

**ARCHAEOLOGICAL SURVEY ALONG THE KARATEPA PIEDMONT, SAMARKAND:
PRELIMINARY RESULT OF THE 2019 AND 2021 UIAP FIELD SEASONS**

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The paper presents the result of the field survey carried out in the Karatepa foothill during the 2019 and 2021 campaigns by the Uzbek-Italian Archaeological Project “Samarkand and Its Territory”. The investigation encompassed the piedmont area (750–1000 m asl) between the villages of Egrikul and Mirankul, Southwest of the city of Samarkand. Thanks to a systematic fieldwork, and the use of the Android App QField for QGIS, the survey resulted in the identification of ca. 150 new archaeological sites. Most of them belong to low stone mounds used for funerary purposes (kurgan) and found either single, double, or clustered together. Such a large presence of funerary sites here suggests that the Karatepa piedmont was used for a long time as a preferential place for burials, not only by the communities living in this area but also for those living in the irrigated plain, where kurgans are few and multi-layered settlement mounds (tepa) abound.

**САМАРҚАНД ҚОРАТЕПА ТОҒ ОЛДИ ЭТАКЛАРИДА ТАДҚИҚОТЛАР:
ЎЗБЕКИСТОН-ИТАЛИЯ АРХЕОЛОГИК ЛОЙИХАСИ (ЎИАЛ) 2019 ВА 2021
ЙИЛ МАВСУМЛАРИДАГИ ДАЛА НАТИЖАЛАРИ**

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Калит сўзлар: Самарқанд, Қоратепа, Эгрикул, Миранқул, кўрғон, QField/QGIS, ландшафт археологияси.

Мақолада “Самарқанд ва унинг худуди” ни ўрганиш Ўзбекистон-Италия археологик лойиҳаси бўйича 2019 ва 2021 йиллар, Қоратепа тоғ олди этакларида олиб борилган дала кидирув тадқиқотлари таҳлили натижалари ёритилган. Тадқиқот худуди Самарқанднинг жануби-ғарбий қисмида жойлашган Эгрикул, Миранқул қишлоқлари ва уларга яқин бўлган тоғ олди воҳасини (денгиз сатҳидан 750–1000 м балан-дликда) қамраб олган. Дала тадқиқотлари давомида QGIS ва QField андроид иловасидан фойдаланган ҳолда 150 та алоҳида жойлашган қабр (мозорқўрғон) лар аниқланди. Уларнинг аксарият қисми пасткам тош мозорқўрғонлар бўлиб, айрим қабрларнинг бир жойда тўп-тўп бўлиб жойлашганлиги, айримлари яқка ҳолда жойлашганлиги кузатилади. Шунингдек, Қоратепа тоғ олди худудида қабрлар учун жуда қулай махсус жой танланганлиги эътироф этилади.

1. Introduction. This paper presents the preliminary results of the 2019 and 2021 field seasons of the Uzbek-Italian Archaeological Project – UIAP “Samarkand and Its Territory”¹. The main operations focused on the survey in the northern piedmont of the Karatepa mountains (Figure 1), where previous UIAP investigations (Tosi *et al.* 2002; Bonora *et al.* 2003; Franceschini 2007)

¹ The 2020 field season was suspended because of the COVID-19 pandemic.

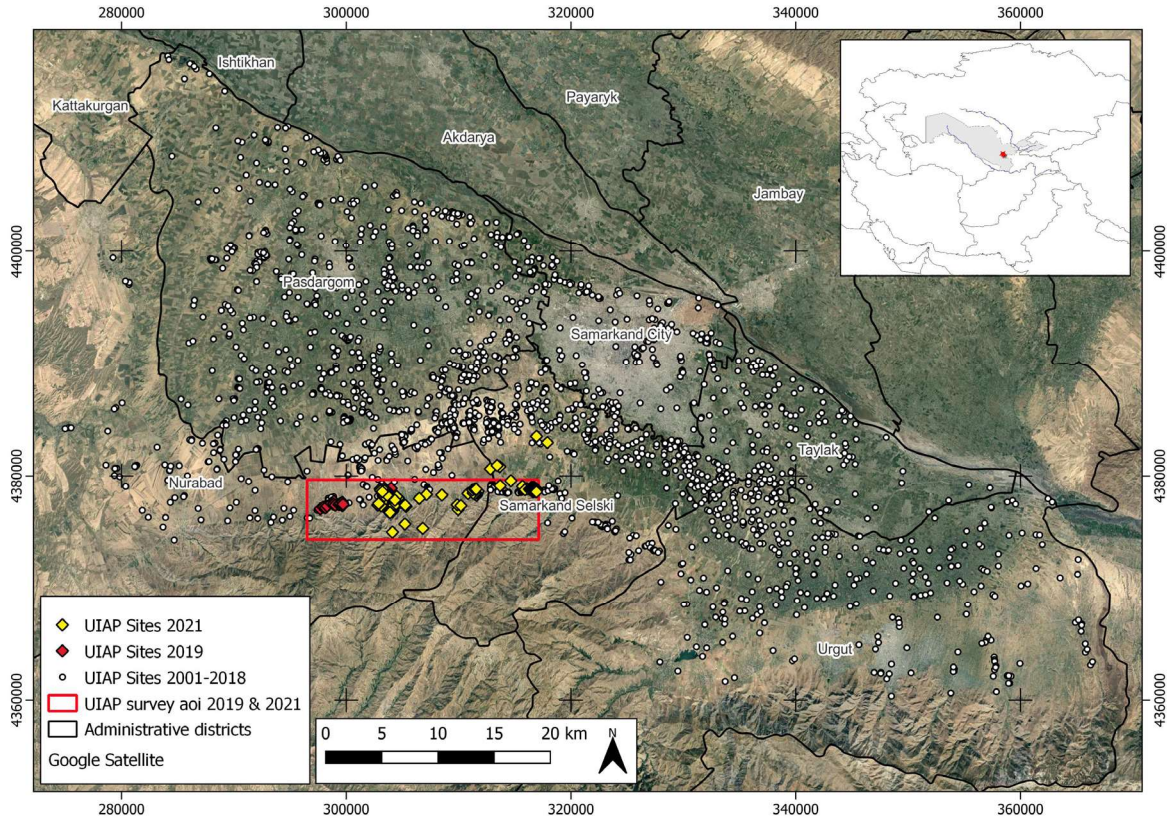


Figure 1 The Samarkand oasis with the UIAP area West of investigation 2019 and 2021 on an ESRI satellite image 2021 (data processing S. Facciani, © UIAP).

