

Report on the First Campaign of Excavations of 2023 at Bazar-kala, with Additional Considerations on the Urbanism of Ancient Chorasmia*

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Nel 2023 è stato avviato dalla missione congiunta italo-karakalpaka in Antica Corasmia (ISMEO & Nukus) lo studio archeologico del sito di Bazar-kala, situato nel distretto di Turtkul, in Karakalpakistan, Repubblica d'Uzbekistan. Il sito è stato scelto per via delle sue caratteristiche contestuali, come ubicazione ed estensione, e in base a recenti prospezioni preparatorie che hanno seguito, dopo decenni, le prime d'epoca sovietica. L'obiettivo della nostra ricerca è la raccolta dati al fine di approfondire e di far avanzare la conoscenza della storia e dello sviluppo del paesaggio rurale e dell'"urbanismo diffuso" e fortificato nella regione. Inoltre, lo scavo di Bazar-kala segna l'avvio della necessaria verifica del nuovo modello cronologico post-sovietico proposto per la Corasmia e avviato con lo studio di Akchakhan-kala (Minardi 2015). I lavori della missione nel suo primo anno si sono concentrati sulla cittadella del sito. Sebbene i sondaggi all'interno della cittadella siano stati di estensione limitata, hanno tuttavia consentito un primo delineamento della periodizzazione di Bazar-kala in senso cronologico assoluto. I dati raccolti hanno altresì permesso di meglio focalizzare quei processi che sembrano alla base dei maggiori mutamenti storici avvenuti nel contesto corasmio, evidenti nei due cambiamenti della cultura materiale della regione: il primo, a seguito del cessare dell'egemonia politica persiana, segnato dall'apparizione di numerosi siti fortificati gerarchicamente collocati nel territorio agricolo corasmio (periodo Antico 2); il secondo, a seguito di un possibile evento di portata epocale, che avrebbe coinvolto l'intera Corasmia (periodo Antico 3) e che, sebbene non documentato nelle poche fonti disponibili, appare piuttosto evidente su base archeologica. Il risultato di quest'ultimo evento sembra associarsi allo stabilirsi, intorno all'anno zero, di un'era dinastica locale che durerà per più di 700 anni.

In 2023, the Joint Italian-Karakalpak Mission in Ancient Chorasmia (ISMEO & Nukus) initiated the archaeological study of the site of Bazar-kala, located in the Turtkul district of Karakalpakstan, Republic of Uzbekistan. The site was selected due to its contextual characteristics, such as location and size, and based on recent preparatory surveys that followed, after decades, the initial Soviet-era investigations.

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Fig. 1 - View of the site from the east (the only recent drone photo available, courtesy Department of Geography, Institute for the Human Sciences, Nukus).

The goal of our research is to gather data to deepen and advance understanding of the history and development of the rural landscape, as well as the “diffuse” and fortified urbanism in the region. Furthermore, the excavation of Bazar-kala marks the beginning of the necessary verification of the new post-Soviet chronological model proposed for Chorasmia, initiated with the study of Akchakhan-kala (Minardi 2015).

During its first year, the mission’s work focused on the site’s citadel. Although the sondages within the citadel were limited in scope, they enabled a preliminary delineation of Bazar-kala’s periodization in absolute chronological terms. The data collected also allowed for a better understanding of the processes underlying significant historical transformations in the Chorasmian context. These are evident in two major shifts in the region’s material culture: the first, following the end of Persian political hegemony, marked by the emergence of numerous hierarchically organized fortified sites in Chorasmia’s agricultural territory (Antique 2 period); and the second, following a possible epoch-defining event that appears to have affected all of Chorasmia (Antique 3 period). Although this epoch-defining event is not explicitly recorded in the scarce available sources, it is quite evident archaeologically. Its outcome seems to be associated with the establishment, around the year zero, of a local dynastic era that would last for more than 700 years.

