

# STUDIA HERCYNIA XVIII/1-2



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## 5. Kayrit burial site (south Uzbekistan): preliminary report for season 2014<sup>1</sup>

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With Pls. 11–14

**Abstract:** The Czech-Uzbekistani archaeological team conducted between 2008 and 2011 archaeological surface survey in the Sherabad district, South Uzbekistan. This effort yielded substantial amount of fresh archaeological data linked predominantly to the Kushan and Medieval, but also to the earlier periods. In this article, we pay attention to selected results of this research associated with funeral practices of nomad population of the piedmont steppe in this district, i.e. to nomad burials known as kurgans. One of the kurgans detected during the survey, has been partly excavated in 2014 season. Additionally, we describe briefly other archaeological sites newly detected in the area between Maydan and Karabag including Burgut Kurgan, important settlement of Yaz I period.

**Keywords:** Burial site; Kurgan; Nomads; Central Asia; Irrigation system

During the previous project of extensive surface survey in Sherabad District, South Uzbekistan, the Czech-Uzbekistani team had detected numerous settlements of various historical periods (STANČO 2009; DANIELISOVÁ – STANČO – SHAYDULLAEV 2010), but also several concentrations of burials mounds (kurgans) located in the piedmont steppe area in the valleys of Pashkhurt, Loylagan, as well as in the Sherabad river valley itself (STANČO – SHAYDULLAEV 2015, *in print*). As a preliminary step for a future large-scale “kurgan project”, we decided to study closely one of these features in order to define proper excavation and survey strategies. A small team from Charles University in Prague and Termez State University in Termez headed by L. Stančo and Sh. Shaydullaev invited renowned anthropologist Julio Bendezu-Sarmiento of Délégation archéologique française en Afghanistan (DAFA), Kabul, for collaboration. The other members of the team were students of archaeology from Prague Adam Pažout and Hana Vondrová. The fieldwork could only last two weeks (31<sup>st</sup> August – 13<sup>th</sup> September) due to various organisational reasons.

We searched for a kurgan suitable for trial excavations with an aim to get relevant chronological as well as morphological data with a least effort and costs. Among the previously detected kurgan burial sites had appeared as a probably best option for such trial excavation one of the burials situated on the high flat terrace above dry river bed between the village of Karabag and the famous archaeological site of Zarautsay.<sup>2</sup> Well-preserved and compact stone burial mounds had promised good results. An accidental discovery of yet another burial site made us change the original plan. This completely new burial site is

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<sup>2</sup> L. Stančo and Sh. Shaydullaev found this burial site during inspection of a medieval settlement site near Karabag village in November 2011; altogether seven kurgans was detected in this area.



located close to the hamlet of Kayrit, which is considered part of Karabag (Pl. 11:1). For ease of orientation, we call this new site Kayrit, while for the above-mentioned one we are going to coin the name "Karabag". Besides the other advantages, we appreciated especially the good road access allowing us to work more effectively in the limited time span.

### Description of the site

The site of Kayrit is situated on the prolonged ridge above large flat basin stretching between modern villages of Karabag, Zarabag, and Maydan. The landscape here is typical for its dry steppe that stretches over highly contoured relief with steep and rocky main ridge of Kugitang Mountains in the background. The landscape is bare, without trees, only small thorny succulent plants grow here that are periodically grazed by passing herds of sheep and goats.

The first group of four kurgans was detected on 31<sup>st</sup> August 2014 from the road linking Maydan and Zarabag, while the other kurgans were discovered later on by field walking. All of them were placed on the elevated flat plateau above dry valleys of seasonal streams. Let us note that we have not discovered these kurgans using remote sensing despite our long-lasting effort. Once we know the exact location of the given features, we are able to recognize them easily in the satellite images. Moreover, we are able to detect the other similar objects in the region. The final number of kurgans in the area between Kayrit and Zarabag is at least fourteen by now (Pl. 11:2). The kurgans do not make up any particular cluster, they are irregularly scattered across the plateau. After the first inspection of the site, one well-preserved kurgan (Kayrit 1) was chosen for trial excavations that began the next day. This particular burial mound is situated 90 m to the north of the road linking Maydan and Zarabag (2.2 km to the west from the turning of the road to Karabag, the village Zarabag is yet another 3.9 km to the west from the site) at the elevation of 836 m, and its coordinates are N 37.752 E 066.797. The other kurgan (Kayrit 2) lies ca. 110 m to the west from it and two more are situated 120 m to the south just across the road (Kayrit 3 and 4).

### Excavation progress (Fig. 4)

The excavations of the selected kurgan started with photo documentation of its original state of preservation. We have set out a square trench of eight meters side length. Subsequently, the entire surface of the barrow was cleared of soil. We accomplished this work within two days. In the central part of the kurgan, an oval depression was apparent from the very beginning, indicating a subsurface feature beneath, probably grave pit. The dimensions of this depression were 0.9×0.6 m. We took pictures of the whole kurgan for 3D reconstruction (Pl. 13:5, see below). As the next step, we excavated a section of the barrow: we gradually removed stones from the south-eastern and north-eastern quarters. The thickness of the stone layer in central part reached 0.5 m at its most (Pl. 12:3). Beneath the stones was the undisturbed original surface of the steppe, except for the centre of the kurgan, where the outline of a pit measuring 1.5×2.5 m appeared (exactly below the depression in the barrow), filled with red-brownish clay containing little white stones. It should be noted that the burial mound has no clear structure: there is no stone ring or other type of construction. The stones of the above-earth structure had simply been stacked on the barrow, being usually 20-40 cm long, with several exceptional pieces in the central part reaching as much as 50-65 cm in length and 35-45 cm in width. After documenting the eastern half of the E-W section and the entire S-N section, as well as the general ground plan, we continued excavating by removing the soil from inside of the grave pit. Our intention was to make section again and to dig only the eastern half of the pit, but the situation inside the pit became very unclear in the dry soil of the filling. Thus, in the depth of less than one meter, we decided to excavate the whole area of the pit at one time.