Расм. 1. ЎИАЛ асосан ўрганиши ҳудуди Самарқанд воҳаси 2019 ва 2021 йиллардаги сунъий йўлдош тасвири (С. Фассиани томонидан ишланган, © UIAP).

Рис. 1. Самаркандский оазис с районом исследования УИАП 2019 и 2021 гг. на спутниковом снимке ESRI 2021 г. (обработка данных С. Фаччиани, © UIAP).

and narratives (Obel'chenko 1966, 1969, 1972, 1973) evidenced a high presence of typical mounded burials (*kurgan*). However, since the early UIAP fieldwork was based on low-accuracy 100,000 scale topographical maps, as well as non-intensive coverage of this territory, the main goal of this survey was to validate previously identified sites and update the database through the discovery of new evidence. More recently, the area around Sazagan was the subject of a survey from the Chinese-Uzbek archaeological expedition headed by Jianxin Wang (Northwest University, Xi'an, China) and Muhtalib Hasanov (Institute of Archaeology, Samarkand, Uzbekistan) (Excavation Report..., 2017).

2. Area of investigation (S. S.). The investigation interested the Karatepa foothill between the villages of Erikul and Agalyk for



Figure 2. An example of the area of investigation: the area West of the Sazagan village from Nur-243 (photo S. Mantellini, © UIAP)

Расм. 2. Нур-243, Товоқбулоқ ва Сазаган қишлоқлари орасидаги тадқиқот ҳудуди (С. Мантеллини сурати, © UIAP)

Рис. 2. Район исследования между селами Тавакбулак и Сазаган, Нур-243 (фото С. Мантеллини, © UIAP)

a direct distance of approximately 20 km and a surface of approximately 40 km², with the Highway 378 Samarkand-Karshi as its northern limit (Figure 2).

The hilly territory is interrupted by the presence of fan-shaped villages which evolved along natural intermittent streams (*sai*), mostly at the 800–1000 m asl, where the economy is largely based on breeding with seasonal transhumance in the hot summer months (Mantellini, 2020. PP. 64–65). Although the cultural landscape is well-preserved by comparison to the agricultural districts of the Samarkand region, where the destruction of archeological sites is attested at around 45% (Mantellini & Berdimuradov 2019), the recent development of local villages has resulted in the partial destruction of *kurgan* due to reuse of stones in the construction of houses, fences, and other buildings. Other causes of site threatening regard the installation of electric lines, the use of some areas as caves, and the excavation of pits to use the soil for buildings.

The districts interested by the 2019 and 2021 surveys were Nurabad (code Nur-progressive number) and Samarkand Selski (code Sam-progressive number).

3. Methods (S. M.). Considering that most of the evidence belongs to the typical *kurgan* burials, characterized by limited size and elevation, they are not reported on topographical maps nor clearly visible on satellite imagery. The preliminary desktop assessment, the approach widely used in the rest of the UIAP reconnaissance areas, was therefore not useful in this case (Rondelli & Mantellini 2004; Mantellini 2017a. PP 15–17, b. PP. 336, 2018. PP 176–77, 2019. PP 189–93). Furthermore, the positioning of many sites during the first years of the UIAP survey proved to be incorrect due



Figure 3 Field walking by parallel lines in the area of investigation (photo S. Mantellini, © UIAP).

Расм. 3. Дала худудини параллел чизиқлар орқали ўрганиши (С. Мантеллини сурати, © UIAP).

Рис. 3. Обход поля параллельными линиями в районе исследования (фото С. Мантеллини, © UIAP).



*Figure 4. Recording a *kurgan* burial (photo S. Mantellini, © UIAP).*

Расм. 4. Қўрғонларни қайд қилиб бориши (С. Мантеллини сурати, © UIAP).

Рис. 4. Описание курганного захоронения (фото С. Мантеллини, © UIAP).

to the absence of detailed topographic maps and the inability to use GPS. As a result, some sites mapped in the first surveys were not found and validated. The field approach was therefore based on an intensive exploration of the investigation area, with the team of archaeologists moving across the fields in parallel lines at intervals of ca. 10 m (Figure 3). This technique made possible the full exploration of the investigation area, except for those fenced fields and inner house courtyards when the owner was not on site. The restricted-access area (ca. 6 sq km) between the villages of Tavakbulak and Sazagan prevented the full exploration of this area.

The Alpine Quest Pro App for Android was used to track the territory covered during the pedestrian survey, while every single archaeological feature was recorded onto the Qfield App for Android. The latter allowed for both positioning through GPS integrated into the portable devices (table and/or smartphone), and the on-field data entry in categories such as site code; date; team survey; class of site; state of preservation; presence/absence and

