

The Petroglyphs of Pashkhurt Valley in the Surkhan Darya Province (South Uzbekistan) - Preliminary Report

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ABSTRACT

This report focuses on a group of petroglyphs that were recently discovered and documented near the village of Zarabag in the Sherabad District (south Uzbekistan). Although the prehistoric and early medieval petroglyphs rank among the most well-known and studied phenomena in the archaeology of Central Asia, they have been virtually unknown in south Uzbekistan. The group consists of 42 individual stones with rock art that have been recently found, carefully documented and preliminarily analysed. This paper offers a brief description of the site, and of the individual petroglyphs, their basic typology and preliminary dating as well as a spatial analysis.

KEYWORDS

Rock-art; petroglyphs; landscape; Central Asia; Bactria; Yaz culture; Sapalli culture.

In the autumn of 2015 during the research activities of the Czech-Uzbekistani-French archaeological team¹ in the Sherabad District of Surkhan Darya Province, south Uzbekistan, numerous previously unknown petroglyphs² were detected. This discovery was unexpected and is of great importance, since no similar rock art sites had previously been known in this region. Our activity focused, beyond the detection and documentation of the single examples, on their spatial analysis with regard to the settlement pattern. Beside both co-authors, Johana Tlustá was engaged in the photographic documenting of the petroglyphs. The field work lasted altogether four days in late September and early October 2015.

PETROGLYPHS IN THE SHERABAD REGION

Although rock art is by no means unique in other regions of Central Asia, in the environment of south Uzbekistan this phenomenon had not been uncovered yet. The highest concentrations of petroglyphs in Uzbekistan are to be found in the north-eastern (western Tien-Shan, Turkestan and Alai ranges, Fergana Valley) and in the central (Nurata and Zarafshan ranges) parts of the country. Some clusters of rock art are also present in the north-western part of the republic (central Kyzyl Kum, the mountains of Bukantau, Tamdytau, Sultan Uvays, Kuldzhuktau; see: KHUJANAZAROV 2004; KHUJANAZAROV 2011, 99).

The only exception in south Uzbekistan so far is represented by the site of Zaraut Kamar situated in the Zaraut Say gorge close to the village of Kyzyl Alma in the Sherabad District of the

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- 1 One part of the team excavated the site of Burgut Kurgan (STANČO *et al.* 2016) belonging to Yaz I culture, while another part of the team conducted an archaeological non-destructive survey in the Zarabag Oasis (AUGUSTINOVÁ *et al.* 2016) and Kayrit Oasis (STANČO 2016) nearby the aforementioned Yaz I site.
 - 2 According to R. G. Bednarik's glossary, the petroglyphs represent a rock art branch that involved a reductive process in its production such as percussion or abrasion (BEDNARIK 2003, 14).

Surkhan Darya province; thus the site is situated only 10 km north of Zarabag. Unlike the Zarabag petroglyphs, the site of Zaraut Kamar is a small limestone rock shelter decorated with paintings. Numerous researchers have dealt with this site (FORMOZOV 1965, 63–84; 1969; KABIROV 1976, 73–82; KHUJANAZAROV 1996; OKLADNIKOV 1966, 69–75; ROGINSKAYA 1950; ROZWADOVSKI 2004, 16–18; TASHBAYEVA *et al.* 2001; SHER 1980, 181–183) and ascribed the paintings to the Mesolithic period.

The petroglyphs studied in autumn 2015 were detected in the western part of the Sherabad District in the steppe belt of the Kugitang Mountains piedmonts. They are scattered in the vicinity of the Zarabag micro-oasis, which is located 6 km to the north of the centre of the village of Pashkhurt.

They are concentrated into three clusters (**Pl. 5/1** and **5/2**) and represented by 42 individual decorated stones. The first and largest concentration (Za_01) is situated immediately east of the Zarabag Oasis (**Pl. 5/3**) and includes 27 stones. The second one (Za_02) represented by nine stones continues to the east of the first cluster with a spatial gap around the Yaz I site of Burgut Kurgan. The last, and so far the smallest cluster (Za_03), is situated west of the Zarabag village and consists for now of only four decorated stones.

The first two concentrations (Za_01, Za_02) follow a virtual axis along the road connecting the villages of Zarabag and Maydan. The petroglyphs are situated about 3–5 km north-west of this crossroads. The third cluster (Za_03) is located on the right side of the road connecting Zarabag and Kampyrtepa.

LANDSCAPE CHARACTERISTICS

The steppe landscape of the piedmonts of Kugitang – part of the Alai-Western Tian Shan Steppe (PA0801)³ – consists of vast rocky outcrops, low elongated ridges and wavy plains separated by dry river beds. In the springtime, there are two seasonal rivers flowing through the research area (Shalkan and Machayly), but their riverbeds are dry during the rest of the year. The altitude of the steppe landscape here varies between 700 and 1500 m.a.s.l.

The petroglyphs occur on the loose lying stones that are typically situated on the slopes of the elongated ridges. The stones themselves are rocks of volcanic origin; their black colour patina strongly contrasts with the grey and brown shades of the landscape (and with the green palette in the spring time). This characteristic colour makes them quite easy to find and visible (unlike the petroglyphs themselves) even from the distance of several hundred meters. The elevation of the petroglyphs discovered so far varies between 822 m.a.s.l. in the case of P40 (Za_02) and 1098 m.a.s.l. in the case of P21 (Za_03) with an overall average elevation of 907 m.a.s.l.

STATE OF PRESERVATION

Due to the fact that stones with petroglyphs in the open landscape are exposed to the elements for a very long time, it is not possible to decidedly recognize each of the depicted motifs. Stone P11 has brought to light an interesting finding. A part of this petroglyph was covered with soil at the moment of its discovery. After its complete clearing, the differences in preservation

3 A description of this ecosystem is given in detail in the following link (visited 20/8/2016): <http://www.worldwildlife.org/ecoregions/pao801>; in the map part of this source, this ecosystem seems to cover almost the entire Surkhan Darya province. In the text part, however, its eastern border seems to be marked by the Kugitang Mountains.

between the exposed and previously covered parts became clearly obvious (**Pl. 5/4**). This example distinctly illustrates that the original appearance of the motifs differed markedly from what we can see now. They were more contrasting and crisply scratched and they could even have looked much more distinct in the landscape than today. This fact also warns that the petroglyphs are irretrievably disappearing because of exogenous influences and it is necessary to capture and document them now.

DISCOVERY CIRCUMSTANCES AND METHODS OF DOCUMENTATION

The discovery of the studied petroglyphs came about by coincidence. The first of them was shown to us by a local herder named Rustam Sukhrov from the Zarabag village. Following his first discovery we succeeded in finding all the other so far undiscovered petroglyphs.

Even if not each of the stones bears clearly recognizable depictions, we have documented every stone with obvious marks of engravings in order to get detailed data on the placement of the petroglyphs in the landscape. The documentation of the petroglyphs was carried out in several steps. Every stone was positioned by GPS (Garmin eTrex and Topcon GMS-2), described in the terrain and photographically documented.⁴ Afterwards, the spatial data were processed in QGis software and analysed. The identifiable motifs were redrawn by Adobe Illustrator and further studied.