Meanwhile, the original square measuring 8×8 m was widened to the west and partly to the south in order to cover the whole surface of the kurgan. Diameter of the barrow reached nine meters. The filling of the pit, initially loose, became harder and compact with some big stones inside (max. 40 cm long). In the upper part of the filling, there was no ceramic material, while in the depth of 150 cm and below we found several fragments of pottery belonging to eight vessels at least. In this depth, we came across mud bricks. There was, however, no obvious structure made of them: both bigger stones and mud bricks were once thrown into the pit (be it during its primary filling or during the secondary process of hiding a robber pit). The lower part of the pit contained even bigger stones than the aboveground mound, and although huge boulders prevailed, we found also flat stone slabs resembling a lintel over the door (80×47×5-6 cm). We were inclined to interpret these slabs – since they were placed horizontally in the sidewalls of the pit – as lintels over a passage or a manhole to the grave chamber, but this was not the case. The search for the entrance to the burial chamber proofed vain, even when we reached depth of about 2.3 m below the level of original surface. Before reaching this level – the deepest we were able to arrive –, we came across traces of – probably secondary – activity. Remains of two wooden objects and related iron implements were unearthed some 170 cm under the surface. At the same level, a well-preserved whetstone was found (see below **Fig. 1**; **Pl. 13:7**). Kurgans without skeletal remains of various types were elsewhere in Scythian context interpreted as simple cenotaphs. At the burial site of Akbent in the Eastern Tajikistan, for instance, Bernshtam and Litvinskiy counted 17 cenotaphs out of 51 excavated kurgans (LITVINSKIY 1972, 8).<sup>3</sup> Thus, Kayrit 1 can be with all probability interpreted along the same lines. Dating of the kurgan, on the other hand, poses serious problem, since we have no clear chronological clues. Small finds (see below) allow us to presume origin of the burial in both Late Bronze and Early Iron Age. The latter period is more probable taking into account also similarity of the kurgan to typical Scythian burial mounds throughout Central and Inner Asia (BOURGEOIS – GHEYLE 2005, 12).

### Digital documentation of the excavations

Following recent development in the field of 3D documentation methods in archaeology (e.g. DONEUS *et al.* 2011; KJELMANN 2012; COCCA 2014) it was decided to test them in the field in course of the Kayrit dig. The main aim was to produce accurate orthophotographs for documentation of the whole excavated structures (that is kurgan and other features). One of the main advantages of these methods is their easy use in the field and low equipment requirements – work in the field is done with camera and images are then processed on computer with photogrammetric software. We used simple amateur SLR camera Pentax istD<sup>4</sup> and Agisoft PhotoScan.

The method is very straightforward, utilizing structure-from-motion approach. After alignment of the overlapping images taken in the field, the software computes series of 3D points (point cloud), from which the mesh, or the surface of the feature, is generated and in the end, it is draped over with texture. An orthophoto of the feature is generated from this model afterwards (see **Pl. 13:5** and **Pl. 14:9**).

<sup>3</sup> Also the other burial sites on the high plateaus of Eastern Tajikistan (Pamir) confirm this picture: Aydynkul' I - two cenotaphs of the six kurgans; Aydynkul' - three cenotaphs out of four kurgans; Andemni – seven of twelve kurgans were cenotaphs; Koyjilga – four of twelve kurgans were cenotaphs; etc. (LITVINSKY 1972, 7–17).

<sup>4</sup> We tested a semi-professional NIKON D80 as well, but PENTAX gave better results in parameters like colours and plasticity.



## Small finds

In the grave pit, especially in its lower part (in the depth between 150-170 cm below surface) we found many pottery fragments typically of light or even pale yellow colour, unfortunately none of them represents diagnostic piece (Pl. 13:6). According to Sh. Shaydullaev expertise, they belong to the ceramic production of Sapalli culture. They are slightly different in some characteristics from the typical Sapalli ware of Sapalli site itself and of Jarkutan, and this divergence can be explained by the local piedmont workshops tradition. We believe, however, that the ware in question belong to the tradition of Late Bronze Age. Among the non-diagnostic pottery fragments of Sapalli culture, we found also very special one, with black smooth surface from the inside (caused intentionally during the production process, not by accidental secondary fire). Two individuals seem to belong to medieval production, the incised lines point to 12<sup>th</sup> c. AD. We are inclined to believe that these two fragments may have been connected with the secondary digging activity of grave robbers. This also applies to the above mentioned iron implements (Fig. 1: left), perhaps originally forming part of some tools or equipment. Beside the finds from the pit, we unearthed some pottery fragments also from the barrow above the ground. These, however, do not allow any precise dating.

