



ARCHAEOLOGICAL RESEARCHES IN THE SETTLEMENT OF NAKHCHIVAN TEPE

NAHÇIVAN TEPE YERLEŞMESİNDE ARKEOLOJİK ARAŞTIRMALAR

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Özet

Kalkolitik Çağda Güney Kafkasya'nın Mezopotamya dahil Yakın Doğu ile ilişkileri uzun yıllardır ki, araştırmacıların dikkatini çekmektedir. Birçok bilim insanları, aralarında R.M. Muñçayev, O.H. Həbibullayev, İ.H. Nərimanov, T.D. Axundov ve diğerleri olmakla Yakın Doğu kültürlerinin Kafkaslar'a etkisinden bahsetmişler. Yakın Doğu ve Kafkasya arasında olan ilişkiler şimdiye dek tek-tek eserlerle temsil ediliyordu. Şimdi biz Yakın Doğu ve Güney Kafkasya'yı kapsayan tüm bir kültür karşındayız. Bu kültür şimdideki Urmiya Havzası'nın güneyinden belli olan "Dalma Tepe Kültürü"dür. 2017 yılında Nahçıvan şehrinde yerleşen Nahçıvan Tepe yerleşmesinin araştırılması sırasında "Dalma Tepe Kültürü"nü tüm özellikleri ortaya çıkarılmıştır.

Seramikler yerleşmenin stratigrafisine uygun olarak iki döneme ayrılabilirler. Genel olarak ele alındığında her iki dönemin seramikleri teknolojik ve bezeme açısından aynıdır. Onlar bant üsulu ile hamur laylarını bir-birinin üzerine yerleştirmekle hazırlanmıştır. Bazı kapların yüzeyi ince bir tabaka ile sıvanmıştır. Araştırmalar bu yöntemin bazen kapları bezemek, bazen ise onların rengini değiştirmek amacı ile kullanıldığını göstermektedir. Bu özellikle parmak baskısı ile bezenmiş seramiklere aittir. Kimi araştırmacılar parmak baskılı seramikleri etnolojik özelliklerle bağlantılı olduğunu söylemişlerdir.

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Bulunmuş seramiklere dayanarak yerleşmeyi İÖ V binyılın birinci yarısına ait etmek olur. Yerleşmenin en alttaki ikinci yapı katından alınmış kömürün analizi İÖ 4945 yılını göstermiştir.

Son zamanlar araştırmacılar Dalma Tepe kültürünün Kuzey Batı İran'da formlaşarak Urmiye Havzasının güneyine doğru yayıldığına ait yeni arkeolojik kanıtlar göstermişler. Nahçıvan Tepe yerleşmesinin kazısı "Dalma Tepe Kültürü"nü Nahçıvan bölgesini de kapsadığını kanıtlamaktadır. Hiç kuşku yok ki, gelecek araştırmalar sırasında Urmiye Havzası ve Nahçıvan kültürlerinin ortak özellikleri ve onların karşılıklı ilişkileri daha aydın şekilde ortaya çıkarılabilecektir. Araştırmaların "Dalma Tepe Kültürü"nü formlaşması ile ilişkili sorunları da aydınlatmaya imkan sağlayacaktır.

Anahtar kelimeler: Nahçıvan, Dalma Tepe Kültürü, Urmiye Havzası, boyalı seramik, baskı bezemeli seramik, göçebe hayvancılık, obsidyen.

Abstract

Existence of connections between the cultures of South Caucasus and those of the Middle East (including Mesopotamia) has drawn the attention of researchers for many years. Researchers such as R.M. Munchayev, O.A. Abibullayev, I.G. Narimanov, T.I. Akhundov and others spoke about the spread and distribution of cultures of from Middle East in South Caucasus. Although the existence of these connections was sometimes demonstrated by single finds, now however these connections are demonstrated by a complex of archaeological materials. One such monument is the settlement of Nakhchivan Tepe which is characterized by Dalma Tepe ceramics. We consider that is necessary to introduce to the scientific community the fact that this cultural assemblage has been revealed for the first time in the South Caucasus, and also to define its place among the other Caucasian cultures.

The ceramics can be divided into two periods, based on the stratigraphy of the settlement. However it should be noted that the two groups coincide to a certain degree in terms of the technology of production and ornamentation. The ceramics were mainly produced by the coil method, and the application of two layers of potter's clay to each other. The surfaces of some vessels were covered with a thin layer of clay. The research demonstrates that this was done in some cases to change the color, and in others, for ornament purposes. It is also possible to discuss the products ornamented with finger impressions, which are sometimes are executed inaccurately and mixed together. The study demonstrates that the finger impressions remained after being stuck in the thin upper clay layer. We think that some researchers were right to connect Dalma Tepe ceramics with these ethnographic features.

The study of bones of animals from this settlement has shown that the residents were generally were engaged in cattle and small cattle breeding. Hunting took an the insignificant place in the economy.

The pottery of the settlement of Nakhchivan Tepe can be dated the first half of the V millennium BC. The analysis of coal from the lower horizon has shown 4945 BC.

Thus it can be concluded that the area of formation and distribution of Dalma Tepe culture included Nakhchivan's territories. Undoubtedly, subsequent studies

will clarify some questions of the nature of the mutual ties between the tribes of the basin of Urmia and Nakhchivan. We think that the issues related to the birthplace of Dalma Tepe culture will also be clarified.

Key words: Nakhchivan, Dalma Tepe cultur, Urmia Basin, painted ceramics, ceramics with impression ornament, nomadic cattle-breeding, obsidian.

INTRODUCTION

Research has shown that the ancient people of Kültepe and those in its vicinity were forced to relocate as a result of climate change. The Kültepe settlement was populated during the sixth millennium BC, and the population dispersed at the beginning of the fifth millennium. Some fifth millennium pottery found in the settlement of Kültepe indicates some transitory occupation, but no permanent settlement. However, life continued in neighboring settlements. Excavations at Uzun Oba and Uçan Ağıl settlements revealed archaeological materials from the first half of the fifth millennium BC.

In 2016, the settlement of Nakhchivan tepe was revealed in the Nakhchivançay valley. Research on the settlement Uçan Ağıl, located in the Sirabçay valley, and the settlements of Nakhchivan tepe and Uzun Oba, located in the Nakhchivançay valley, show that at the beginning of the fifth millennium BC ancient people moved closer to river valleys. Apparently, this shift in settlement locations was promoted by an increasingly drought prone climate.

Research shows that the dry climate continued for an extended period before it was replaced with a more temperate rainy climate, which caused flooding. As a result of the flooding, some settlements were buried under silt and were not visible from the surface.

Research at Nakhchivan tepe and settlements its vicinity show that these sites appear between the Late Neolithic and the Late Chalcolithic Age allowing us to fill the gap in our knowledge of this period. On the basis of researches it is possible to tell that in the settlement of Nakhchivan tepe ancient people are occupied at the beginning of the V millennium BC. We think that the recently revealed sites from the early Chalcolithic Age will be valuable in studying the ancient cultures of Azerbaijan, as well as those throughout the South Caucasus and the Middle East.

THE SETTLEMENT NAKHCHIVAN TEPE

Existence of connections between the cultures of South Caucasus and those of the Middle East (including Mesopotamia) has drawn the attention of researchers for many years. Researchers such as R.M. Munchayev (*Мунчаев, Амиров, 2009, с. 41-52*), O.A. Abibullayev (*Абибуллаев, 1982, с. 72*), I.G. Narimanov (*Нариманов, 1985, с. 271-277; Нариманов, 2003, с. 32*), T.I. Akhundov (*Achundov, 2007, p. 95-122*) and others spoke about the spread and distribution of cultures of from Middle East in South Caucasus. Although the existence of these connections was sometimes demonstrated by single finds, now however these connections are demonstrated by a complex of archaeological materials. One such monument is the settlement of Nakhchivan Tepe (Fig. 1) which is characterized by Dalma Tepe ceramics. We consider that is necessary to introduce to the scientific community the fact that this cultural assemblage has been revealed for the first time in the South Caucasus, and also to define its place among the other Caucasian cultures.

The settlement of Nakhchivan Tepe is located on the right bank of Nakhchivançay, at the height of 853 m above sea level (Fig. 2). The settlement is located on the brink of steep drop which was formed by rough waters of Nakhchivançay. The river, now, flows 200 m away from the settlement. Apparently, in ancient times was close. Part of the settlement today is under cultivated fields, and part collapsed during construction of a bridge passing over the Nakhchivançay. Currently, the remaining part of the settlement covers an area of approximately 2 hectares.

The settlement has been studied through two soundings with a size of 3x2 m and two excavation sites with a size 10x10m. Although the soundings provided clarity on the thickness of the occupation layer, nevertheless characteristics of the settlement in that area remain incomplete. Therefore, here we will discuss results only of the two excavation sites.

During the excavation of the first site, it was recognized that the top layers of the settlement had been damaged to a certain extent during agricultural works. Excavation of the first site has revealed two construction horizons. The first construction horizon was revealed at a depth of 15-20 cm below the soil level. The remains of four rooms belong to this construction horizon. It should be noted that all rooms were built from mudbrick (Fig. 3, 1). The first room was revealed in the northeastern part of the excavation area. The length of this room is 2, 35 m, and its width is 1, 90 m (Fig. 3, 1, 1). The room entrance has a width of 70 cm, and is located in the southern section. Wall remains have been found up a height of 32-40 cm, depending on the relief. During the course of research, pottery of Chalcolithic Age, bones of animals, and chips of obsidian were identified within the room's area.