The Site

The archaeological site of Bazar-kala is today situated in a semi-arid setting within the district of the city of Turtkul, Karakalpakstan (Uzbekistan). The entire site is buried

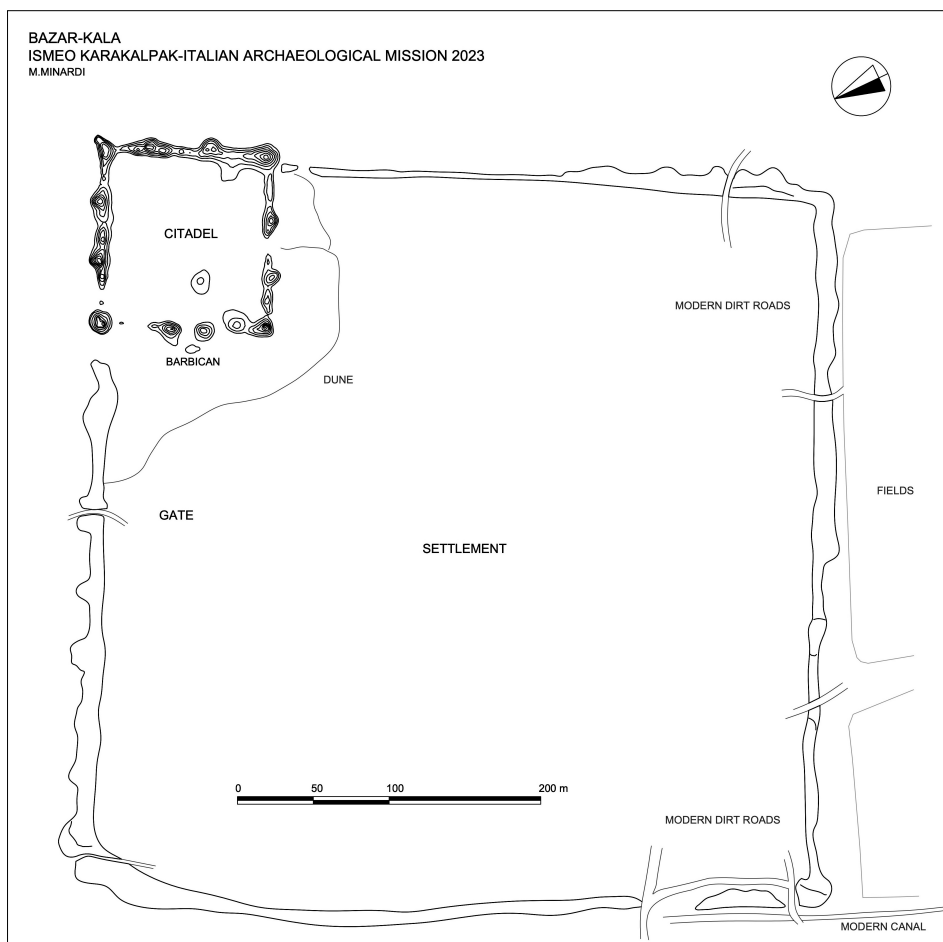


Fig. 2 - General plan of the site. All drawings and photos by MM unless otherwise specified.

under a thick aeolian accumulation of sand, partially covered by dense bushes of halophilous vegetation sprouted as a result of the presence of irrigation canals recently dug in the area (Fig. 1). The only visible structural remains emerging from the terrain are those of the two *paksha* and mud-brick made enclosures, characterised by round towers that encircle the remains of its settlement and citadel, and some other minor features (Fig. 2). The total area covered by the site, including the citadel located in its Northeastern corner, encloses an area of approximately 25 ha. The settlement, i.e., the area of the lower and larger enclosure, is square in plan with a side of nearly 490 m. Its main gate, c. 5-m wide, is located on its Northeastern side, flanked by semi-circular towers. The walled perimeter of the citadel, linked but distinct for its features by the larger one of the settlement, measures 112×103 m with the longest side oriented on a North-Northwest to South-Southeast axis surrounding an area of approximately 1.2 ha. The citadel was provided with round hollow towers projecting from its two-storey gal-leried curtain wall on each side, except for the Western one where a barbican gate with spur wall was located (Figs 3-4). In the Northeastern corner of the citadel, and possibly