The documented petroglyphs are summarized here in a simple catalogue in the form of a table (**Tab. 1**) that is supplemented by drawings and photographs. We take into account the elevation of the stones (m.a.s.l.), the orientation of the petroglyphs to the cardinal points, and the size of the surface (cm) on which the motif is situated. In iconographic and stylistic terms, we have focused on the questions, whether the petroglyph contains only one object (O) or a composition of more objects (C), and especially what motifs are depicted.

As for map data, the only topographic map of the research area freely available is the 1:100000 map compiled by the Soviet military in 1983 (**Pl. 5/1**) which is not detailed enough for our intentions. As a working map underlay, the satellite imagery of Google Earth served us better.

Petroglyph No.	Cluster No.	Elevation	Coordinates		Composition	Size of the surface with engraving (cm)	Slope orientation	Motif
Po1	Za_01	895	66.775689404	37.759957043	C	45×40	N-W	arkhar (2), markhor (1), unrecognizable animals (?; Fig. 1)
Po2a	Za_01	910	66.773478175	37.760613682	C	180×30	E	geometric pattern (1), arkhar (1; Fig. 2)
Po2b	Za_01	910	66.773478175	37.760613682	C	180×50	W	geometric pattern (1)
Po3	Za_01	913	66.773120100	37.760852901	O	30×40	S	wild goat (1; Fig. 3)
Po4	Za_01	909	66.770350719	37.760290811	C	50×80	E	unclear motif
Po5	Za_01	902	66.769965319	37.760029547	O	20×20×20	S-W	geometric pattern (1; Fig. 4)
Po6	Za_01	907	66.768900314	37.760525420	C	90×40	W	markhor (2), wild goat (2), Siberian ibex (2), unrecognizable animals (?; Fig. 5)
Po7	Za_01	902	66.769192507	37.760121999	C	60×50	S-W	unclear motif
Po8	Za_01	866	66.780430209	37.759459661	O	50×50×40	S-E	scorpion/group of goats (1; Fig. 6)

4 The photographs of the petroglyphs were taken by A. Augustinová, L. Stančo and J. Tlustá.

Petroglyph No.	Cluster No.	Elevation	Coordinates		Composition	Size of the surface with engraving (cm)	Slope orientation	Motif
P09a	Za_01	888	66.780099878	37.759642471	O	60×30	S-E	arkhar (1; Fig. 7)
P09b	Za_01	888	66.780099878	37.759642471	O	60×30	S-E	unclear motif
P10	Za_01	888	66.780047826	37.759383721	C	40×30	N-E	unrecognizable animal (?), anthropomorphic figure (1; Fig. 8)
P11	Za_01	903	66.773457052	37.760509495	C	70×20	N	hunting scene – wild goat (1); Siberian ibex (?), human figure (1; Fig. 9)
P12	Za_01	920	66.770570911	37.760331128	O	30×20	S	markhor (1; Fig. 10)
P13	Za_01	912	66.768535282	37.760027032	C	60×30	S	unclear motif (Fig. 11)
P14	Za_01	912	66.768550873	37.760023596	C	40×40	W	markhor (1; Fig. 12)
P15	Za_01	883	66.778938901	37.759348769	C	43×20	W	unclear motif
P16	Za_01	893	66.777652949	37.759347847	C	50×50	Z	unclear motif
P17	Za_01	895	66.776868990	37.759593939	O	50×30	S-W	unclear motif
P18	Za_01	898	66.773340041	37.762283441	C	80×60	W	unclear motif
P19	Za_03	1096	66.719582789	37.776641892	O	70×50	W	unclear motif (Fig. 13)
P20	Za_03	1079	66.720908135	37.775806887	C	50×40	S-E	unclear motif
P21	Za_03	1098	66.721546249	37.776746834	O	90×30	N-E	Siberian ibex (1; Fig. 14)
P22	Za_03	1083	66.721551111	37.780153407	C	70×40	N-E	unclear motif
P23a	Za_03	860	66.789964791	37.757679345	C	70×30	N-E	unclear motif (Fig. 15)
P23b	Za_03	860	66.789964791	37.757679345	O	25×40	E	unclear motif
P24	Za_02	862	66.792460838	37.754813069	C	60×40	S-W	unrecognizable animals (?; Fig. 16)
P25	Za_02	869	66.792637445	37.754709721	C	40×50	S-W	arkhar (1; Fig. 17)
P26	Za_02	865	66.793008177	37.754570497	O	60×30	S	arkhar (1; Fig. 18)
P27	Za_02	861	66.794905756	37.754776860	O	60×50	S-E	unclear motif
P28	Za_02	863	66.796356915	37.754772753	C	50×25	S	arkhar (1), Siberian ibex (2; Fig. 19)
P29	Za_02	863	66.796446769	37.754746014	O	60×25	S	Siberian ibex (1; Fig. 20)
P30	Za_01	917	66.766510382	37.760572862	O	25×25	E	unclear motif
P31	Za_01	914	66.765581919	37.760823984	C	80×30	S	wild goat (1), part of human figure (1; Fig. 21)
P32	Za_01	917	66.771556539	37.761058761	O	50×50	S-E	unclear motif
P33	Za_01	909	66.772960592	37.760822475	C	80×70×70	N-W	unclear motif
P34	Za_01	907	66.774544101	37.760487786	O	60×20	S-W	cow (1; Fig. 22)
P35	Za_01	897	66.776250405	37.760264659	C	40×20	W	unclear motif
P36	Za_01	891	66.776979715	37.759791082	C	50×70	S-W	unclear motif
P37	Za_01	896	66.777420519	37.759600645	C	60×70	S-W	unclear motif
P38	Za_01	889	66.778642014	37.759450190	C	50×50	S-E	unclear motif
P39	Za_03	823	66.797400000	37.754500000	C	30×70	W	unclear motif
P40	Za_03	822	66.796900000	37.754600000	C	50×30	S	unclear motif
P41	Za_03	830	66.796500000	37.754700000	O	60×30	S	unclear motif
P42	Za_03	833	66.794000000	37.753600000	C	60×60	S	unclear motif

Tab. 1: Overview of the petroglyphs discovered in 2015.

THE ZARABAG PETROGLYPHS

As mentioned above, the petroglyphs surrounding the Zarabag micro-oasis are divided into three clusters (Za_01-03) and each stone has its own number (P01-P42). A letter after the number in the code (e.g. P02a, P02b) indicates that the stone has motifs on more than one side, and they seem to be separated from each other. All of the documented decorated stones share similar characteristics and are situated in similar places in the landscape. As far as the proposed identification of the motifs is concerned, it is necessary to take into consideration that it is based only on the subjective appraisal of the authors, who do not claim it to be an indisputable statement of fact.

