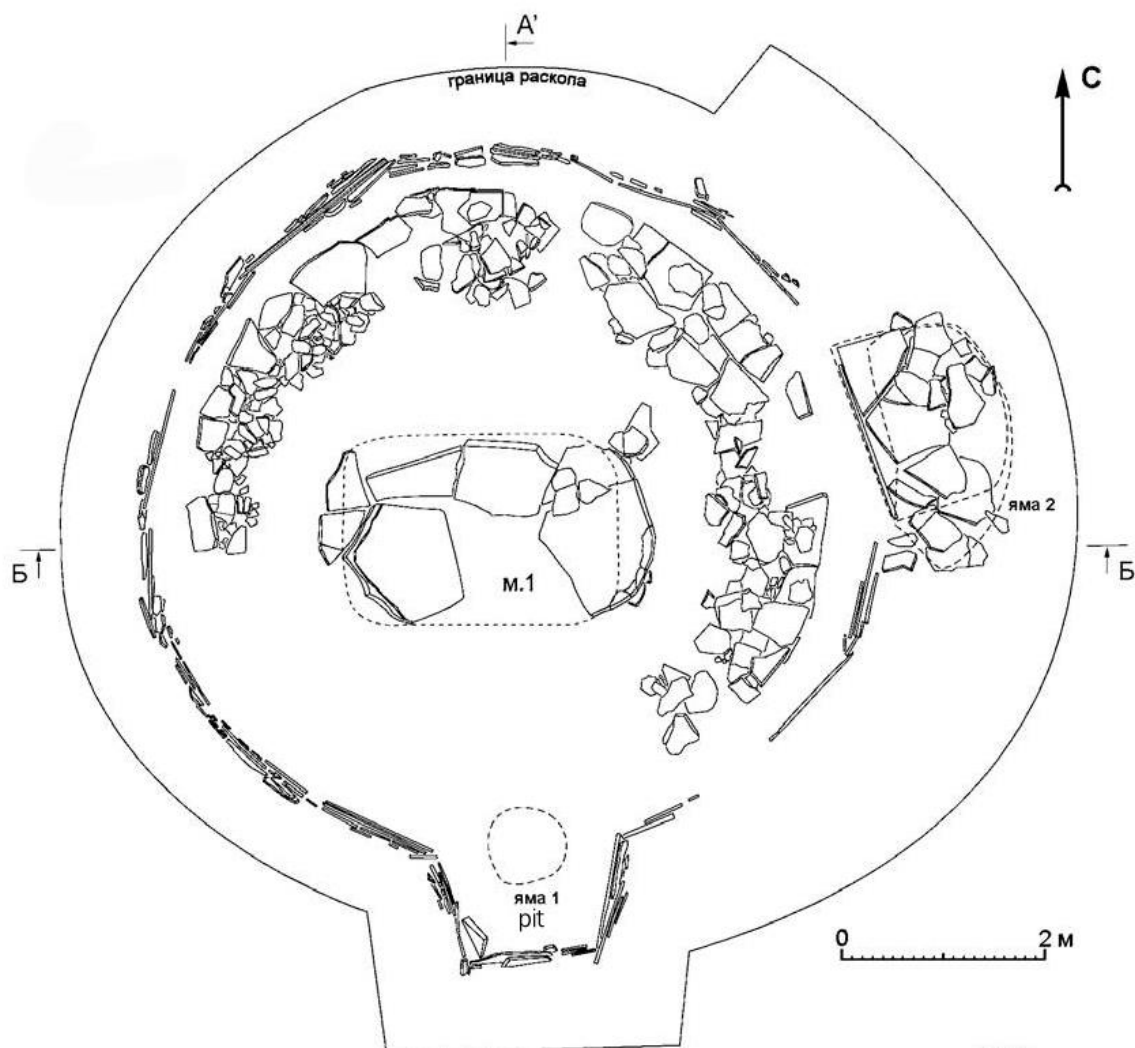


Figure 61: Itkol II – Kurgan 24 (Polyakov, 2010, p.149)

Kurgan 27 has a circular structure that was formed by vertical excavated sandstone slabs with a diameter of 7.2 meters and has a stone shell of various sizes in its center. Two graves were found under the stone crust and two inside the fence. Grave 1 is inside the fence, 1.75 x 1.55 meters in size, 0.8 meters deep and in the northwest-southeast orientation. 4170 ± 30 radiocarbon dates (sample: wood) were obtained from the grave and two people had bones. After the calibration, the date 2882-2635 BC was obtained (Polyakov, Stepanova, 2009, p.378). Probably, both skeletons were about 15-18 years old. One of the skeletons was male and the other was female. There is an ornamented vessel in the east corner (fig.64; 7). A piece of a wooden vessel that was wrapped with a copper leaf was found near the southwestern wall (fig.63; 3). Grave 2 is within the fence, 0.7 km from the corner of grave 1, 0.7 x 0.7 meters in size, 0.25 meters deep. A completely rotten bones of a baby were found inside. In the southeast of the fence, when cleaning the surface, the plates of the grave of a little boy were found (grave 3). The grave was built with a dimension of 0.6 x 0.5 meters and a depth of 0.3 meters and an east-west orientation. There is no inventory. Grave 4 is outside the fence, in the north-south orientation, 0.8 x 0.45 meters in size and 0.3 meters deep, and a child's bone fragments were found inside. There is no inventory.

Kurgan 43 detected in the space between kurgan 26 and 27. It is a circular structure with a diameter of 3.5 meters that consists of vertically excavated plates (fig.62). A 1.5 x 1 meter sized and 0.6 meter deep grave was found in the center of the Kurgan. The skeleton of a child who is thought to be 8-10 years old was preserved inside the grave. There is a small ochre patch in the chest area. The skull is missing and no objects were found (Polyakov, 2010, p.148-152).

The works of many archaeological cultures were reached in **Itkol-III settlement**. The most common cultural materials are Afanasievo and Okunev, but ceramics from the Karasuk and Tagar periods were also detected. It is difficult to distinguish between the borders of Okunev and Afanasievo ceramics. The ceramic pieces in (fig. 65) are objects of the Afanasievo period in the Itkol-III area (Polyakov, 2010, p.155-156).

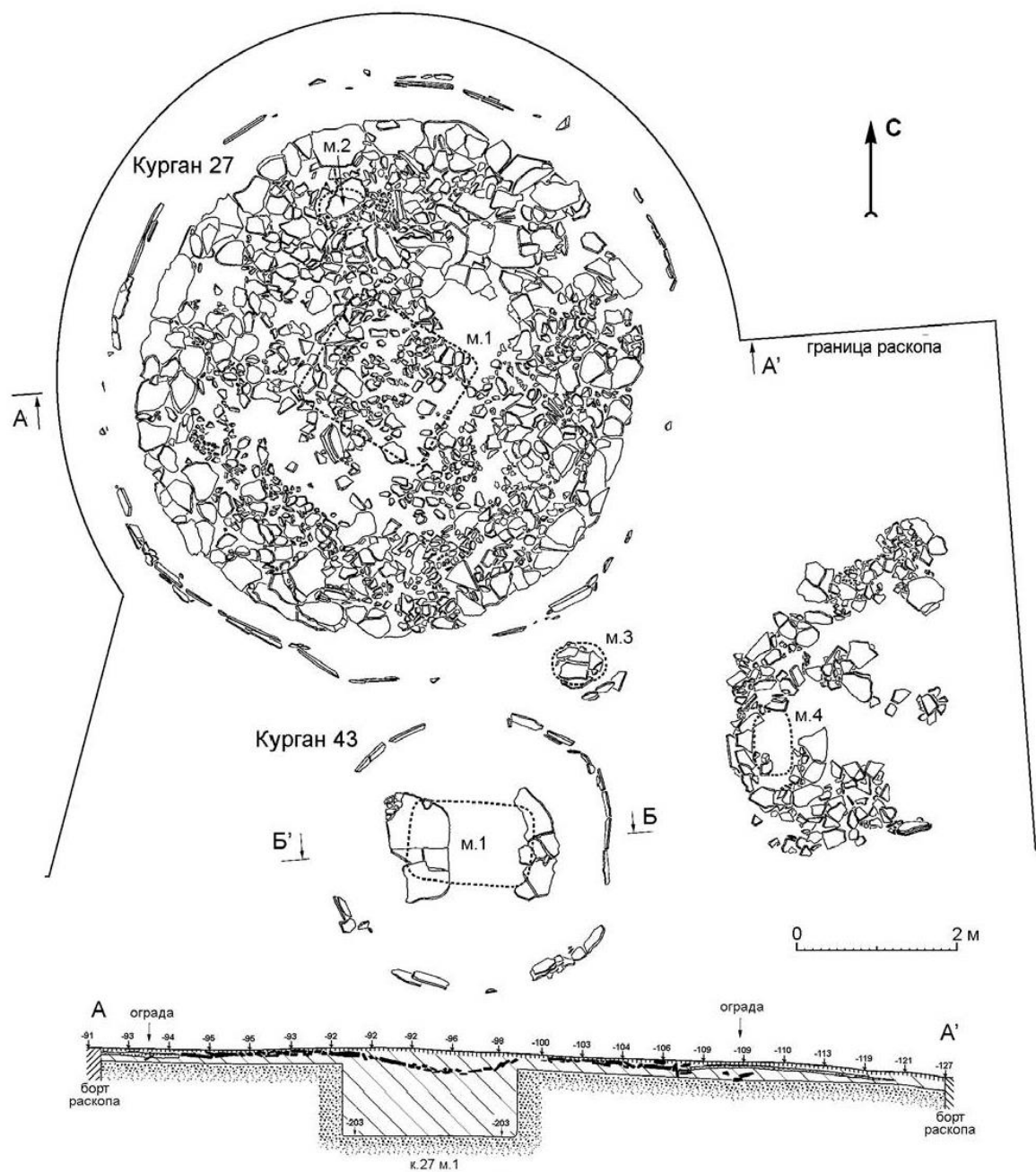


Figure 62: Itkol II – Kurgan 27 and 43 (Polyakov, 2010, p.150)

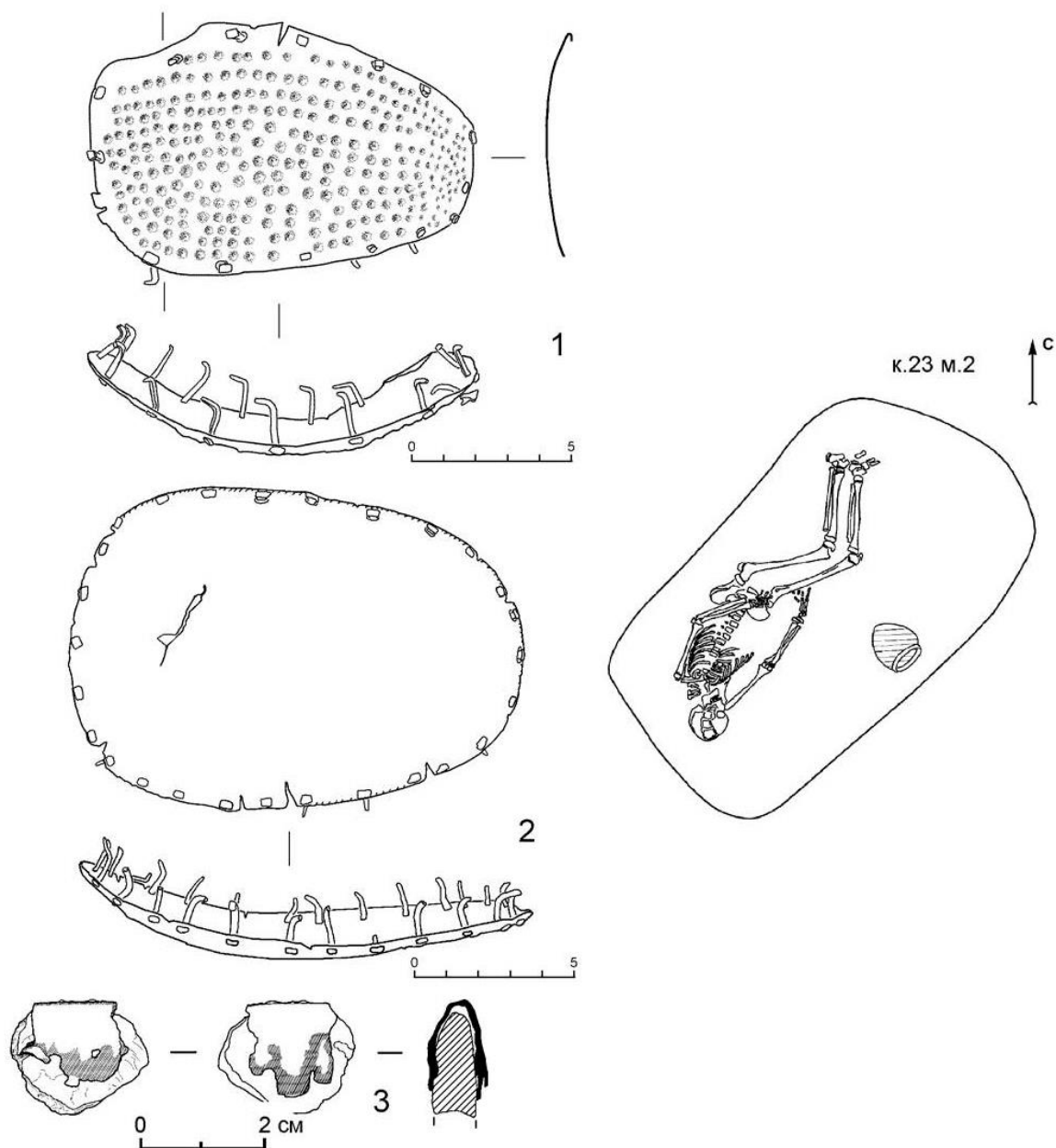


Figure 63: Itkol-II - copper lining of wooden vessels: kurgan 23-grave 1; (1,2), kurgan 27-grave; (3), kurgan 23-grave 2; (4) (Polyakov, 2010, p.151,154)

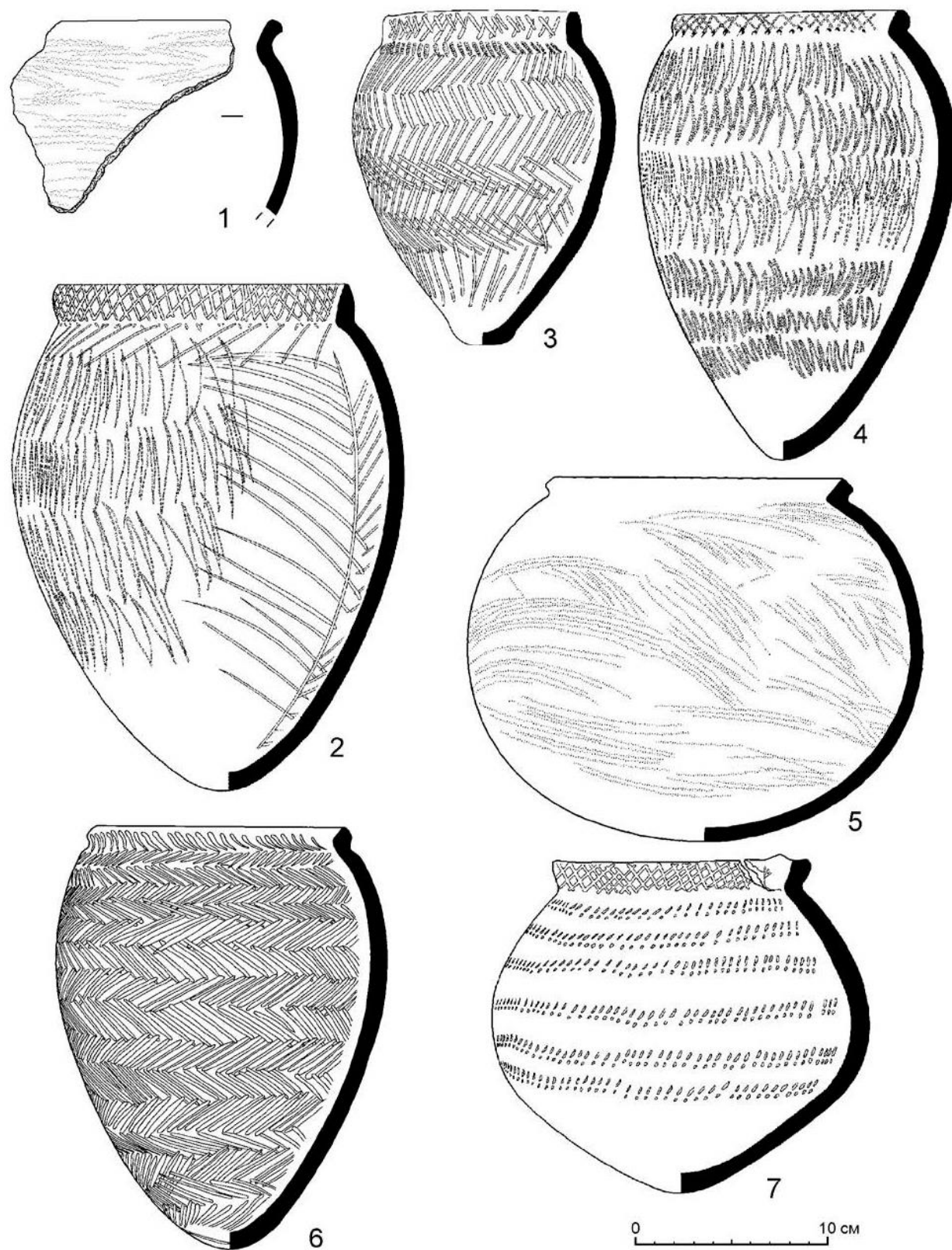


Figure 64: Itkol II – kurgan 14; (1), kurgan 23-grave 1; (2,3), kurgan 23-grave 2; (4), kurgan 24-grave 1; (5,6), kurgan 27-grave 1; (7) (Polyakov, 2010, p.153)