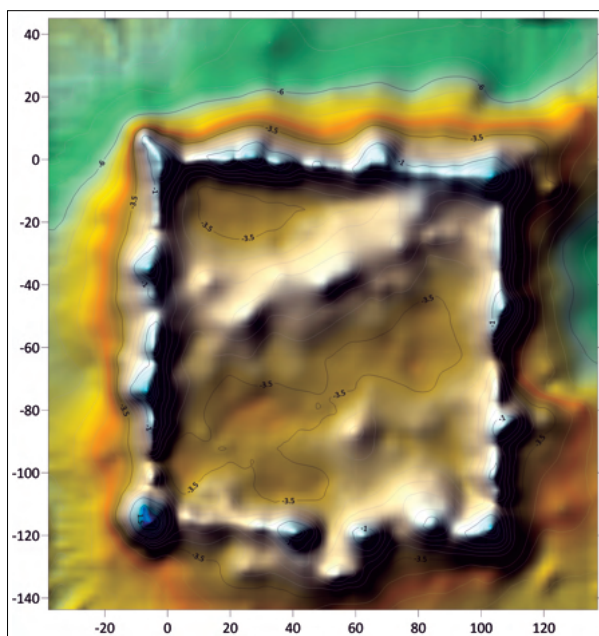


Fig. 3 - Topographic survey of the citadel.

in the Southwestern one,¹ towers with a specific oval configuration were built while in the opposite two corners, the towers more simply flanked the wall where it connected with the lower enclosure of the settlement. This configuration is very similar, for instance, to that of Kaparas, a stronghold of Southern Chorasnia (district of Khorazm),² and the layout can also be compared with the Central Building of Akchakhan-kala.

The state of preservation of the site has much deteriorated since 1938 when Bazar-kala was first located in the midst of the desert and mapped and

sounded by S.P. Tolstov and Ya. G. Gulyamov over the two following years. The most apparent loss relates to the two-storey mud-brick vaulted perimetral corridor built over the *pakhsa* basement of the curtain wall of the citadel, still detailed by V.N. Yagodin and S.M. Madijarov in 1986³ which had almost completely disappeared. Both walls and towers were provided with splayed loopholes, so that a “shooting gallery,” as customary for Ancient Chorasnian fortifications, existed on the second storey of the vaulted corridors.⁴ Based on pottery typology, Soviet archaeologists considered

¹ In its present state, this characteristic is not discernible.

² The fort of Kaparas (Antique 2 and 3 periods) had a layout quite close to that of the citadel of Bazar-kala (128×110 m with a barbican and round corner and perimetral towers with the same arrangement). Like the citadel of Bazar-kala, at least in the Antique 3 period, it contained some buildings (Itina 1991: 158)—as did the great majority, if not all, of the Chorasnian fortified sites (*infra*). Pil'-kala (less than 5 ha) also has round towers and a square citadel on its Southeastern corner accessible only through a barbican, but this is much smaller in comparison, with a side of approximately 55 m (Tolstov 1948a: fig. 67; cf. Yagodin, Madijarov 1986: 201).

³ This is the most exhaustive description of the site and of the works that have been there undertaken in the Soviet period. Since stratigraphic sections and detailed plans were not published, we do not know on what Yagodin and Madijarov's description exactly relies. Translated (by MM) passages from this difficult-to-retrieve publication are here provided in the footnotes for convenience. On Bazar-kala, see also Tolstov 1948a: 112-113; 1948b: 113; 1962: 104; Gulyamov 1957: 76-77, 99; Andrianov 1969: 116-118. For photos of the area at the time of the discovery: Tolstov 1948b: fig. 25; 1962: fig. 41. For a schematic plan (also reproduced in Yagodin, Madijarov 1986): Tolstov 1948a: 112, figs 47-48; see also Khozhaniyazov 2005: 203, fig. 11; for the survey of the area of Bazar-kala, which was integrated with aerial photographs: Tolstov, Zhdanko 1958, folding plate; see also Andrianov 1969: fig. 32 (here Fig. 6).