The second room was revealed in the northwest part of an excavation. The length of this room is 3, 50 m, and its width is 3, 05 m (Fig. 3, 1, 2). The room entrance with a width of 75 cm is located in the eastern section. From this room, there are remains of three walls. The width of walls varies depending the state of preservation, but is between 56-65 cm. The height of walls varied between 34-40 cm. This room also contained pottery of Chalcolithic Age, bones of animals and chips of obsidian.

During excavation, a shared wall between the third and fourth room was also identified. The length of this wall is 6, 50 m, and its width is 60 cm. Because these rooms were badly preserved, it proved difficult to determine their exact sizes.

The length of the third room is 5, 95 m, with a width in the north of 3, 21 m, and in the west of 3 m (Fig. 3, 1, 3). This room had a common wall with the second room, the thickness of which was 55 cm. Walls remained to a height of 35-48 cm. During the work in this area, this room revealed plain and painted pottery of Chalcolithic Age, bones of animals and chips of obsidian. Within this room, beginning at a depth of 58-60 cm, the color of the layer began to change. This change was observed only on a small part of the center of the room, while in the rest of the room, the yellowish layer dominated.

The length of the fourth room is 7, 10 m, and its width in the north is 4, 06 m, and in the west is 4, 30 m (Fig. 3, 1, 4). The width of the earth platform located in the east of this room is 1, 20 m. The work in the fourth room revealed plain and painted pottery of Chalcolithic Age, bones of animals and chips of obsidian. Some of the pottery recovered here is decorated with finger impressions.

During the excavation of this room, beginning at a depth of 48-50 cm, the color of layer once again began to change. However in other areas, the yellow layer again continued. It was impossible to establish the exact size of this room, in light of the significant destruction of the walls. On the clay platform located in the east of the room, mudbrick layers with intermediate thin layers of sand were visible. The first layer of sand was revealed at a depth of 40-65 cm from the soil level. Similar layers of sand were found also during excavation of the first sounding. The research shows that this part of the room was often fortified by the addition of clay. According to geologists and geomorphologists, during

severe floods the settlement was exposed to floods.

The investigation of the construction remains from the first horizon showed that they were built above a previous context, which is recognizable by a gray ashy layer across the site. Since the adobe brick walls were built atop this soft ashy layer, in some places they sunk deep in ashes. Therefore, the height of walls was variable. On the basis of the investigation, it is possible to determine that the first construction horizon proceeded up to a depth of 70-75 cm. Pottery of this layer is represented by a complete set of products similar to those of the settlement Dalma Tepe.

At a depth of 70 cm across all excavation sites, layers of an abundant mix of gray ash without any construction remains were discovered. Below the building remains of the first layer, the remains of two hearth were revealed. Because the hearths were in operation for a long period of time, their ashes spread across a wide area.

The first hearth was uncovered in the northern part of the excavation, at the bottom of the second room. The diameter of the hearth was 1, 52 m (1053). The interior of the hearth was filled with ashes of gray color. The circumference of the hearth had solidified, so that its plan was clearly visible. After cleaning the hearth, pottery, bones of animals, and chips of obsidian were found horizontally located. Pottery included fragments of kitchen and storage wares. Among them there were also fragments of painted vessels which, probably, were for dining. After cleaning, it turned out that the hearth had a round form. The depth of the hearth was 15 cm, and below the hearth, the gray ashy layer with the osteological and obsidian remains continued. The second hearth was uncovered in the eastern part of the site near a partition wall (1054). The diameter of this oval hearth was 1, 90 m. in one direction, and 1, 80 m in the other. The inside of the hearth was filled with ashes of gray color. In the course of cleaning, pottery, bones of animals and chips of obsidian were found. In comparison to the first hearth, this hearth was deep. Its depth reached 40 cm. Fragments a brazier with a ring-shaped bottom were recovered from this hearth. Similar objects usually were found either in a hearth or around one, allowing us to assume that they were used for the baking bread. The perimeter of this hearth was also hardened. Excavation of this layer revealed pottery, bones of animals and chips of obsidian. Among the ceramics were also sherds of painted vessels, as well as vessels decorated with the impressions of various tools, including fingers. which in archaeological literature have been called vessels with impressed ornament.

During the exploration of the eastern corner of the third room, a part of a vessel with red paint was found (1066). Around this vessel was found further pottery, bones of animals and chips of obsidian. It should be noted that a vessel with red paint was also found excavation of a Neolithic layer at Kültepe. Another earlier vessel with red paint was revealed also O.A. Abibullayev's excavation. Undoubtedly, this color of paint was used to decorate vessels which were in Kültepe and in the settlement of Nakhchivan Tepe. In the settlement of Nakhchivan Tepe there were also numerous sherds of painted vessels.

Below these hearths, at an approximate depth of 1 m, the remains of two additional hearths were revealed.

The first of these is located on the northern side of site and had a rounded shape (1077). Its length is 1, 90 m, and its width is 1, 30 m. The inside area in the north was filled with earthy gray ashes. Pottery, bones of animals and chips of obsidian were discovered inside of the hearth, lying horizontally. The pottery includes fragments of kitchen and storage vessels. There were also tableware sherds. The ashes consisted of several layers demonstrating that the hearth worked for a long period. The depth of the hearth was 40 cm.

The second hearth was in the eastern part of the site, closer to the earth platform (1078). The length of this oval hearth is 1, 90 m, and its width is 1, 30 m. Inside the hearth was a fill of gray ashes mixed with earth. The hearth contained pottery, bones of animals and chips of obsidian also aligned horizontally. The depth of the hearth was 40 cm. During the

investigation, it became clear this hearth was dug into the floor of a semi-dugout structure.

At a depth of 1, 40 - 1, 50 m in the eastern area of the excavation, room remains of the semi-dugout type were uncovered (Fig. 3, 2). The northern section of the room had been dug into the ground. On the northern side, mudbrick wall remains were found. A part of this wall collapsed and was covered with black ashes, possibly as a result of burning. The east wall was exposed to erosion and has been altered to a certain extent. It was impossible to establish the other walls of the room owing to the considerable damage. A round hearth was located at the center of the room, as well as nearby remains of a second hearth which wasn't excavated. The length of this room was 5, 30 m, and its width in the west was 3, 40 m, and in the north was 3, 56 m. In the corners of this room, stones had been placed in row. One of these stones was a half of a grinding stone.

Outside of this room near a northern wall there was a large grinding stone (1089). Around this grinding stone were found also pottery and chips of obsidian. Apparently, this part was the production sector.

On the basis of these explorations, it is possible to say that the first settlers of Nakhchivan Tepe used semi-dugout rooms, partly dug into the ground, and partly constructed from mud bricks. Rooms of this kind have also been uncovered in excavation of the settlement Ovçular Tepesi (Marro, Bakhshaliyev and Ashurov, p. 31-87) and Yeni Ёол (Baxşəliyev, Quliyeva, Rzayeva, 2017, s. 50). Although abundant accumulations of ash were discovered, the remains of charcoal were found very seldom. This demonstrates that wood was used very seldom as a fuel.

The second excavation area at the site is located near the first. This second area had become covered by debris of different types. After the removal of this debris, excavation began. During the removal of the layer which had been exposed to erosion, pottery of Chalcolithic Age, bones of animals and chips of obsidian were discovered. Among the pottery found were sherds of painted vessels and also ceramics with impressed ornament.

Below the erosion layer was a firm yellowish layer. On the basis of an examination, it is possible to suggest that this layer was formed by the destruction of the construction debris of mud brick. Pottery was found across the area, and especially in the western part of the excavation. The pottery had chaff inclusions, and was fired to a red color. There were also painted sherds. Individual examples have also emerged of graywares. In the northeastern area of the excavation, in addition to pottery, one spindle whorl (2002). Its size was 1, 75 x 30 cm. There were also fragments of a thick-walled utilitarian vessel. In the southern part of the excavation area were found further vessel fragments with chaff inclusions (2004).

Building remains of mudbrick were revealed at a depth of 20-23 cm in the western part of the excavation area. The first room here was located in the western part of the excavation (Fig. 5, 1). The wall, running towards the western edge of the excavation site, was badly preserved. The width of this wall is 40 cm. The eastern wall was better preserved, but the northern wall was also badly damaged. However on the basis of the construction remains, the plan of the room can be defined. Its length is 6, 20 m, and its width in the south is 1, 50 m, and in the north is 2, 60 m. The height of the intact parts of the walls is 30 cm. On east side of the room, a clay platform was found connected to the wall. The length of this platform is 4, 40 m, and its width is 1, 10 m. During excavation of the room, chips of obsidian, bones of animals, and red-fired pottery with chaff inclusions, sometimes with a impressed ornament, were found. The chips of obsidian appeared more often in the upper layers. Along with the clay platform, the remains of an oval hearth were also uncovered. The hearth was at a depth of 48-70 cm (2047). In this area, beginning at this depth, the color of the soil changed. In certain areas, a layer of gray color appeared.