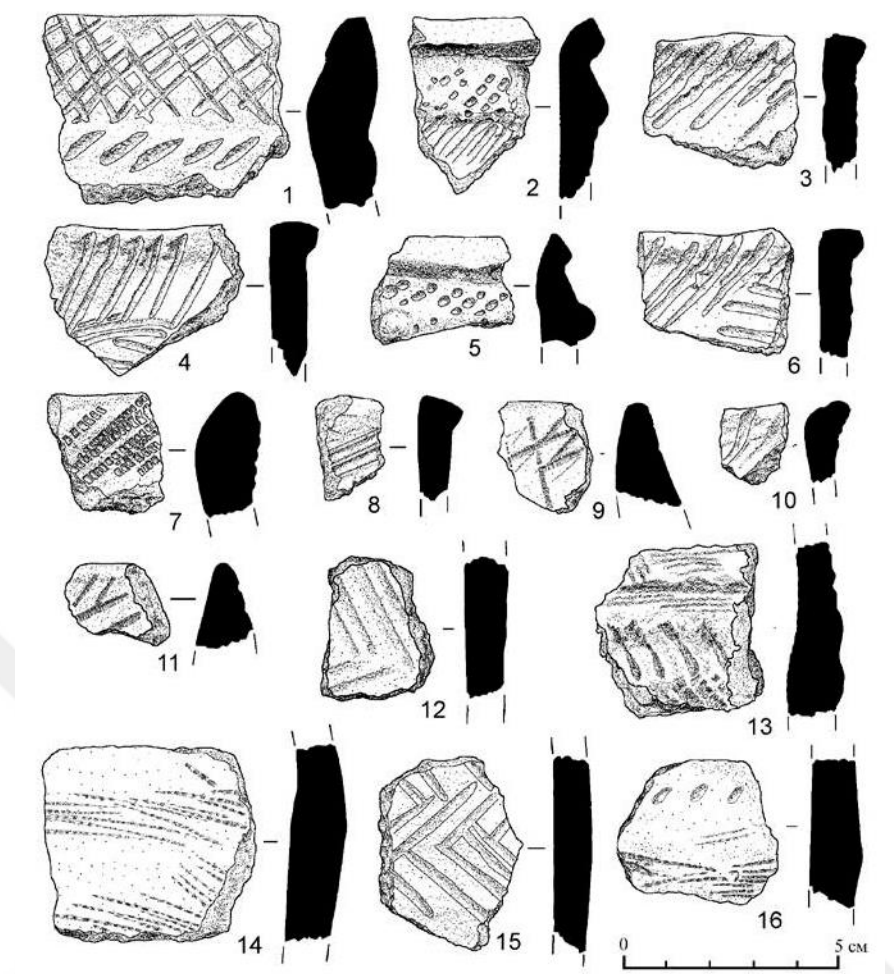


Figure 65: ceramics of Itkol III burial ground

1.3.6. Kamyshta I, burial ground

The cemetery is located 1.4 km northeast of Kamyshta village in the Askiz region, between the Kamyshta and Ninya (left tributaries of the Abakan river) rivers and 400 meters north of the Great Ring monument. According to E. N. Kirginekov who worked in this area in 2008, Ninya I and Kamyshta I cemeteries are a single cemetery that were artificially separated. The diameter of the monument is 9.6 meters. (Kurgan no. 8) In grave 1 in the middle part of kurgan, three reddish that were colored ceramic pieces with characteristic scratches and wear marks of Afanasievo vessels were found. An adult that is thought to be male, had bones in the 1.1 meter deep embankment. A group of human bones were identified at the bottom of the grave and next to the southwest wall. It was concluded that the bones were replaced by theft. The dimensions of the grave were determined as 1.70 x 2.55 meters, depth of buried soil 1.14 meter, and the bottom of the burial pit was 1.35 x 2 meters. It is directed along the northwest-southeast line. No material was found. There was grave 2 in the

western part of the outer ring of the kurgan. A Devonian Sandstone plate measuring 0.6 x 0.75 meters was found. The size of the grave is 0.55 x 0.7 meters and its depth from the buried soil level is 0.15 meters. Bones of a baby whose head was placed towards the north were found. The skull, the rib part is preserved and no objects are found (Kirginekov, 2010a, p.74-75). On the northwest side of the outer ring, the Devonian Sandstone plate was recorded and grave 3 was discovered. A child's skeleton that is estimated to be 3-7 years old, was found inside the grave. His knees were bent, and there was a ceramic bowl decorated with a corolla type "herringbone" (fig.66; 1,2). Also found is a pointed chipped animal bone.

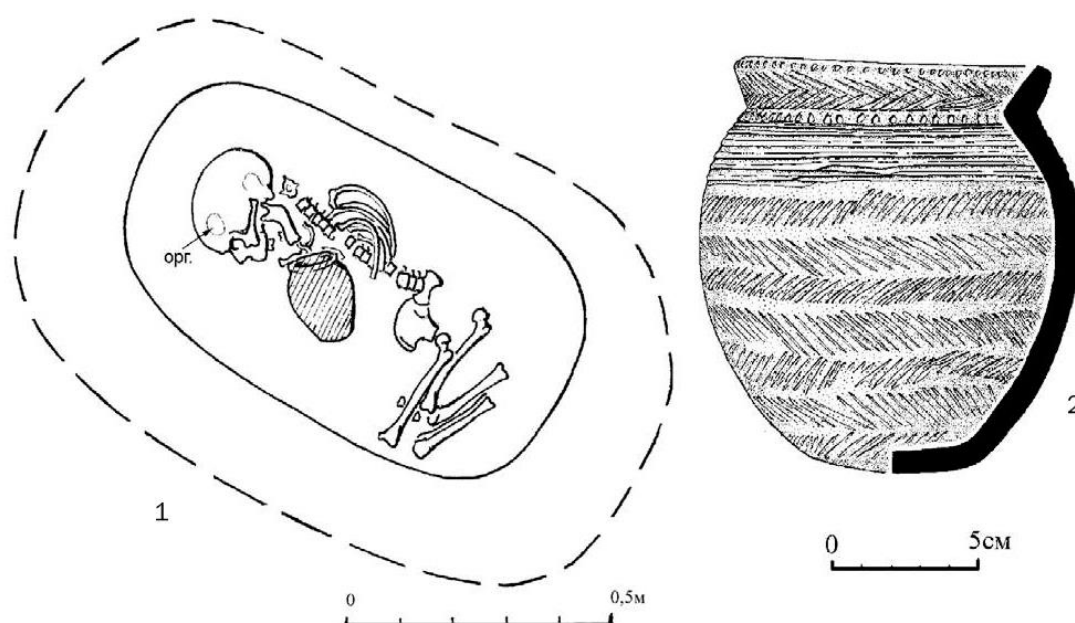


Figure 66: Kamyshta-I – grave 3; (1,2) (Kirginekov, 2010a, p.78)

In Kurgan 8, in addition to the Great Ring, as in the Uybat-Khulgan-Kurgan 1, there is a fill that was made of torn stones. The monument can be attributed to the late stages of Afanasievo culture and is similar to some monuments in Altai, Tuva and Western Mongolia as a grave structure type (Kirginekov, 2010a, p.77-79).

1.3.7. Ninya I, burial ground

It is located in the same area as the Kamyshta-1 monument. Kurgan was examined by G.A. Maksimenkov in 1973, and Mansimenkov claimed that Ninya-1 was different from Kamyshta-1 kurgans. The monument has a round structure with a diameter of 10 meters and a

width of 1.5 meters. The grave that is located in the center of Kurgan is a rectangular pit measuring 2.5x1.5x1 meters and is directed along the southwest-northeast line. (Figure 164 - 2). A child of 8-9 years old had a skeleton on the northern wall and his legs were bent. There were dark yellow marks on the right cheekbone. At the bottom of the grave was the skeleton of a 40-50-year-old woman. No objects were found in the grave. It probably belongs to Afanasievo Culture (Vadetskaya, Polyakov & Stepanova, 2014, p.255-257).

1.3.8. Pistach, burial ground

It is located on the Uzunchul river, the right bank of the Kamyshta river, 3 km below the village of Nizhny Uzun-Chul. It got its name from the nearby mountain. The monument was built in 1993 by M.L. It was studied by Podolsky and three kurgans were identified.

Kurgan consists of two ring fences with a diameter of 1, 15 and 6 meters. The grave 1 in the center has the skeletons of a man and a 35-45-year-old woman. In the filling, fragments of 3 vessels were found. In Grave 2, only a child of 10-12 years old has bones. In grave 3, a skull and egg-shaped container of a newborn baby were identified.

Kurgan 2 is surrounded by a fence of 8 meters in diameter. There are 4 tombs inside. There are the bones of a 7-year-old child in Grave 2, and the remains of a newborn baby in Grave 4. Grave 3 is empty, and Grave 1 is a stripped child grave.

Kurgan 3 shows a special situation with two different fence types. Scholars think that Afanasievo kurgan was built first, and then a second fence was erected in the time of Okunev. There is no remnant of Afanasievo culture outside the fence.

1.3.9. Sagay, burial ground

It is located 8 km south of the village of Askiz on the left side of the Abakan river valley. 8 kurgans were recorded and 4 of them were excavated in 1956 by A.N Lipsky. According to Lipsky's report, the three kurgans are completely destroyed.

The preserved kurgan was in a round structure with a diameter of about 8 meters and a height of 0.4 meters. The top of the grave was covered with a log covered with large stone slabs and extended to the neck. On the floor of the grave were two skulls, one old and one young man or woman. Their heads were directed to the southwest. The legs of both deads were bent, and there was a flattened and decorated egg-shaped vessel (crushed). The ornament is in the shape of a zigzag and solar symbol in the form of a cross is detected at the base of the container. This shows the increasing influence of Okunev Culture carriers on Afanasievo

culture. So much so that, researchers have thought that Afanasievo culture belongs to the last period of its existence in Middle Yenisei (Vadetskaya, Polyakov & Stepanova, 2014, p.257-260).

1.3.10. Svet-Tag, cave

The archaeological site was discovered by S.V. Alexandrov's study of this region. A squad of the Khakass State University Archeology Laboratory under the direction of A. I. Gottlieb conducted research in 1998 and N. F. Katanov worked on this area. The area is located 1.1 km southwest of Ust-Tunguzhul village on the right bank of Ak-Yus River. It got its name from the cave and mountain of the same name. The place where the cave is located is the rock in the granite form that resembles a face at the foot of the mountain ridge. A few meters east of the cliff at the base of the granite outlet, it has a small entrance shade, 1.75 m high and 1.5-2 m wide (fig.67). The total area of the cave is 9 square meters. The excavation area is 12 square meters and three cultural and chronological layers were unearthed. The thickness of the sheet reaches 1 meter in the center and 0.3-0.4 meters on the edges. The third cultural layer is attributed to the Afanasievo time. It is clearly separated from the previous layer by a thin sterile granite layer. This layer reaches up to 2 cm thickness (Gottlieb, 2012, p.103-105). 20 pots and more than 600 ceramic pieces were found in the excavations. 303 of them belong to Afanasievo Culture. In addition, 6 vessels are clearly distinguished. Typical Afanasievo decorations such as herringbone and zigzag are encountered. There is almost no animal bone in the layer. 60 small and partially calcified bones were found. In addition, 54 river pebbles and 297 untreated river stones were found.

This monument is kept separate from settlements in Orta Yenisey as a clear stratigraphy of the layers is reached and it is a separate sterile layer (Gottlieb, 2012, p.109-110, 112).

1.3.11. Tas-Khazaa, a single kurgan

Kurgan is located on the second terrace above the floodplain on the right bank of the Abakan river, 8 km northeast of the Chapyskov settlement, across the mouth of the Kamyshta river. In 1957, A. N. Lipsky 15 tombs were excavated, but only 6 of them were preserved.

Most scholars agree that this fiction belongs to the Okunev culture, but according to Lipsky, there are vessels that belong to the Afanasievo period in grave 1, 2 and 4. The grave structure and burial rituals indicate typical Okunev culture, but the pots belong to a

completely different period. At present, the debate of Okunev and Afanasievo culture carriers living together for a long time still continues. For those who support this hypothesis, this monument is the most important evidence link. Karasuk VIII monument is another example, but it is controversial. The Okunev structures found as entrance graves of Afanasievo monuments are not presented as evidence of this hypothesis. Therefore, Tas-Khazaa is very important and unique (Vadetskaya, Polyakov & Stepanova, 2014, p.263).

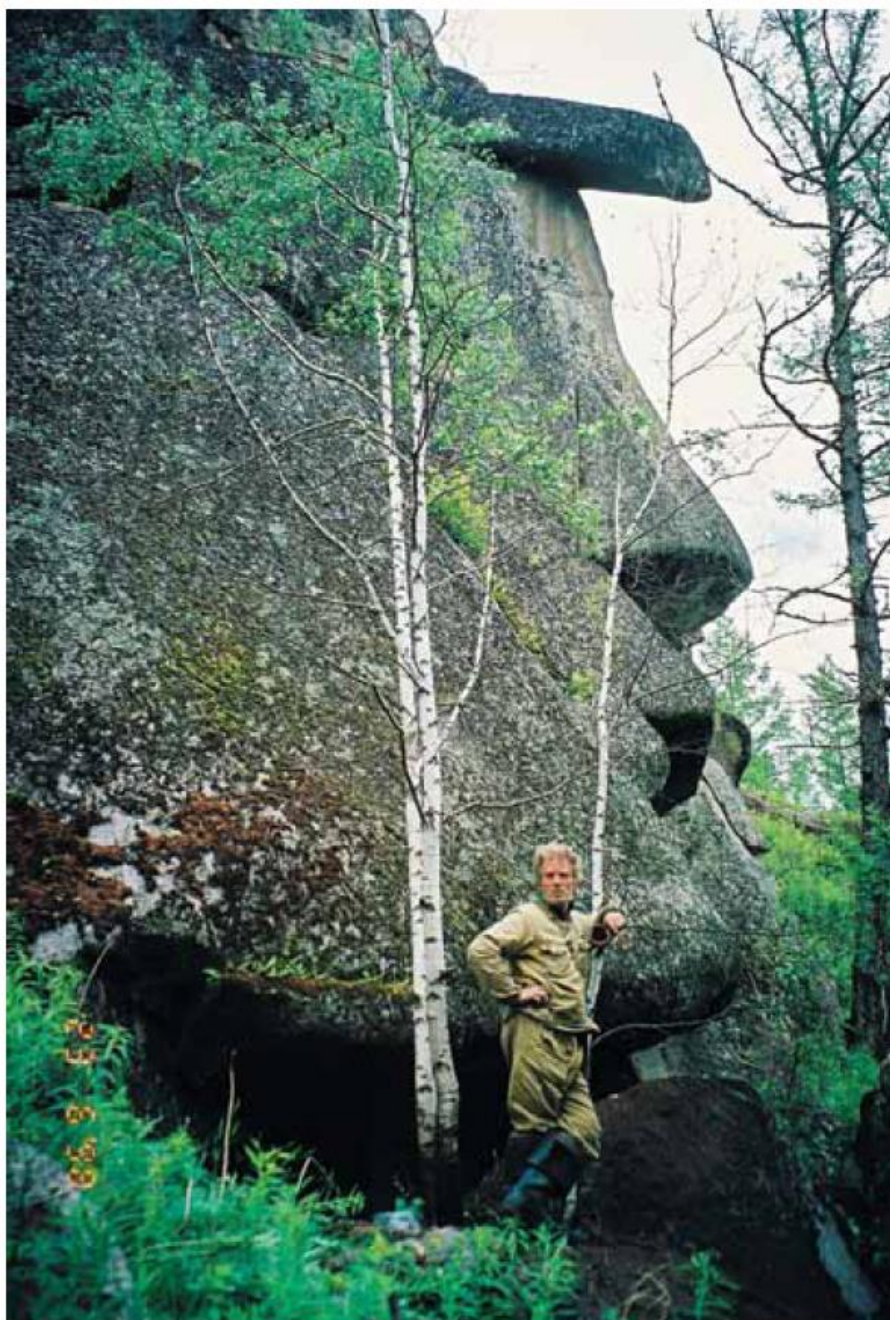


Figure 67: Overview of the rocky cliff at the Sve-Tag cave (Gottlieb, 2012, p.104)

1.3.12. Uibat-Khulgan, burial ground

It is located 300 meters south of Khulgan Mountain in the upper left of the floodplain of the Uibat river, 150 meters south of the Abakan-Achinsk railway in the Ust-Abakan district. A total of 5 kurgans were recorded in the memorial, and three of these kurgans were excavated by L.R. Kyzlasov in 1958 and 1972. Kurgan 1 is attributed to Afanasievo culture, Kurgan 2 is attributed to Okunev culture. Kurgan 3 which was examined in 1972 was associated with Kurgan 1.