Most interesting find in our view is a complete 17.5 cm long whetstone made of grey stone (Pl. 13:7; Fig. 1: right). The object was found intact, but was very fragile and got cracked during the manipulation. After cleaning, the whetstone was reassembled together again. This type of whetstone is difficult to classify chronologically, but there are some analogies among the finds from Talashkantepa I, more precisely from its upper strata (SHAYDULLAEV 2000, 65, ris. 44; SHAYDULLAEV 2002, 292, Abb. 40, esp. no. 1 and 3) belonging to Achaemenid period.<sup>5</sup> The other similar item come from the strata dated to 2<sup>nd</sup> – 1<sup>st</sup> c. BC of the site Kampyrtepa (RTVELADZE – KATO eds. 1991, 294, no. 204). This object has also similar size: 16.3×1.9×1.1 cm, while the early – Yaz period – whetstones and similarly shaped stone tools for processing yarn from Kuchuktepa and Kyzyltepa are much smaller (shorter), measuring ca. 7-8 cm in length (ASKAROV – AL'BAUM 1979, 42 and 109, tab. 21:4; SAGDULLAEV 1987, ris. 33:11).<sup>6</sup>

## Overview of the kurgans at Kayrit

By now, we have detected eleven kurgans near Kayrit around the road connecting Maydan and Zarabag. Following table shows the basic characteristics of these burial mounds:

Number (local numeration for Kayrit)	Coordinates		Diameter (m)	Height (m)	Elevation (m above sea level)
1	66,798	37,752	9	0.5	838.8
2	66,797	37,752	11	0.7	834
3	66,797	37,751	9	0.8	833.5
4	66,798	37,751	10	1.2	834
5 <sup>7</sup>	66,797	37,755	3.4	0.1	833
6	66,794	37,750	13	1.5	835
7	66,790	37,750	12	1.4	843

<sup>5</sup> The best-preserved one is 8.4 cm long and 1.8 cm wide, while the other finds are preserved only as fragments. However, some of them are reported to have the length up to 13 cm (SHAYDULLAEV 2000, 65).

<sup>6</sup> One more yarn-processing tool was found at Talashkantepa I. It is 7.5 cm long.

<sup>7</sup> This structure was reinterpreted from kurgan to stone circle at last, see below.



8	66,788	37,757	11	1.4	856
9	66,801	37,756	5	< 0.5	859
10	66,801	37,751	<2	0.7	829.5
11	66,801	37,751	<2	< 0.5	823
12	66,802	37,751	<2	< 0.5	821
13	66,802	37,751	<2	< 0.5	821
14	66,786	37,757	6	0.5	853

In the close vicinity of the kurgans numbered 10–13, we observed several more kurgan-like features. These features were much smaller than the other detected barrows (the same actually goes also for the kurgans 10–13) and are, unlike the other kurgans, also clustered close together. In this case, we can talk about a grave field. These features are marked in the map (Pl. 11:1, 2), but missing in the table above.

### Stone circle

Our team studied yet another feature presumably connected with burial rite. On the small ridge just across narrow valley to the north of the Kayrit kurgan 1, there was an incomplete stone circle with diameter of 3.5 m (Pl. 14:9). It is also included in the table above (no. 5), since originally we assumed it a grave with stone circle instead of a barrow (specific type called *ograda*). Such burials dating from Kushan period were encountered in the Southern Tajikistan (MANDEL'SHTAM 1975, 64–104) for instance, but were known to Scythian/Saka nomads of Eastern Pamir as well (LITVINSKIY 1972, 10, foto 3; Tabl. 80). The Pamir burial sites (Alichur, Istyk and other burial sites) of Scythian origin revealed also simple stone circles. Unfortunately, they are not described in detail (LITVINSKIY 1972, 10; 14). We carefully excavated interior of this structure (ca. 20–30 cm below the surface), but did not find any culture layers or artefacts, thus the function of the circle remains unresolved. Similar structures, however, were found and documented at various sites of Asian steppe belt cultures, most likely Scythian, and usually are interpreted as places for deposition of animal sacrifices that was taking place during funeral rites, or funeral feasts, connected with the kurgans. New zooarchaeological investigations of such structures in Mongolia identified remains of caprines and cattle in most cases without traces of burning (BRODERICK *et al.*, in print). Stone circles of various sizes surrounded also the famous Scythian kurgan of Arzhan 2. The bigger stone circles at this site have ca. seven meters in diameter (14 structures), while the diameter of the small ones – with 20 examples excavated – reaches approximately 2.5 m. In contrast to the circles studied in Mongolia, Arzhan examples yielded traces of burning and artefacts, suggesting burnt offerings performed on the spot (ČUGUNOV – PARZINGER – NAGLER 2010, 142–152). The great kurgan of Arzhan 2 was built at the end of the seventh c. BC and stone circles around are of the same date. These analogies show that stone circles were usually, but not exclusively, connected with kurgans, and with rituals performed in their vicinity. Thus, similar function we assume for the Kayrit stone circle, which is also located close to the kurgan burials. Moreover, stone circles are connected with Scythian nomads, at least in Mongolia and Altai area (BOURGEOIS – GHEYLE 2005, 12), which could also be the case of Kayrit stone circle. The circle excavated here is not the only one in piedmonts of Kugitag: our team has recorded similar structures also at the large burial site of Loylagan in 2010 (not yet published). Diameter of the best-preserved stone circle of Loylagan site reaches ca. 2.5 m.



## Newly detected settlements around Kayrit

During the process of trial excavations at the Kayrit burial site, we undertook additional survey resulting in detection of seven new settlements of various periods in this area. Here we give only brief description of these sites with very preliminary attempts of their dating based exclusively on the surface ceramic material. We have given them simple provisional numeration, since there were in most cases no local names of the sites. The number in brackets indicates again the code in our database of archaeological sites in Sherabad district.