The second room is located to the east of the first room (Fig. 4). The walls of this room, built of mud brick, which had been laid very accurately. However it was somewhat

difficult to determine the exact size of room as a result of the serious destruction of the structures within the room. The research exposed that this room has the form of an irregular rectangle (Fig. 5, 2). The length of the room is 5, 40 m, its width in the south is 2, 30 m, and in the north is 1, 60 m. Its walls have been preserved to the height of 30 cm. A significant amount of pottery and a fragment of grinding stone was found at the center of the room. The pottery generally consists of fragments of kitchen and utilitarian vessels (2024). Among them there were also sherds with impressed ornament. Further explorations uncovered that the pottery assemblage was found atop the hearth. The length of the heart is 1, 10 m, and its width is 1, 80 m. The hearth was discovered at a depth of 30-58 cm.

In the eastern area of the site, remains of mud bricks were found covering a large are. Exploration of this layer revealed pottery, animal bones, and chips of obsidian. In the southern part of this area, the color of the layer changed. The layer consisted of sand mix with soil. The ceramics found here were red wares, along with chips of obsidian. The length of third room is 5, 50 m, its width in the south is 1, 60 m, and in the north is 2 m (Fig. 5, 3). Its walls have been preserved to a height of 30-40 cm. Near the western wall of the room, an oval-form hearth was discovered. It became clear that the hearth was found in the central area of the room. The length of the hearth is 70 cm, and its width is 35 cm. The hearth was located at a depth of 50-63 cm (2046). From inside of the hearth, pottery, bones of animals and obsidian chips were found.

The fourth room is located to the east of the third. The length of the room is 6 m, its width in the south is 1, 10 m, in the north is 1, 52 m (Fig. 5, 4). Two clay platforms were found in the eastern part of the room. The length of the first of them is 2, 20 m, and its width is 80 cm (2126). The length of the second platform is 2, 30 of m, and its width is 40 cm (2127). The walls of the room are preserved to a height of 25 cm. In the space between the clay platforms, an oval-form hearth was discovered (2061). From the hearth were recovered red ceramics, bones of animals and chips of obsidian.

In the northern part of excavation area, a further two rooms were revealed. The length of the fifth room is 5 m, and its width is 4 m (Fig. 5, 5). A clay platform in the shape of a cube was discovered in the northern part of this room. Its walls have remained up to a height of 30 cm. In this area, the first construction horizon continued to a depth of 78-79 cm. From within the room, various pottery sherds, tools made from stone and chips of obsidian were discovered. Some of the pottery had an impression ornament. A door was uncovered in the east. The width of the entrance is 1 m.

The sixth room was revealed on eastern side of the excavation site. The length of the room is 4, 40 m, its width in the east is 3, 26 m, and in the west is 4, 10 m (Fig. 5, 6). On the southern side of the room, a platform with a length of 3, 50 m and (2099) width of 84 cm was uncovered. Pottery with a painted and impressed ornament was found inside the room, as well as a fragment of a grinding stone.

Below this building layer, construction debris were not found, only the remains of hearths. Across the entire area, however, an earthy-ashy layer was traced.

A round hearth was uncovered during excavations, at a depth of 82 cm (2056). Pottery, bones of animals and chips of obsidian were found inside the hearth. The inside of the hearth was filled gray ashes. A tiny vessel with traces of orange paint was also found here (2057).

At a depth of 82-85 cm, in the eastern part of the excavation area below the construction remains, two additional hearts were discovered. One of hearth was oval in form (2110). Its length is 1, 90 m, and its width is 74 x 94 cm, with an overall depth of 30 cm. Fragments of vessels decorated with impressed ornament were found here.

The second hearth (2111) was found in the bottom of the western wall of the sixth room (2071). The length of the hearth is 1 m, its width is 0, 9 m, and its depth is 12 cm.

Chips of obsidian and red pottery with an impressed ornament were found from the hearth. At a depth of 1, 07 m within this site, remains of red painted vessels and charcoal were found (2121).

The other hearth of this layer was found in the northern corner of the third room, at a depth of 1 m (2090). The hearth has a rectangular shape. The length at the center is 60 cm, its width is 40 cm. Around the hearth, pottery with impressed ornament was found, as well as a grinding stone, a part of a red pot, bones of animals, and chips of obsidian. Fragments a brazier were also found. The diameter of the brazier is 32 cm, its height is 15 cm, and the thickness of its walls is 3-4 cm.

In order to establish the character and depth of the occupation layer, a sounding was placed in the western section of the fourth room, with a size of 3, 40 x 3, 40 m. At a depth of 1, 15 cm in east part of the sounding, fragments of a large vessel were discovered (2074). At a depth of 1, 23 m, the remains of a hearth and clay floor around this hearth were found (2076). Two beads were found on the floor. At the level, plain soil was discovered, while in another section, the occupation layer continued. The hearth continued up to a depth of 1, 40 m (2081). At a depth of 1, 60 m the remains of a semi-dugout type room were revealed (Fig. 6). The inside of the room was filled with earthy ashes that had inclusions of charcoal (2087). Numerous fragments of pottery and bones of animals were found at this level. During investigation of the semi-dugout room, at a depth of 1, 90 m, a hearth was found, the ashes of which had accumulated inside the room. The hearth had an oval form with a diameter of 37x64 cm, and was 10 cm in depth (2101). It has been established that the thickness of the occupation layer on the settlement is 2 m, and in some places 2, 10 m thick.

On the basis of investigations, it is possible to say that there were two construction horizons in the settlement. The second construction horizon is located at a depth of 0, 78 - 2, 10 m and had two layers. The second layer of this horizon is represented by the hearths. The first layer, located above the plain soil, was characterized by rooms of semi-dugout type. A similar room was exposed in the sounding which had been placed in the second site. At the same level, part of a room in the form of rectangle was uncovered. As described above, the remains of a similar room were also found in the first excavation area.

A majority of archaeological materials from the site are pottery and chips of obsidian. Tools were also found in a small quantity. Grinding stone are represented by one example. Flint products also are represented by one copy. Tools made of bone are represented by one copy. Among tools in general, the majority are obsidian. Among the obsidian products, there are a few blades for sickles, which give some information on the character of the economy.

The pottery is generally characteristic of the first half of the V millennium BC. The pottery is generally characterized by Dalma Tepe painted and impressed ceramics. Excluding single finds, an entire complex of such ceramics had not been revealed in the South Caucasus. Therefore, the pottery of the settlement of Nakhchivan Tepe has important value for studying the Chalcolithic Age culture of the South Caucasus, including Azerbaijan.

The ceramics can be divided into two periods, based on the stratigraphy of the settlement. However it should be noted that the two groups coincide to a certain degree in terms of the technology of production and ornamentation. The ceramics were mainly produced by the coil method, and the application of two layers of potter's clay to each other. The surfaces of some vessels were covered with a thin layer of clay. The research demonstrates that this was done in some cases to change the color, and in others, for ornament purposes. It is also possible to discuss the products ornamented with finger impressions, which are sometimes are executed inaccurately and mixed together. The study demonstrates that the finger impressions remained after being stuck in the thin upper clay layer. We think that some researchers were right to connect Dalma Tepe ceramics with these ethnographic features (*Henrickson and Vitali, 1987, p. 37-40*). This method of coating was

also used in the restoration and repair of ceramics. The pottery is generally made with chaff inclusions, and fired to different shades of red. Pottery with sand inclusion is represented by a single copy. Gray wares are also represented by a single piece.

The pottery from the top horizon belongs to the first period. As has already been described, this horizon is characterized by rectangular architecture. The ceramic products of this horizon can be divided into six groups. The first group is composed of plain pottery; the second group includes painted ceramics; the third group is the pottery painted in red without ornament; the fourth is ceramics with impressed ornament including fingertip impressions; the fifth group includes pottery decorated with a stamp from the edge of a tool; and the sixth group is that pottery decorated with edge ornament in the form of horizontal strips.

The plain ceramics make up the majority of the pottery (Fig. 7). They are generally made of clay with chaff inclusions, and well-fired to a red color. However, gray interlayers appear in the walls of some examples. Some examples of these sherds have been coated with yellow slip, and sometimes cream slip, and some are well-polished. An inside of some of the sherds was smoothed with a rough tool, like a comb. The inside of some pottery was also painted red color and well-polished. Pottery of this group generally consists of bowls, pots and jugs. Bowls are especially widespread. Some vessels have auricular ledges. Clay braziers and large storage vessels also belong to this group. Similar ceramics are known from Culfa Kültepe settlements (*Abedi et al., 2014, p. 38*), Dalma Tepe (*Hamlin, 1975, p. 101*), Dava Göz Tepe (*Abedi, 2017, p. 73*), Seh Gabi B (*Henrickson, 1983, p. 232-236*).