Kurgan 1 is an oval stone soil structure with a diameter of 15.6 meters, a size of 13x11 meters and a height of 0.45 meter. There are skeletons that belong to the Okunev culture. Bone fragments 5 and 6 are attributed to Afanasievo culture. Some inventory and two vessels in the grave belongs to the Afanasievo period. The most interesting object is a razor made of staple decorated liner. Similar decorations on wooden vessels are a common inventory of Afanasievo graves, and the Itkol-2 monument can be cited as exemplary evidence in Kurgan 23-grave 1 (Vadetskaya, Polyakov & Stepanova, 2014, p.266).

1.3.13. Chitigol I, II and III, settlements

Chitigol I lies 3 km northwest of the village of Tyur-tas (Four-stone), at the mouth of the Chitigol log, 13-14 meters above the water level of the Big Yes river. There is a large log named "Seventh Log" at this place and settlements takes its name from the log. Settlement, in the expedition that was made by Khakass State University archeology team under the leadership of F.S. Zubkov. It was discovered by N.F. Katanov in 2001. With the studies were carried out until 2006, a total area of 124 square meters was revealed and two cultural layers were identified. There are 4 pieces of Afanasievo-Okunev ceramic in the lower layer.

Chitigol II is 90-100 meters away from Chitigol I settlement and a total area of 120 square meters was excavated by working in 2005-2006. 3 cultural layers were unearthed. In the middle layer, ceramic pieces that belong to two vessels specific to Afanasievo culture were identified and the total number of pieces is 142.

Chitigol III is located 60-70 m south west of Chitigol II. A total area of 225 square meters was revealed by carrying out the work in the field between 2002-2004. 3 cultural layers were identified. In the middle layer, 2 pieces pots of Afanasievo period were found (Vadetskaya, Polyakov & Stepanova, 2014, p. 268-269).

1.4. Memorials of Afanasievo Culture of Tuva

1.4.1. Oorug-Aksu, burial ground

It is located on the right bank of the Uluug-Oorug River, 7 km south-southwest of the Kızıl-dag village and 10 km north-northeast of the Baytal village. 44 different structures were identified and 5 of them were explored by Ya. A. Sherom in 1988. Kurgan 26 is attributed to Afanasievo culture and it is an annular stone structure made of large pebbles. The grave point is not fixed, and a number of pottery pieces were found in the middle part of the kurgan, a skeleton at a depth of 0.55-0.64 meters and fragments of a pot decorated with the old surface level. In addition, while filling the grave, two pieces of ostrodon type vessels were discovered and one of them was decorated with a Christmas tree figure.

1.4.2. Khayırakhan, burial ground

Khayırakhan is located at the narrow end of a high terrace on the left bank of the Yenisei river, adjacent to the steep slope of the Khayırakhan mountain in the Uluug-Khem region. It was explored by A.M. Mandelstam in 1978 and L.I. Reva in 1987-1988 and studied on all five kurgans (fig.68).

Kurgans are 4-6 meters in diameter, round structure that they consist of large flat plates and were made of white limestone. All kurgans were robbed. The graves in Kurgan 1 and 2 are in the west-east orientation and the graves in Kurgan 3 and 5 are in the northeast-southwest direction. There are two graves in Kurgan 1. (Other kurgans have a single grave.) The skeletons inside are turned to the west. Ochre traces were found in all graves. The best preserved grave is found in Kurgan 4. The legs of the skeleton inside are bent and there is ochre where the skeleton's hands, feet and the missing skull has to be. In cemeteries; ax-shaped attachments, sherds of vessels and incense burner fragments were identified (fig.69) (Vadetskaya, Polyakov, Stepanova, 2014, p. 270-271). Before burial process, it was also observed that kurgan 5 was made in late autumn (Tyurina, 2008, p.131).

1.4.3. Toora-dash, settlement

It is located on the right bank of the Yenisei river, 5 km below where the Khemchik river meets the Yenisei river in the Yermakovskiy district. An area of 670 square meters was uncovered between 1978-1984 by V.I. A. Semenov. From the Neolithic period to the Middle Ages, 13 cultural layers were identified and the layer reached up to 4 meters. Afanasievo

culture is on the 5th layer in an area of 440 square meters. This layer is divided into three layers, each are measured up to 0.3 meter. Afanasievo culture layer is between Neolithic and Okunev layers. Most of the objects discovered are pottery and stone pieces. The stone inventory consists of 246 stamps and 48 flint stones. In addition, objects such as arrowheads and pestles and 9 ceramic vessel pieces were found. Containers are free of analogy with the typical objects of Afanasievo culture. That is why Semenov claims that these vessels are a combination of Neolithic and Okunev cultural types (Vadetskaya, Polyakov & Stepanova, 2014, p. 272).

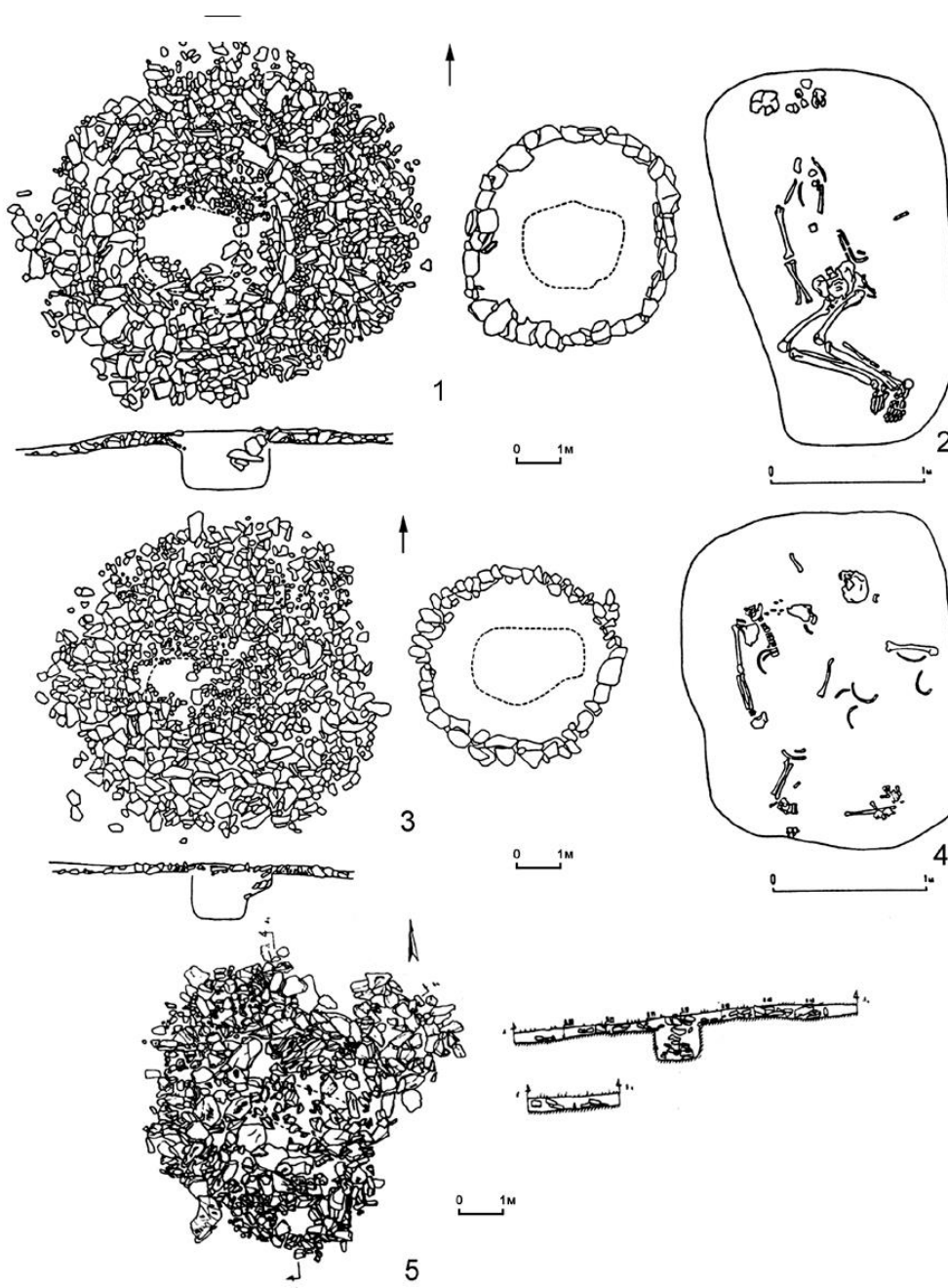


Figure 68: Khayırakhan burail ground (Vadetskaya, Polyakov, Stepanova, 2014, p.271)

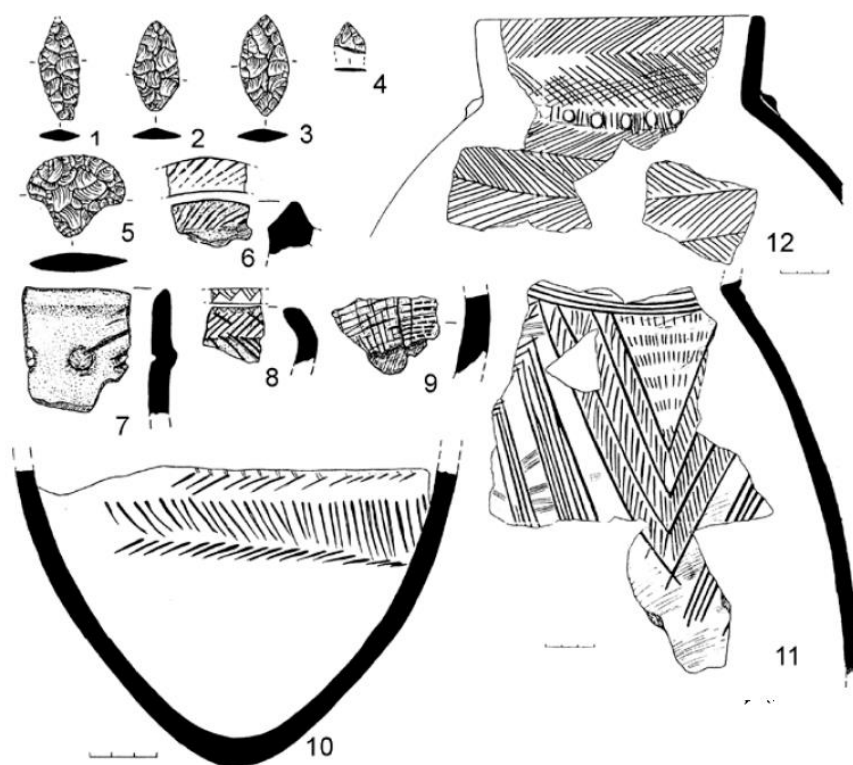


Figure 69: Khayirakhan – rocks; (1-5), ceramics; (6-12)

1.4.4. Khadinnikh I, settlement

Khadinnikh I settlement is located on the right side of Yenisey River, 27 km below Hemchik River and 22 km from Toora-Dash in Yermakovskoye district. The area takes its name from Khadinnikh stream, the arm of Yenisei, which is 1.5 km above the monument. The area was opened 1973 and 1973-1975, 96 and 36 square meters of area were examined and excavated by VI. A. Semenov. The length of the western end of the terrace is about 300 meters and the distance is 7-8 meters wide from the water's edge and it does not exceed 30-40 meters in total. Because of all terraces were filled with rock fragments after landslides, it could not be made a wider discovery. Four cultured layers were discovered in the alluvium-deluvion sediment thicker than 2 meters. On the third layer, the stone surface and ceramics that can be attributed to Afanasievo and Okunev cultures contain analogies with ceramics in the 5th layer of Toora-Dash. Ceramic pieces were found in layers 3, 4 and 5. The main layer is on the 3rd layer, there are more than 300 pieces of ceramic and about 200 items. Some of them can be attributed to Afanasievo Culture (Semenov, 2012, p.160-161). In addition, horse, sheep, deer, Siberian ibex and a wolf bone fragments were found in the layers (Vadetskaya, Polyakov & Stepanova, 2014, p.274).

1.5. Memorials of Afanasievo Culture of Northwestern Altai (Krai?)

1.5.1. Shchuchiy Log-I, burial ground

Schuchiy Log-I is located on the right bank terrace of Charysh River, 8 km east of Charyshskoye Village of Charyshsky district of Altai region. Stone tombs attracted the attention of the local people and they were explored by Shulga in 2005. During the discovery, three kurgans of stone with a diameter of 4 meters and a height of 25-35 cm were found and identified as a chain along the southeast-northwest line. In the middle of Kurgan 2, there were quartzite slabs that could be called overlapping. Because of these features, kurgan was attributed to the Scythian Period. It is possible that Kurgan 3 belongs to the Afanasievo period (Shulga, 2010, p.189).

1.5.2. Ust-Teplaya, burial ground

Ust-Teplaya is located on the Teplaya river, a left tributary of the Charysh river. 4 fences were excavated by P.I. Shulga and the structures are 3 to 5 meters in diameter (Vadetskaya, Polyakov & Stepanova, 2014, p.282).

Fence 16 is a round-shaped stone structure with a diameter of 5 meters, and located in the southern part of the grave area. The grave in it is 1.8 x 0.85 meters, oriented along the southwest-northeast line and 35 cm deep from the ancient surface level. It contains a human tooth, a decorated ostrodon bowl and two crushed pebbles (fig.70; 1). The pot that was found has the characteristics of Afanasievo Culture with its 15.5 cm high ornamentation shape (fig.70; 2).

Fence 20 is located on the edge of the terrace, 10 meters east of fence 16 and southeast of fence 21. The grave inside is 2.5 x 1.45 meters in size. Bone and inventory were not found. Small ochre clusters were identified at a depth of 1.05 meters (Shulga, 2010, p.195-196).

Fence 21 is adjacent to the northwest side of fence 20. There is a rectangular burial pit, measuring 1.6 x 0.95-0.25 meters along the southwest-northeast line along the top of the fence. At the bottom of the grave is the skeleton of a poorly protected child in a supine position. On the right side of his shoulder is a cup that was decorated with a Christmas tree and a flint piece with chips. Coals and small ochre clusters were observed at the bottom of the grave.