Among the newly discovered sites, we must mention in detail settlement of Yaz I period called Burgut Kurgan (no. 047 in our system). It is situated on the edge of an elongated flat range that forms elevated closure of a large flat basin between villages of Majdan, Karabag, and Zarabag. This valley provides good pastures in spring and early summer time and Burgut Kurgan overlooks the whole valley being perfectly situated to take control over the area. The settlement itself has a round, slightly oval form in its groundplan and is surrounded by stone ramparts. In southern slightly elevated part of the site is situated micro-citadel where is possible to recognize square room in the relief (Pl. 14:10). The surface of the site provided plenty of pottery fragments including diagnostic ones. This pottery assemblage (Pl. 14:8; Fig. 3) has been preliminarily analysed by Š. Šajdullaev and A. Askarov, who both identified typical Jaz I hand-made painted ware and the other ware bearing some aspects of Andronovo tradition. This site was selected for an intensive excavation project in the near future.

The site Kayrit IIa, situated just north of the road, represents also a walled settlement. In this case, the ceramic material collected on the surface allows us to set the preliminary dating to Late Antique (Kushan-Sasanian) period, more precisely to 4<sup>th</sup> c. AD (Fig. 2). The site has a regular rhomboid ground plan. High density of the pottery finds to the east of this main structure shows that the un-walled part of the settlement may have stretched over a larger area in this direction.

The other sites are either simple tepas (small mounds: K IIb, IV, V, VI) without fortification or are not elevated at all and are characterised only by pottery scatters (K I). Kayrit VI (Norkhontepa according to local people) is an exception, since it is located on the elevated natural location and apparently fortified, but the very limited amount of pottery in this place does not allow us even to speculate about its dating.

Site	Number	Coordinates		Dating
Kayrit I	182	66,799	37,752	Sapalli (Late Bronze Age)
Kayrit IIa	076	66,792	37,758	4 <sup>th</sup> c. AD (Kushan-Sasanian period)
Kayrit IIb	183	66,791	37,751	18 <sup>th</sup> – 19 <sup>th</sup> c. AD (early modern)
Kayrit III = Burgut Kurgan	047	66,789	37,757	Yaz I (Early Iron Age)
Kayrit IV	185	66,785	37,753	18 <sup>th</sup> – 19 <sup>th</sup> c. AD (early modern)
Kayrit V	187	66,786	37,756	Sapalli (Late Bronze Age)
Kayrit VI = Norkhontepa	186	66,797	37,749	Unknown (few surface finds)
Kayrit VII	184	66,783	37,758	Unknown

It is perfectly clear that the studied portion of the steppe was repeatedly (but not continuously) inhabited, not only by nomadic peoples, but also by settled population. According to currently available data, the small plateau between Zarabag and Kayrit was settled by Sapalli, Yaz I, and Kushan peoples, and later on during late medieval/early modern period. Two of the seven settlements (Kayrit IIa and Kayrit IV), moreover, are fortresses, which undoubtedly served –



judging by their size and position – only to control of limited area in immediate surroundings. Note also that most of the newly discovered settlements are situated near the modern road, from which we can conclude that some road could also go through the same place in historic times. The seasonal streams running through Karabag and Zarabag valleys could not provide sufficient water for the stable agriculture. In the hamlet of Kayrit, there is natural water source, which was, however, of no use for the sites in question being hidden behind the ridge. The only water sources available were springs in the present-day Zarabag village. Their waters must had been brought by a system of water canals down to the settlements. At least some of them were irrigated this way, as is attested by traces of small canals connecting Zarabag micro-oasis and prehistoric sites including Burgut Kurgan. Our brief survey this season cannot give any final answer concerning dating of the canals, though a few fragments of Late Bronze Age pottery that were found around these canals allows us to speculate about the dating of this system preliminarily to Late Bronze/Early Iron Age. This dating, however, will be difficult to prove. Only closer examination of this system may shed some more light on the water supply strategies and agriculture practices in this remote piedmont landscape. We must take into account also dry farming as possible subsistence strategy, especially in periods for which we are not able to prove a working irrigation system.

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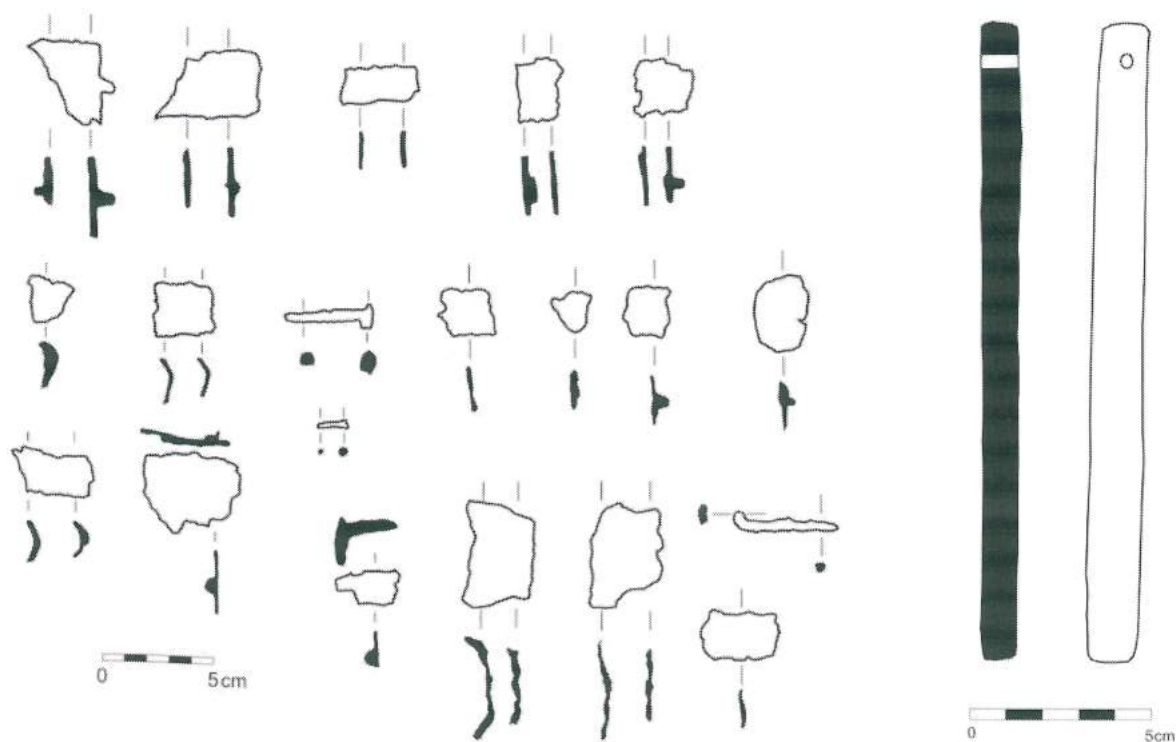