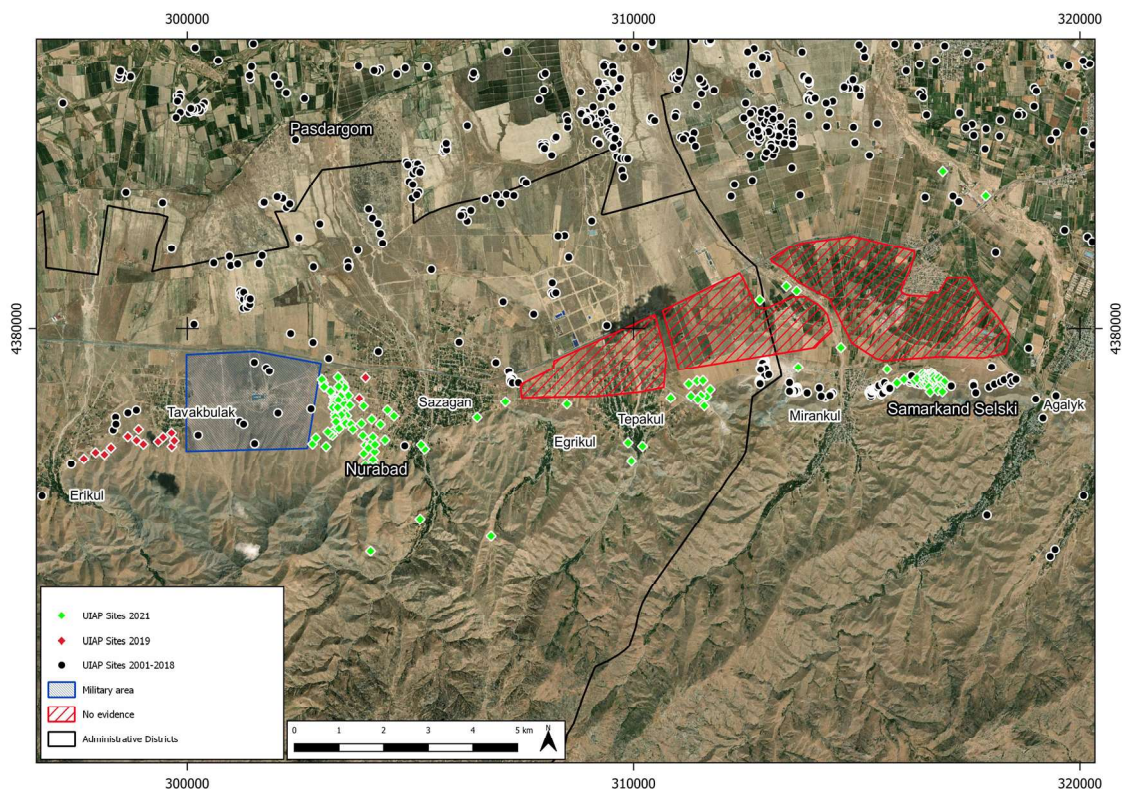


Figure 5. Results of the 2019 and 2021 UIAP survey on a GOOGLE satellite image 2021 (data processing S. Facciani, © UIAP).

Расм. 5. UIAP сўрови натижалари, 2019 ва 2021 2021 GOOGLE сунъий йўлдош тасвирига асосланган (С. Фассиани томонидан ишланган, © UIAP).

Рис. 5. Результаты исследования UIAP 2019 и 2021 гг. по спутниковому снимку GOOGLE 2021 г. (обработка данных С. Фаччиани, © UIAP).

quantity of finds; etc. Moreover, the possibility of synchronizing the Qfield project with the QGIS desktop project made easier, faster, and safer the data transfer, management, and processing. Recent satellite images (BING, ESRI, GOOGLE) were used as a base map. The basic information entered in Qfield was also reported on a paper form, together with a sketch map of the evidence (Figure 4).

Previous investigations proved how surface archaeological material associated with underground burials is poor, even in the case of kurgans partially destroyed. Moreover, sherds are little in size and rarely useful for a chronological assessment of the site. For this reason, and unlike the UIAP standard approach used for the tepa and based on the selection of the diagnostic sherds, it was decided to collect all the surface sherds available from the kurgans.

Recorded evidence were then classified according to their morphological feature into 5 main classes:

- i) tepa, mounds where mud architecture prevails and they are well recognizable in the landscape because some meters height from the ground surface;
- ii) kurgan, low mounds that usually raise for a few centimeters from the ground surface (0–50 cm);
- iii) flat sites, characterized by ceramic sherds scattered on the ground, without architecture;
- iv) architectural evidence, such as stone walls;
- v) caves, usually associated with prehistoric settlements.

Kurgans are often aggregated together without a clear spatial distribution, thus we tried to distinguish the different clusters on the basis of the spatial proximity/distance and the morphological and architectural features of the single burials.

Elevation of the sites was calculated through the GIS raster analysis ‘sample raster values’, using the Aster Global Digital Elevation Model – GDEM v.2 (2011) as basis for the automatic calculation of the elevation.

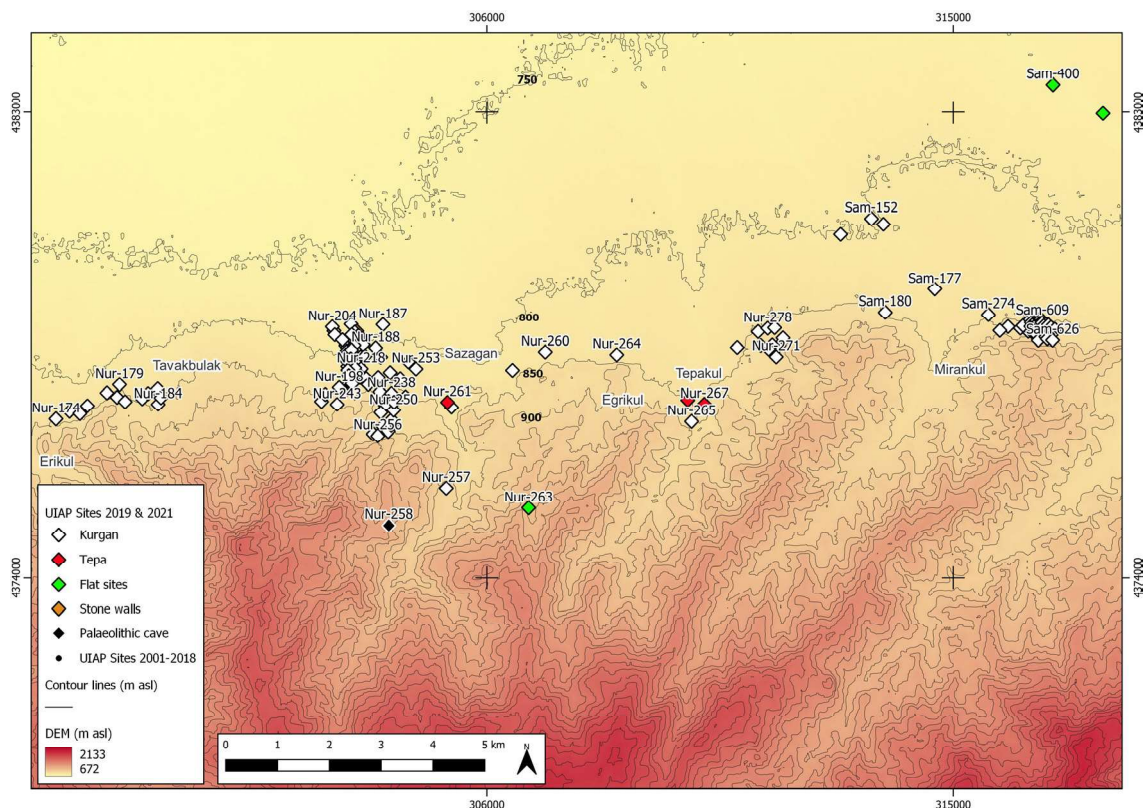


Figure 6. Results of the 2019 and 2021 UIAP survey with a classification of archaeological evidence on an ASTER GDEM v.2 (data processing S. Facciani, © UIAP).