⁴ Not much remains of the elevation of the structures and of the upper level of the corridor described by Yagodin and Madijarov (1986: 28): “The walls of the citadel, preserved up to a height of 9-10 m from

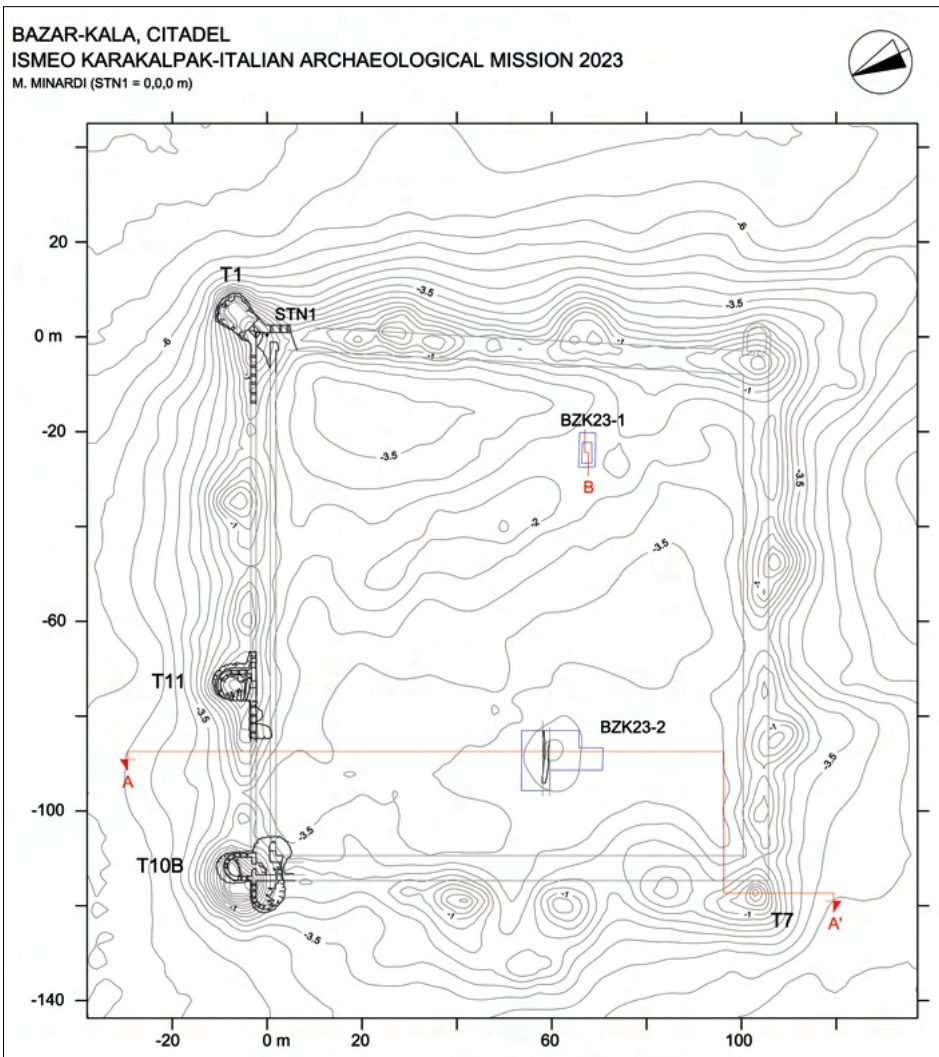


Fig. 4 - Preliminary plan of the citadel.

the modern surface at the northwest tower, had a thickness of about 2 m at the base and about 1.5 m at the level of the second floor. The walls were constructed up to the level of the lower corridor's vaults from *pakhsa*, with the vaults laid in a belt of mud bricks, above which the *pakhsa* belt of the second-floor walls (shooting gallery) is situated [cf. Khozhaniyazov 2005: 92], featuring arrow slits cut into the *pakhsa* blocks for 0.14 m. The arrow slits are covered by ordinary mud bricks placed obliquely on the edge. (...) the walls are made of mud bricks to the top. The distance between the arrow slits ranges from 1.6 to 2 m, the outer opening of the slits is approximately 1.2 m wide and the inner one is about 0.6 m. The size of the bricks in the masonry walls ranges from 42 to 47 cm per side with a thickness of 10-12 cm. The vaults were constructed with transverse segments and inclined rings [i.e., with the “pitched-brick method”—for further details see Minardi and Khozhaniyazov 2015]. Slightly wedge-shaped bricks with bases measuring 22-23 and 25-26 cm and a height of 37-38 cm were used. In the bricks of the elevation and the vaulted ceiling there are potsherds [cf. *ibidem*].”