Fence 7 is located in the northern part of the grave area, with a small depression in the center and a 5-meter oval shaped fill. There is a small grave, measuring 1.3 x 0.5 meters at a

depth of 70 cm from the old surface level, and at the bottom of the grave a skeleton of a little boy was found. There are ochre seeds on the top of his head and spine, and no other material were detected. According to the data that was obtained from the bones of the skeleton, 3975 ± 75 years of radiocarbon date was obtained (Shulga, 2010, p.197).

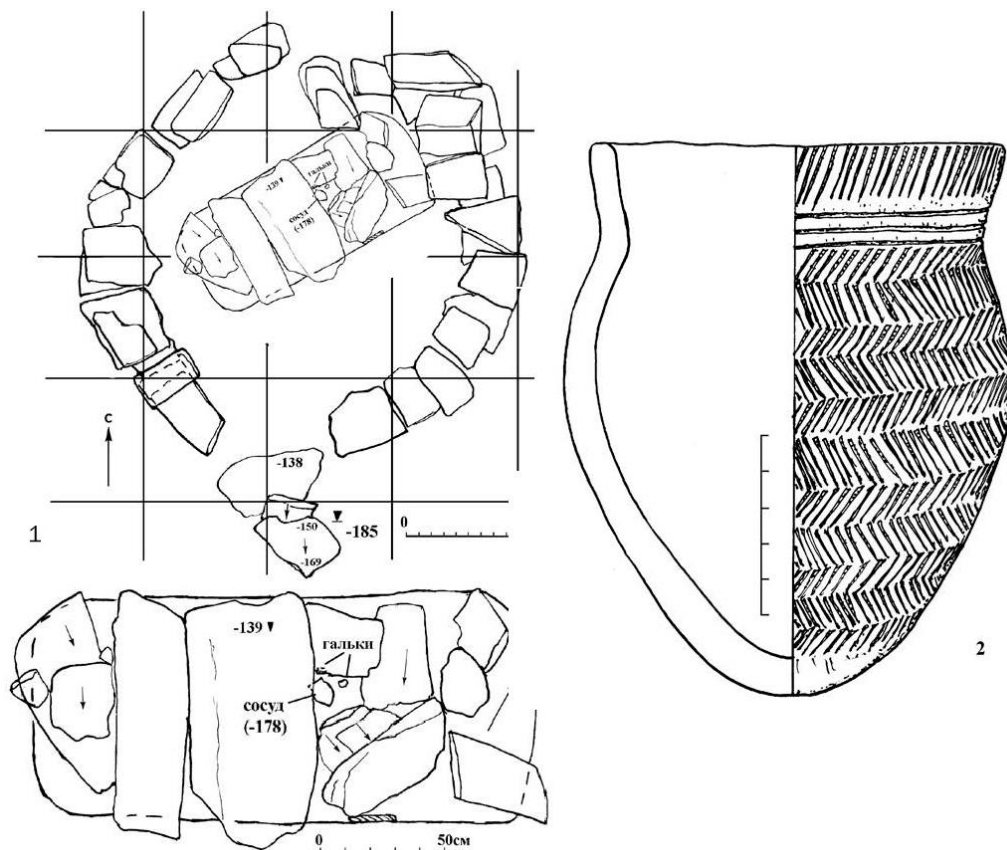


Figure 70: Ust-Teplaya – Fence 1; (1), fence 16; (2) (Shulga, 2010, p.196, 199)

1.5.3. Denisova Cave

It is located on the right bank of the Anuy river, 6 km northwest of the village of Chyorny Anuy, 1.8 km below the mouth of the left bank of Karakol river. In 1977, it was discovered by N.D. Ovodov and explored by a group of archaeologists in 1978-80. The monument is multi-layered and there are Afanasievo culture materials in layers 11 and 12. The complex consists of mostly ceramic pieces and animal bones. Sharp and round-bottomed oval vessels and corolla-type objects that belong to Afanasievo culture were found. It contains analogies in Uznezya-1, Small Dugan, Kara-Tenesh, Baliktyul and Tepsey-X monuments.

All six radiocarbon dates were obtained from the objects. The dates that were obtained from the soil are as follows: 4190 ± 30 , 4315 ± 30 , 4225 ± 30 , 4725 ± 30 and 5200 ± 30 . In the wood coal, 4265 ± 30 is obtained (Vadetskaya, Polyakov & Stepanova, 2014, p.283).

2. Memorials of the Afanasievo Culture of Mongolia

2.1. Kurgak Govi-I, burial ground

Between 2001-2005, Mongolian Academy of Sciences History Institute, Ulaanbaatur State University and the participation of St. Petersburg State University and the leadership of A.A Kovalev and D. Erdenebataar, an international Central Asian archaeological expedition was carried out, and Bronze Age - Early Iron Age grave monuments were excavated around Bayan Ölgii and Hovd province. Kurgak Govi-I is attributed to the Afanasievo Culture. These monuments are located 30 km between Kara-Jamat-Gol and Sogog-Gol rivers valley. Kurgak Govi is very important because Chermuchek and Afanasievo cultures have common ritual and grave complexes (Kovalev, Erdenebaatar, 2010, p.91-92). Due to the Afanasievo ceramics in Chemurchek burial structures, the monuments that emerged during excavations in the north of Bayan Ölgii, and data in Northern Jungaria: Kovalev argues that Afanasievo and Chemurchek populations coexist (3 thousand second quarter BC) (Kovalev, 2017, p.260).

Kurgak Govi-I is a circular monument about 0.7 meter high and 14 meters in diameter from its ancient surface (fig. 71). The walls of the kurgan are approximately 1 meter wide and long, with a maximum thickness of 20 cm. It is made of rectangular stone plates and torn stones. Robber pit was observed. Coal and reddish mud were found in the embankment above the wooden structure. West of the wooden structure; a bone arrowhead, two stone tools, a bone plate, and a knife and awl that are thought to be bronze were found (Kovalev, Erdenebaatar, 2010, p.92, 95). At the bottom of the burial pit, the skeletons of an adult man and a child were identified (fig.72; 2). The adult man's hands were placed on the hip joints and his knees were slightly bent. A necklace which was made on the teeth of an animal was found on the chest (Kovalev, Erdenebaatar, 2010, p.97). Radiocarbon dates that were obtained from materials such as bones and trees are given in the table (table; 1).

The monuments which were found in Arkhangai Aimag, Altan-Sandal (Northern Tamir), Shatar-chuluu were also examined between 1970-75, but although there were some analogies that are compared to Afanasievo monuments, a definite definition could not be made (Christmas tree decoration, ocher, burial ritual, etc.). It has been argued that it is a special type of Afanasievo culture.

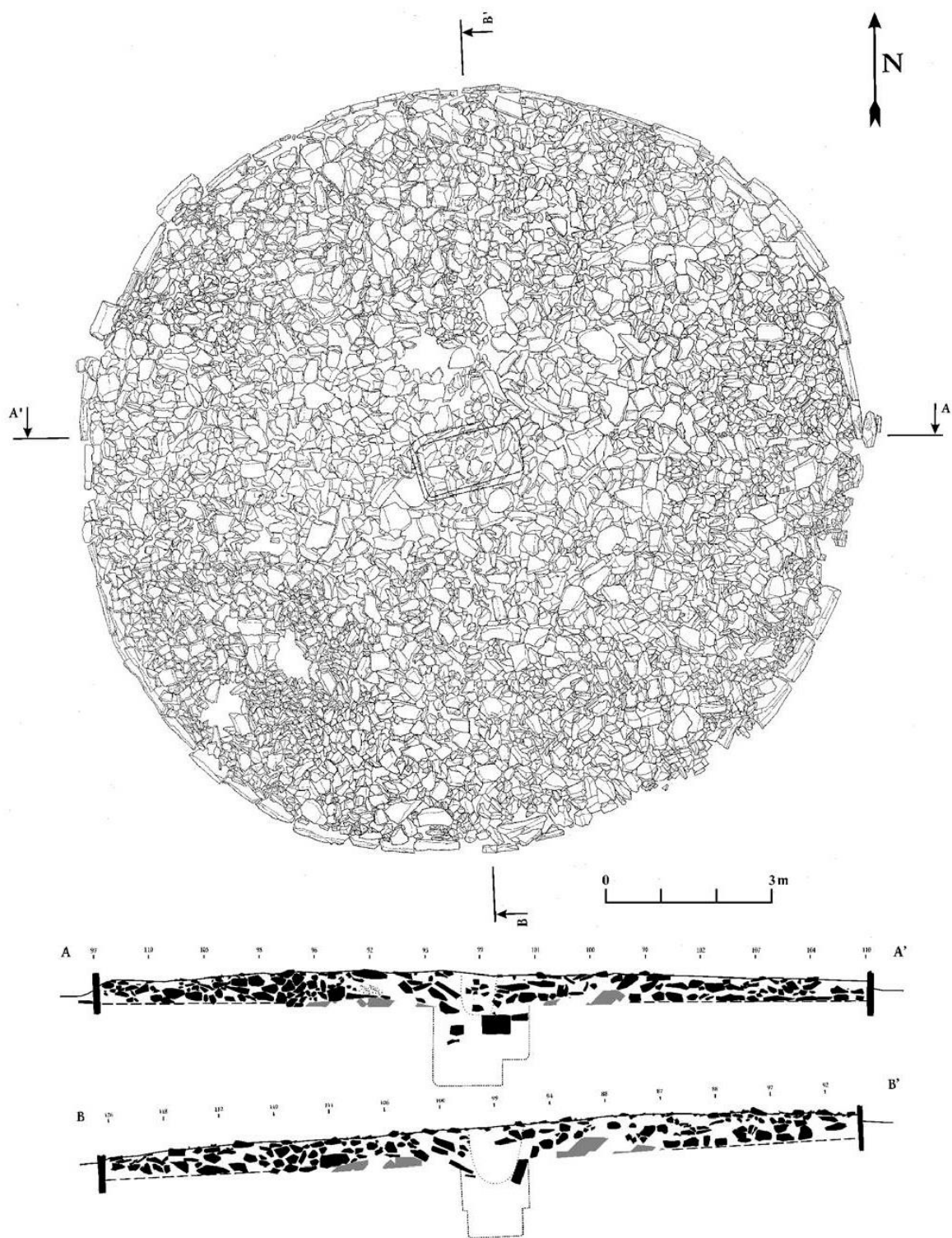


Figure 71: Kurgak Govi-I – general plan and sections (Kovalev, Erdenebaatar, 2010, p.94)

Monument	Laboratory Index	Datable Material	14C age, BP	International of calibrated age (%68.2), BC	International of calibrated age (%95.4), BC ..
Kurgak Govi-I	Le-7219	human bone	4180±100	2890–2620	3050–2459
Kurgak Govi-I	Le-7289	charcoal	4110±25	2850–2810 2740–2720 2700–2580	2870–2800 2760–2570
Kurgak Govi-I	Le-7290	charcoal	4025±50	2620–2470	2860–2810 2750–2720 2700–2450
Kurgak Govi-I	Le-7291	charcoal	4140±35	2870–2830 2820–2800 2760–2630	2880–2580
Kurgak Govi-I	Le-7292	charcoal	4130±40	2870–2800 2760–2620	2880–2580
Kurgak Govi-I	Le-7293	tree	4085±30	2840–2810 2670–2570	2860–2800 2760–2720 2700–2560 2530–2490

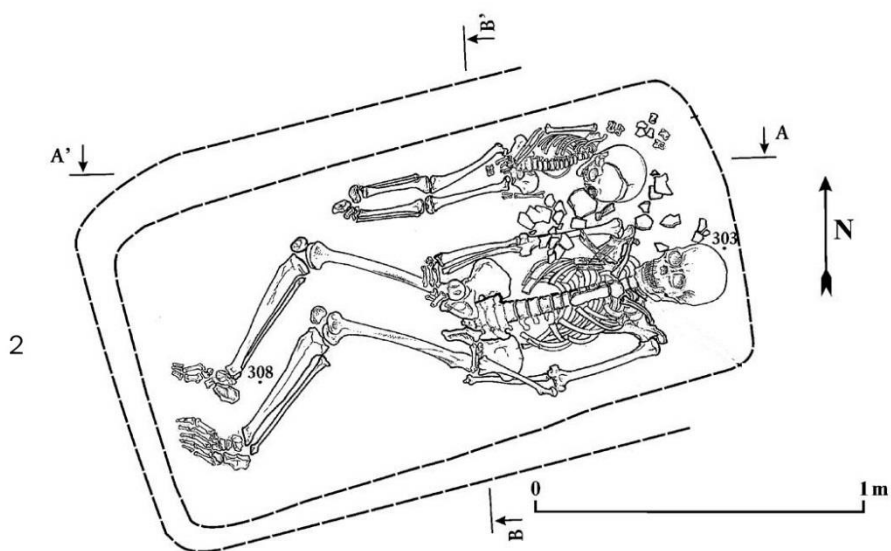


Figure 72 / Table 1: Kurgak Govi-I – grave; (2), table; (1) (Kovalev, Erdenebaatar, 2010, p.95,101)

3. Memorials of Afanasievo Culture in Kazakhstan

3.1. Chernovaya II, burial ground

The monument is located in the Katon-Karagay region of the Eastern Kazakhstan province. The monument that consists of three kurgans was named after the state farm which is located nearby. In 1986, 2 kurgans were excavated on the exploration trip of the Archeology and Ethnology Department of Al-Farabi Kazakh National University.

Kurgan 1 is a round-shaped stone structures with a diameter of 5.6x5.8 meters. There are grave pit, measuring 2x1 meters in the center. On the embankment, human bones and calcified bone fragments and ochre marks were found at a depth of 1.3 meters (near the southeast wall of the grave). There are traces of ashy soil in the northwest part of the pit. At the bottom of the grave was found a skeleton with bent legs and skull fragments.

Kurgan 2 is 5 meters away from kurgan 1 and is a round stone kurgan with a diameter of 6.5x6.5 meters. There is a grave located in the center along the northwest-southeast line with a dimension of 2.2x1.3 meters and a depth of 1.77 meter. The skeleton of a man that is thought to be 35-40 years old was found covered with a dense ochre with his legs bent in the grave. There are 2 crushed vessels next to his right hand and the first one is decorated with a horizontally processed herringbone figure. The other container is not decorated but its surface is smooth and cup-shaped. There are ochre fragments in the southeast section of the grave.

The skeletons from this kurgan show morphological similarity with a number of skulls in the monuments of Bertek 33, Mukhor-Tarhata, Balıktuyul and Aragol.

3.2. Karakoyun, mining facility (?)

Karakoyun is located in the Ulan region of Eastern Kazakhstan province, 2-3 km east of the village of Targyn and on its northern slope. A total of 32 object areas were identified and in 1935; Areas 11, 17, 24 and 28 were partially cleaned. In 17A there was a perforated sharpening stone, a ceramic spinning wheel and a corolla-type pot (Merz, 2014, p.369).

3.3. Sholpan IV, burial ground

Monument is located on the first terrace of the stone bed on the right bank of the Shiderti River, 8-9 km south of the Shiderti station in the town of Ekibastuz in the Pavlodar region. There were 3 graves in the kurgan and two children and one adult were identified. Grave 1 in the center was peeled off. Grave 2 was adjacent to the southeast side of the kurgan and was a large oval pit, measuring 1.65 meter deep, measuring 1.4 x 2.94 meters. On the southwest wall of the grave, a knees bent and a poorly formed skeleton were found. Some bones and the skull are not where it has to be. The analysis revealed that the skeleton belonged to a 18-20-year-old woman. Grave 3 was 0.3 meter deep and paved with stones. Two baby skeletons were found inside. The left side is thought to be 0-2 months old and the right side is 6 months old.

3.4. Grigoryevka II, burial ground

Monument is located in the village of the same name in the Pavlodar region. The monument is located in the northwestern part of the village on the terrace in the first floodplain on the right bank of Irtysh River. According to local residents, human bones were found here before, but it is believed to be permanently destroyed by floods and erosion. Two graves were found 100 meters apart (V.K. Merz, I.V. Merz, 2010, p.134-137). Grave 1 was a rectangular depression in the shape of a 110 cm deep, 180 cm wide. The carbonaceous layer with bone fragments that were marked at a depth of 35 cm was recorded, and a grater fragment that was made of gray sandstone at a depth of 40-45 cm was detected. The grave was laid on an area of approximately 4 square meters and there was a bone-headed arrowhead and several small pieces of ceramic. A skeleton with a knee bent head positioned northward at a depth of 110 cm from the surface near the east wall, and a skull was turned slightly to the left, i.e. east. The skeleton belongs to a woman between the ages of 18 and 20, and a flat polished stone pestle that was made of a 10.8 cm long green siltstone palette was found at the bottom of her chest. The morphological features of the skeleton were attributed to the Mongoloid rasogenetic layer, and its racial appearance was thought to be significantly different from the anthropological type of the population of Afanasievo and Yamnaya cultures and the group that left the Karaagash burial ground.