Fig. 1. Iron implements and whetstone from the grave pit of Kayrit kurgan 1, drawing by A. Pažout.

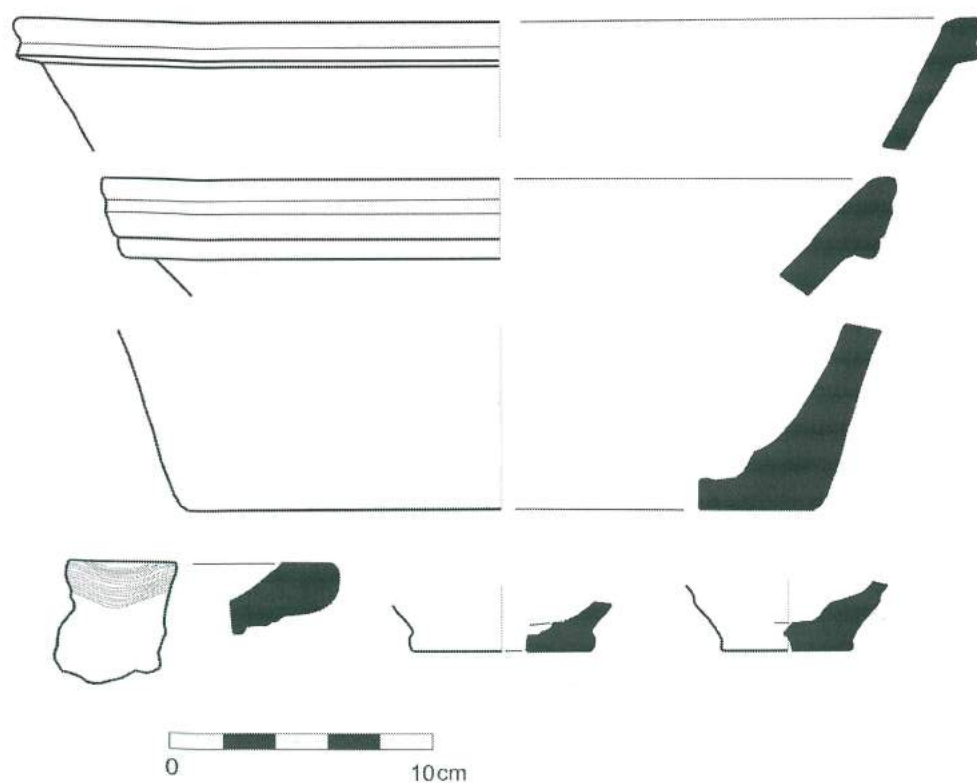


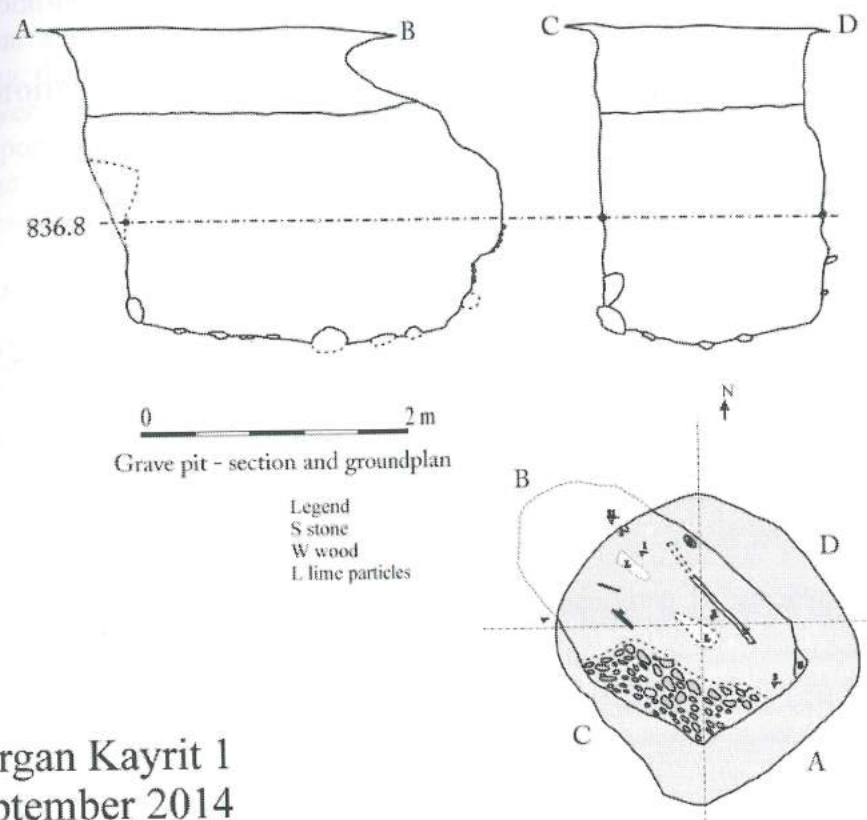
Fig. 2. Pottery from the site Kayrit IIa, drawing by A. Pažout.