Bazar-kala as a city that existed from the “Archaic” to the “Kushan” period (that is from the Antique 1 to the Antique 3 periods), with the citadel possibly erected at a later stage within this time span.⁵ In 1954 a more systematic excavation was conducted at the site compared to the late 1930s, but information about the results is scant: Yagodin and Madijarov described trenches laid out in both the citadel and the lower settlement without pinpointing their locations in their publication (Fig. 5).⁶ Some of these sondages, which were quite succinctly described, were conducted on the Southern wall of the citadel and in one of its towers.⁷ They provided evidence for two main occupation periods at the fort, separated by a break in use linked to a fire-related

⁵ The relative typological development of the Chorasman pottery seems to stand the test of time, while its absolute chronology does not; moreover, “Kushan,” “Kangyui” etc., are inherited obsolete labels that have been already revisited in Minardi 2015. Khozhaniyazov (2005: 96) dated the citadel of Bazar-kala in the 4th-3rd centuries BCE. Tolstov (1948a: 113) initially considered the citadel of the “Kushan” period, but already in his other seminal work of 1948 (Tolstov 1948b: 34) considered Bazar-kala and Koï-Krÿlgan-kala the two most ancient sites of the East-bank, more precisely (*ibidem*: 94) of the “Kangyui period” relative to the 4th-3rd centuries BCE (*ibidem*: 113). In 1959 (Tolstov, Vorob’eva 1959: 66) the Soviets considered a very high chronology for both the foundation of the citadel and the settlement (6th-4th century BCE), and in 1962 Tolstov recorded the presence of Antique 1 material “in the area of the walls of the settlement” (cf. Vorob’eva 1973: 213: *pakhsa* foundations with abundant Antique 1 material were discovered in the Southwestern part of the site), but dated the citadel to the “Kangyui and also Kushan” periods (Tolstov 1962: 104). Gulyamov (1957: 76) also dated the foundation of Bazar-kala in the “Kangyui” period, while he considered the citadel of the following “Kushan” one (*ibidem*: 99; cf. *infra* note 7). Vorob’eva (1973: 213) interpreted Tolstov and Gulyamov’s assertions, suggesting the possibility that an Antique 1 settlement was actually replaced by Bazar-kala. Fragments of two phallic-shaped faïence amulets and one depicting Bes come from Bazar-kala’s citadel of (Tolstov 1948a: 118: fig. 60; 1948b: 119). They are also recorded at Koï-Krÿlgan-kala (Tolstov, Vaïnberg 1967: 149, and tab. XVII, nos 15-16, which are specimens from a floor surface of the “Top horizon;” see also *ib.* no. 17, in shape of forearm, surface find). These amulets come also from both the settlement (Nerazik, Rapoport 1981: 118: fig. 59, no.6) and the “High Palace” of Toprak-kala (Rapoport, Nerazik 1984: 227, not illustrated). A forearm-shaped blue/green amulet has been found at Akchakhan-kala, from the SUs lying on the floor of the “Ceremonial Complex” (KAE, unpublished; cf. *supra* Tolstov, Vaïnberg 1967: no. 17). Other similar specimens were found at Ayaz-kala 3 and Berkut-kala (reference made in Tolstov, Vaïnberg 1967: 149; illustrated in Tolstov 1948a, tab. 27), and Dzhanbas-kala (Tolstov 1948a: fig. 26). In general, these faïence amulets are attested in Central Asia in connection with commercial traffics with the Romano-Hellenistic world *c.* from the 1st century BCE to the 3rd century CE.

⁶ Yagodin, Madijarov 1986: 26: “In 1954, excavations were conducted on one of the towers of the Eastern wall of the settlement, revealing the remains of a large building adjacent to it, possibly dating back to the Archaic period [Antique 1]. Additionally, a section of the collapsed southern wall of the citadel and one of its towers were cleared [see following note]. Work also focused on the potters’ quarter within the settlement’s area. The total excavation area in 1954 encompassed approximately 260 sqm.” Other trenches were laid at the site in 1977-79, in parallel to the exploration of Bazar-kala 2: a house in the south-western part of the site was excavated, and “data on the citadel [was] clarified,” confirming the presence of “quite abundant Kangyui material” and of a not better specified “large building from the Kangyui period” (*ibidem*: 27).