The second group of pottery is the painted ware (Fig. 8). This pottery is made of clay without inclusions and fired very well. The color of the cut of this type of ceramics is black. They are coated with red paint inside and out, well-polished and decorated with a geometrical motive in black paint. Sometimes, the ornamentation of vessels has been erased. The motifs of the ornamentation are vary. The most common type is triangles filled with parallel lines. In addition, there are also ornaments like an ear, triangles put end to end, and mesh decoration. The ornaments are sometimes placed on a yellow background, and sometimes on the unpainted surface of the pottery, in black paint. One of piece of pottery is decorated with triangles inscribed in diamonds. There is also pottery decorated by a white background with red paint. Similar painted ceramics are known from Dalma Tepe (*Hamlin, 1975, fig. 4, A, E; fig. 7,D; Fig. 10, A*), Culfa Kültepe (*Abedi et al., 2014, p. 38, fig. 10, 1-3,5-8*), Seh Gabi of B (*Henrickson, 1983, p. 253-304, fig. 55, 1.1, 1.2; fig. 56, 14.1, 14. 3; fig. 61, 53.1,53.8*), from Lavin Tepe (*Hejebri et al. 2012, fig.7-9*), from monuments of the Songar valley (*Heyderyan, 1392, fig. 6, 15-17*), Haji-Firuz (*Voigt, 1983, fig. 97*) and other settlements.

Pottery of the third group is made of clay with chaff inclusions. These pieces are painted red, sometimes inside and out, and sometimes only on the outer side (Fig. 9). The edge of the pottery is also painted in red paint. There are chaff traces on both sides of vessels. Similar ceramics are known from Dalma Tepe (*Hamlin, 1975, p. 117*), Seh Gabi B (*Henrickson, 1983, p. 226-230*), from Lavin Tepe (*Hejebri et al. 2012, p. 101*), Culfa Kültepe (*Abedi et al., 2014, p. 38*) and other settlements.

The fourth group of ceramics is made of clay with chaff inclusions, fired to different shades of red. The firing of these ceramics is sometimes very high quality, sometimes average, and sometimes low-fired. The decorations of the pottery are very different. Some of them were made by a special blunt tool. Among these, stamps prevail. Some of the ornaments are very accurate and correct. Others are executed imprecisely and mixed with each other. As we have already discussed, some ornaments were finger impressions (Fig. 10). This is especially observed on the sipped vessels. The use of pottery of this group is various. Among the forms are dining, kitchen and storage wares. Red paint is on the outer side of some, and on the outer and inner sides of others, including sometimes having been applied

after ornamentation. Similar ceramics are known from Dalma Tepe (*Hamlin, 1975, p.101, fig. 8*), Seh Gabi B (*Henrickson, 1983, p. 242-251, fig. 49-54*), Siahbid (*Henrickson, 1983, fig. 104*), Choga Maran (*Henrickson, 1983, fig. 105*), Lavin Tepe (*Hejebri et al. 2012, p. 101, fig. 9, 172; fig. 10, 1069*) and the monuments of Songar valley (*Heyderyan, 1392, fig. 3; fig. 5; fig. 7-8*)

Pottery of the fifth group is decorated by the stamped impression of a comb tool (Fig. 11). Pottery of this group is generally represented by fragments of vessels of larger size. However, there is also skillfully made tableware in the group. Pottery of this group is sometimes painted cream, yellow, or red. As in the fourth group, ornaments were sometimes applied accurately, and sometimes not carefully. Similar ceramics are well-known from the Dalma Tepe settlement (*Hamlin, 1975, fig. 8, E; Pl. II, b*).

Pottery of the sixth group is decorated with comb ornament in the form of horizontal strips (Fig. 12). These ceramics are represented by one copy. Unlike similar ornament at Ovçular Tepesi, there they are thin and executed accurately. Pottery with a similar ornament is revealed from various layers by Culfa Kültepe (*Abedi, 2014, p. 110, fig. 9, 1; fig 13, 10; fig. 15, 4; fig. 20, 14*). This type is also known from Nakhchivan Kültepe, Uzun Oba and Uçan Ağıl which haven't yet been published. It should be noted that a similar ornament is absent in the lower layers to Nakhchivan Tepe. Similar ceramics were spread across the second half of the V millennium BC (*Marro, Bakhshaliyev and Ashurov, 2009, p. 31-87*).

The second the period, as we have already mentioned, is represented by two stages. However, pottery of the first period also continued in the second period, with some changes. The red polished ceramics with black paint in this period diminished and eventually fell out of use. The types of impressed ceramics however increased. They are painted sometimes in red, and sometimes in yellow and cream. At the same time, it should be noted that impressed ceramics haven't been found from the lower layers Culfa Kültepe (*Abedi et al., 2014, p. 38, fig. 10, 1-3,5-8*) which is characterized by Dalma Tepe ceramics. This means that the similar ceramics were characteristic of an early stage of culture of Dalma Tepe. Certain changes are also observed in the plain ceramics. Some of the plain ceramics were coated with red paint inside and out, and were well-polished and undoubtedly used as dining ware. A certain part of pottery of this period was decorated with wide strips of red paint. In one case, black paint is used instead. Unfortunately such ornaments were not preserved in their entirety. Therefore, reconstruction of the motive of this ornament has been impossible so far.

The study of bones of animals from this settlement has shown that the residents were generally were engaged in cattle and small cattle breeding (Fig. 13)¹. Hunting took an the insignificant place in the economy. Bones of horses and dogs are represented by single examples. The botanical remains have so far been absent. The fact is that in the settlement layers, the remains of charcoal are insignificant. And washing the ashy remains from the various hearth hasn't yielded results yet. We hope that this type of research in the future will reveal information on the part of economy of ancient settlers to Nakhchivan Tepe.

The pottery of the settlement of Nakhchivan Tepe can be dated the first half of the V millennium BC². The analysis of coal from the lower horizon has shown 4945 BC (Fig. 14)³. As at the valley Nakhchivançay and Sirabçay, in 2010-2016 new monuments of Chalcolithic Age have been reported (*Бахшалиев, 2014, с. 88-95; Бахшалиев, 2015, с. 136-145*). The settlement of Nakhchivan Tepe together with other settlements of the valley Nakhchivançay

¹ The Faunal remains are investigated by Remy Berthon.

² Charcoal is analyzed on laboratory of the city Lesse of Italy.

³ This work was supported by the Science Development Foundation under the President of the Republic of Azerbaijan - Grant № EIF-KETPL-2-2015-1(25)-56/47/5

and Sirabçay allow us to specify a periodization the Chalcolithic Age monuments of South Caucasus including Azerbaijan. At the same time, the ceramic complex of the settlement Nakhchivan Tepe, which almost repeats that of Dalma Tepe, draws attention. The painted ceramics of the Dalma Tepe type are known from the settlement of Uzun Oba and Uçan Ağıl (Baxşəliyev, 2017, s. 117-124). Impressed ceramics have been attested at the settlement Uçan Ağıl, by a single copy. In other settlements, this has not yet been discovered. Similar ceramics have been found in isolated copies also in monuments of Karabakh (Ахундов, 2017, с. 197-198, табл. 22, 1; табл. 56, 1 et al.). Research demonstrates that that in the monuments located on the basin of the lake of Urmia generally use the Syunik obsidian (Khademi et al., 2013, p. 1956-1965). Among the the settlements of Nakhchivan, they generally used Gekche obsidian (Бахшалиев, 2015, с. 143), from the lake basin in present-day Sevan. In spite of the fact that Syunik is closer to Nakhchivan than Gekçe, in Nakhichevan's monuments the Syunik obsidian isn't as common, and by percent is in the second place (Бахшалиев, 2015, с. 143). Apparently, the tribe occupying the Lake Urmia basin had communications with the obsidian deposits of the Zangezur Mountains by means of the tribes of Nakhchivan. It should be noted that recently, one stone hammer was found in the Nakhchivançay valley, with remains of copper ore on it, which demonstrates that the connections between these tribes with Zangezur Mountain were not caused not only deposits of obsidian, but also by copper deposits.

As is well-known, Dalma Tepe ceramics were explored for the first time at the settlement of the same name, at Charles Burney's excavation in 1959, and then also in 1961 to Cuyler Young (Hamlin, 1975. p. 111-127). Other similar ceramics have been uncovered from the settlements of Hasanlu, Haji-Firuz (Voigt, 1983, p. 20) and Tepe Seavan (Solecki, 1973, p. 98-117). The Dalma Tepe have been found, in the territory of Iran and Iraq, together with typical Halaf and Obeid ceramics. Similar ceramics were discovered on a survey of Zagros Mountains monuments, such as settlements of the Kangavar valley like Seh Gabi B (Henrickson, 1983, p. 153-169) and Godin Tepe (Young, 1974, p. 80-90; Henrickson, 1983, p. 172-173), where Dalma Tepe period layers were found (Levine and McDonald, 1977, p. 39-50). Numerous Dalma Tepe ceramics were also found at the Mahidasht valley, among the surface materials of 16 settlements. Among these monuments is the Tapa Siahbid settlement (Henrickson, 1983, p. 305-314) as well as Choga Maran (Henrickson, 1983, p. 317), which was investigated by a sounding, and Tepe Kuh,⁴ investigated by survey. Among superficial material at Tepe Kuh, ceramics like those from Dalma Tepe prevailed (Henrickson and Vitali, 1987, p. 38). Similar ceramics have also been found in Iraq at the settlement of Jebel, Kerkuk (Henrickson, 1983, p. 39), Tell Abad, Kheit Qasim and Yorgan Tepe (Henrickson and Vitali, 1987, p. 39-40). It should be noted that such ceramics also prevailed in the Kangavar valley, but that in the Mahidasht valley, the percent of Dalma Tepe ceramics decreased very sharply. Whereas in the Kangavar valley these ceramics comprised 68%, and Mahidasht the number was 24% (Henrickson and Vitali, 1987, p. 39) The research shows that this type of ceramics lessened to the south. Although it had earlier been assumed that the similar ceramics were widespread to the South and the West of the Urmia basin, now we understand that similar ceramics were also present in the north of Lake Urmia (Abedi, 2017, p. 69-87), and now in Nakhchivan. In the territory of Iranian Azerbaijan, this culture is also revealed from the settlement at Culfa Kültepe (Abedi et al., 2014, p. 33-167), Ahranjan Tepe (Talai, 1983, p. 7-17), Lavin Tepe (Hejebri et al., 2012, p. 95-117), Ghosha Tepe (Hejebri and Purfaraj, 2005, p. 304), Idir Tapa (Abedi, 2017, p. 80) and Baruj Tepe (Alizadeh, 2003a, p. 4-25; Alizadeh, 2003b, p. 3-21). Now similar ceramics have been discovered in the territory of Southern