Расм 6. UIAP сўров натижалари 2019 ва 2021 ASTER GDEM в.2 бўйича археологик топилмалар тавсифи (С. Фассиани томонидан ишланган, © UIAP).

Рис. 6. Результаты исследования УИАП 2019 и 2021 гг. с классификацией археологических данных по ASTER GDEM v.2 (обработка данных S. Facciani, © UIAP).

4. Results. The evidence visited during the two seasons amount to 16 in 2019 (Nur-174 to Nur-189) and 133 in 2021 (Nur-190 to Nur-279; Sam-151, Sam-152, Sam-177, Sam-180, Sam-274, Sam-279, Sam-332, Sam-333, Sam-400, Sam-428, Sam-429, Sam-587 to Sam-593, Sam-602 to Sam-626) for a total number of 149 sites, 22 of which a available from previous surveys. The total number of sites recorded by the UIAP is presently 2269 (Figure 5).

The number of kurgans (140) prevails over tepa (3), flat sites (3), caves (1), and architectural evidence (2). Groups/Clusters of burials (114) are far superior to single (11) and double (15) kurgans. Tepa, which are the most common archaeological feature in the archaeological landscape of Samarkand and Central Asia (Mantellini 2017b. PP. 336, 2018. PP. 174, 2019. PP. 189), just three: Nur-261, inside the village of Sazagan, presently used as a cemetery and not accessible because of the COVID-19 restrictions; Nur-266 and Nur-267, both located in the upper part of the village of Tepakul and already mapped from earlier investigations (see below). The main results can be described according to the following geographical subdivisions (Figure 6).

4.1. Between the villages of Erikul and Tavakbulak (E. S.). The early UIAP survey recorded six kurgan graveyards (Nur-003, Nur-007 to Nur-011) in the lower part of this area, along the 800 m asl contour line. The new research focused on the upper terraces (830–850 m asl), where six new burial clusters (Nur-174 to Nur-179) were found along, and partially cut by, the dirt road connecting the two villages. The presence of stones (Nur-174) and dense vegetation (Nur-175 and



Figure 7. Nur-181: general view from Nur-182 (from E) (photo: S. Mantellini, © UIAP).

Расм. 7. Нур-181, Нур-182 лардан умумий кўриниши (С. Мантеллини сурати, © UIAP).

Рис. 7. Нур-181: общий вид с Нур-182 (с Е) (фото: С. Мантеллини, © UIAP).

Nur-176) made the identification of kurgans difficult in some cases. The largest concentration of kurgans was found in two sites, Nur-180 and Nur-181, each positioned in the lower part of two parallel ridges that descend towards the valley to the north (Figure 7).

A second group of graveyards (Nur-182 to Nur-186) were located on the natural terraces South of the Tavakbulak village (835-860 m asl). The presence of houses and pits, the thick vegetation, and the many stones scattered on the ground prevented the identification of more burials. However, the lack of archaeological evidence from the quarry South of Nur-182 suggests that kurgans were originally clustered near the present-day village.

4.2. Between the villages of Tavakbulak and Sazagan (S. F.)

This area is currently inaccessible, hence it was not possible to validate the sites from Nur-290 to Nur-298 recorded by the UIAP in 2003 and 2004 (field codes SZG208, SZG209, SZG210, SZG211, SZG212, SZG310, SZG312B, TBK1, and TBK2). The presence of kurgans close to the eastern border of this territory (Nur-182 to Nur-186 at West, Nur-202 to Nur-204 at East) argues for the existence of more burials in addition to those already known (Figure 8a-b).

4.3. Sazagan village (S. M.). The survey between the military area and the western edge of the Sazagan village (ca. 400 ha) revealed the highest concentration of evidence (70) from the two campaigns. Except for the remains of two architectural structures, possibly a wall (Nur-207 and Nur-217), evidence belonged almost entirely to graveyards (68): five single burials (Nur-188, Nur-203, Nur-211, Nur-243, and Nur-248); six double burials (Nur-199, Nur-206, Nur-208, Nur-210, Nur-215, and Nur-229); and 57 necropolises with three or more kurgans.

In the first survey area, the large presence of surface stones made difficult

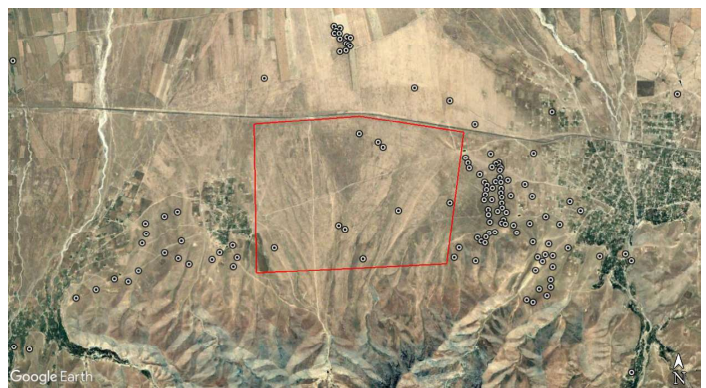


Figure 8. The area between Tavakbulak and Sazagan on Google satellite images 2004 (a) and 2022 (b) (data processing S. Facciani, © UIAP).

Расм. 8. Тавақбулоқ ва Сазогон ўртасидаги ҳудуд GOOGLE сунъий йўлдош тасвирига асосланган 2004 (а) ва 2022 (б) (С. Фассиани томонидан ишланган, © UIAP).

Рис. 8. Район между Тавакбулаком и Сазаганом на спутниковых снимках Google 2004 (а) и 2022 (б) годов (обработка данных S. Facciani, © UIAP).



Figure 9. The building technique of kurgan as visible from a partially destroyed burial (Nur-225)

(photo: S. Mantellini, © UIAP).

Расм 9. Қўрғонни қуриш техникаси, тепаси қисман вайрон бўлган Нур-225 қабристонидан кўриниши

(С. Мантеллини сурати, © UIAP).

Рис. 9. Техника строения кургана из частично разрушенного захоронения (Нур-225) (фото: С. Мантеллини, © UIAP).



Figure 10. The kurgan Nur-196 with the stones from the sai scattered around (photo: E. Serrone, © UIAP).

Расм. 10. Нур-196 қорғони атрофида сочилган сай тошлари (Э. Серроне сурати, © UIAP).