⁷ Yagodin, Madijarov 1986: 28: “Reconnaissance excavations of the Southern wall and one of the towers of the citadel revealed that the citadel was inhabited twice, after which regular life ceased within it. The lower vaulted corridor functioned only during the first period of habitation, up to a fire broke out, then the citadel was empty for some time. After the fire and subsequent abandonment, the shooting gallery [i.e., the second floor of the corridor with arrow slits] was intensively reused, since five floor levels (...) were stratified above the aeolian deposit [that was likely sand]. However, the entire period of the existence of the citadel (and the settlement) does not extend beyond the Kushan period.” Cf. Gulyamov 1957: 77: “Bazar-Kala has experienced two periods. (...) one (...) belongs to the early period of the city’s life and its surroundings, before some kind of abandonment occurred. After several centuries, the abandoned

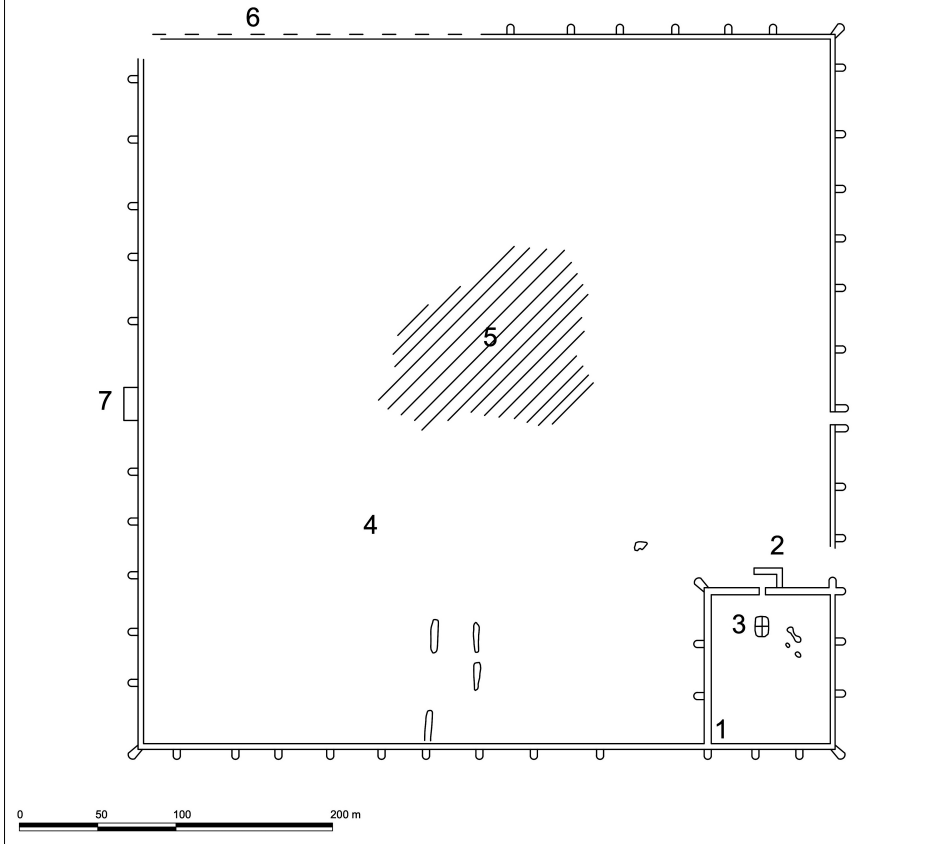


Fig. 5 - Old Soviet-era plan of the site (redrawn integrating schematic plans after Tolstov 1948a and Yagodin and Madiyarov 1986). Original key by S.P. Tolstov: 1. Citadel; 2. Fortification structure in front of the citadel; 3. Remains of a small house; 4. “Shahristan”—city centre, with traces of buildings, pottery workshops, etc.; 5. Place with the highest concentration of remains of pottery workshops; 6. The most heavily destroyed part of the walls; 7. Large building in the system of the Southern wall.