The main motifs that occur repeatedly on numerous stones and are clearly recognizable, resemble “wild goats” of various species which still exist today in various places of the vast territory of Eurasia including parts of Uzbekistan: “ibexes”, “goats” and “sheep”. Some of them resemble “arkhar” (mouflon - *Ovis orientalis bocharensis*; seven depictions: P01, P02a, P09a, P25, P26, P28; **Tab. 1; Fig. 1, 7, 17, 18, 19**; KHOLIKOV 2004, 66-71). Other depicted motifs are similar to “markhor” (*Capra falconeri heptneri*; five depictions: P01, P06, P12, P14; **Tab. 1; Fig. 1, 5, 10, 12**; BOGDANOV 1992, 101-105). Still other recognizable species of animal bear a resemblance to a “wild goat” (*Capra aegagrus*; five depictions: P03, P06, P11, P31; **Tab. 1; Fig. 3, 5, 9, 21**), or the similarly looking “siberian ibex” (*Capra sibirica*; seven depictions: P6, P11, P21, P28, P29; **Tab. 1; Fig. 5, 11, 14, 19**; DAYAN *et al.* 1986, 105-116; GRUBB 2005, 637-722).

Among other depictions on the petroglyphs, there is a motif resembling a “cow” (P34; **Fig. 22**) and a “scorpion” or several goats not better identifiable because their depictions are very thickly packed together (P08; **Fig. 6**), numerous geometric patterns (P02a, P02b, P05; **Fig. 2, 4**), an anthropomorphic figure seemingly depicted in interaction with a not recognizable animal (P10; **Fig. 8**) and probably a hunting scene (P11; **Fig. 9**).

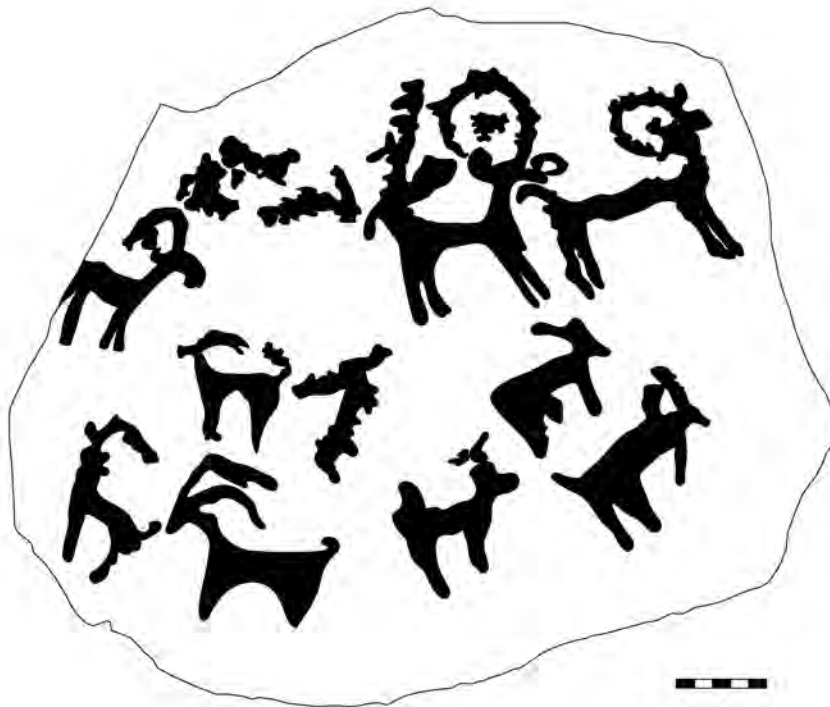


Fig. 1: P01 (Za_01) - arkhar, markhor, unrecognizable animals (redrawn by A. Augustinová).

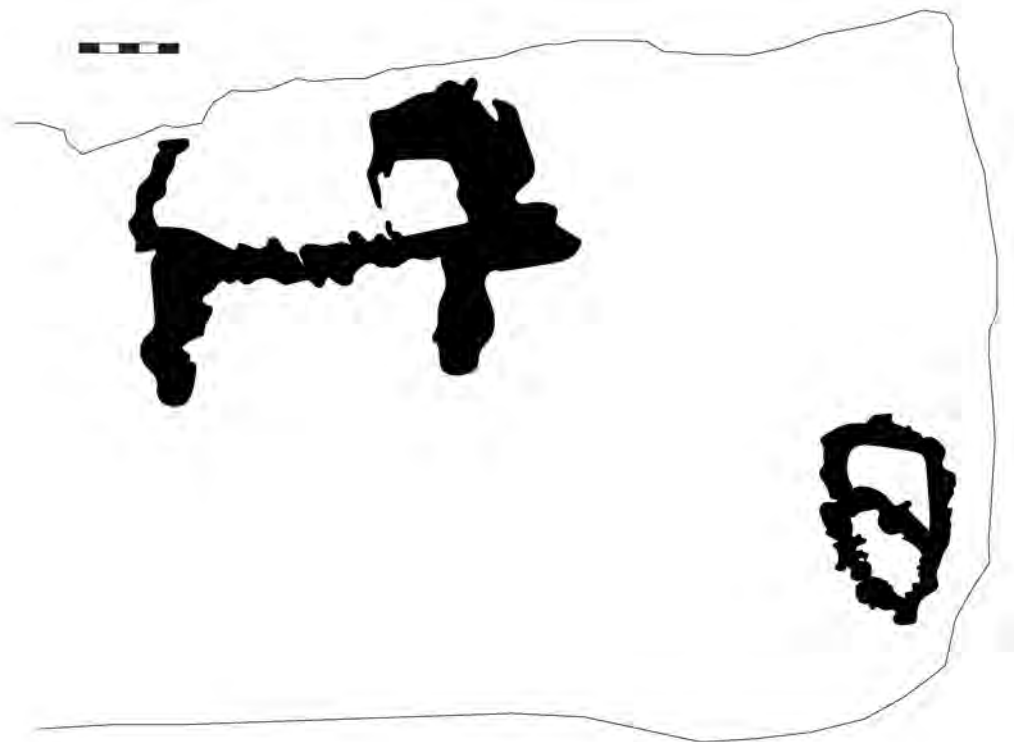


Fig. 2: Po2a (Za_01) - geometric pattern, arkhar (redrawn by A. Augustinová).



Fig. 3: Po3 (Za_01) - wild goat (redrawn by A. Augustinová).

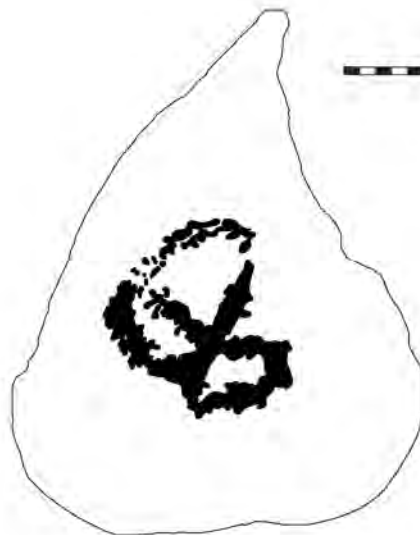


Fig. 4: Po5 (Za_01) - geometric pattern (redrawn by A. Augustinová).