3.5. Izmailovka, burial ground

Monument is 2 km from the floodplain in the Borodulikha region on the upper terrace of the bed of the second stone on the right bank of the Irtysh River. The cemetery area consists of 32 kurgans (V.K. Merz, I.V. Merz, 2010, p.137-138).

3.6. Ust-Narym, burial ground

Monument is located in the small nose of the sandy floodplain on the terrace of 2.5 km south of the village of Ust-Narym in the Katon-Karagay region of Eastern Kazakhstan province. Due to the Bukhtarma Reservoir, the cemetery area which has a multi-layered structure was flooded.

3.7. Karagash, burial ground

Monument is located 2.5 km northeast of Taldy Village of Karkaralı district of Karaganda region and a kurgan that belongs to Afanasievo Culture were identified. Kurgan is

27 meters in diameter and 0.85 meter deep, and three tombs were found inside, two of them were destroyed by robbers. In the grave number 2, a skeleton of a man with his knees bent was found (V.K. Merz, I.V. Merz, 2010, p.138-141).

4. Memorials of Afanasievo Culture in East Turkestan (Northwest China)

4.1. Gumugou, burial ground (lake of Lob Nur area)

Excavations were made in 1979, the first publication in 1981. In 1983, Wang Binhua published an article, and in 1986 Han Kangxin published an anthropological study. Later, S. V. Alkin (1987) and T.A Chikisheva (1994) worked on this field. The monument is located on the second terrace of the lower floodplain of the Konchederya River and is located 70 km east of the Lob Nur salt lake. In the modern geographical map, it is located to the west of Lob Nur Lake, to the south of the Konchederya River. Due to the presence of a nuclear test site in the area, the inconsistency in determining the location is thought to be related to keeping the area confidential. In the north of the monument is the Kurugtag Mountains, and the monument is covered with a rectangular 35 x 45 meters platform on a small dune. Apart from Afanasievo, Andronovo objects were also found in the area.

There is only one buried person in most of the graves in the area. More than one person is buried in only two graves (two persons and three persons). All of the buried ones were laid with the head were faced east. The dead lay directly on the sand and wrap in a woolen cloth or felt. The fact that the area has a dry and mild climate has enabled the dead to enter a natural mummification process. The heads of the skeletons are covered with pointed caps that were made of fine felt, decorated with bird feathers and their feet are covered with leather shoes. No other clothes were found. All those that were buried had small Chinese bales of ephedra on the right side of their chest. In each grave stood a small basket with a grain of wheat or a mass of white color next to the body. Jewelry that was made of jade, bone and river pearls were found on the throat, waist and wrists. At the head of the graves were wooden or stone anthropomorphic images, daily utensils that were made of wood, animal horns, horn vessels. In the sacrum of an embedded person there was an arrow with stone correction.

Materials of graves 25, 28, 29, 31; Afanasievo culture shows a complete similarity with skull morphology and funeral rites. In addition, the date of 2886-2587 BC was

determined in the data which was taken from the wood in Grave 12 and corresponds to the Afanasievo culture (Molodin, Alkin, 2012, p.149-150).

4.2. Kermutsi, burial ground

The monument is located on the Altai - Burzin road, near the village of Kermutsi, about 12 km southwest of the city of Altay. The Kermutsi river flows on the southern outskirts of the Altai mountains and there are many monuments along the north-south steppe area. Excavations were carried out in three areas from the north of the road and there are stone sculptures, stone kurgans with different types of structures, monuments of various periods and cultures.

In 1963, 32 graves were investigated on this monument. For the first time in research, an incense burner, two ceramic vessels and a handle with in the form of an animal head were detected. Materials that belong to the Bronze Age were published by A.A Kovalev in 2007. All of 22 tombs were excavated. There are stone sculptures and vertically placed stone slabs next to some hedges and simple kurgans without fences. It was observed that no more than four stones and sculptures were accompanied by individual fences. Although contradictions about dating and cultural definition persist, it is argued that there are ceramics from Afanasievo Culture (Molodin, Alkin, 2012, p.151).

4.3. Guçung (Kitay) City

The Syduytutsyu monument was opened in 1976. It is located in the district of Guçung on the north side of the Bogda-Shan range and is separated by the Tengri (Tien Shan) mountains and the Turpan plain, and it is also the southeast border of the Junggar Basin. Archaeological materials were collected from the surface of a small dune. There were scattered human bones, animal bones and blackened ceramic pieces in the area of 400x60 m. Local residents found two well-preserved vessels. There are pieces that resemble Afanasievo ceramics with vessel shapes and ornaments and it contains analogies with the Bertek-33 monument (Molodin, Alkin, 2012, p.153).

5. Memorials of Afanasievo Culture in Uzbekistan (Zerevshan)

The monument is located on the banks of the Zerevshan River, 16 km east of Samarkand (Avanesova, 2012, p.8). It can be represented by 5 reconstructed, 30 plaster

decorated and 2 unadorned ceramics. Gryaznov argues that the ceramics in here mimic the Afanasievo type (Avanesova, 2012, p.13).

Avanesova suggests that the materials she collected were small in volume, but the Yamno-Afanasievo early pastoral groups emerged with an advanced economy at the beginning of IV-III millennium BC. It also states that this complex deserves special attention (Avanesova, 2012, p.8-9). The pottery that was obtained resembles the Afanasievo types: Pestle shaped objects, flint tools, ceramics with herringbone ornaments, arrowheads, bone and clay crafts, and incense burner piece. In addition, there are ochre traces in the fence and grave fillings, and there are a significant number of sheep, cow and deer bones. As a typology, the mountainous AI contains analogies with its structures and contents in Khakassia and Tuva. Due to the Afanasievo component, the formation of the monument is thought to be largely (Avanesova, 2012, p.8-9). What makes the Zerevshan monument special is these ceramics are found in a closed complex and in a common structure, and chronologies coincide with the same periods. This situation makes it different from other monuments of the Central Asian paleometal period.

According to Avanesova, the ruins in the Zerevshan region may cause the Eurasian early pastoralists to expand southward in terms of the geography in which they spread. It even claims to be connected with the birth of the Afanasievo culture. It also relates to the Yamnaya culture, but the closest is the Afanasievo culture. So much so, funerals are completely similar to the graveyard of Sarazm. (There are graves in the center or in the walls of the structures, orientations of graves such as southwest-northeast, multi-sex burial pits and traces of ochre etc.) (Avanesova, 2012, p.20) These similarities likely contain not only cultural but also genetic similarities. Afanasievo-type ceramics in the Sarazm II layer can further strengthen the presence of genetic relationships (Avanesova, 2012, p.23). Also, according to the author, the Zhukovsky complex is the Yamno-Afanasievsky monument and it is located kilometers away and strengthens the theory of the immigration of Yamnaya culture carriers to Central Asia (Avanesova, 2012, p.25). We disagree with this view.

6. General Features Of Afanasievo Monuments in Altai Mountains and Yenisei

6.1. General Features of Afanasievo Monuments in Altai Mountains

The study of Afanasievo monuments in the mountainous Altai accelerated in the mid-1970s until the 1990s. Altai State University archaeological work started in 1976 Yelo Village in the Onguday region. All of several monuments were identified and some were excavated.

Academics analyzed a total of 49 objects from 11 graves. In addition, 14 gravesites were found by Astrahan State University, but no excavations were made and those that belong to Afanasievo culture were recorded (Stepanova, Vladimirov, Tsib, 2005, p.20-21). More than 70 Afanasievo burial grounds were identified in the Altai mountains and more than 240 graves were excavated with the studies conducted until today. In addition, 40 settlements are known of which 10 were excavated with an area of 1 to 1432 square meters. In total, more than 3000 square meters of the area was exposed in the settlements. In addition, the study of the Afanasievo cultural layer was carried out in four caves.

The legs of the deads were bent 85% towards their backs. More than 60% of the graves are covered with ochre or have ochre clusters (Stepanova, 2010, p.177-178). Fences of vertically placed plates and egg-shaped vessels with a sharp base also have the same percentages. It is very difficult to define the orientation of the buried people. Although many orientations such as southwest, west and east are detected, the most common direction is southwest with 28% (Stepanova, 2012a, p.203). Eastern orientation is also dominant in the Altai monuments. Although the orientation of buried people is 59% in southwest-west, west, west-northwest; northeast, east, southeast and southeast-east are at a considerable rate with 38%.

In the Afanasievo monuments in the Altai Mountains, we see the types of structures built in different ways. The main differences are the mounting of slabs and stones horizontally or vertically. There are also mixed construction types and some objects are formed with solid dams that do not have additional structures such as crepids. In various monuments such as Boytigm-II, Bertek-33 and Saldyar-I, structures that consist of large rocks or stones are also known (11%) (Stepanova, 2012a, p.204). The proportion of fences that consist of vertically placed plates is quite dominant at 59%, but it is argued that this is due to the ease of detection of such monuments. As a result, we do not know the actual proportion of monuments of different structures.

Diameters of grave structures generally vary between 0.8-16.5 meters. Those with a diameter of 0.8-5 meters are 56.5%, those with a diameter of 9 meters are 32%, and those with a diameter of 10-16.5 meters are 12.5%. The grave structures with a diameter of 31% in 2.4-4 meters are the most excavated monument types. The diameter of the objects in the Karakol region is 19-20 meters, and besides the Afanasievo monuments, it also includes the monuments of Karakol culture.

Burial pits are generally defined by oval or rectangular pits. Some tombs take the oval shape towards the bottom. Grave types such as round and square are rare. Typical rectangular

pits towards the ground were found in Yelo-1, Yelo-Bashi and Lower Tyumechin-1. Oval shapes were found in the monuments of Saldyar-1 and Ust-Kuyum. There are also graves with vertical or inclined walls. (Such as First Mejelik-1, grave 3, 4, 5 and Tenga-4, grave 1) Therefore, a difference in size occurs between the top and bottom of the grave. During the construction or dismantling phase, there is also the possibility of this happening (Vadetskaya, Polyakov & Stepanova, 2014, p.313,316-317).

All of 230 people that include 62 children, 21 young people, 147 adults (55 men and 41 women, 51 adults, buried as defined by gender and age) were buried in 201 graves, and the estimated age of 134 people was determined. 57% of those that were buried are adult men, 43% are adult women and 36% are children and adolescents. The Saldyar-1 monument draws attention with 63% child and adolescent graves. The closest monuments to this rate are the tombs of Lower Tyumechin-1 with 47% and Kara-Koba-1 with 40%. We can also say that the majority of men died under the age of 50, and most of the women died under the age of 35 (Vadetskaya, Polyakov & Stepanova, 2014, p.320).

The ceramics in the Mountainous Altai; it is classified as 66% sharp, 19.5% round and 9% straight. Unexpected objects make up 6%. Analysis of the forms showed that there were vessel figures with a special similarity. Products differ in terms of ornamentation. It can be said that this situation occurred by a group of potters with similar qualities by imitating a single sample. The composition of Afanasievo ornaments is usually not complicated. It consists of repeated print rows on the entire surface of the products. Less often it is divided into zones: the upper part of the container (shoulder or upper part of the shoulder) can be decorated differently from the lower part. In general, the horizontal arrangement of the elements of the ornaments is typical, and sometimes, there are also vertical or cross arrangements. For vessels with a horizontal arrangement of decorative decoration elements, the sequences of parallel stamp slopes that is inclined to one side are typical, and this type of pots make up 52% of the products. Another typical ornament is herringbone with 35%. In 12% of the vessels, the pattern consists of partially or completely horizontal lines, that were usually made by dragged the sharp edge of the tool. Cross and vertical rows on Afanasievo ships are extremely rare. Ornaments also known as plants, trees, and larvae are also rare (Stepanova, 2014, p.63-64).

6.2. General Features of Afanasievo Monuments in Yenisei

Afanasievo monuments in the Minusinsk basins are less known than the Mountainous Altai region. This may be the reason why kurgans are in forest-steppe areas and are scattered around the Yenisei River and hidden in the hills. The structures in this area are usually invisible without excavation, but darkened tops can be selected. In addition, the culture took its name from Afanasievo Mountain (Vadetskaya, Polyakov & Stepanova, 2014, p.292). Approximately 360 graves were investigated on 31 monuments in the central part of Yenisei and about a dozen settlements were identified. In the study by Stepanova, the materials of 250 graves were taken into consideration. Individual graves are dominant with 71%, and double graves are 15.5%, triple graves - 6% and graves of 4 to 8 people - 7.5%. Mass graves were not found in every monument, and usually, there are no more than one grave on a burial ground (Stepanova, 2012a, p.180). In the Letnik VI monument, individual tombs are 12. The graves where two people are buried are observed in kurgan 3 (one child and one woman) and kurgan 25 (two men). There are 13 individual graves and 3 double graves in the Afanasievo Mountain monument. There are 9 individual graves and a double grave in the Karasuk-III monument. The Krasny Yar-I monument has 9 single graves and 5 two-person graves (Vadetskaya, Polyakov, Stepanova, 2014, p.306-307).

Collective grave structures have a rate of about 30% (Vadetskaya, Polyakov, Stepanova, 2014, p.298). People in collective graves were probably formed by burials of people who died at different times. (Three things stand out in the graves: First, there is a special area for the deads and objects in the graves. Second, the graves contain the bones of the dead that were packed tightly. Third, during the burial or initial storage of the corpse, the skull is kept separately. It is probably for protection purposes. Due to reasons such as abduction and robbery, skull cult may have occurred. In the following millennia, such beliefs stand out in Turkic communities.) (Vadetskaya, Polyakov, Stepanova, 2014, p.302). Funeral rites and burials were rarely held in the spring and autumn, often in summer. The orientation of burial pits and pre-heating traces of spring, autumn pits prove that those who died in the cold season are buried again. In addition, most of the grave structures are in southwest-northeast orientation.

Although generally exhibiting standard features, the monuments on the right and left shores of the Yenisey River differ in size and material. Except for children's graves, all graves are of a large scale, The grave complexes are generally detected outside of pit-shaped or dome-shaped structures, near hills or crepids-fences (Vadetskaya, Polyakov & Stepanova, 2014, p.294-295). With M.P. Gryaznov dug more than 40 kurgans in this region, Afanasievo

culture was defined the marriage and family relations of the carriers for the first time (As a result of excavation of nine burial grounds, age groups of 150 dead, including 40 infants and 26 young children, were formed.) (Vadetskaya, Polyakov & Stepanova, 2014, p.293). Evidence was detected that the age of marriage began from the age of 13. Two women between the ages of 13-14 were found on grave 9 and 11 in the Krasny Yar-1 monument. Someone has baby bones in her uterus. The other woman was buried with two newborns and a 3-6-month-old baby.

There is a child together with an adult woman or man in the first dominant grave. The second dominant grave is the graves where there are two people of the same or different sex. In addition, one child may be found or not. In monuments with at least 4-5 kurgans, 1-2 graves that appear to be noble graves are clearly observed. In this kind of noble graves, kurgans were quite large compared to others (Vadetskaya, Polyakov & Stepanova, 2014, p. 297-298).

The main inventory of the monuments (18 graves) that were dug by Teploukhov around Afanasievo Mountain was: Clay pots that were used various ornamental techniques, mostly egg-shaped, less often spherical. The presence of a small number of meat dishes in the graves led us to define the hunting and cattle breeding aspects of the culture. About 20 years later, S. V. Kiselev dug 34 more kurgans, and in addition to egg-shaped ostrodon and spherical-bottomed vessels, it was added pot-shaped containers and vases on the pallet with a flat bottom-shaped bottom. Thus, it was understood that the inventories in this region were more diverse. Various types of vessels that were added later were identified for later periods. According to their capacities, vessels are classified, not their size. Pots of 1.5-3 liters are in the majority and rarely more than 10 liters are detected. The largest capacity container was measured up to 200 liters. The capacity of children's containers is 0.5 liter or less. The containers are thought to be used for cooking or heating liquid food (Carbon was found only in the upper part of the vessels.). This view was proven by digging Tepsey settlements. According to Kiselev, Yenisei carriers of Afanasievo culture dealt with fishing, collecting and hunting, and have taken the first steps in raising animals (Vadetskaya, Polyakov & Stepanova, 2014, p.292-293).