⁴ This settlement some researchers it is called as Pushti Kuh (Henrickson, 1983, p. 436) or Kuhi Sefid (Henrickson and Vanda, 1987, s. 38)

Azerbaijan at more than 100 monuments. Some of these settlements belonged to settled population, while others to tribes living a nomadic way of life (*Abedi, 2017, p. 80*). According to researchers, this culture blossomed in North Western Iran, and extended from here to the South and the West of Urmia basin (*Abedi, 2017, p. 80*). Chemical analysis of Dalma Tepe ceramics has shown that they were the product of local manufacture (*Henrickson and Vitali, 1987, p. 40*).

Thus it can be concluded that the area of formation and distribution of Dalma Tepe culture included Nakhchivan's territories. Undoubtedly, subsequent studies will clarify some questions of the nature of the mutual ties between the tribes of the basin of Urmia and Nakhchivan. We think that the issues related to the birthplace of Dalma Tepe culture will also be clarified.

CONCLUSION

This research determined that the settlement of Nakhchivan tepe was one of the most ancient Chalcolithic sites in the South Caucasus. Archeological excavations in this settlement make it possible to date the main stages of Chalcolithic Age culture. Research shows that ancient settlers at Nakhchivan tepe engaged in agriculture and cattle breeding. They also mastered nomadic cattle breeding. The archaeological materials revealed at Nakhchivan tepe allow us to track features of Chalcolithic Age culture, and also observe changes in ancient life ways.

The remains of copper revealed in various layers of the settlement demonstrate that ancient settlers had knowledge of their environment, including copper sources. Finding the remains of copper ore and its minerals in settlements such as Kültepe I, Uçan Ağıl, Zirincli, and Ovçular Tepesi shows that Nakhchivan was one of the ancient centers of metallurgy in the Caucasus. Nozzles and clay casting molds for casting flat axes found at Ovçular Tepesi show that copper smelting had been mastered in Nakhchivan in the fifth millennium BC. Research conducted on metal products and ores shows that ancient metallurgy in Nakhchivan developed using local raw materials.

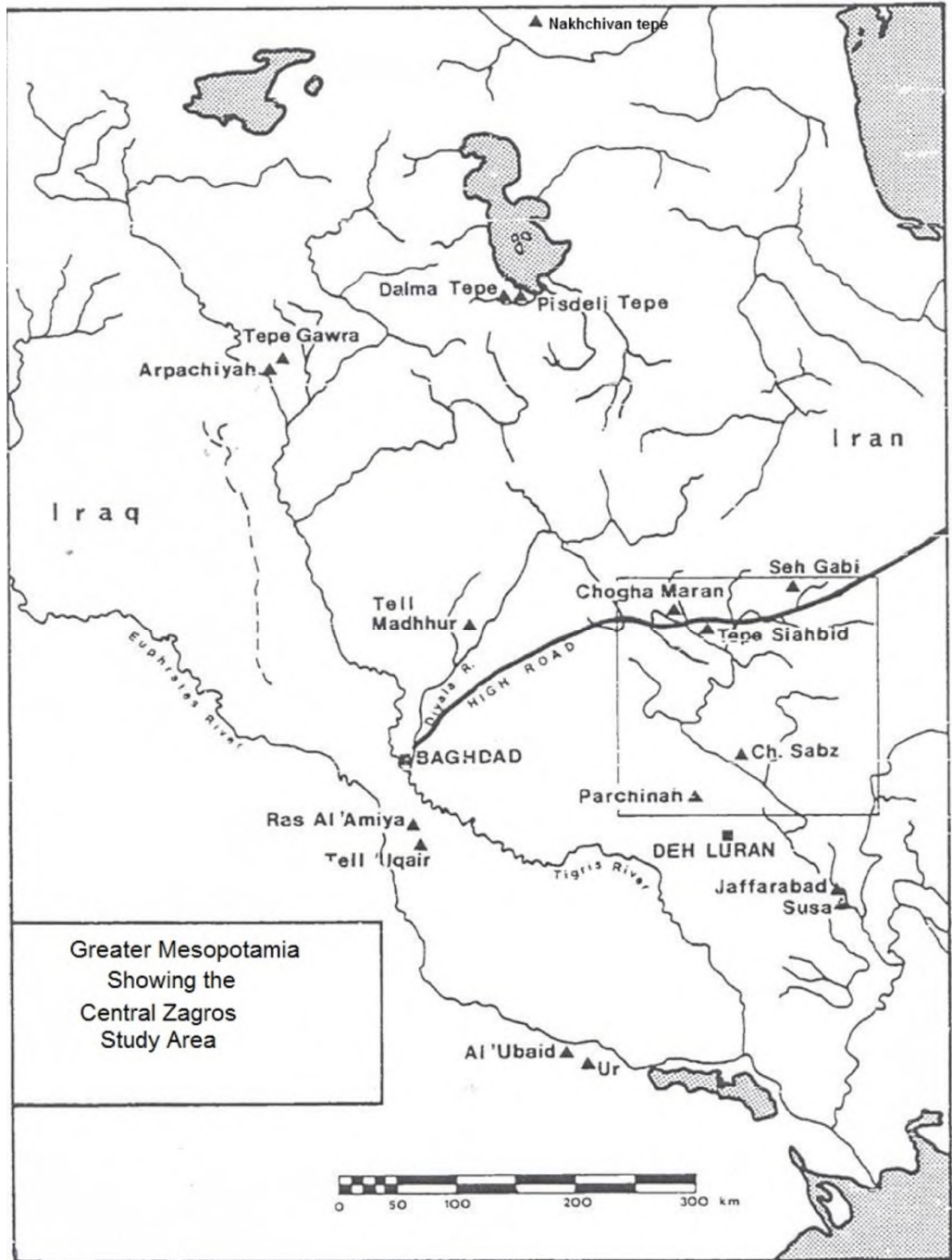
Research on Nakhchivan tepe and settlements located in the surrounding area allow us to establish features of Chalcolithic Age cultures. The recently revealed settlements also help us to understand the consecutive stages of Chalcolithic culture. Research on the settlements of Nakhchivan tepe, Uzun Oba, and Uçan Ağıl make it possible to study early Chalcolithic Age culture.

We think that research on Neolithic and the Chalcolithic Age sites in the area around the settlement of Kültepe will be of great value not only for our understanding of archeology in Azerbaijan, but throughout the South Caucasus and the Middle East.