Fig. 3. Pottery from the site Kayrit III (Burgut Kurgan), drawing by A. Pažout.





## Kurgan Kayrit 1 September 2014

Burial mound - groundplan and S-N section

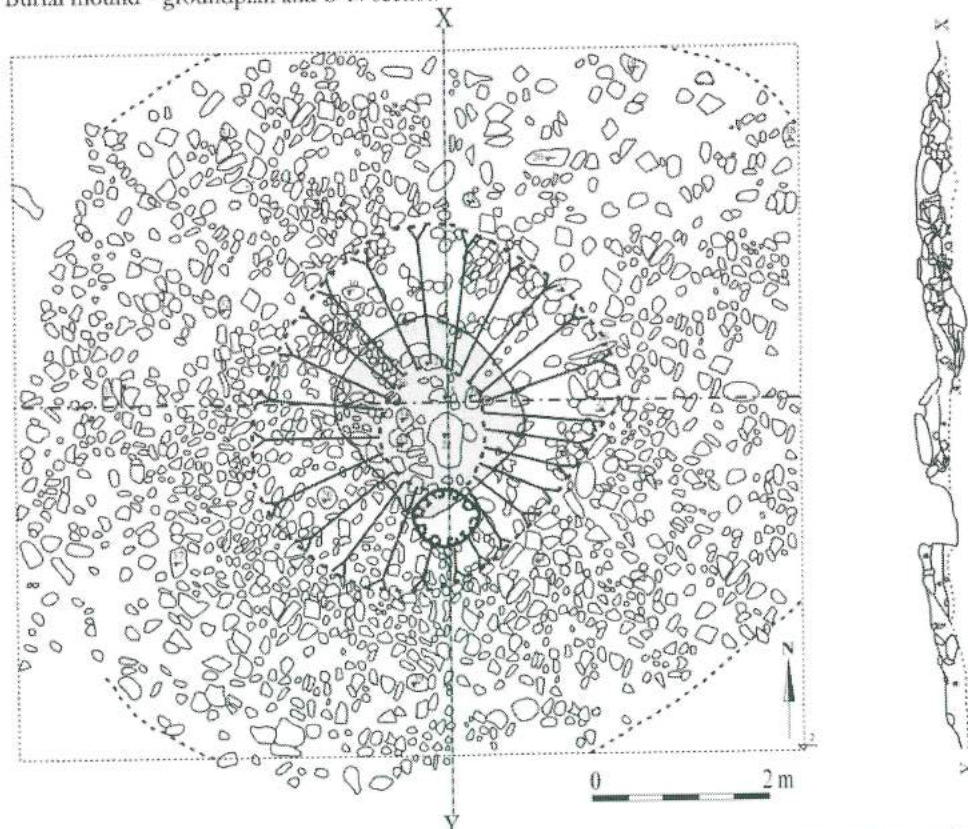