On the other hand, there is no known Afanasievo cemetery in Yenisei which has no influence with the Okunev culture or the Okunev population. Tas-Khazaa, Kamyshta, Afanasievo Gora-6, Beltyry; They are the common structures that culture of Okunev and Afanasievo. Some academics suggested that these structures are called "Sayan Complex" (Sokolova, 2012, p.231).

7. Origin Problem

Many scholars accept the Afanasievo culture as a continuation of the Yamnaya Culture and they argue that the Early Eurasian pastoralists of Indo-European origin were the bearers and founders of this culture, but we do not agree.

Withal the developing technology, radiocarbon test methods have changed and the AMS method which is considered to be more reliable has been used instead of the LSC method. Although the number of monuments that were studied with this method is insufficient, Afanasievo was dated the dating of the cultural monuments a few centuries earlier. Considering the lack of data which was obtained with this new method that was related to Yamnaya (Pit-Graves) Culture, it is doubtless that chronological changes will occur in the same way. As a matter of fact, it is very important that both cultures belong to similar periods in chronological terms that they are genetically related and show some analogies craniologically, but this does not prove the possibility of migration from west to east (Likewise, migration from east to west?). On this plane, there is also a situation where both cultures are defined as the same culture. On the other hand, this identification problem is also encountered in the Afanasievo and Okunev cultures (Sayan Culture). As a result, the carriers of this culture are likely to be archaic remnants of Turkic or Proto-Turkic peoples. In order to detail this opinion, we will analyze it under 3 main headings.

7.1. Chronology

The first chronological description of Afanasievo culture was made in 1929 by S.A. Teploukhov and in the coming years, many researchers connected the monuments of this culture to the first stage of the Eneolithic Age. Over time, radiocarbon history has been used as the only way to clarify the chronological framework. Until 2009, 29 radiocarbon dates were determined by liquid scintillation (LSC) method in Middle Yenisei and all dates were recalibrated by using the OxCal 5.0.2 program and IntCal04 calibration curve. 24 of them were obtained from wood samples in Chernova-VI, Krazy-Yar-I, Vostoschnoye, Letnik-VI, Raspberry Log, Small Kopeny-II, Sargov Ulus and Itkol-II burial grounds and so on. 7 analyzes that includes human bones were also made from the Afansievo Mountain and Karasuk-III burial sites. Two of the analyzes are in BC. 518-386 and A.D. 663-772 dated. Almost all of the 29 samples that were obtained in total were 33-25th centuries BC dated. This chronological boundary was also considered the most likely date for Afanasievo culture

(Polyakov, Svyatko, 2009, p.24-25). As an exception, four samples were taken from two hedges on the Raspberry Log grave ground and it was determined as a 37-34th centuries BC dated (Polyakov, 2010b, p.162). Due to the "Old Wood Effect" of the data that was obtained from wood should not be ignored. Cause, there is a the possibility of giving older dates. So much so that, this situation will be clearly revealed in the wood tests that were carried out with the AMS method in the coming years.

As a result, until that year, 200 radiocarbons dates from Afanasievo culture was made and the results of 36-19th centuries BC were reached. Later, various corrections were made by using the calibration curves and it was decided in the 33-25th centuries BC (Polyakov, Svyatko, 2009, p.27).

In 2010, Polyakov; Referring to 75 publications and radiocarbon data on Afanasievo culture on Altai, Orta Yenisei and Mongolia, he stated that the length of the culture was determined as 4040-2289 BC with a probability range of 95.4%, and he stated it that should be the most reasonable date for the formation of the culture was 38-37th centuries BC. In addition, he said about the chronological frame should have been centuries 38-25th BC (Polyakov, 2010, p. 160,167).

While the middle Yenisei monuments existed in 29-25th centuries BC, the modern Accelerator Mass Spectrometry (AMS) method tests determined that the Altai monuments existed in 31-29th centuries BC. The assumption that Altai monuments are older has been accepted by many archaeologists, but no evidence has been presented except for radiocarbon analyses (table 2) (Polyakov, Svyatko & Steponova, 2017, p.66).

Radiocarbon dates obtained by AMS method of Afanasievo culture areas in Altai [Rasmussen et al., 2015; Svyatko et al., 2017]

Lab. Index	Material	Sample Origin	¹⁴ C age, BP	Calibrated date, BC
UBA-22983	human bone	Yelo Bashi, burial 3	4322±37	3078–2886
UBA-22984	human bone	Yelo Bashi, burial 4	4392±40	3311–2905
UBA-22985	human bone	Kara-Koba-I, burial 1	4394±37	3308–2907
UBA-22986	human bone	Kara-Koba-I, burial 3	4346±35	3084–2896
UBA-35116	wood	Kara-Koba-I, burial 3	4331±31	3022–2893
UBA-22987	human bone	Ozernoye-II, kurgan 1	4404±36	3316–2911
UBA-22988	human bone	Ayridash-I, burial 15	4336±34	3081–2892
UBA-26406	human bone	Inskoy Dol, kurgan 9	4255±35	2922–2704
UBA-29305	human bone	Saldyar-I, fence 17	4344±41	3089–2891
UBA-29306	human bone	Saldyar-I, fence 31	4462±34	3339–3021
UBA-29307	human bone	Saldyar-I, fence 36	4409±34	3316–2915
UBA-29308	human bone	First Mejelik-I, fence 12	4389±33	3097–2912
UBA-29309	animal bone	First Mejelik-I, fence 12	4473±35	3341–3026
UBA-22989	sheep bone	Small Dugan, settlement	4209±34	2901–2677
UBA-22990	roe deer bone	Small Dugan, settlement	4197±36	2896–2666
OxA-31219	human tooth	Ust-Kuyum, grave 6	4423±29	3322–2923
OxA-31220	human tooth	Ust-Kuyum, grave 6	4442±29	3331–2935

Table 2: (Polyakov, Svyatko, Steponova, 2017, p.65)

7.2. Phylogenetic

According to the genetic data that was obtained as a result of archaeological studies of the population in the Afanasievo culture, almost all of the Y-chromosomal DNAs (paternal) belong to Haplogroup R1b, and the vast majority of them belong to the L23 subclass. Recently, regarding the above data; paleogenetic studies that include many examples from monuments such as Afanasievo Mountain, Karasuk-III, and Itkol-II were conducted. These studies were conducted by Strasbourg, Copenhagen, and Harvard Universities. Copenhagen University analyzed three samples from the Afanasievo Mountain kurgan area. In general, when the genetics of Eurasia were characterized in the Bronze Age, it was seen that the populations of Yamnaya and Afanasievo cultures were almost the same. In addition, genetic traces of "Yersinia Pestis" plague bacteria were found in these materials. As the remains of 4 adults (3 females and 1 male) and 3 children were identified from the tomb 15 of Mount Afanasievo, it was accepted as a mass grave and it was thought to be a major deadly disease which includes plague. Bone and tooth samples were taken from the skeletons in the grave and tests were performed by using the AMS (Accelerator mass spectrometry) method. As a result, Yersinia Pestis (Plague) bacteria were found in two out of three women and radiocarbon dates were obtained from 2887-2677 BC and 2909-2679 BC (table 3). Together with its dating, it has been registered as the oldest evidence of the plague disease in the Bronze Age (Polyakov, 2019, p.96., Rasmussen, Allentoft, Nielsen, Nielsen, Kristiansen, ..., Willerslev, 2015, p.573).

Sample	Country	Site	Culture	Date (cal BC)	CO ₂	pMT1	pPCP1	pCD1
RISE00	Estonia	Sope	Corded Ware	2575-2349	0.39	0.36	1.40	0.66
RISE139	Poland	Chociwel	Unetice	2135-1923	0.14	0.24	0.76	0.28
RISE386	Russia	Bulanovo	Sintashta	2280-2047	0.82	0.96	1.12	1.60
RISE397	Armenia	Kapan	EIA	1048-885	0.25	0.40	6.88	0.50
RISE505	Russia	Kytmanovo	Andronovo	1746-1626	8.73	9.15	34.09	17.46
RISE509	Russia	Afanasievo Gora	Afanasievo	2887-2677	29.45	16.96	31.22	50.32
RISE511	Russia	Afanasievo Gora	Afanasievo	2909-2679	0.20	0.24	1.19	0.60

Table 3: Overview of the Yersinia Pestis Containing Samples (Rasmussen, Allentoft, Nielsen, Nielsen, Kristiansen, Willerslev, etc., 2015, p.573)

The data that was obtained by taking four samples from Itkol-II / Kurgan 3 were published by Strasbourg University. On the other hand, five kurgan materials from four burial sites in the Altai Mountains were analyzed. These are Bersyukta-I, Kurgan 1; Tytkesken-VI, Kurgan 95; Choburak-II, Kurgan 1, and Saldyar-I, Kurgan 25 and 36. According to the Y-chromosomal DNA samples that were analyzed from the Itkol-II monument; 3 of them were identified as belonging to the L23 marker / SNP / subclass / haplotype (R1b1a1a2a) of Haplogroup R1b, which is the typical line of the Afanasievo male population. The other male is the Okunev Culture carrier and was identified as having the haplotype R1b1a1a, i.e. the P297 marker. P297 is considerable in terms of being the upper class of L23, M269, and M412 markers. Finally, in 2018, 26 samples were taken from various regions of the Afanasievo culture by Harvard University. 14 of them belong to Central Yenisei monuments and 12 of them belong to Altai monuments. Due to the high number of samples which were taken from different regions and the quality of the laboratory studies, more reliable data were obtained, but the problems of the Afanasievo culture were not mentioned much because the main subject of the study was the formation of the population in India. The data that was obtained from these three studies show that Yamnaya Culture has combined with the Afanasievo culture almost into a single genome set and it is except for the three samples it was. Moreover, 15 of the 18 diagnoses which were obtained with Y-chromosomal DNA are to a single subclass and as a result of "lower pseudo-variants of the L23(?)", it is understood to belong to R1b. The homogeneity of the male group draws attention and they have the same haplotype as the group that characterizes 95% of the Yamnaya Culture. 8 of the 15 diagnoses belong to the group in the Minusinsk Basin and 7 of them belong to the group in the Mountainous Altai and they indicate that both regions have an equally close connection. Contrary to this homogeneity, three males (a father and two sons) were identified in Kurgan 1- Tomb 1 in Karasuk-III burial site in Minusinsk Basin that belongs to Haplogroup Q1a2. Haplogroup Q is vital in terms of being the characteristic genome of Okunev Culture (fig.73). This situation we mentioned earlier somewhat explains the confusion in the common monuments. The two populations may go in the reciprocal assimilation process (or it may indicate the habit of living together of haplogroups Q and R that subclasses of haplogroup P?) (Polyakov, 2019, p.96-98., Hollard, Zvenigorosky, Kovalev, Kiryushin, Tishkin, Lazaretov, ..., Crubezy, 2018, p.6).

Owing to the fact that there is a lot of diversity in mitochondrial DNAs (maternal), more emphasises will be placed on paternal DNAs in order to better analyze the interaction

with common ancestors and other cultures. In this context, the theory that the Yamnaya Culture carriers (pastoralists) who migrated from west to east constitute the basis of Afanasievo culture, "Steppe Theory" or "Kurgan Theory" will be given information and discussed. Therefore, in order to explain the Haplogroup R1b in detail, haplogroups / subclades such as R1a, R, Q, and P will be briefly mentioned.

Haplogroup P probably originated in Southern Siberia 38,000 years ago and later, it split into Haplogroup Q and Haplogroup R.¹ Also, Haplogroup R originated 30 thousand years ago and Haplogroup R1 mutated 26 thousand years ago in Southern Siberia has also appeared (Klyasov 2012, p.88).

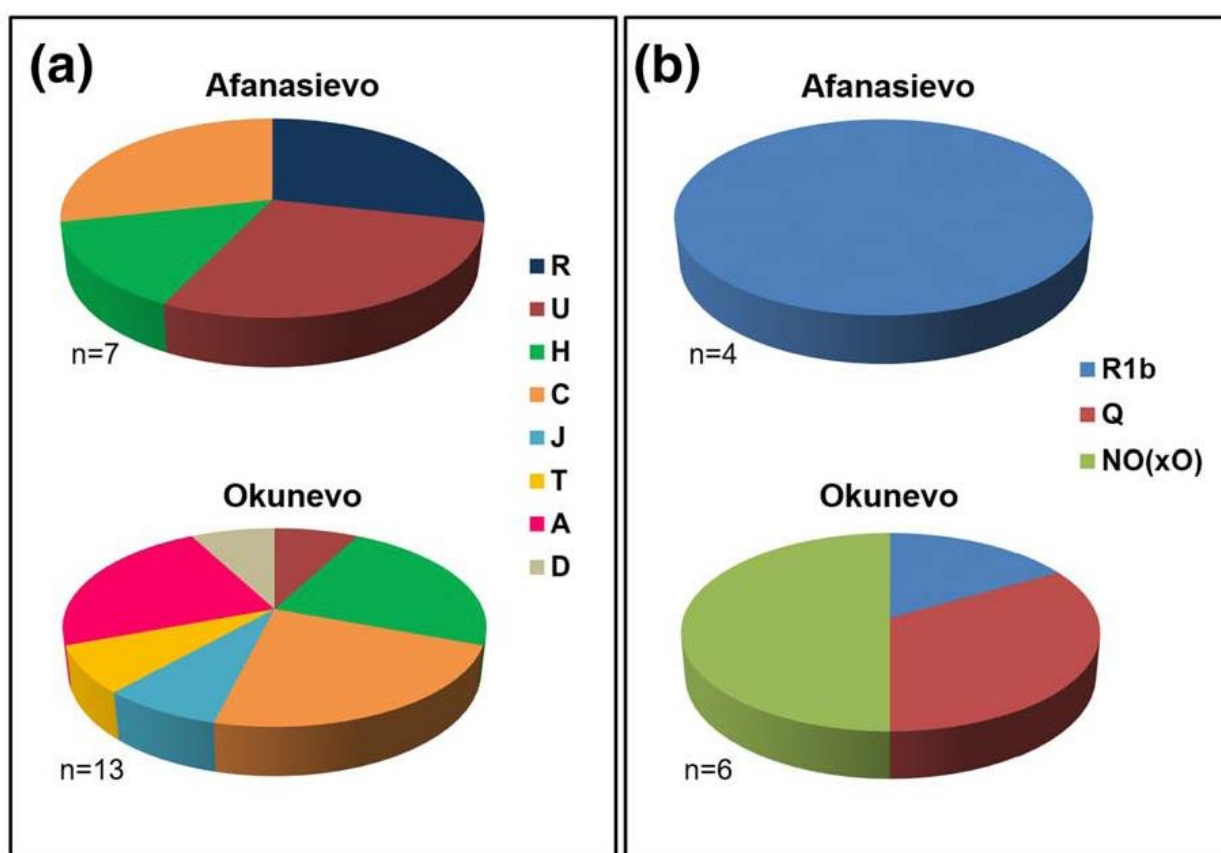


Figure 73: Mitochondrial (A) and Y (B) haplogroup distribution in studied populations Hollard, Zvenigorosky, Kovalev, Kiryushin, Tishkin, Lazaretov, Crubezy, etc..., 2018, p.6)

Haplogroup R1a (M420) is thought to emerge 20 thousand years ago in Southern Siberia. Later, some of the carriers of this subclass moved westward through Tibet and arrived

¹ By virtue of each of the haplogroups is the upper class or subclass of each other, terms such as "haplogroup, haplotype, and subclade" will be used at the same time.