event, followed by a temporary abandonment. This abandonment was possibly definitive for the lower corridor of the citadel’s walls but definitely not for the “shooting gallery” (see *infra*, “chronology and related issues”). Data on the settlement were also collected, yet the documentation is meagre. The only relevant information indicates that domestic and economic activities, such as pottery production and metal-

Bazar-Kala site came back to life; around the beginning of our era, the northeastern part of the site turned into an inner fortress using corresponding sections of its northern and eastern ancient walls.”

working, were conducted within it during its use.⁸ However, the chronology, scale, spatial organization and the number of habitations of the site remains unclear, and its current state of preservation is significantly compromised due to the rising water level, humidity and vegetation growth.

MM, AB

The Sondages Carried out in 2023

The first campaign at Bazar-kala aimed to initiate the topographic survey of the site (Figs 2-4), and to assess the stratigraphic potential of the citadel, given the presence of surface ceramic material belonging to the main stages of Chorasmian antiquity, including Antique 1 specimens that have not yet been associated with any *gorodishche* in the entirety of eastern (relatively to the Amu Darya/Oxus) Chorasmia.⁹ The only Antique 1 fortified settlement of Kyuzeli-g'yr is in West-bank Chorasmia,¹⁰ and a Chorasmian site without a compressed stratigraphic sequence is virtually non-existent (*infra*). Following the views previously held by Soviet scholars and reiterated by S.H. Helms,¹¹ the site was then chosen primarily because it might have been, given its dimensions and layout, dominant position in relation to the local canalization system (Fig. 6), and indeed potential antiquity,¹² the royal centre that preceded that of

⁸ Yagodin, Madjarov 1986: 27: “The remains of destroyed buildings have been preserved on the territory of the *gorodishche*, one of which adjoined the middle of the eastern wall, and the second, destroyed to the bottom of the base of the walls and was a multi-room building with Kangyui ceramics, was located in the Southwestern part of the settlement” [*pace* Negus-Clearly 2017: 88]; p. 28: “In addition to the mentioned traces of development on the settlement, there were also found remains of the population’s production activities in the form of ruined pottery kilns, accumulations of metal slags, and pieces of iron blooms. Pottery kilns were concentrated in the northeastern part of the settlement, apparently in the potters’ quarter. Four kilns were excavated (...)” [Tolstov and Vorob’eva 1959: 206-211, figs 50 and 51; dated to the “Kushan” period].

⁹ The manor (enclosed by a wall) of Dingil’dzhe, now lost, was the only well preserved Antique 1 site fully excavated in Eastern Chorasmia (Vorob’eva 1973).

¹⁰ A stronghold built in a strategic position with a layout adapted to the hillock on which was founded, thus different for this and other, chronological, reasons from subsequent Antique 2 *gorodishche* (Khozhaniyazov 2005: 123)

¹¹ Helms in Khozhaniyazov 2005: 51, note 163.

¹² *Supra* note 5; surface finds of Antique 1 pottery sherds (pers. obs.). Additionally, Soviet archaeologists located a large inhumation cemetery “120-160 m east of the settlement of Bazar-kala,” extending over approximately 1000 sqm with 30 recorded burials, including those of children. The tombs, which lacked mounds, contained either simple burial goods (such as spindle whorls) or none at all, and no weapons were found in the packages except for a single arrowhead. Some animal bones, notably those of calves, were also retrieved. They dated this cemetery to the “4th-3rd or 5th-3rd” centuries BCE (Gudkova, Man’lov 1981; see also Rapoport 1971: 119, note 3). Other isolated discoveries of inhumations were recorded in the areas of Koï-Kr’ylgan-kala, Berkut-kala, near Bol’shoi K’yrk-k’yz-kala, and in “Left Bank” Chorasmia at Kunya-uaz (*ibidem*: 167). As already noted in Minardi, Amirov 2017, and Minardi 2023b, the evidence collected and published (with only a selection provided) does not offer enough information to understand who these individuals were and to which group they might have belonged. The presence of high-footed goblets in two burials (Gudkova, Man’lov 1981: 155, where these are compared to specimens from Koï-Kr’ylgan-kala; illustrated at p. 163: fig. 36; on this class of material in Sogdiana, see Lyonnet 2018) indicates, in my opinion, albeit it is impossible to determine the duration of the cemetery’s use and the earliest inhumations, an Antique 2 chronology (3rd or 2nd century BCE?). Thus, spatially and chro-