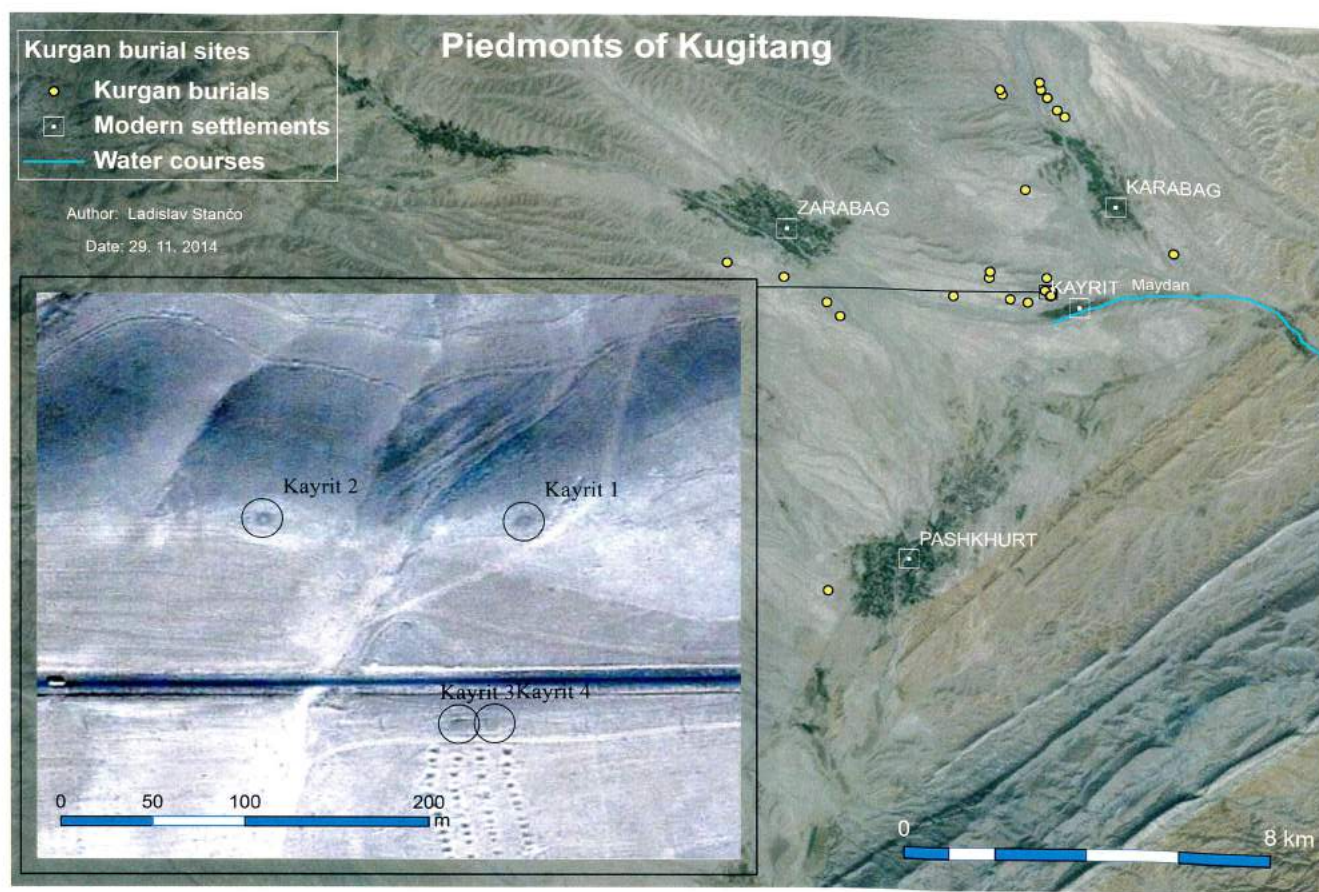
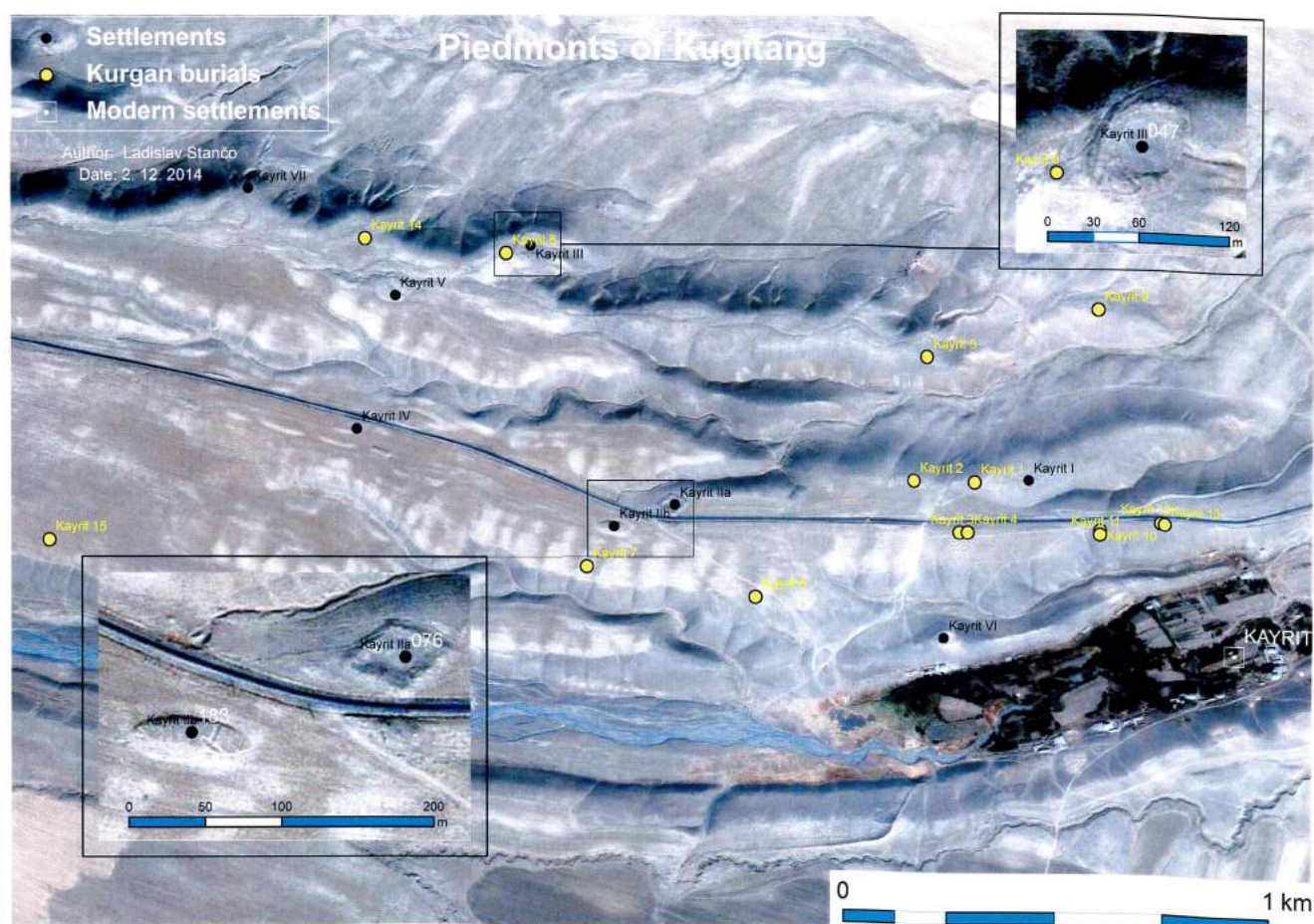


Fig. 4. Kayrit kurgan 1, general ground plan and sections, drawing by H. Vondrová, A. Pažout and L. Stančo.