Рис. 10. Курган Нур-196 с разбросанными вокруг камнями из сая (фото: Э. Серроне, © UIAP).

the natural terrace at South (Nur-243, previous KKM-001, 900 m asl; and Nur-244, 884 m asl). Burial Nur-243 deserves special mention because it is an isolated kurgan, bigger (diameter 9.2 m) and taller (ca. 1 m) than other ones (Figure 11). Moreover, its location on the top of the ridge at 900 m asl makes it quite visible from the hilltops around and from the plain below. Another significant presence of kurgan burials is attested in the gently sloping area West of Boyssartepa, where previous investigations resulted in only one site (SZG304A = Nur-252). The 2021 fieldwork led to the identification of 12 new kurgans (Nur-238 to Nur-242, Nur-246 to Nur-251, and Nur-256). It is worth noting that two of them (Nur-242 and Nur-256) are located at the base of a natural ridge at the elevation of 924 m asl.

The identification of sites in the village of Sazagan and in the upper course of the Sazagan sai was instead rather difficult because of both the transformation in the last two decades and the rough positioning of the sites during early surveys. Site SZG302 was impossible to identify although the area is only partially covered by fields. The nearest site is Nur-187 at a distance of ca. 250 m. The site marked as OLB001 (possibly referring to the even earlier investigation by Obel’chenko in the 60s), located 100 m from the right bank of the sai ca. 350 after its exit from the mountain, was impossible to find. One reason might be the presence of houses, but this area was already inhabited at the

the reconnaissance of archaeological evidence. Their presence was due to both anthropic and natural factors: i) Local people usually gather stones from the outer structure of the kurgans to obtain building material for houses, stables, and fences (Figure 9); ii) Small irrigation canals cut the graveyards, resulting in the surface scattering of stones; iii) many stones in the southern part of this area were the result of run-off and erosion caused by natural streams (sai) coming from East and South (Figure 10).

Most of the kurgans are located in the area between the highway and the foothill. There, between 780 and 924 m asl, kurgans are clustered together and they shape two alignments with a regular S-N orientation. Other minor groups of burials are located near and in between those alignments. The necropolis continues North on the other side of the highway, where three groups of kurgans were recorded in previous surveys (Nur-004 to Nur-006). The limited number of burials (Nur-202 to Nur-204) close to the eastern border of the military area might be partially due to the high and thick vegetation, which is particularly more abundant than elsewhere.

On the contrary, a remarkable presence of kurgans is attested at the exit of the piedmont sai (Nur-194 to Nur-198, Nur-223, and Nur-233), and at the top of

time of the 2001–2004 surveys. South of it, inside the Sazagansai, one cluster of kurgans (Nur-257) likely corresponds to the old SZ001. With its 933 m asl, this is the highest elevation attested for a kurgan necropolis within the investigated area (Figure 12). On the contrary, it was impossible to recover SZG240, located on top of a natural hill ca. 550 m NW of Nur-257. Nur-254 refers to the Neolithic cave of Ochilgor, investigated by Samarkand State University around 20 years ago (Holmatov 2006, 2008).

The fieldwork in the eastern edge of Sazagan was limited to the validation of Nur-262, right below the hilltop, corresponding to two sites marked together as SZG202 (burials) and SZG203 (metal slags), although there was no trace of the latter.

4.4. Egrikul village (S. F.). The area between Sazagan and Tepakul is characterized by a very low number of archaeological evidence. Most of them were already known South of the highway, with 12 clusters of kurgans around tepa Nur-067 (old SZG120) and partially destroyed in the last decade by the construction of houses and the oil station. Nur-067 is remarkable because according to Obel’chenko’s interpretation (Obel’chenko 1966, 1973), it is one of the few kurgans built with significant mud architecture. It might be similar to Nur-066, 570 m NW of Nur-067, which was excavated by the same Uzbek-Chinese team conducting the survey around Sazagan (Archeological Survey..., 2015).

Except for the validation of a small group of kurgans (Nur-260, old SZG204) inside a fence, and a new cluster (Nur-264) discovered ca. 1.3 km East of it, the rest of this territory (ca. 300 ha) is empty of archaeological evidence. Along the Egrikulsai, at the very end of the same named village, the survey visited the site of Djankgal-1 (Nur-263, old DG001), which was also excavated by the Samarkand State University team between 1986 and 1989 and dated to the Neolithic (Džurakulov & Holmatov 1991a; b).

4.5. Tepakul village (V. O.). A situation similar to Egrikul was found at Tepakul, where the present village and the area South of the highway (total of ca. 400 ha) resulted in the absence of archaeological evidence, whereas the sites are concentrated in the valley of the local sai.

The upper part of the oasis village is remarkable due to the presence of two tepa (Nur-266 and Nur-267) positioned facing each other on opposite banks of the sai at a distance of approx. 300



Figure 11. The isolated kurgan Nur-243 on the top of a natural hill SW of Sazagan, from South, archaeologist standing as scale (photo: S. Mantellini, © UIAP)

Расм 11. Сазогоннинг жануби-ғарбидаги табиий тепаликдан юқорида жойлашган Нур-243 тоғи (С. Мантеллини сурати, © UIAP)

Рис. 11. Одиночный курган Нур-243 на вершине естественного холма к юго-западу от Сазагана (фото: С. Мантеллини, ©UIAP)



Figure 12. At the elevation of 933 asl, Nur-257 is the highest kurgan necropolis discovered during the 2019 and 2021 seasons, from South, archaeologist standing as scale (photo: E. Serrone, © UIAP).

Расм 12. Денгиз сатҳидан 933 м баландликда жойлашган Нур-257, 2019 ва 2021 йиллар оралигида топилган энг баланд кўрган некропол ҳисобланади. Жанубдан қурилиши (Э. Серроне сурати, © UIAP).

Рис. 12. Вид с юга на высокий курганный некрополь Нур-257, обнаруженный в 2019 и 2021 гг., расположенного на высоте 933 м над уровнем моря (фото: Э. Серроне, © UIAP).

m. Nur-266 extends over ca. 2.2 ha, is ca. 20 m high, has a good state of preservation and it is presently used as a cemetery. Nur-267 is smaller (ca. 0.35 ha, ca. 10 m high) but its perimeter was deeply damaged by the construction of the road and houses. As for Nur-266, some burials indicate that it was certainly a cemetery in the past while now it has been fenced and used for grazing.