Fig. 5: Po6 (Za_01) - markhor, wild goat, siberian ibex, unrecognizable animals (redrawn by A. Augustinová).



Fig. 6: Po8 (Za_01) - scorpion/group of goats (redrawn by A. Augustinová).



Fig. 7: Po9a (Za_01) - arkhar (redrawn by A. Augustinová).

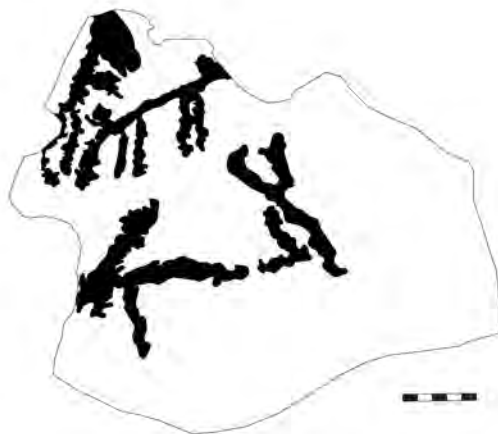


Fig. 8: P10 (Za_01) - unrecognizable animal, anthropomorphic figure (redrawn by A. Augustinová).

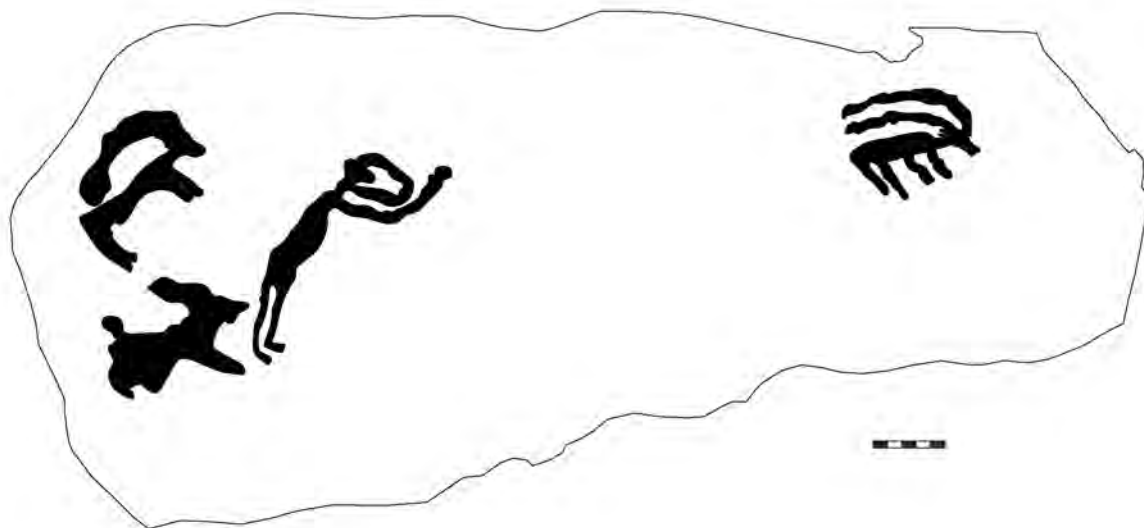


Fig. 9: P11 (Za_01) - hunting scene (?) - wild goat, siberian ibex, human figure (redrawn by A. Augustinová).

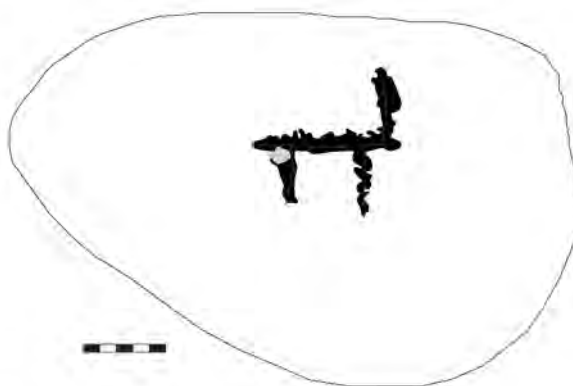


Fig. 10: P12 (Za_01) - markhor (redrawn by A. Augustinová).

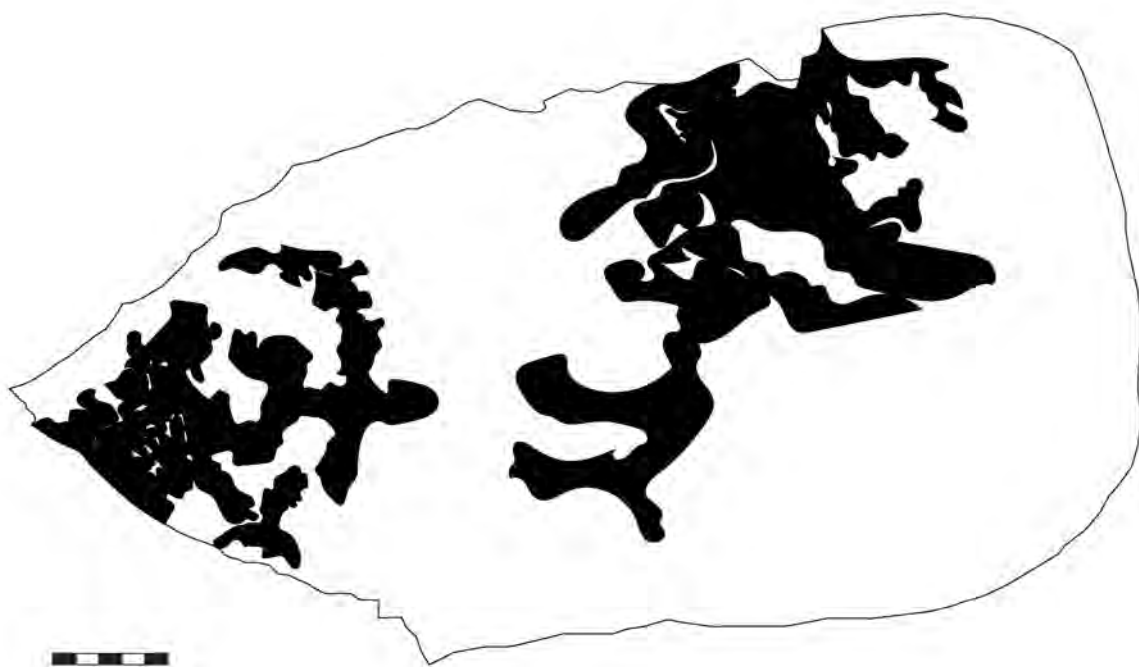


Fig. 11: P13 (Za_01) - unclear motif (redrawn by A. Augustinová).



Fig. 12: P14 (Za_01) - markhor (redrawn by A. Augustinová).



Fig. 13: P19 (Za_03) - unclear motif (redrawn by A. Augustinová).