1 Map of piedmonts of Kugitang with Kayrit burial site (kurgans 1-4), by L. Stančo.

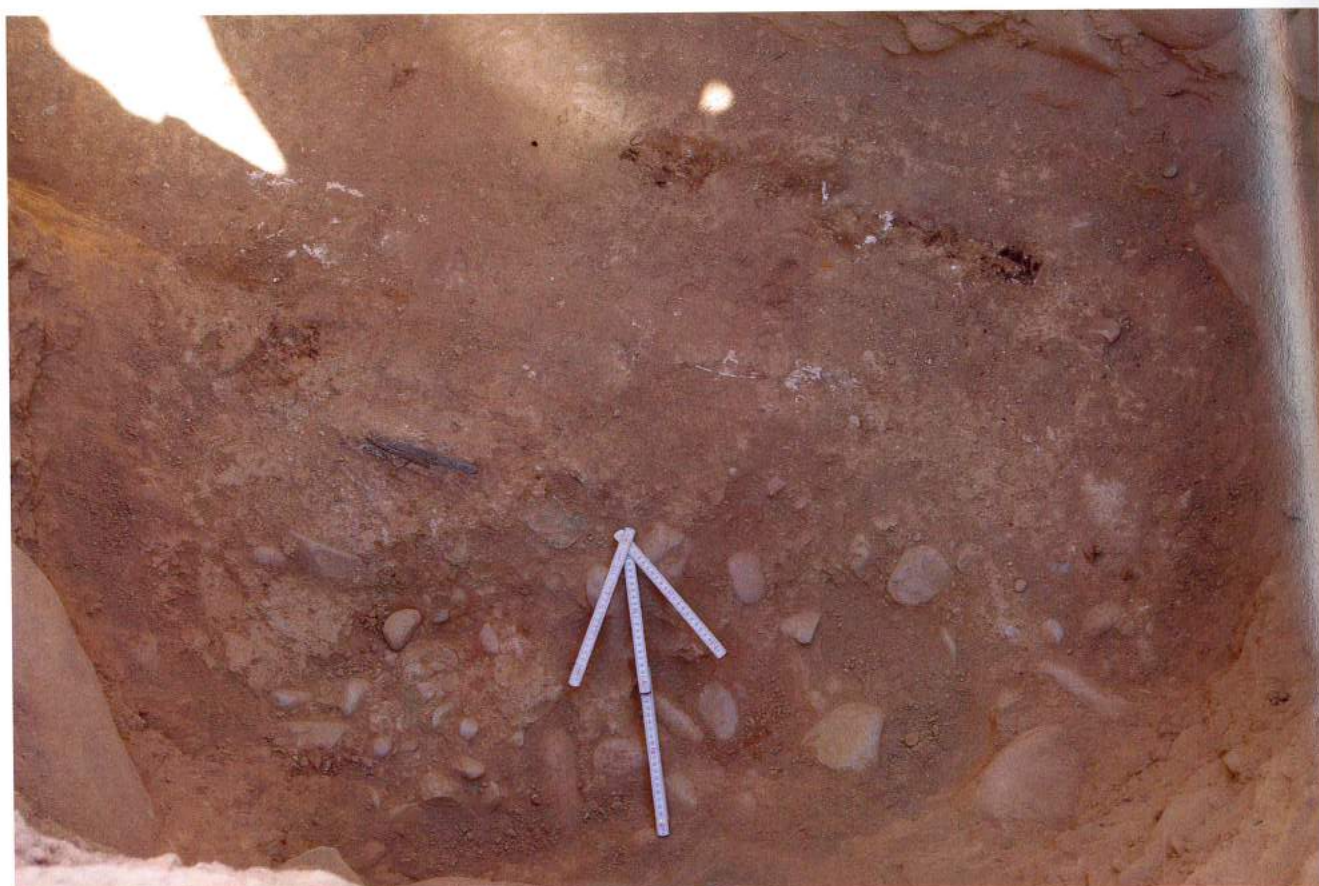


2 Map of piedmonts of Kugitang near Pashkhurt with Kayrit kurgans and settlements, by L. Stančo.





3 Section through the burial mound of Kayrit kurgan 1, view from the south, photo by L. Stančo.

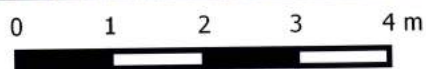


4 Bottom of the grave pit of the Kayrit kurgan 1 with whetstone and wooden objects, photo by A. Pažout.





5 Orthophotograph of Kayrit kurgan 1 made from 3D photogrammetric model, by A. Pažout.



6 Pottery from the grave pit of Kayrit kurgan 1, photo by L. Stančo.



7 Whetstone from Kayrit kurgan 1, photo by L. Stančo.







8 Pottery from the site Burgut Kurgan, photo by L. Stančo.



0 0.5 1 1.5 2 m

9 Orthophotograph of Kayrit 5 (stone circle) made from 3D photogrammetric model, by A. Pažout.



10 Burgut Kurgan, stone ramparts, photo by L. Stančo.