The validation of the sites there was difficult because of the mismatching between the position of the sites. Tepa Nur-257 is in fact halfway (ca. 90 m) of sites TKL 001 and TKL002, and no other evidence was found at those spots. It is therefore possible that both evidence were wrongly positioned already in the earliest survey. Moving southward along the sai, the old TKL005 should correspond to the cluster of kurgans Nur-265 (difference of ca. 80 m), which is inside a fence and partially destroyed by recent works. In the eastern periphery of the village, code Nur-268 was assigned to the large group of kurgans between the houses, and early identified under the codes TPK101, TPK102, and KG001, very close to each other (less than 100 m), as well as Nur-269 to TPQ135 ca 500 m at North.

4.6. Between the villages of Tepakul and Mirankul (V. O.). The area of ca. 800 ha enclosed between the eastern edge of Tepakul, the piedmont, the highway, and the Agalyksai sai, is remarkable for the presence of a large group of kurgans in the piedmont less than 1 km East of Tepakul village. There are two single kurgan (Nur-277, Nur 278) and seven kurgan clusters, from Nur-271 (= old TPK3) to Nur-276, and Nur-279, the latter corresponding to the old TPK4 and TPK5 together.

Ca 1.4 km East of Nur-279, the S-N dirt road marks the border between the districts of Nurabad and Samarkand Selski. Hence, the cluster of kurgans TPK103 located in proximity of to limestone quarry, has been validated as Sam-180.

Downstream, just one cluster of kurgans (Nur-177) was found on the right bank of the Mirankulsai. Ca 1500 m downstream, along the left bank of the Agalyksai and South of the highway. The fieldwork validated the presence of the kurgan burials SZG311 (Sam-152) and led to the discovery of a flat site with some pottery sherds scattered on the surface (Sam-151). Ca. 650 West of them, a double-burial kurgan (Nur-270) was discovered in the cultivated fields.

Upstream of the village, inside the Mirankulsai, the fieldwork confirmed the absence of any archaeological evidence, either tepa or kurgan.

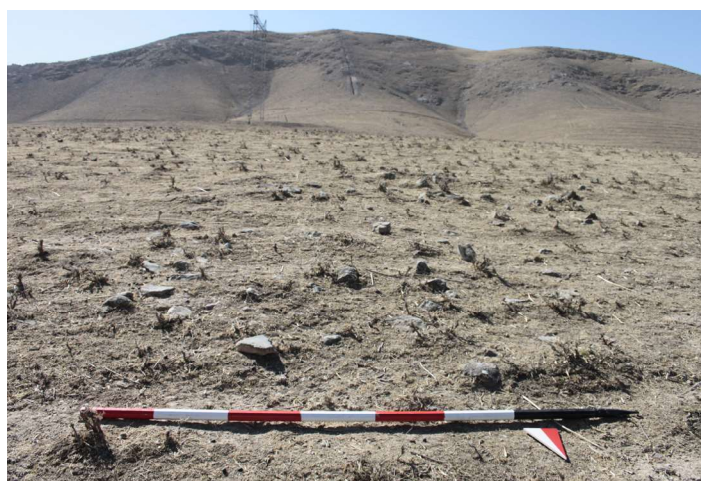


Figure 13. The kurgans cluster Sam-610 between the villages of Mirankul and Agalyk, from North (photo: E. Serrone, © UIAP)

Расм 13. Шимолдан Миронкул ва Оғалиқ қишлоқлари оралигидаги Сам-610 тепаликлар жамланмаси (Э. Серроне сурати, © UIAP)

Рис. 13. Скопление курганов Сам-610 между селами Миранкул и Агальк с севера (фото: Э. Серроне, © UIAP)

4.7. Between the villages of Mirankul and Agalyk (V. O.). Except for the identification of a double-kurgan burial (Sam-274), the investigation interested the territory (ca. 70 ha) between the dirt road and the piedmont, where previous investigations recorded only one archaeological evidence (MRK4). The new fieldwork resulted in the identification of 36 new kurgan clusters, with a concentration of sites comparable only to the area between Sazagan village and the military area (see § 4.3). This evidence includes one single kurgan (Sam-617), and 6 double kurgans (Sam-589, Sam-590, Sam-592, Sam-604, Sam-608, and Sam-625). The most remarkable are Sam-610 (Figure 13), extending over 0.4 ha, and the cluster of kurgans (Sam-612) located on top of the ridge at 920 m asl. The area was altered by the

construction of two pylons for electricity, and it is arguable that further archaeological evidence was destroyed for their installation.

5. Materials (E. S.). As expected, the surface materials available from the kurgan necropolis were very few, and it was almost entirely pottery. The total numbers of ceramic sherds collected were ca. 350 from 68 sites, with an average of 5.14 fragments per site (Figures 14, 15).

However, a very preliminary dating of the pottery makes possible the following chronological attribution:

- Achaemenid – 6th-mid 4th centuries BCE (1): Nur-242.

- Early Antiquity – mid-4th century BCE-3rd century CE (3): Nur-183, Nur-227, Nur-267.

- Late Antiquity – 3rd-5th centuries CE (2): Nur-184, Nur-227.

- Early Middle Ages – 5th-early 8th centuries CE (7): Nur-195, Nur-245, Nur-239, Nur-240, Nur-264, Nur-265, Nur-266.

- Middle Ages – early 8th-14th centuries CE (23): Nur-182, Nur-183, Nur-185, Nur-186, Nur-198, Nur-201, Nur-211, Nur-219, Nur-220, Nur-224, Nur-225, Nur-229, Nur-233, Nur-235, Nur-237, Nur-238, Nur-244, Nur-259, Nur-262, Nur-265, Nur-266, Nur-272, Sam-177.

- Late Middle Ages – 14th-19th centuries CE (5): Nur-190, Nur-218, Nur-223, Nur-225, Nur-259.

- Modern – 19th-20th centuries CE (7): Nur-212, Nur-213, Nur-241, Nur-248, Nur-252, Nur-269, Nur-270.

Among other finds, is remarkable a coin (inv. no. UIAP. 21. O.3) from the necropolis Nur-259 and dating to the 878 AH/1473-1474 CE (Figure 16).

6. Conclusion and Perspectives. The

survey conducted in the 2019 and 2021 campaigns along the northern Karatyube foothills confirmed the importance of this area as burial ground for the rural communities living in the Samarkand region. The graveyards covered almost the entire lower slope of the Karatyube mountains between the 778 m asl (Nur-204) and 933 m asl (Nur-257), with an average elevation of 843 m asl. The high vegetation and the stones scattered on the surface made difficult the identification of further burial cairns, which are however arguable in consideration of the high density of kurgans discovered by the UIAP during the



Figure 14. Examples of ceramic material collected during the 2021 survey: site Nur-259 (photo: O. A. Patone, © UIAP).