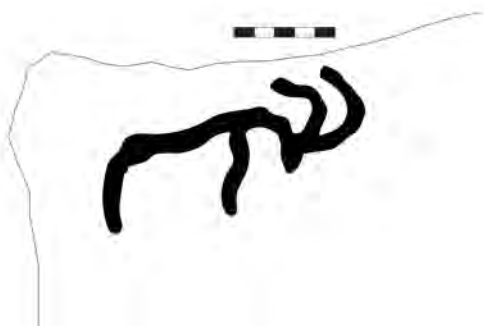


Fig. 14: P21 (Za_o3) - siberian ibex (redrawn by A. Augustinová).

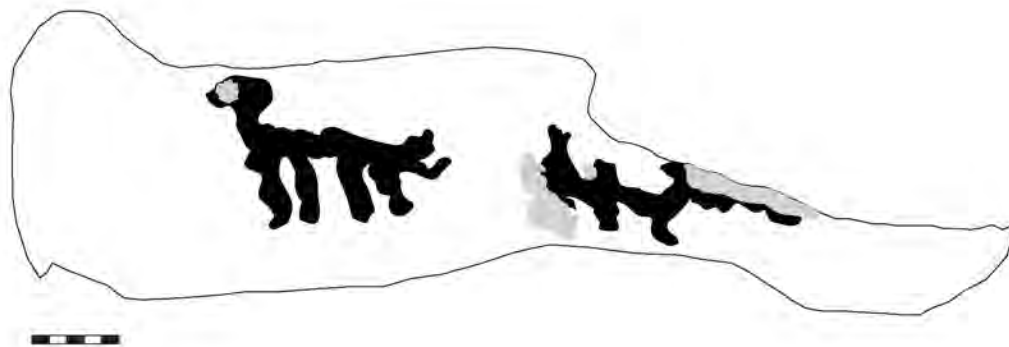


Fig. 15: P23a (Za_o3) - unclear motif (redrawn by A. Augustinová).

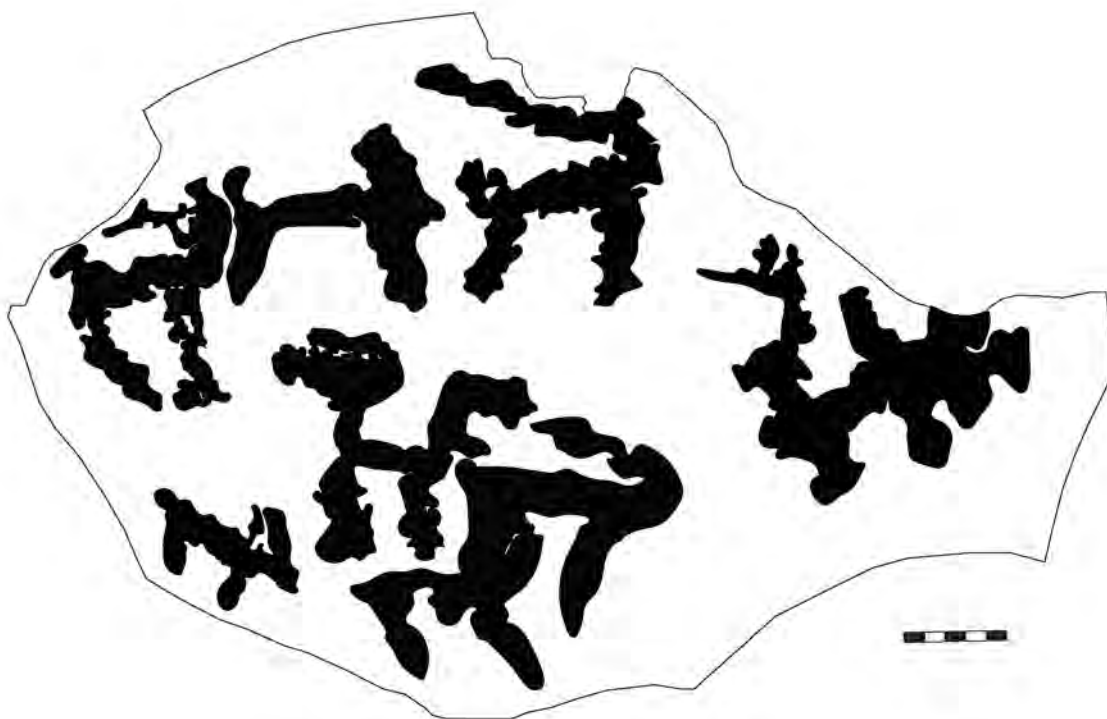


Fig. 16: P24 (Za_o2) - unrecognizable animals (redrawn by A. Augustinová).



Fig. 17: P25 (Za_o2) - arkhar (redrawn by A. Augustinová).

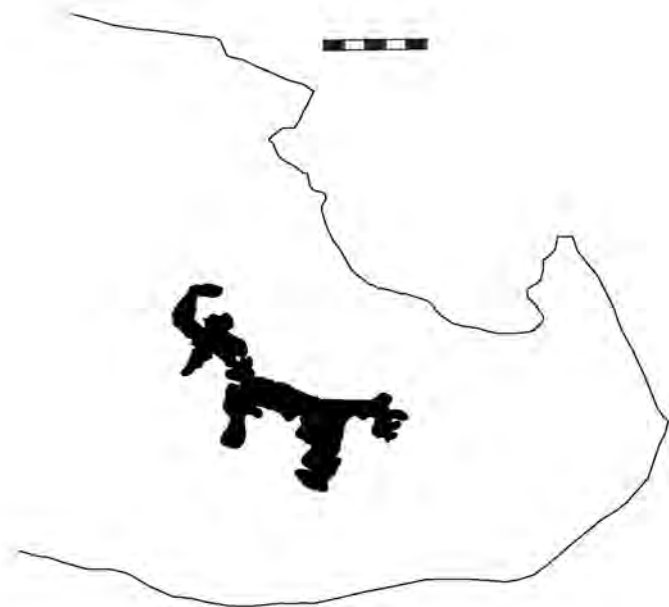


Fig. 18: P26 (Za_o2) - arkhar (redrawn by A. Augustinová).