12 thousand years ago in India, and 10-9 thousand years ago from there migrated to Anatolia on Iran. It is claimed that they came to the Balkans well-nigh 9-8 thousand years ago and interacted with local haplogroups there and formed the Proto-Indo-European language. (Some linguists argue that the early symptoms of this language occur in Anatolia.) In the following millennia, when the carriers of R1b1a2 began to fill Europe, R1a subclasses migrated to various places. The haplogroup R1a1 migrated to the Russian Plain 4800-4600 years ago, and from there, some moved south to Anatolia and the Arabian Peninsula, some to the southeastern Iranian region, and some to the South Ural and North. They came as far as India.² The arrival time in India is shown as 3800-3500 years ago. This is significant in that the community with the definition of "Aryan" belongs to this haplogroup. So much so that, the haplogroup R1a constitutes about 72% of some of the upper casts of the Indians (especially Brahmins). Just about half of Eastern Europe has the same DNA as the groups (Aryan) in India 3500 years ago. Owing to these and similar reasons to these, Anatole Klyasov suggested naming Haplogroup R1a and its subclasses as Aryan (Klyosov, Mironova, 2013a, p.167., Klyosov, Rozhanskii, 2012b, p.1-2., Klyosov, Tomezzoli, 2013b, p.102). Because of the formation of R1a is assumed to be 20 thousand years ago, we partially agree with this opinion. The beginning of the Proto-Indo European language is dated back to 10-8 thousand years ago. However, for the formation of a language, communities have to live in isolation for a long time. Another isolated part of R1a that did not migrate or migrated to surrounding areas is likely to form a non-Indo-European language. There is a difference of at least 10-16 thousand years between the emergence of haplogroup R1a and the emergence of the Proto-Indo European language or Indo-European language. Also, Klyosov stated that the haplogroups N, O, P and R might have an agglutinative language at the beginning, and he argued that a flexible linguistic structure of Indo-European language was formed in the following millennia.

Y-DNAs were extracted from the teeth of two previously excavated skeletal remains that belong to the Khazar Khaganate Period in the Lower Don region in the article published in 2017. Both individuals were found to belong to the haplogroup R1a and its subclass Z93.³ After it was proven unrelated to Jewish haplogroups, it was analyzed that their common ancestors may have lived in the Scythian period or even a little earlier (closer to the present). It is also important in this respect that only R1a is detected among the Scythian Y-DNAs.

² The chronology between R1a and R1a1 is not yet uncertain.

³ One belongs to the Z280 marker, but is written like this because it is a subclass of Z93.

Today, R1a-Z93 is quite common in Karachay-Balkars, Tatars, Bashkirs, Kyrgyz, and Uzbeks, and in Slavic men of Polish, Ukrainians, and Russians who are estimated to carry the R1a haplogroup, this SNP (Single Nucleotide Polymorphism) is very rare. Thus, it also supports the idea of the formation of a non-European language. It is also possible that the common ancestors of the Turkic communities that are mentioned above are dated to the Scythian period. For these and similar reasons, the R1a-Z93 subclass is assigned to Turkic tribes (The markers observed in the upper caste of Indians, Pashtun and Tajiks can be explained by historical interaction.) (Klyosov, Faleeva, 2017, p.18-20). On the other hand, in 2009, 13 Altai R1a1 haplotypes were listed, and 12 of them displayed fairly close base haplotypes and it results in a common ancestor of 825 ± 320 years. When compared to haplotypes in the Russian Plain (Indo-European), it was understood that they had common ancestors between 10,400 and 7,300 years ago. Also, Tuvans, Kyrgyz, Kazakhs, and Turks have the same haplotype. The presence of R1a1 haplogroup in the rate of 18-32% in Salar peoples (Yellow Uighurs) in China is also very significant in this respect (Klyosov, Rozhanskii, 2012b, p.2-3). Nevertheless, the term Aryan can be used as the majority of the population with haplogroup R1a is Indo-European language peoples, but not all communities that belong to R1a subclass are Aryan.

Haplogroup R1b (M343) is thought to emerge 16,000 years ago by analyzing the gene data of the Afanasievo culture skeletons, and this chronological definition is supported by determining that the common ancestors of the R1a1 and R1b1a2 haplotypes lived $17,100 \pm 2,400$ years ago. Previously, two different opinions were made for the R1b subclass. These are that it is from the Anatolian origin and it emerged in Europe 30 thousand years ago. The 4408 haplotypes/subclasses that belong to the R1b haplogroup dates from 16000 to 1500 years ago by taking into account the ancestor/base haplotypes of the R1b populations and the migration map is as follows: Carriers of R1b that were seen and originated in Southern Siberia or Central Asia moved westward by 6500-6000 years. After that, from there, they moved to the south and came to Anatolia and Mesopotamia. They appeared 4500 years ago in the Balkans. They moved to North Africa over the Middle East 5500-5000 years ago and from there, they reached the Iberian Peninsula 4800 years ago. They completely filled Europe in the range of 4000-2500 years ago and have become dominant especially to the islands in the region up to 85-95%. The creators of the Bell Beakers Culture are also the R1b and subclass carriers who came to this region. The haplotype data clearly show that the R1b subclass was in a state of continuous proliferation in Europe at that time, and there is evidence that they

moved from the Iberian Peninsula to the east to the Balkans, to the western border of the Russian Plain, and even to the Baltic Sea (Klyosov, 2012a, p.87-88., Lee, Makarewicz, Renneberg, Harder, Krause-Kyora, Müller, ..., Ostritz, 2012, p.5. Klyosov, Rozhanskii, 2012b, p.2). R1b-L21 subclass also emerged in the south of France 4000 years ago and passed from there to the British Island.

R1b haplogroup populations were named "*Arbin*" or "*Proto-Turkic*" by Klyosov. The language of this branch is agglutinative. Basques, which carry 90% R1b1a2 subclass, can be shown as the agglutinative language structure that came without assimilation until today (Klyosov, 2011, p.1718). The reason we give this example is it constitutes the haplogroup, the ancestor of 60% of the population of modern Europe (This gene originated 4800-3300 years ago.) (Klyosov, 2011, p.1730). The reason why most of them are flexible Indo-European languages today is the haplogroup R1a1 filled Europe again 3000-2,200 years ago (Klyosov, 2011, p.1740). It is understood that the languages of R1b and its subclass carriers are assimilated after this period. The reason for the absence of genome changes can be shown as the disappearance of other groups in the places where the R1b haplotype migrated. In this context, evidence of the E1b-V13 haplotype, dating to 7 thousand years ago in Spain can be shown. Because this haplotype unites with a common ancestor only 3600 years ago. As a result, there is a gap between 7000 and 3600 years ago. This gap is observed in all haplogroups / haplotypes / subclasses of ancient Europe (from 4800 years ago). Haplogroup I1 disappeared, Haplogroup I2 fled to Ireland and the Russian Plain, and the majority of Haplogroup G disappeared. During this period, the R1a1 haplotype also disappeared almost completely from Europe. While the R1b population was found in Italy 4.125 ± 500 years ago, in the Balkans 4.050 ± 890 years ago and in Slovenia 4.050 ± 540 years ago but the R1a1 population was absent. Apart from the disappearance of haplogroup R1a1, the presence of crushed skulls and stone arrowheads in Scandinavia and Germany almost occurred the possibility of a "*bottleneck*" with the arrival of R1b carriers in the region. It was observed that at the end of the 2nd millennium BC, Haplogroup I1 started to proliferate in Europe and 2300 years ago in Eastern Europe. So much so that, the common ancestor of the I1 haplotype carriers was dated to only 3300 years ago and R1a1 around 2700-2500 BC. After the mentioned dates, the Arbin or Proto-Turkic language populations (R1b1a2) may have gradually adopted Indo-European languages and existing European languages may have formed (Klyosov, Tomezzoli, 2013b, p.102-104., Klyosov, 2011, p.1717,1719,1738). Many linguists have argued that the names of old European places, tribes, and materials cannot be

explained in Ancient Greek, Latin, and Semitic languages and can be explained in Proto-Turkic or Turkic languages. Moreover, as the Aryans filled Europe again, the language of many tribes changed, but it can be said that the populations in the Volga and the North Caucasus preserve the old European Turkic language (Klyosov, 2011, p.1726).

On the other hand, some of the peoples from Modern Uighurs, Bashkirs, Kazakhs, Siberia, Central Asia, and the Urals who carry the R1b1 haplotype, and their conservation of the same genome for 16 thousand years has contributed to the R1b haplogroup by being named Proto-Turkic language (Klyosov, 2011, p.1718). Also, Haplogroup R-M73 (R1b1-R1b1a1) is observed in all Ural-Turkic language peoples (Klyosov, 2012a, p.92).

If we mention the R1b-L23 subclass which is the characteristic genome of the Afanasievo culture other than the above data, the L23 subclade emerged around 6000-6200 years ago at the confluence of Asia and the Russian Plain. While others headed towards Europe 4500 years ago, some of them migrated to Anatolia and the Middle East through the Caucasus. The dominant R-L23 haplotype has in Bashkirs living on both sides of the Ural Mountains and in Northern Kazakhstan. L23 SNP (Single-Nucleotide Polymorphism) has at a rate of 84% in Perm Bashkirs and 81% in Baymak Bashkirs. In the past years, 29 of the L23 subclade markers that are related to Bashkirs were published and 26 of them were exactly the same. As a result, the entire Bashkir L23 branch had a common ancestor living only 575 ± 175 ybp.

It also differed with three mutations that are compared to the European R-L23 base haplotype, and the common ancestor was dated to 5500 years (with 200 generations difference). On the other hand, L-23 subclade and R1b1a2 haplotypes are detected in almost all communities in the Caucasus. (For example, 79 of 81 haplotypes in Abkhaz belong to the L23 subcategory.) It is also very important that the L23 haplotype is seen more than 70% in Armenians and Anatolian Turks and is the second most dominant branch after the Bashkirs⁴ (Klyosov, 2012a, p.93- 94). Currently, in Europe, we only see haplotypes / subclasses R1b1a2 (xL23) which derived from common ancestors living at a maximum of 4500 ybp. The descendants of the earlier L23 ancestors did not survive or did not come from the East Russian Plain, Anatolia, and the Middle East (Klyosov, 2012a, p.99).

⁴ First branch 4600 ± 490 ybp; second, 4200 ± 440 ybp. Therefore, their common ancestors lived $(4600 + 4200 + 2025-81 \text{ generations-}) / 2 = 5400 \pm 800$ ybp.

It is doubtless in the light of all these data that the migration route of haplogroup R1b is from east to west. We have already mentioned that haplogroup R1a has an eastward migration trend at the end of the 3rd millennium BC. M. Gimbutas highlighted in "Kurgan Theory": *"The Proto or Early Indo-Europeans, whom I have labeled "Kurgan" people, arrived from the east, from southern Russia, on horseback. Their first contact with the borderland territories of Old Europe in the Lower Dnieper region and west of the Black Sea began around the middle of the 5th millennium BC. A continuous flow of influences and people into east-central Europe was initiated which lasted for two millennia"*. (Klyosov p.1761). It can be seen that it is certain that those which came from the east were not Indo-Europeans. Because, it took another 1700 years for R1a to emerge in this region.

In addition, some researchers consider the fact that the carriers who separated in the early period of the Yamnaya Culture formed the Afanasievo culture, causing the Tocharian language to branch out from other late Indo-European languages (Narasimhan, V.M., etc., 2019, p.8, fig 3b, "The Impact of Yamnaya-Steppe Pastoralist").

In the "Caucasus" gene theory; Although it is referred that Corded Ware, Bell Beakers, and Scandinavian Cultures are genetically very similar to European Late Neolithic and Bronze Age cultures, it is stated that these cultures are most closely related to Yamnaya (Allentoft, Sikora, Sjögren, Rasmussen, Rasmussen, Stenderup, ..., Damgaard, 2015, 168-169). Considering the R1b-L23 haplotype and the migration routes of R1b, we can clearly say that we do not agree with either of these theories.

As a result, we will address as Proto-Turkic to the Haplogroup R1b carriers that emerged the Kurgan Culture. We will try to explain why we use this terminology in the title of culture after genealogy data.

7.3. Culture

Up-to-date information on chronology and genetics were conveyed, and we have clearly stated that the Afanasievo culture is not of Indo-European origin. Likewise, we will declare our opinions on *"culture"*, another pillar of this theory.

The general framework of the Afanasievo culture; All features such as kurgan structures that we mentioned earlier, wooden tombs and pit tombs, shelters, the use of felt and wood coating in the tombs, ceramic structures, and processed figures are not observed in Ancient Indo-European and Middle Ages European societies, but the steppe, the fact that it is frequently detected in the steppe tribes that we can call Proto-Turkic origin and in the Middle

Ages Turkic societies further strengthens the idea we defend. In addition, ancient funeral cars and mummification of the dead observed in monuments that are considered as kurgan or pit burial culture can be examples of this situation.

First of all, when we examine the word "kurgan" etymologically; We see that it is derived from the word "*shelter-korugan*" meaning "*guardian*", "*hand truck*" and "*castle*" and it is a word of Turkic origin. This word is used both for burial structures and castles which protects cities and is still present in different dialects of Turkic. For example, in Azerbaijan, "*kurgan*" is used as "*kurğan*" in Bashkirs, "*korgan*" in Uyghurs and Kazakhs, "*korgan*" in Kyrgyz, "*korgan*" in Uzbeks and "*gorgan*" in Turkmens (Çoruhlu, 2016, p.22). The using of Russians as an archaeological terminology must be because of their interaction with the Turks and their common history. Indeed, if such a culture had existed in Indo-European tribes, the word "kurgan" in their terminology would have had one or more equivalents. So much so that, we cannot see the continuity of this culture in any Indo-European tribes. In Turkic culture, we can see similar tomb structures and their partially transformed forms in the Scythians, Huns, Turkic Khaganate (Gök-Turks), and later periods.

The felt that was used in grave structures; It is very important in terms of being one of the main materials that are used in shelters which the Turks call "*yurt*", "*otağ*", "*hearth*", "*house*" and "*tent*". The word "*hearth*", which is one of the words that is used for home, dormitory, and homeland, is a concept that should be emphasized in this context. In order to understand the quarries in the Afanasievo culture monuments, we need to look at Turkic cosmogony / worldview(philosophy) and mythology. The "Fireplace Cult" or "Cult of Fire" in the Turks helps us understand why the Afanasievo population cook in their graves or offer some animal sacrifice.

Throughout history, the fire has meant a lot. For all living beings who come to land and adapt, fear became an element / figure that cannot be approached and even avoided. Along with the hominids (Homo Erectus, Homo Neanderthalensis, and Homo Sapiens Sapiens), which is still the subject of controversy by scientists. Along with the hominids (Homo Erectus, Homo Neanderthalensis, and Homo Sapiens Sapiens), which are still the subject of controversy by scientists and are the main factor of dominating and directing of the fire, our understanding of fire changed and we reached a turning point as a result changing diet habits effect to our brain functions. Along with modern people, the fire has become the foundation of life and the most important element of humanity for many societies, and for

Turks, it has become a motif that has become more meaningful over time; It has become a symbol of cleansing, and purity, light, unity and a sign of life, vitality, and transformation. According to Turkic mythology, fire is not a god but *"it was discovered by an ancestor of the Turks named Turk or sent by God."* (Ögel, 2014, p.630). In addition, it is believed that fire has a soul, and the word "ot izi" is used for the fire spirit in Altai Turks and in many other sizes. In Yakut Turks, on the other hand, the word "uot-iççite" is encountered for the spirit of fire. According to this understanding, the soul of fire (od iyesi) sits in the fire (Ögel, 2014, p.653). In ancient Turkic societies, victims were presented to the fire and their hair was made in order to get away from evil, get rid of diseases, and clean. It was the "great fire" that conveyed the victims to heaven. For Beltir Turks who were less exposed to external influences, putting the victims on the great fire can be shown as an example (Ögel, 2014, p. 631).

In Turkic belief, fire is seen with the understanding of family heirlooms. In some Turkic societies it is an ancestor heirloom, in some, it is both ancestor and mother, and in some, it is the mother heirloom, and it is believed that their souls are in the hearth inside the tent. In this context, today *"the father finds the fire and burns it; The mother sits by the hearth for the that works."* called (Ögel, 2014, p. 646). "Hearth-Fireplace" understanding is also related to ancestors and ancestors cult. It is quite striking that the expression "the hearth burned by our ancestor" is used in the prayers of the Kams (Shamans). In Yakut Turks, name ceremonies are held in front of fire and hearth. The words of oath begin with *"our grandfather in the face of fire ... I swear .."* and end with *"I swear with the flaming fire that I threw from my food"*. (İnan, 2017, p.61,63). In this context, it is quite difficult to distinguish between the Cult of Fireplace and the Cult of Fire.