Расм 14. 2021-йилда Нур-259 даласида ўтказилган тадқиқот давомида тўпланган сопол материаллар (А. Патоне сурати, © UIAP).

Рис. 14. Фрагменты керамического материала, собранный в ходе исследования в 2021 г. на поселении Нур-259 (фото: О. А. Патоне, © UIAP).



Figure 15. Examples of ceramic material collected during the 2021 survey: site Nur-270 (photo: O. A. Patone, © UIAP).

Расм 15. Нур-270 даласида 2021 йилги тадқиқот давомида тўпланган сопол материаллар тузрасида (А. Патоне сурати, © UIAP).

Рис. 15. Фрагменты керамического материала, собранного в ходе исследования в 2021 г. на поселении Нур-270 (фото: О. А. Патоне, © UIAP).



Figure 16. The coin UIAP. 21.O.3 from Nur-259

(photo: O. A. Patone, © UIAP).

Расм 16. Нур-259 дан (UIAP. 21.O.3) олинган танга

(O. A. Патоне сурати, © UIAP).

Рис. 16. Монета UIAP. 21.O.3 из Нур-259

(фото: O. A. Патоне, © UIAP).

last and previous field seasons in this area. In consideration of the new sites discovered during the two campaigns (127 over 149, 121 of which are kurgan), and the alteration to the landscape due to recent anthropic works, the total number of burials must be assumed to be greater.

The new investigation in this area evidenced the prevalence of groups of kurgans that are different in location, size, orientation, and number of burials. On the contrary, the number of tepa, usually associated with permanent settlement, are limited. They are all located along the seasonal streams inside the present-day villages. This little number cannot justify such a large presence of burials. It is therefore arguable that the choice of the foothills as a burial place was not a prerogative

of the communities who lived in this area, but also of the agricultural villages located in the lower part of the steppe, where settlements abound while the necropolises are few or absent (see Figure 1).

The tepa, now used as cemeteries but commonly with a residential function originally, are few and are located in the upper part of the foothills (Nur-261 at Sazagan, and Nur-266 and Nur-267 at Tepakul). These are located in a strategic position along the communication routes between the upper part of the foothills and the valley, and perhaps also for easier access to water resources.

Although the surface pottery collected during the reconnaissance of the necropolis in Kurgan is very scarce, and often not very diagnostic, its preliminary dating indicates a long frequency of the area for funerary purposes. This is further confirmation of the hypothesis that this practice can be associated not only with the (few) settlements present in this area but also with those of the agricultural plain below.

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Table 1. Main information on the sites identified during the 2019 and 2021 UIAP fieldwork. Coordinates approximately refers to center of the area in case of kurgan necropolis, elevation (m asl) has been calculated with the QGIS analisis “sample raster values” (coordinate system UTM WGS 84, Zone 42). Preservation: WP = Well Preserved; PD = Partially Damaged; LD = Largely Damaged; D = Destroyed

UIAP code	Other codes	Preservation	Finds	Class	Season	East	North	Elevation
Nur-174	ERK1	WP	no	Kurgans cluster	2019	297683	4377072	850.67
Nur-175		WP	no	Kurgans cluster	2019	297946	4377217	827.03
Nur-176		WP	no	Kurgans cluster	2019	298145	4377173	845.04
Nur-177	TBK4ovest	WP	no	Kurgans cluster	2019	298291	4377325	836.95
Nur-178	TBK4est	WP	no	Kurgans cluster	2019	298668	4377575	836.41
Nur-179		WP	no	Kurgans cluster	2019	298910	4377738	839.67
Nur-180		WP	no	Kurgans cluster	2019	298864	4377491	882.01
Nur-181	Tbk3	WP	no	Kurgans cluster	2019	299018	4377404	869.61
Nur-182		WP	yes	Kurgans cluster	2019	299349	4377463	848.33
Nur-183		WP	yes	Kurgans cluster	2019	299460	4377560	835.33
Nur-184		WP	yes	Single Burial	2019	299654	4377354	863.33
Nur-185		WP	yes	Single Burial	2019	299648	4377657	840.36
Nur-186		WP	yes	Single Burial	2019	299710	4377483	856.73
Nur-187	SZG205	PD	no	Kurgans cluster	2019	303995	4378896	782.35
Nur-188	SZG206	WP	no	Single Burial	2019	303854	4378440	808.71
Nur-189	SZG207,SZG305TS	PD	yes	Kurgans cluster	2021	303647	4378281	812.74
Nur-189		PD	yes	Kurgans cluster	2021	303647	4378281	812.74
Nur-190		WP	yes	Kurgans cluster	2021	303310	4378440	802.02
Nur-191		WP	no	Kurgans cluster	2021	303302	4378380	800.69
Nur-192		WP	no	Kurgans cluster	2021	303263	4378231	804.62
Nur-193		WP	no	Kurgans cluster	2021	303283	4378305	803.69
Nur-194		WP	no	Kurgans cluster	2021	303319	4377749	814.66
Nur-195		PD	yes	Kurgans cluster	2021	303270	4377689	819.32
Nur-196		WP	no	Kurgans cluster	2021	303255	4377606	832.69
Nur-197		WP	no	Kurgans cluster	2021	303200	4377629	825.05
Nur-198		PD	yes	Kurgans cluster	2021	303150	4377681	819.30
Nur-199		PD	no	Double burial	2021	303317	4378088	805.68
Nur-200		WP	no	Kurgans cluster	2021	303279	4378487	794.09
Nur-201		WP	yes	Kurgans cluster	2021	303213	4378600	787.35
Nur-202		WP	no	Kurgans cluster	2021	303066	4378697	785.06
Nur-203		WP	no	Single Burial	2021	303049	4378772	785.66
Nur-204		WP	no	Kurgans cluster	2021	303018	4378852	778.68
Nur-205		WP	no	Kurgans cluster	2021	303380	4378904	787.02
Nur-206		WP	no	Double burial	2021	303504	4378711	791.67
Nur-207		PD	no	Wall	2021	303490	4378767	791.65
Nur-208		WP	no	Double burial	2021	303504	4378653	792.30
Nur-209		WP	no	Kurgans cluster	2021	303500	4378546	801.04
Nur-210		WP	no	Double burial	2021	303511	4378479	803.01
Nur-211		PD	yes	Single Burial	2021	303513	4378392	802.73
Nur-212		PD	yes	Kurgans cluster	2021	303505	4378327	802.68
Nur-213	SZG305	PD	yes	Kurgans cluster	2021	303515	4378262	807.00