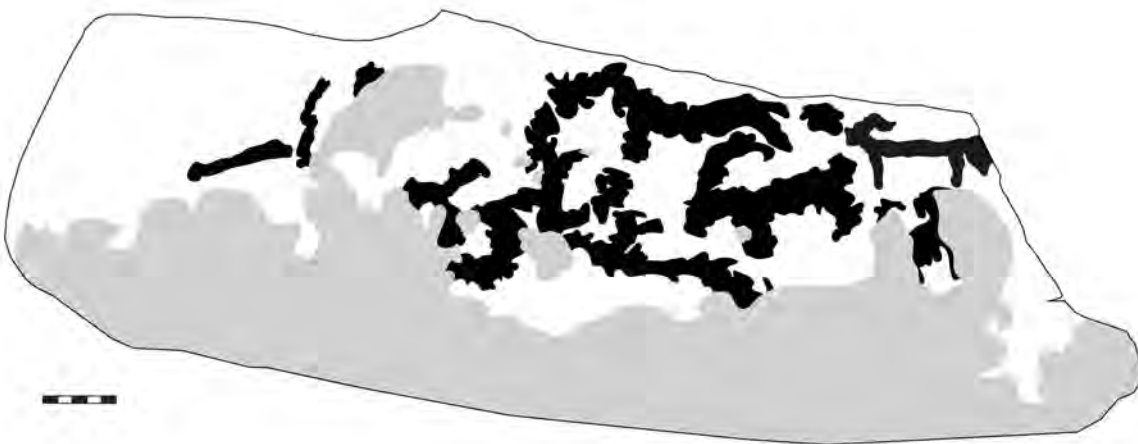


Fig. 19: P28 (Za_o2) - arkhar, siberian ibex (redrawn by A. Augustinová).

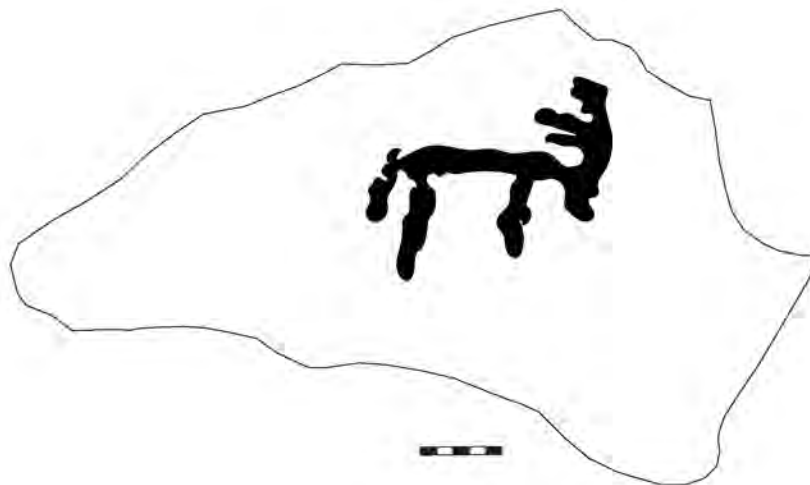


Fig. 20: P29 (Za_02) - siberian ibex (redrawn by A. Augustinová).



Fig. 21: P31 (Za_01) - wild goat, part of a human figure (redrawn by A. Augustinová).

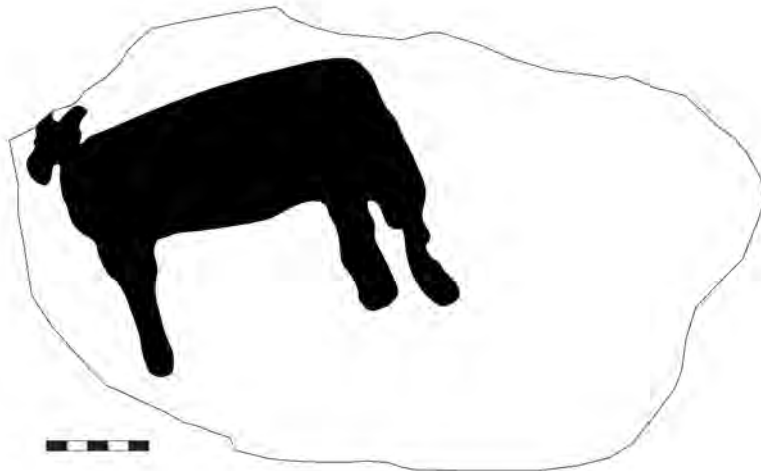


Fig. 22: P34 (Za_01) - cow (redrawn by A. Augustinová).

SPATIAL RELATIONS TO THE SETTLEMENT PATTERN IN THE EASTERN PASHKHURT VALLEY

Even though it is not yet possible to date the petroglyphs reliably (see below), they occur in the landscape with numerous pieces of evidence of a settlement and it is hardly possible to study and understand them properly without taking into account their spatial distribution in the cultural landscape.

By 2014, the area of and around the villages of Zarabag, Karabag and Kayrit had represented a blank space on the archaeological maps: virtually nothing was known about archaeology in this very region. Along with the Zarabag petroglyph clusters, however, a substantial group of prehistoric settlements have been detected by the Czech-Uzbekistani team in the same area. The sites have been dated quite reliably using archaeological material, especially pottery, from both excavations and extensive surface survey (STANČO *et al.* 2014; AUGUSTINOVÁ *et al.* 2015; STANČO *et al.* 2016; STANČO 2016, HUILIER 2016). Summarizing briefly the results of the fieldwork, we can attest to – a non-continuous – occupation from the Late Bronze Age to the Pre-modern period with two peaks: the Early Iron Age and Middle Ages (including both Early and High Middle Ages). A chronological gap surprisingly occurs in the Hellenistic and the Great Kushan period with not a single find (unlike the previous Yaz II/III period, including the Achaemenid one, that are represented by isolated pottery scatters), as if Alexander the Great and his campaign prevented human occupation here for many centuries (STANČO *et al.* 2015, 36; AUGUSTINOVÁ *et al.* 2015, Tab. 4 and 280: Tab. 7; STANČO *et al.* 2016, Tab. 1). The map (Pl. 2/1) shows clearly that the spatial distribution of the petroglyphs in the landscape matches with that of small settlements, especially of the Yaz I period.⁵ Note, that the Yaz I sites also yielded in many cases material akin to the Sapalli culture, although in a limited amount. This fact may serve as one of the hints allowing us to date these sites to the earlier phase of Yaz I or even to the transitional period between the Sapalli and Yaz cultures. Such an assumption seems to be further supported by isolated finds of Sapalli culture pottery fragments in the abundant Yaz I material excavated at Burgut Kurgan in 2015 (LHUILIER 2016). The combined pattern of rock art and settlements is further thickened by regularly distributed kurgans (or kurgan-like features) that amounts to 34 by now. All together they work perfectly as a unique example of a well-preserved record of a complex cultural landscape – let us call it a Yaz I cultural landscape. One more feature in the landscape seems to belong to the same basic pattern: the traces of a water-bringing system, particularly small canals leading directly to the sites with Yaz I material. The canals themselves have not yet, however, been exactly dated. The Za_01 cluster of petroglyphs appears between two branches of the canal. Their linear distribution suggests a sort of intention towards the viewer: the line of petroglyphs might follow a road leading from one Yaz I settlement cluster to another, or from the centre at Burgut Kurgan to the main water sources in the present day Zarabag micro-oasis (AUGUSTINOVÁ *et al.* 2015, 269–270). The regular distribution and characteristic setting of the stones allow us to predict more sites with a high potential of detection of petroglyph clusters in the surrounding landscape. These include the dry river beds of Kayrit Say, Dabil Say, and other narrow valleys especially up-stream of the micro-oases (towards the village of Kampyrtepa, for instance). Our team is going to verify these predictions in the near future.