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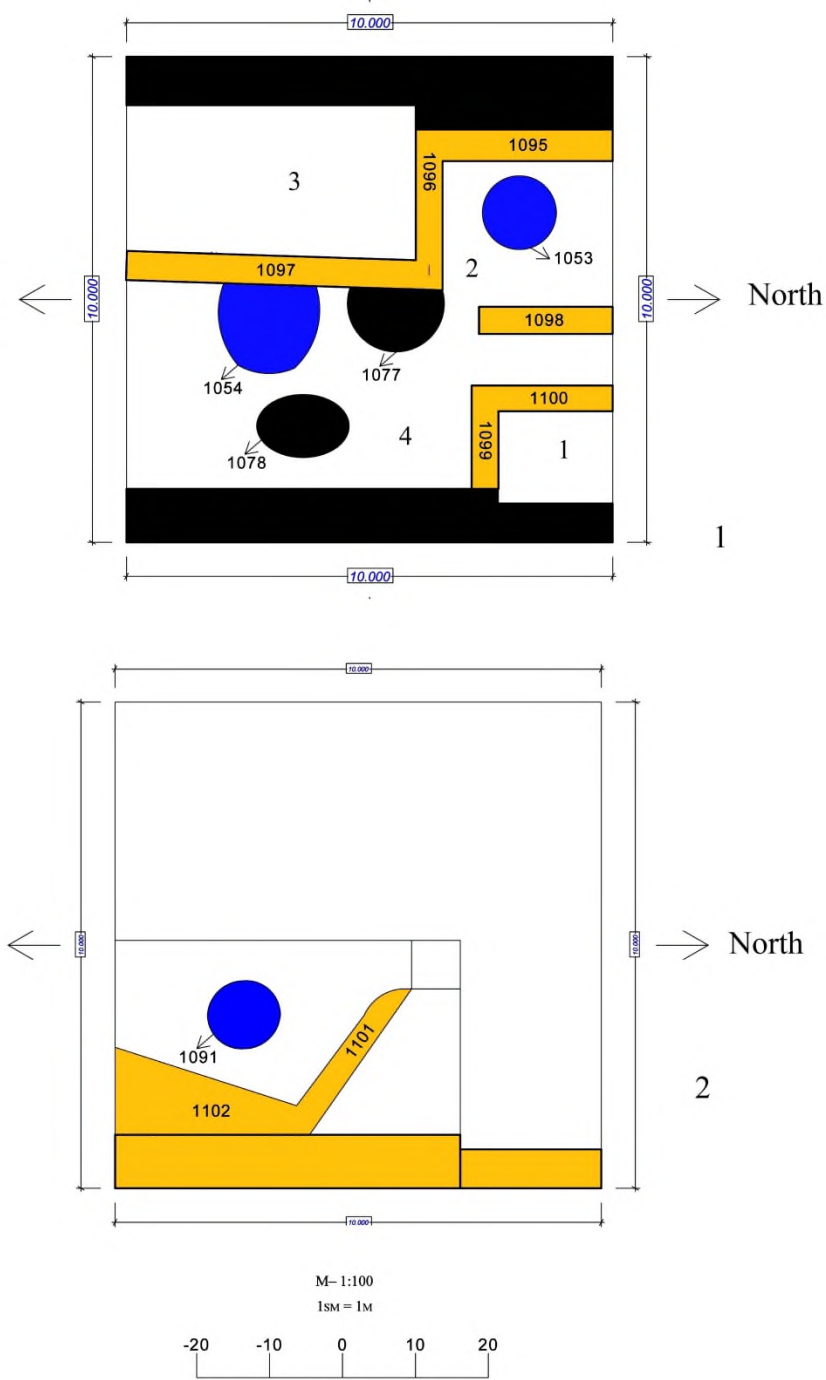
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Res. 1. Nahçıvan tepe ve Urmiya havzası yerleşmelerinin haritası. Fig. 1. Map of Urmia basin monument and Nakhchivan tepe.



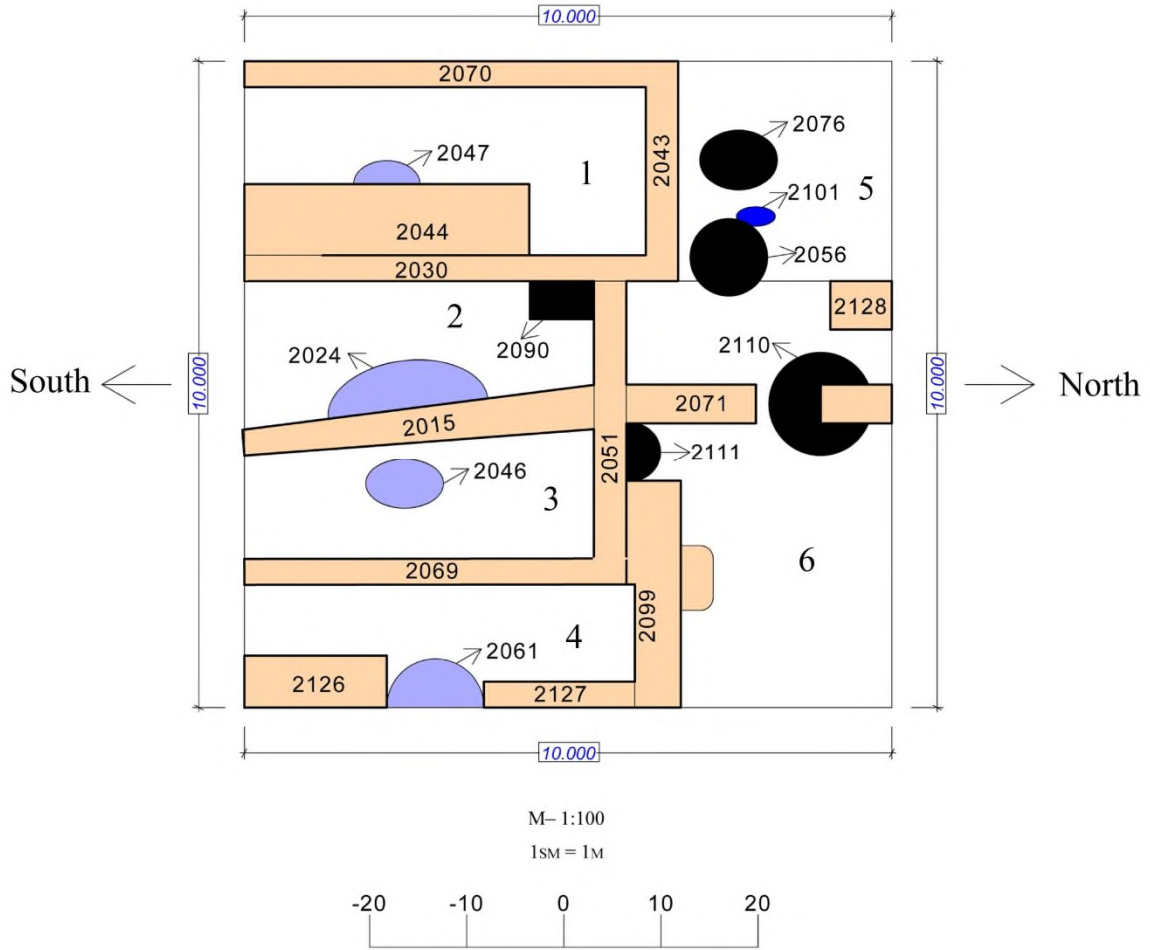
Res. 2. Nahçıvan tepe yerleşmesi. Fig. 2. Settlement Nakhchivan tepe.



Res. 3. 1- Birinci kazı alanının dörtköşeli odaları. 2- Birinci kazı alanının ikinci yapı katı.
 Fig. 3. 1-Plans of rectangular rooms of first excavation sites. 2- Plan of the second building horizon of the first sites.



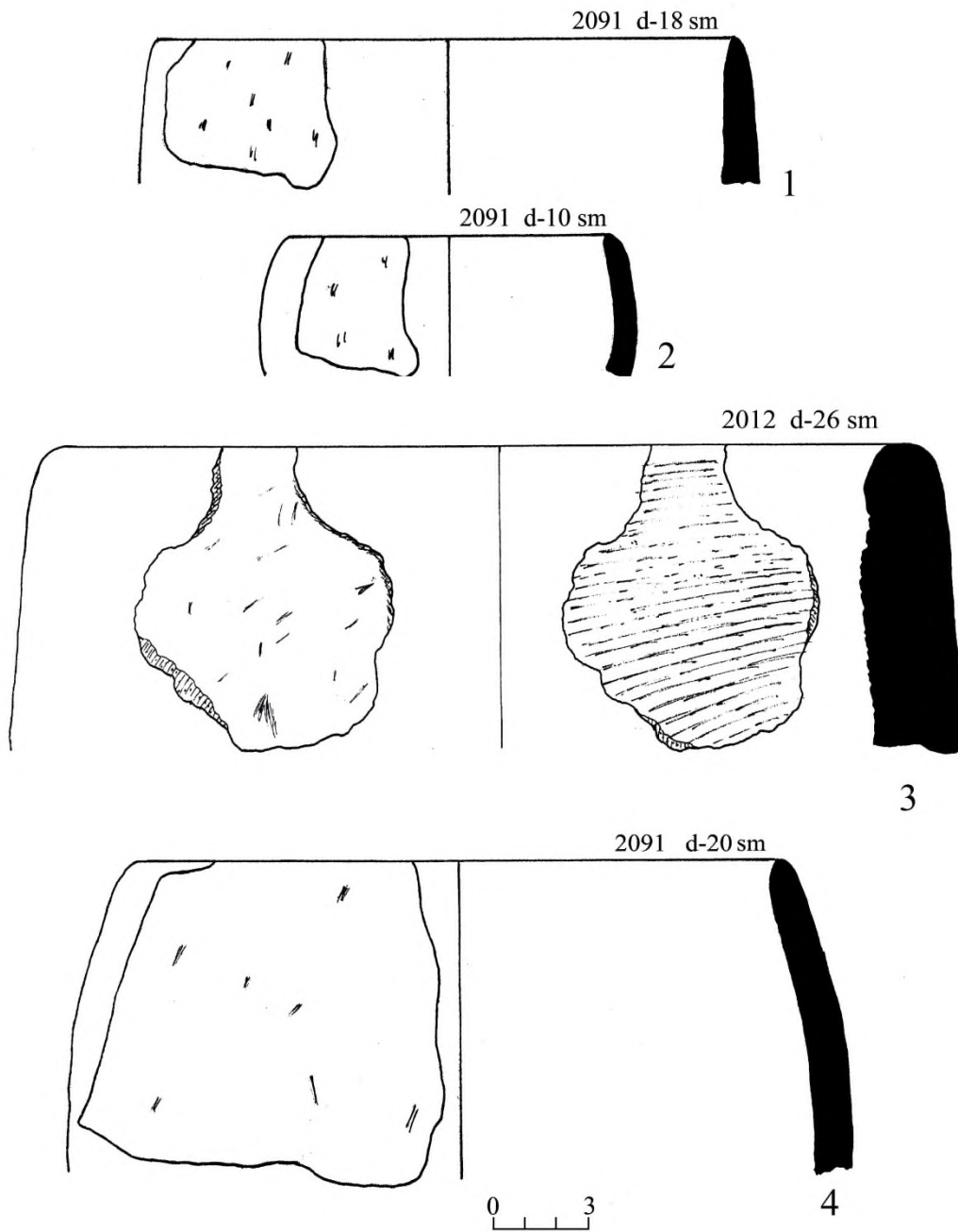
Res. 4. İkinci kazı alanında dörtköşeli oda. Fig. 4. Rectangular room from second site.