Nur-214		WP	no	Kurgans cluster	2021	303512	4378178	813.36
Nur-215		PD	no	Double burial	2021	303516	4378107	814.34
Nur-216		WP	no	Kurgans cluster	2021	303450	4378748	790.03
Nur-217		WP	no	Wall	2021	303521	4378682	792.68
Nur-218		PD	yes	Kurgans cluster	2021	303573	4378041	816.38
Nur-219		PD	yes	Kurgans cluster	2021	303529	4377937	821.01
Nur-220		PD	yes	Kurgans cluster	2021	303502	4377892	817.35
Nur-221		WP	yes	Kurgans cluster	2021	303553	4377877	820.35
Nur-222		PD	yes	Kurgans cluster	2021	303670	4377854	828.00
Nur-223		PD	yes	Kurgans cluster	2021	303711	4377741	830.36
Nur-224		PD	yes	Kurgans cluster	2021	303936	4377599	851.34
Nur-225		PD	yes	Kurgans cluster	2021	303902	4377874	839.04
Nur-226		PD	yes	Kurgans cluster	2021	303993	4377381	863.68
Nur-227		PD	yes	Kurgans cluster	2021	303951	4378263	815.69
Nur-228		WP	no	Kurgans cluster	2021	303612	4378507	803.68
Nur-229		WP	yes	Double burial	2021	303372	4378230	802.32
Nur-230		PD	yes	Kurgans cluster	2021	303450	4378060	812.71
Nur-231		PD	yes	Kurgans cluster	2021	303318	4378016	805.99
Nur-232		WP	no	Kurgans cluster	2021	303334	4377910	815.63
Nur-233		WP	yes	Kurgans cluster	2021	303400	4377757	816.98
Nur-234		PD	yes	Kurgans cluster	2021	303436	4378490	800.67
Nur-235		WP	yes	Kurgans cluster	2021	303391	4378700	790.02
Nur-236		WP	yes	Kurgans cluster	2021	303387	4378400	800.02
Nur-237		PD	yes	Kurgans cluster	2021	304134	4377967	835.73
Nur-238		PD	yes	Kurgans cluster	2021	304158	4377565	859.01
Nur-239		WP	yes	Kurgans cluster	2021	304102	4377415	867.68
Nur-240		WP	yes	Kurgans cluster	2021	304059	4377320	870.68
Nur-241		PD	yes	Kurgans cluster	2021	303953	4377194	873.39
Nur-242		LD	yes	Kurgans cluster	2021	303808	4376784	924.01
Nur-243	KKM001	WP	no	Single Burial	2021	303110	4377352	899.70
Nur-244		LD	yes	Kurgans cluster	2021	302808	4377409	883.37
Nur-245		WP	yes	Kurgans cluster	2021	302882	4377545	855.26
Nur-246		PD	yes	Kurgans cluster	2021	303991	4376929	887.94
Nur-247		WP	yes	Kurgans cluster	2021	304096	4376836	912.01
Nur-248		WP	yes	Single Burial	2021	304155	4376954	874.33
Nur-249		WP	yes	Kurgans cluster	2021	304161	4377055	879.93
Nur-250		WP	no	Kurgans cluster	2021	304200	4377238	873.66
Nur-251		WP	yes	Kurgans cluster	2021	304208	4377397	865.97
Nur-252	SZG304A-TF	WP	yes	Kurgans cluster	2021	304431	4377500	848.30
Nur-253		PD	no	Kurgans cluster	2021	304632	4378038	819.65
Nur-254	SZG306	WP	no	Kurgans cluster	2021	304486	4378175	821.68
Nur-255	SZG307	PD	no	Kurgans cluster	2021	304328	4377851	838.65
Nur-256		WP	no	Kurgans cluster	2021	303895	4376749	924.32
Nur-257	SZ001	PD	no	Kurgans cluster	2021	305216	4375733	933.29
Nur-258		WP	yes	Cave	2021	304108	4375012	1154.43

Nur-259		WP	yes	Kurgans cluster	2021	305318	4377297	829.28
Nur-260		WP	no	Kurgans cluster	2021	307127	4378362	824.33
Nur-261		WP	no	Tepa	2021	305240	4377394	839.97
Nur-262	Szg202/203	WP	yes	Kurgans cluster	2021	306495	4378010	811.31
Nur-263		WP	yes	Flat	2021	306806	4375348	1040.24
Nur-264		WP	yes	Kurgans cluster	2021	308508	4378308	837.34
Nur-265		WP	yes	Kurgans cluster	2021	309952	4377024	866.00
Nur-266		WP	yes	Tepa	2021	309877	4377436	855.31
Nur-267	TKL001/002	WP	yes	Tepa	2021	310199	4377359	843.06
Nur-269	TPQ135	D	yes	Kurgans cluster	2021	310832	4378449	841,33
Nur-270		LD	yes	Double burial	2021	312828	4380641	799.97
Nur-271	TPK-3/5	WP	no	Kurgans cluster	2021	311585	4378269	876.34
Nur-272		WP	yes	Kurgans cluster	2021	311635	4378482	870.71

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**АРХЕОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЯ В ПРЕДГОРЬЯХ КАРА-ТЕПА,
САМАРКАНД: ПРЕДВАРИТЕЛЬНЫЕ РЕЗУЛЬТАТЫ ПОЛЕВЫХ СЕЗОНОВ
УИАР 2019 И 2021 ГОДОВ**

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Ключевые слова: Самарканд, Каратепа, Эгрикул, Миранкул, курган, QField/QGIS, ландшафтная археология. В статье представлены результаты полевых исследований, проведенных в 2019 и 2021 годах Узбекстано-Итальянской совместной археологической экспедицией по проекту «Самарканд и его территория» в предгорьях Каратепа. Район исследований охватывает территорию между селами Эгрикул и Миранкул, расположенными в юго-западной части города Самарканда и предгорным оазисом вблизи них (на высоте 750-1000 м над уровнем моря). Полевые исследования с использованием QGIS и приложения QField для Android выявили 150 отдельно расположенных захоронений. Большинство из них имеют невысокие каменные насыпи, причем замечено, что выявленные могилы в одном месте располагались группой, а в другом отдельными захоронениями. Выяснилось, что в предгорьях Каратепа место для захоронений было выбрано максимально удачно.