5 The Yaz I culture is represented by 11 individual settlements or pottery scatters.

ANALOGIES AND DATING

No conventional archaeological material was found in close proximity⁶ to the petroglyphs that could be dated and help us tentatively date the engravings, including the mur-e⁷ that could help us clarify the methods of petroglyph creation. It is not an easy task to date the petroglyphs by absolute dating methods as rock paintings allow. In the case of petroglyphs, there is no pigment or other organic material that would be possible to date by natural science dating methods (AMS C14 dating, XRF – based patina dating etc.).

Nevertheless, since we were not able to analyse the motifs using natural science methods, we focused on the stylistic and iconographic analogies from different sites. It is necessary to take into consideration, that even the analogies do not provide us with absolute dating. That is why they represent only a potential determination of the age, but based on this it is not possible to reliably assign the motifs to any period.

As is briefly mentioned above, the newly found petroglyphs are located in the region, where numerous sites dated to the Early Iron Age (Yaz) have been detected⁸ and some also dated to the Late Bronze Age (Sapalli). The two largest groups (Za_01, Za_02) of the petroglyphs even occur in close proximity to this season's excavated Yaz I site Burgut Kurgan (STANČO *et al.* 2016). It is necessary to look at the petroglyphs in the wider context of the landscape, i.e. as a part of the Late Bronze Age and Early Iron Age cultural space.

A similar situation seems to exist in the complex of petroglyphs on the site of Jorbat in the north Khorasan Province of north Iran. The motifs depicted in Jorbat can be clearly compared with those from the vicinity of the Zarabag Oasis and – what is important – as with the Zarabag petroglyphs they lie near a Yaz I site and in general in the context of the Late Bronze and Early Iron Age landscape: also near Jorbat a site called Rafteh was found dated to the Bronze and Early Iron Age (VAHDATI 2010, 11–15; VAHDATI 2011). The presence of petroglyphs in the close proximity of the Late Bronze and Early Iron Age settlement in both regions (Jorbat and Pashkhurt) clearly indicates a relation between these two phenomena and points out the necessity to study both together.

Another example of similar motifs dated to the Late Bronze Age is represented by a complex of petroglyphs in the Kulzhabasy Mountains (MARYASHEV – ZHELEZNYAKOV 2013; ROGOZHINSKIY 2011, 16–18) in the Zhambyl Region, south Kazakhstan (200 km north-west of Almaty). The petroglyphs dated to the Late Bronze Age can be compared with the Zarabag petroglyphs.

Even if analogies from the nearby regions provide the most reliable grounds for dating, we cannot omit the example of clearly similar motifs that were found in much more remote territory belonging to the petroglyph complex of the Ukok Plateau in the Altai Mountains. We can also mention the similar design of the engravings of the south Siberian Late Bronze Age Afanasievo culture that are equally dated to the Late Bronze Age (MIKLASHEVICH 2003, 92–94).

Based on the stylistic analogies from other regions it is preliminarily possible to date the majority of the Zarabag petroglyphs to the turn of Late Bronze and the Early Iron Ages. This is nevertheless only an estimation based on non-precisely dated parallels. For a reliable

6 The settlements situated nearby and their spatial relations to the rock art are presented separately by L. Stančo (2016) in this volume.

7 Mur-e represents a general term for a tool used in the fashioning of petroglyphs (BEDNARIK 1998, 27).

8 The steppe belt of the Kugitang piedmont has marginally been subject to investigation since the 1970s (RTVELADZE – KHAKIMOV 1973, 16–17; RTVELADZE 1974, 66–67; BOBOKHOJAEV *et al.* 1990; MKRZYCHEV *et al.* 2005; KANIUTH 2011; DVURECHENSKAYA *et al.* 2014). In the past few years the Czech-Uzbekistani team focused on this region in more detail and more systematically (STANČO 2009; DANIELISOVÁ – STANČO – SHAYDULLAEV 2010; STANČO *et al.* 2014; AUGUSTINOVÁ *et al.* 2015; STANČO 2016).

chronological classification it is necessary to employ natural science methods of dating. Such analyses are planned within the framework of a new project, focusing on the detection and evaluation of petroglyphs in the wider area of the Sherabad District.

CONCLUSION

Up to now, 42 individual stones with petroglyphs have been detected and documented in the Pashkhurt basin of the Kugitang piedmonts. The so far discovered examples represent a coherent group that is not unique in its iconographic content, but especially in chronological terms, since petroglyphs had not yet been known in this part of Central Asia. The Zarabag group of petroglyphs seems to represent an important link between the famous rock art sites of northern Central Asia on the one hand, and the Iranian finds on the other. No exact dating method could be applied and their chronology can be based only on the grounds of formal analogies, which suggest their date to the turn of the Late Bronze (Sapalli culture) and Early Iron Age (Yaz I culture). The application of natural science dating methods is, nevertheless, necessary to confirm or modify this opinion.

The petroglyphs are concentrated in a landscape rich in evidence (settlement, burial sites – kurgans, water canals) of Late Bronze and Early Iron Age occupation. The connection between them and the petroglyphs cannot, however, be unequivocally declared yet. If all these features (the above-mentioned sites and petroglyphs) were of the same age, it would allow us to envisage this region as an extraordinary example of a complex cultural landscape.

As is evident from their state of preservation, the petroglyphs engraved on stones in open space stones, are permanently under the destructive impact of climatic factors. It is obvious that this important part of the cultural heritage has to be meticulously documented and further studied. Our team is intending to do so in the research seasons 2016 and 2017.

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BIBLIOGRAPHY

- AUGUSTINOVÁ *et al.* 2015 = Augustinová, A. – Stančo, L. – Shaydullaev, Sh. – Mrva, M. 2015: Archaeological Survey in the Micro Oasis of Zarabag (South Uzbekistan), Preliminary Report for the Season 2015. *Studia Hercynia* XIX/1–2, 262–281.
- BEDNARIK, R.G. 1998: The Technology of Petroglyphs. *Rock Art Research* 15/1, 23–35.
- BEDNARIK, R.G. 2003: *Rock Art Glossary. A Multilingual Dictionary*. Turnhout.
- BOGDANOV, O.P. 1992: *Rare Animals. Encyclopedic Reference Book*. Tashkent.
- ВОВОКНОЖАЕВ *et al.* 1990 = Бобохаджаев, А. – Аннаев, Т. – Рахманов, Ш. 1990: Некоторые итоги изучения древних и средневековых памятников предгорной и горной полосы Кугитанг – Байсунтау. *История материальной культуры Узбекистана* 23, 25–36.