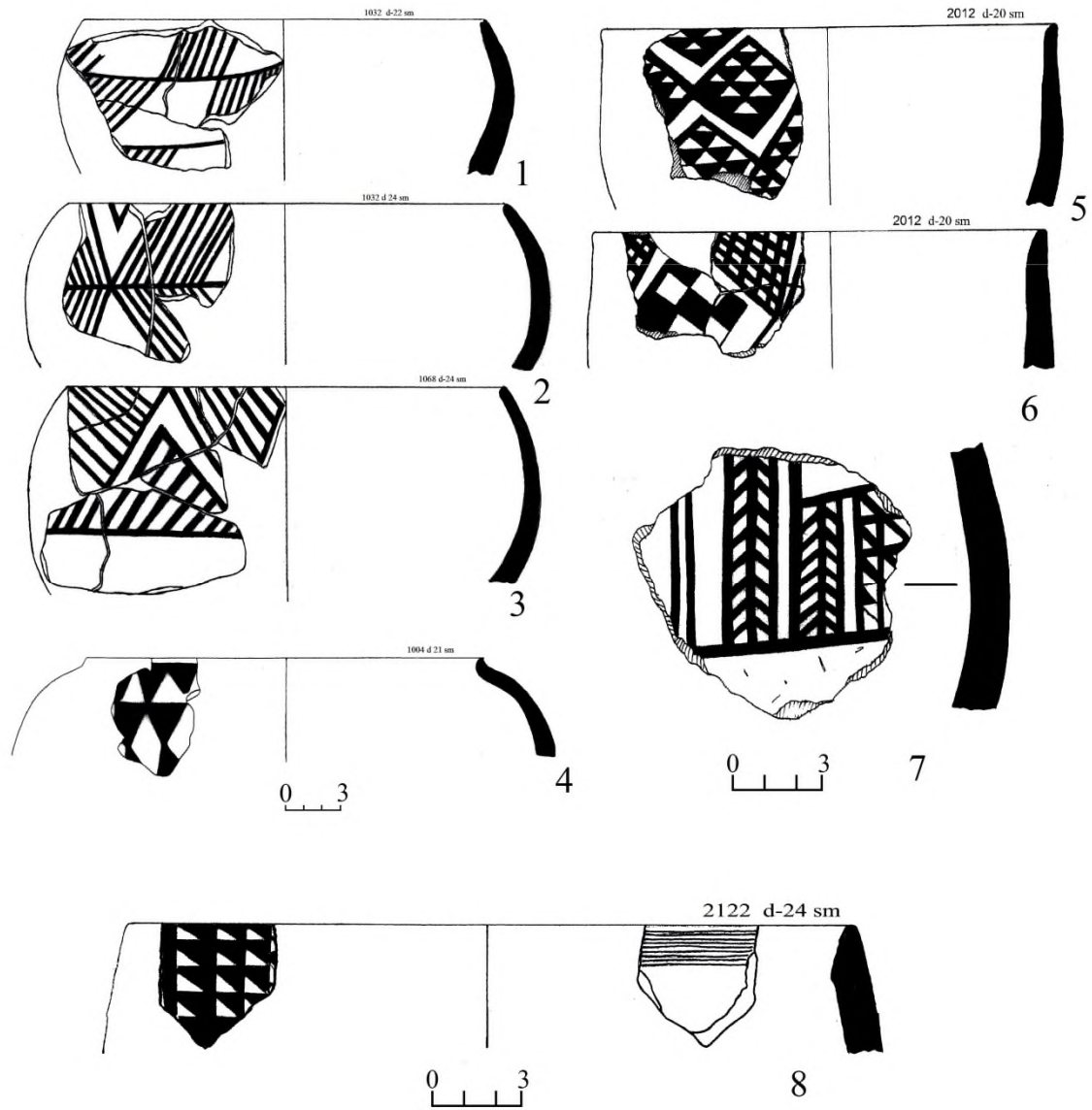
Res. 5. İkinci kazı alanında dörtköşeli odaların planı. Fig. 5. Plans of rectangular rooms of second excavation sites.



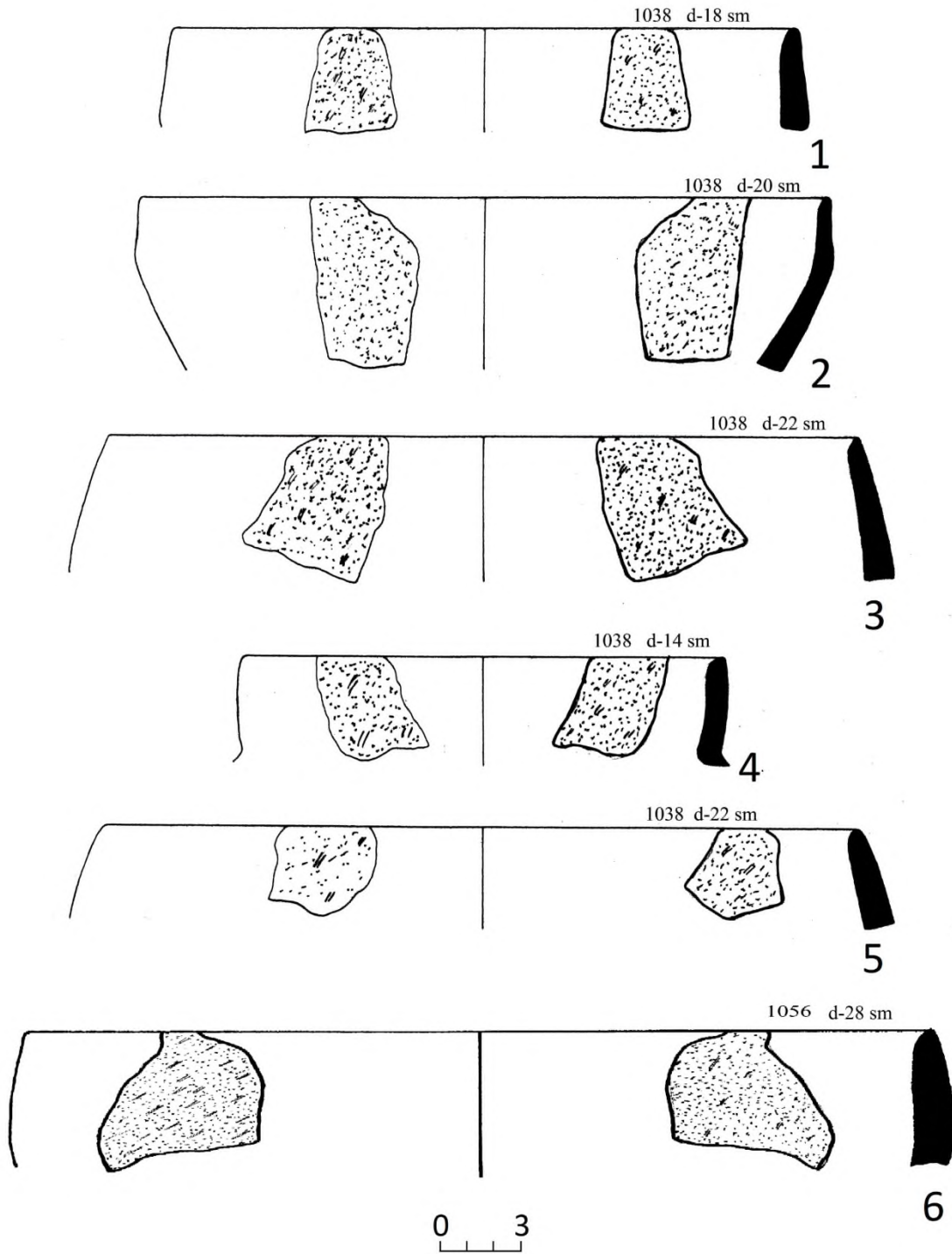
Res. 6. İkinci kazı alanında yarım kazma tipli oda. Fig. 6. The semi-dugout room from the second sites.