We can interpret the hearths and hearths in the Afanasievo culture monuments or the ashes and bone fragments found in the pits on this platform. Today, even among Muslim Turks, the meal which has given after the dead, which is called *"dead food"*, can be seen as a continuation of thousands of years of culture. Such that, Radloff suggested that the kurgans in the area where the monuments erected for Bilge Khagan and Kul Tigin are located, could not be burials but rather places where *yoğ / yuğ / aş* (food) ceremonies were held. (İnan, 2017, p.185)

Rituals and ceremonies in society are one of the most important elements that distinguish society from others. These rituals or ceremonies are among the most important elements that reveal the mythology, world view, and belief structures of that society. The

above-mentioned *"Fire Cult"* and *"Fireplace Cult"* have turned into an important culture that we have observed in the Afanasievo culture and earlier Pit-grave cultures, and that continue before and after Islam, still preserves its place in many Turkic societies. It settled in the daily spoken language of Anatolian Turks and settled into proverbs and idioms in many ways. As an example of these, *"Fire fell on our hearth."*, *"Our hearth went out."* and we can show the words that have a place in our culture such as *"ancestor-father's hearth"*.

The animal bones and hearths that were found in Afanasievo tombs can be interpreted with the sacrificial rituals and ceremonies of the Turks. Kams or shamans do not perform rites or ceremonies without offering a sacrifice, and a blood and bloodless sacrifice must be offered each month. The most important of the bloody victims are horses, then sheep and others come. The specific issue in here is that the bones of the sacrificed animals are not broken or given to dogs. It is either burned or buried. During the rituals, the bones of the sacrificial meat are separated without breaking and cooked by two experts called *"kazancı"*. (İnan, 2017, p. 92-93, 96) Animal bones that were found in different shapes within the Afanasievo monuments may also be products of this thought.

The orientation of the dead inside the Afanasievo culture burials and the location of the tombs mostly in the east-west (northeast-southwest etc.) direction can be explained with the meaning that is given to the east and west in Turkic Culture. In the Turks, The East symbolizes *"birth"*, The West symbolizes *"death"*. The tent of Khagan, that is, the door of the otağ, the door of the ritual, and ritual places opens to the east. For example, in the Altai Turks, after the sun goes down, the first part of the ritual is performed on behalf of Ülgen. The Kam-shaman determines the place of the ritual and a special tent is set up called *"Sööliti"*. This tent is much bigger than the others and its door opens to the east (İnan, 2017, p.94). In addition, the burial of the dead in Sagays with their heads facing east if they are deemed to accepted Christianity and westward if they have the belief of Kam can be seen as a kind of continuity of the culture (İnan, 2017, p.178). As we learn about the burial traditions of the Göktürks (Celestial-Blue Turks) period, from the Old Book of Tang, those who died in spring are buried when the grass and leaves turn yellow in the fall, and those who died in winter or autumn are buried in spring when their flowers bloom (İnan, 2017, p.170). This practice may shed light on the contradiction that some graves that belongs to the Afanasievo culture are excavated before the dead. In addition, the ochre-red ocher that were observed on the bones of the dead or some animals in the Afanasievo monuments must be due to the Turks' belief that the spirit / substance continues to live.

In 2006 and 2011, petroglyphs were investigated in Mongolia's Hoyt Tamir River valley and Khuruugiin uzuur, and these rock paintings, dated to the Bronze Age, had an effect on the problem of defining Afanasievo culture rock art. Petroglyphs; It can be observed on the basal rocks and rock outcrops on the right bank of the Hoyt Tamir River, and the oldest layers are the section where ungulates such as goats, rams, bulls, and horses are depicted. Animal paintings are often depicted with fine contours and can be compared in style to the oldest petroglyphs of other monuments of Altai, the Minusinsk Basin, Central, and Western Mongolia. The most striking finding for us in this region is the image of the horse which is shaped with a "herringbone" figure, which we can call as characteristic in Afanasievo ceramics, and covered with several parallel curved lines (fig.74). It is very important that this petroglyph is a few hundred meters away from the 15 ceramics with "herringbone" figures in the kurgans which were discovered in the Hoyt Tamir River valley and belongs to the Afanasievo culture in 2011.

On the other hand, the types of vertical figures with cross (zigzag) stripes in the Altai monuments and the ceramic pots in similar figures in the Minusinsk Basin are also very important. Again, we can count as important evidence that the figures on the stone stele in the Minusinsk Basin and the columnar figures in Khuruugiin uzuur are related to the Afanasievo culture. In addition, "herringbone" or "pillars", similar figured notches applied to the trunks of sacred trees in Altai, Shors, and Teleuts are important evidence for the continuity of the culture (Esin, Magay, Yeruul-Erdene & Gantulga, 2012, p.205-207).

Another figure that is rare in Afanasievo ceramics (Zerevshan) is the "Oz" or "Tengri" tamga, which is defined as a cross. In the "Hoyd Tamir Inscriptions" (Somoncuoğlu, 2008, p. 144) in the place also known as "Tayhır Çulu" in Mongolia and we come across exactly the similar ones in the "Saimaluu-Tash" petroglyphs in Kyrgyzstan (Somoncuoğlu, 2008, p.370,372-373) that are dated from 3000-2000 BC to the 8th century (fig.75). The fact that people who have continuity and the same philosophy / belief system put forward these imprints as products which strengthen our theory. On the other hand, we call balbal or stone-ancestor, the sculptures that they are called stone steles in the Western terminology, also shed light on our clear definition of "Kurgan Culture" or "Pit-Grave Culture". "A stone stele (Kaiser, Winger, 2015, p.134, fig.76; 11) in "Ezerova settlement" that dated to the Early Bronze Age of Bulgaria and attributed to Yamnaya culture (Kaiser, Winger, 2015, p.127) and "Kernosovkii Idol" (fig.76; 9) that is located near the village of Kernosovki in Ukraine dated to 3rd millennia BC (Afanasyev, 2017, p.1), and Hakkari balbals (fig.76; 8,10) in the Van

Museum is thought to be an estimated 3,000 years old (Somuncuoğlu, 2008, p.492-493) and all of them bear a perfect resemblance to classical Turkic Balbals (fig.76;1-7).

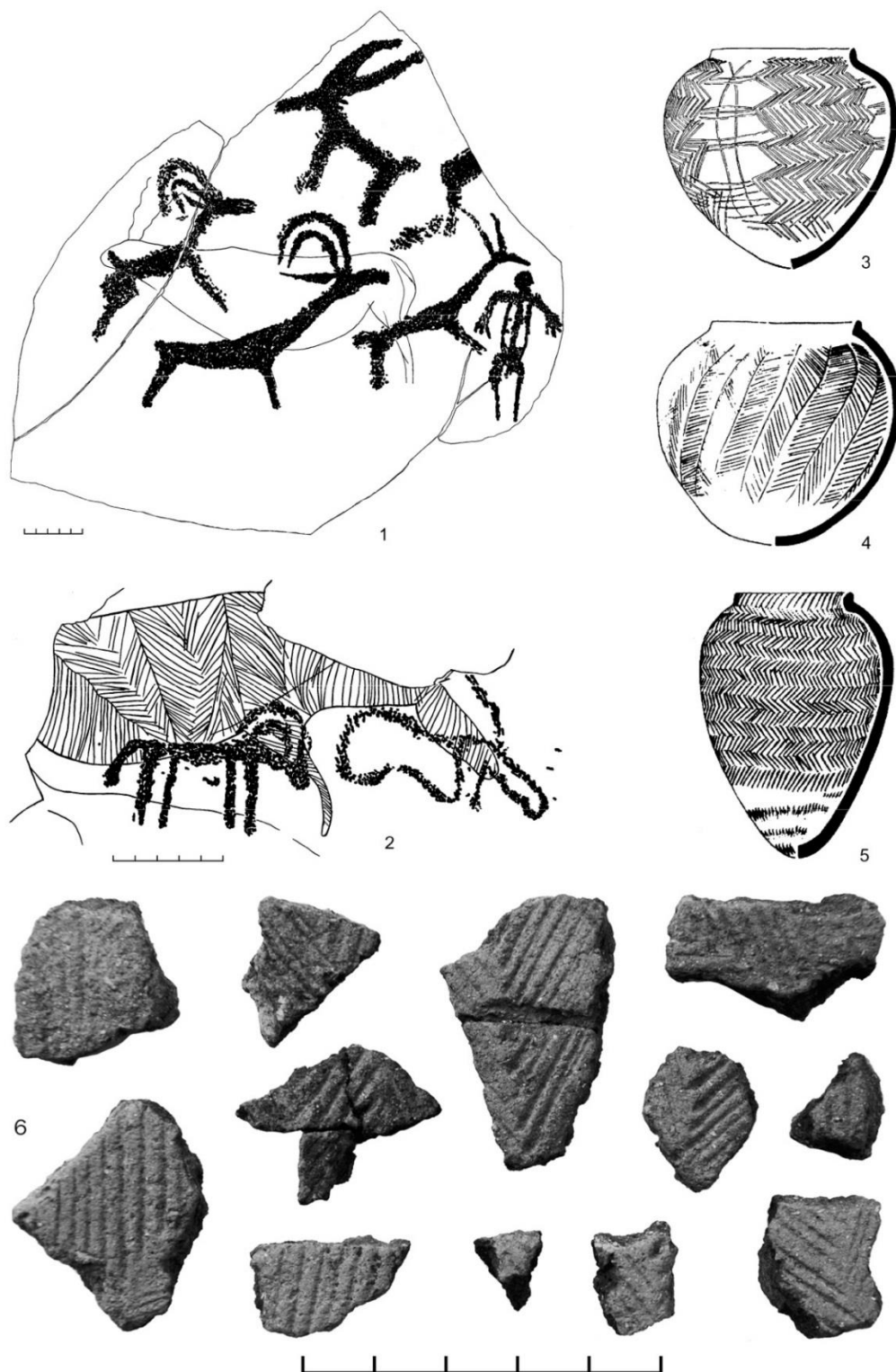


Figure 74: Comparison of the décor of Minusinsk vessels with the ornamental hollows on the horse's body; (2-5), pieces of Afanasievo culture ceramics found near Khuroogiin Ussur; (6) (Esin, Magay, Yeruul-Erdene, Gantulga, 2012, p.207-208)

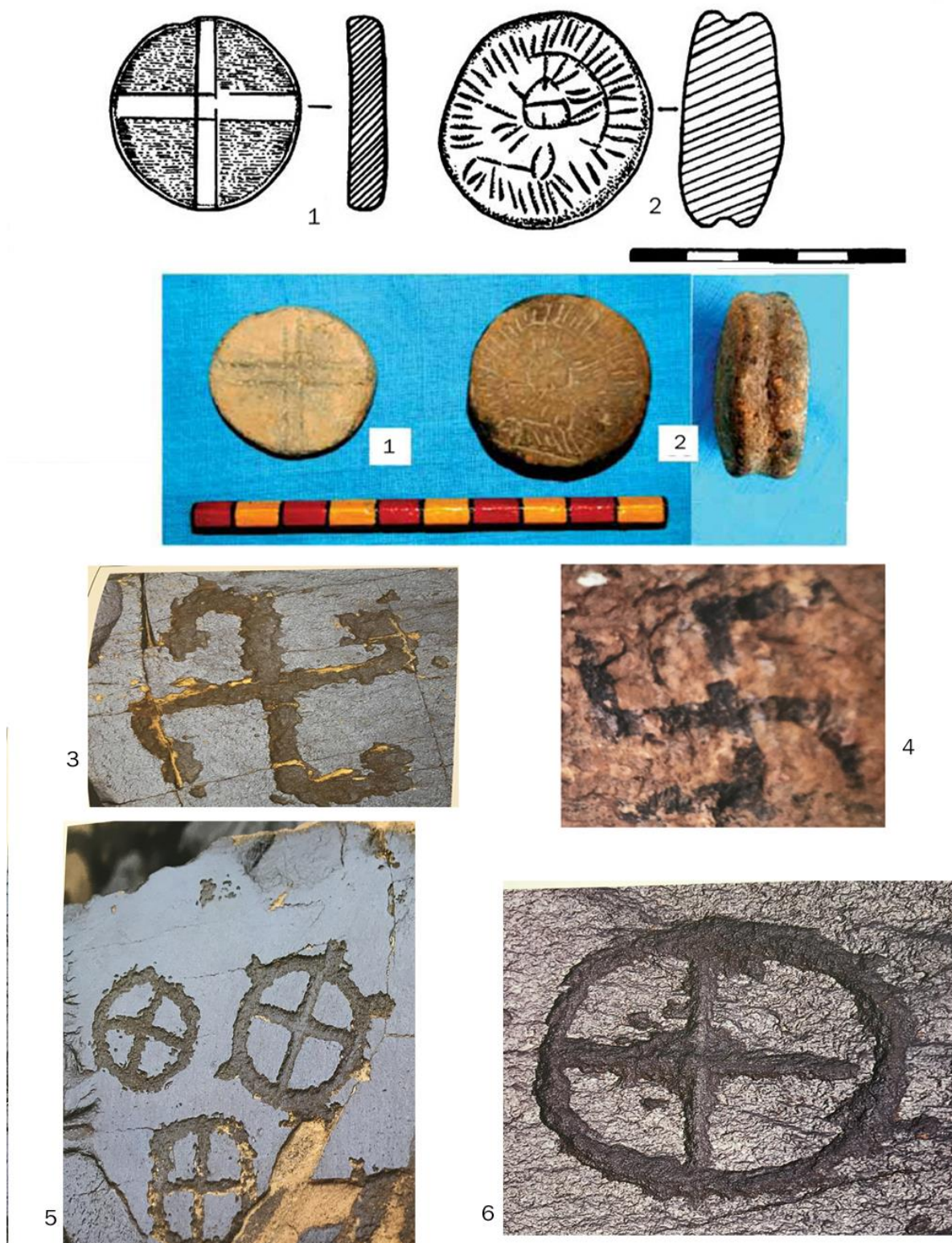


Figure 75: Zerevshan (clay crafts); (1,2), Saimaluu-Tash petroglyphs; (3,5,6) Hoyd-Tamir; (4) (Avanesova, 2012, p.12,22; Somuncuoğlu, 2008, p.144,370,372-373)



Figure 76: Turkic balbals (amit-taş); (1-7), Hakkari balbals; (8,10), Kernovski idol; (9), Ezerovo; (11) (Somuncuoğlu, 2008, p.295, 492-493; Kaiser, Winger, 2015, p.134; Kubarev, 2017, p.96-97)

The geometric shape of the head of the Ezerova statue and the posture of the hands, as well as the head shape of the Kernovskii Idol, the posture of his hands and the thin zigzag notches on the back, and the posture of the balbals that holds a toast in one hand in Hakkari exactly contains analogies with the characteristics of Turkic balbals (stone-ancestors) and it is quite possible that they are the early products of the Turkic sculpture understanding. So much so that, when we follow the migration routes of Haplogroup R1b from east to west, we see petroglyphs, rock writings, and sculptures that can be presented as evidence of east to west migration in the same geographies. (For more information see: *Turks in Stone from Siberia to Anatolia*)

All these data show that; The Pit-grave Culture or Kurgan Culture is undoubtedly a steppe culture, and there is only one steppe tribe in the Eurasian geography that has spread over such wide areas and sustained this spread for millennia: the Turkics.

8. Conclusion

The Afanasievo population, that is, Proto-Turkic origin showed nomadic characteristics during this period and engaged in hunting, farming, and animal husbandry. This population which was also developed in the field of metallurgy, produced jewelry that could be considered important in its period, such as various cutting tools such as arrowheads, axes, etc. made of copper and bronze, spiral earrings, etc. On the other hand, the presence of herringbone figures in the contents of petroglyphs, dating to late or early times, in geographies where the culture has spread, with various figures such as the egg-based pottery made in various scales and the "herringbone" they engrave on, shows the continuity of the culture. So much so that, the discovery of Oz-Tengri Tamga figures is a very important development in terms of Turkic history.

Dealing with agriculture together with the analogies in many materials causes us to take a definite look at its ties with Andronovo and Okunev culture. Considering the migration routes of haplogroup R1b and R1a, the language structures, cultures, and continuities create support our this view.

It is very important that the Kurgans show kinship characteristics in terms of their common DNA with an important culture such as the structures of the tomb, the way of placing the dead, the position and position of the dead, the religious elements (ochre, hearth,

etc.) and the Yamnaya. On the other hand, although we cannot say anything clearly about the horse which is used as an amount, we have no doubt that it was domesticated.

In conclusion, in the light of all the data that was obtained, we can clearly say that the Kurgan culture was created by the Turkic, a steppe society and that the materials within this culture have become a culture that has been going on for millennia, and one of the cornerstones of this culture is the Afanasievo culture.



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