- DANIELISOVÁ, A. – STANČO, L. – SHAYDULLAEV, A. 2010: Preliminary Report of Archaeological Survey in Sherabad District, South Uzbekistan in 2009. *Studia Hercynia* XIV, 67–90.
- DAYAN *et al.* = Dayan, T. – Tchernov, E. – Bar-Yosef, O. – Yom-Tov, Y. 1985: Animal Exploitation in Ujrat El-Mehed, a Neolithic Site in Southern Sinai. *Paleorient* 12, 105–116.
- DVURECHENSKAYA *et al.* 2014 = Двуреченская, Н.Д. – Двуреченский, О.В. – Мокробородов, В.В. – Рукавишникова, И.В. – Рукавишников, Д.В. 2014: Маршрутные исследования на юге Узбекистана в 2013 году. *Краткие сообщения Института археологии* 236, 69–82.
- FORMOZOV, A.A. 1965: The Rock Paintings of Zaraut-Kamar, Uzbekistan. *Rivista di Scienze Preistoriche* 20, 63–84.
- FORMOZOV 1969 = Формозов, А.А. 1969: *Очерки по первобытному искусству. Наскальные изображения и каменные изваяния эпохи камня и бронзы на территории СССР*. Москва.
- GRUBB, P. 2005: *Artiodactyla*. In: D.E. Wilson – D.M. Reeder (eds.): *Mammal Species of the World. A Taxonomic and Geographic Reference*. Baltimore, 637–722.
- КАБИРОВ 1976 = Кабиров, Д. 1976: *Древнейшая наскальная живопись Зараутсай. Первобытное искусство*. Новосибирск, 73–82.
- KANIUTH, K. 2011: Tilla Bulak 2010. Vorbericht über die vierte Grabungskampagne. *Archäologische Mitteilungen aus Iran und Turan* 43, 261–282.
- KHUJANAZAROV 1996 = Хужаназаров, М.М. 1996: *Древнейшие Наскальные изображения Узбекистана. К истокам истории древнего каменного века Средней Азии*. Ташкент.
- KHUJANAZAROV 2004 = Хужаназаров, М.М. 2004: *Памятники наскального искусства Центральной Азии*. Алматы.
- KHUJANAZAROV, M.M. 2011: Rock Art Sites in Uzbekistan. In: J. Clottes (ed.): *Rock Art in Central Asia. A Thematic Study*. Paris, 99–112, 183–188.
- KHOLIKOV, T.SH. 2004: Materials on Conditions of Population of Artiodactyls in Mountains of Kugitang and Bausuntau (Western Side). *Узбекский Биологический Журнал* 5, 66–71.
- LHUILIER, J. 2016: Pottery from Burgut Kurgan and Kayrit Oasis, Preliminary Report for Season 2015. *Studia Hercynia* XX/2, 112–121.
- LYTLE *et al.* 2008 = Lytle, F. – Lytle, M. – Rogers, A. – Garfinkel, A. – Maddock, C. – Wight, W. – Cole, C.: An Experimental Technique for Measuring Age of Petroglyphs Production. Results on Coso Petroglyphs. In: *Paper Presented at the 31st Great Basin Anthropological Conference*. Portland.
- MARYASHEV – ZHELEZNYAKOV 2013 = Марьяшев, А.Н. – Железняков, Б.А. 2013: *Древности Кулжабасы*. Алматы.
- MCNEIL, J.L. 2010: Making Lemonade. Using Graffiti to Date Petroglyphs. *Utah Rock Art* XXIX, 9–21.
- MIKLASHEVICH, E. 2003: Rock Art Research in North and Central Asia 1995–1999. In: P.G. Bahn – A. Fossati (eds.): *Rock Art Studies News of the World* 2. Oxford, 88–118.
- MKRTYCHEV *et al.* 2005 = Мкртычев, Т.К. – Болелов, С.Б. – Ильясов, Д.Я. 2005: Исследования на юге Узбекистана. *Археологические открытия 2004 года*. Москва, 524–528.
- OKLADNIKOV 1966 = Окладников, А.П. 1966: *Петроглифы Ангара*. Москва – Ленинград, 68–75.
- ROGINSKAYA 1950 = Рогинская, А. 1950: *Зараут-сай*. Москва – Ленинград.
- ROGOZHINSKIY, A.E. 2011: Rock Art Sites in Kazakhstan. In: J. Clottes (ed.): *Rock Art in Central Asia. A Thematic Study*. Paris, 9–42, 161–166.
- ROZWADOVSKI, A. 2004: *Symbols through Time. Interpreting the Rock Art of Central Asia*. Poznań.
- RTVELADZE 1974 = Ртвеладзе, Е.В. 1974: Разведочное изучение Бактрийских памятников на юге Узбекистана. In: В.М. Массон (ed.): *Древняя Бактрия*. Ленинград, 74–85.
- RTVELADZE – KNAKIMOV 1973 = Ртвеладзе, Э.В. – Хакимов, З.А. 1973: Маршрутные исследования памятников Северной Бактрии. In: *Из истории античной культуры Узбекистана*. Ташкент, 10–34.
- SHER 1980 = Шер, Я.А. 1980: *Петроглифы Средней и Центральной Азии*. Москва.
- STANČO, L. 2009: The Activities in Uzbekistan in the 2008 Season. Testing the Google Earth Programme as a Tool for Archaeological Prospecting. *Studia Hercynia* XIII, 115–122.

- STANČO *et al.* 2014 = Stančo, L. – Shaydullaev, Sh. – Bendezu-Sarmiento, J. – Pažout, A. – Vondrová, H.: Kayrit Burial Site (South Uzbekistan). Preliminary Report for Season 2014. *Studia Hercynia* XVIII/1–2, 31–41.
- STANČO *et al.* 2016 = Stančo, L. – Shaydullaev, Sh. – Bendezu-Sarmiento, J. – Lhuillier, J. – Kysela, J. – Shaydullaev, A. – Khamidov, O. – Havlík, J. – Tlustá, J.: Preliminary Report on the Excavations at Burgut Kurgan in 2015 Burgut Kurgan. *Studia Hercynia* XX/2, 86–111.
- STANČO, L. 2016: Archaeological Survey in the Surroundings of Kayrit (South Uzbekistan), Preliminary Report for Season 2015. *Studia Hercynia* XX/2, 73–85.
- TAKAKI *et al.* 2006 = Takaki, R. – Toriwaki, J. – Mizuno, S. – Izuhara, R. – Khudjanazarov, M. – Reutova, M.: Shape Analysis of Petroglyphs in Central Asia. *Forma* 21, 243–258.
- TAKAKI *et al.* 2010 = Takaki, R. – Izuhara, R. – Mizuno, S. – Khujanazarov, M. – Kashiwabara, M.: Differences of Petroglyph Styles among Archaeological Sites with Spatial and Time-Wise Distance. *Forma* 25, 45–48.
- TASHBAYEVA *et al.* 2001 = Tashbayeva, K. – Khujanazarov, M. – Ranov, V. – Samashev, Z.: *Petroglyphs of Central Asia*. Bishkek.
- VAHDATI, A.A. 2010: *Stone Canvases. A Preliminary Report on the Study of Two Rock-Art Complexes in North Khorassan Province, Northeastern Iran*. Tehran.
- VAHDATI, A.A. 2011: A Preliminary Report on a Newly Discovered Petroglyphic Complex near Jorbat, the Plain of Jajarm, North-eastern Iran. *Paléorient* 37/2, 177–187.

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