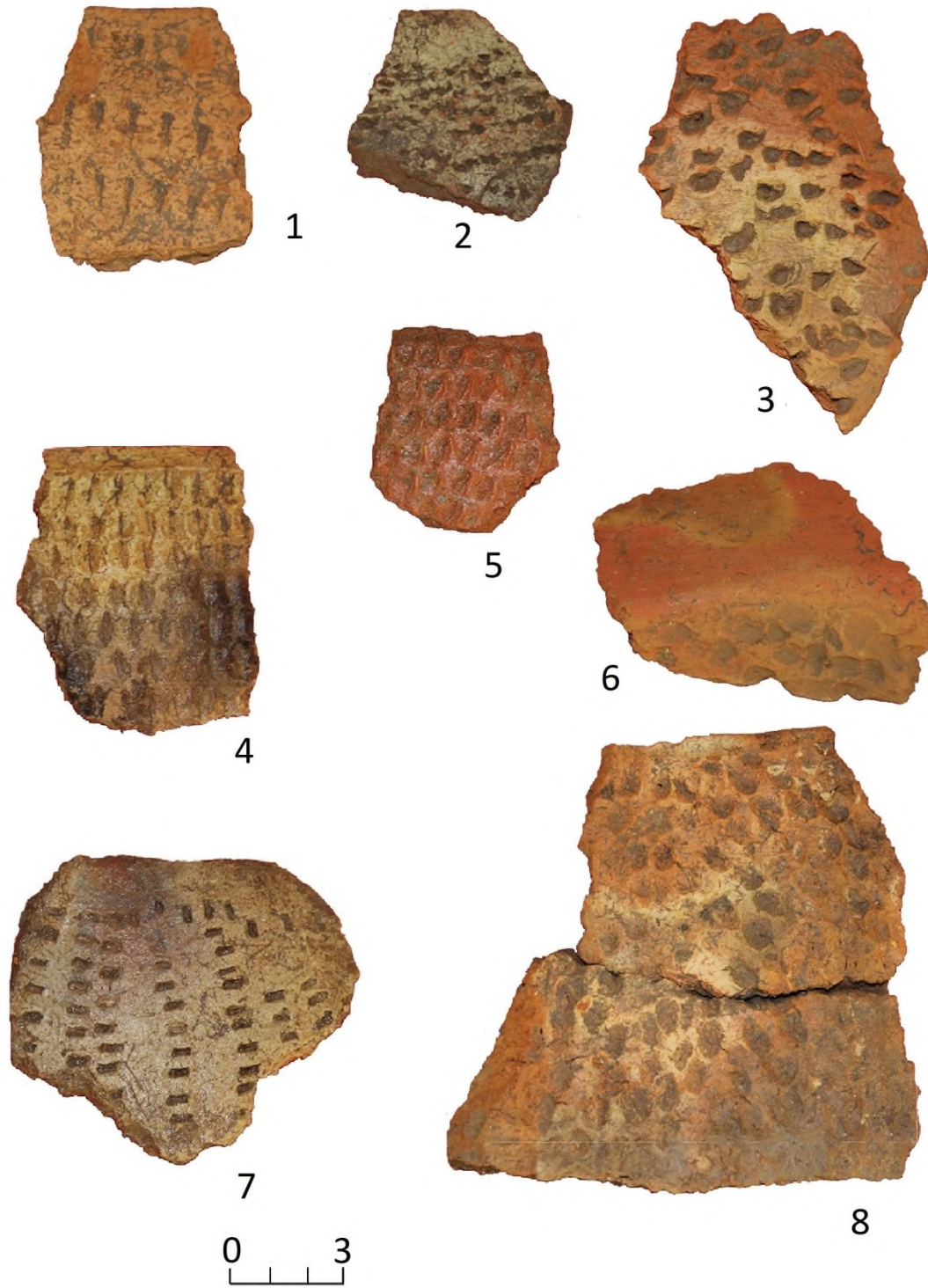
Res. 7. Sade seramikler. Fig. 7. Plain ceramics.



Res. 8. Boyalı seramikler. Fig. 8. Painted ceramics.



Res. 9. Kırmızı boyanmış seramikler. Fig. 9. Red slipped ceramics.



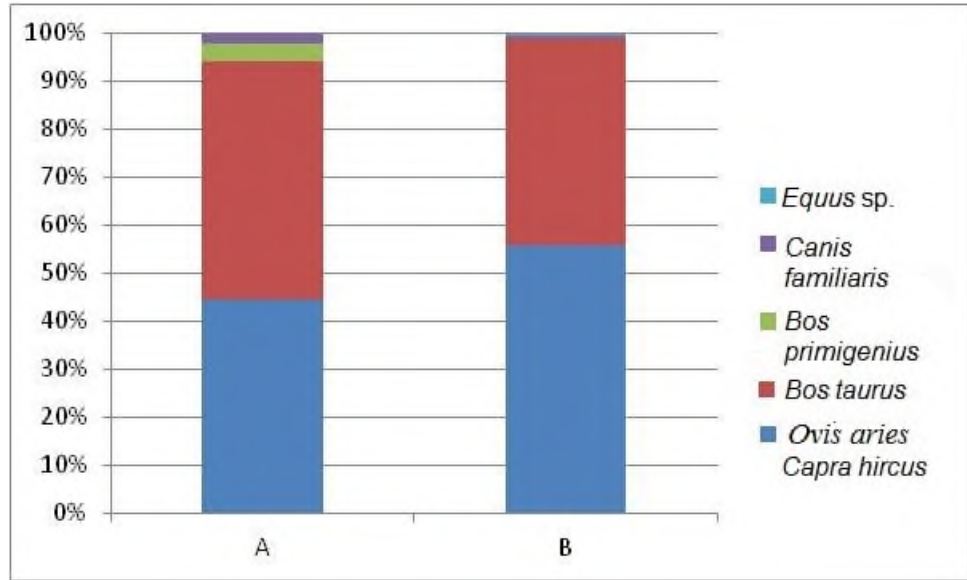
Res. 10. Basma bezemeli seramikler. Fig. 10. Ceramics with impression ornament.



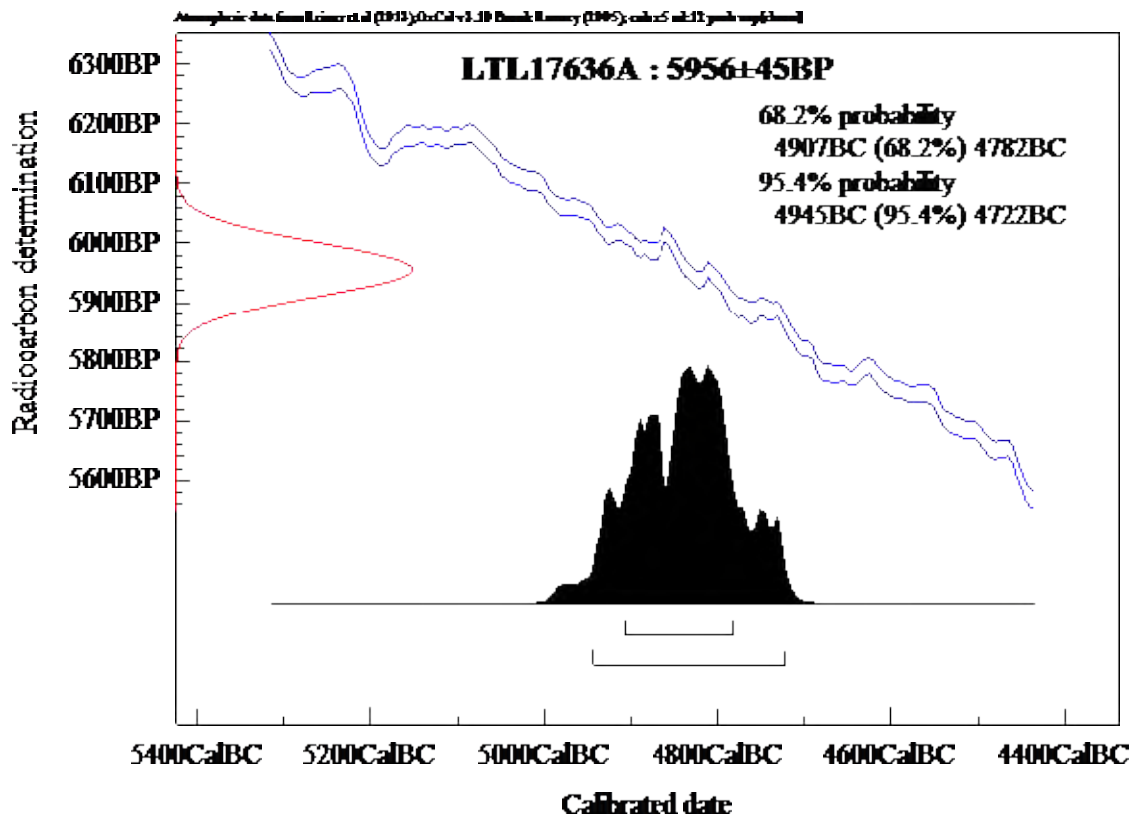
Res. 11. Tarak baskısı ile bezetilmiş seramikler. Fig. 11. Pottery decorated by the impression of a comb tool.



Res. 12. Tarak türü aletle bezelmiş seramikler. Fig. 12. Pottery decorated with comb ornament.



Res. 13. Fauna kalıntıları. Fig. 13. The remains of fauna.



Res. 14. İkinci yapı katından alınmış kömür analizinin sonucu. Fig. 14. . Result of analyses coal from the second construction horizon.