Akchakhan-kala, located approximately 40 km to the West. It was also important to understand whether the citadel was merely a *flucht-burg*, used in times of necessity by the habitants of the settlement and the surrounding areas, as some scholars have suggested due to the scarce and partially published results obtained in the past.¹³

Two small sondages were conducted within the citadel: BZK23-1, measuring 4.4×2.2 m,¹⁴ located in the eastern part of the enclosure; and BZK23-2, placed in the western one, close to the barbican gate, and extended for about 150 sqm. The level of the sand (SU 0) was approximately 2 m in BZK23-1 and 1 m in BZK23-2 (Fig. 7).

The excavation in BZK23-1 (Figs 4, 8) reached bedrock (SU 17), that is a compact grey clay layer on which the entirety of the site was possibly founded. Above this layer, the stratigraphic accumulation began with SU 14, another compact layer of pure clay, very likely artificial, overlaid by the floor level SU 12. SU 14 was at a certain moment cut (SU 18) to lodge a halved upside-down storage vessel (a *khoum*) repurposed for extinguishing embers and ashes of a nearby, yet unlocated, hearth

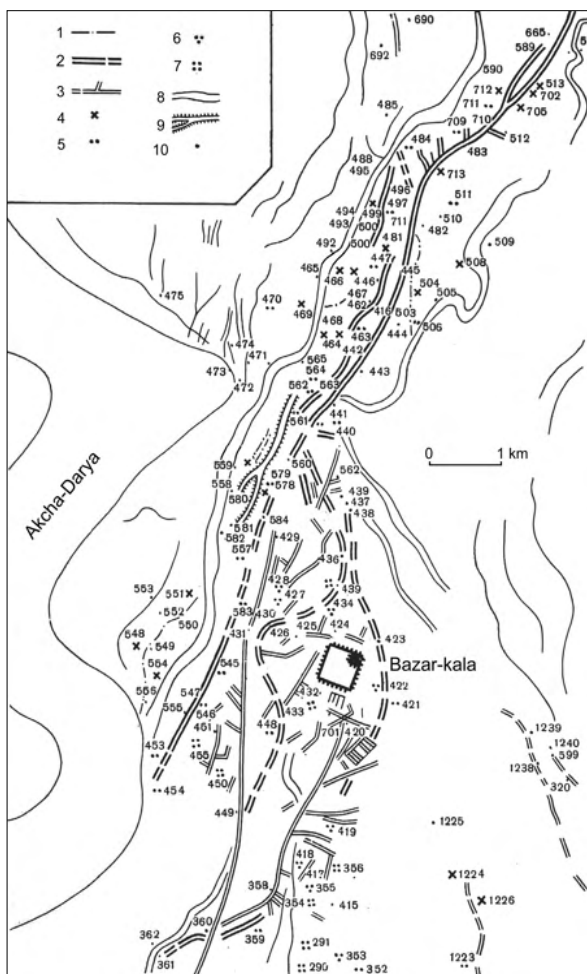


Fig. 6 - The area of Bazar-kala (after Andrianov 1969, fig. 32). Original captions: Canals in the vicinity of the site: 1. Bronze and Early Iron ages; 2. Archaic; 3. Kangyui and Kushan; settlements and large accumulation of ceramics: 4. Bronze and Early Iron ages; 5. Archaic; 6. Kangyui; 7. Kushan; 8. Dry riverbeds; 9. Ancient river channels adapted for irrigation purposes; 10. Excavation numbers.

nologically, the “Bazar-kala” necropolis could have been somehow related to the settlement of Bazar-kala (unlikely it preceded its foundation).

¹³ Khozhaniyazov 2005: 96: “The citadel at Bazar-kala (4th-3rd cs B.C.) appears not to have been built up and may simply have served as a place of shelter in times of danger, perhaps being used for ritual operations in the remaining time (Tolstov 1948[a]: 112).”

¹⁴ Originally 7.5×3.5 m this area, due to the SU 0, had to be resized accordingly.

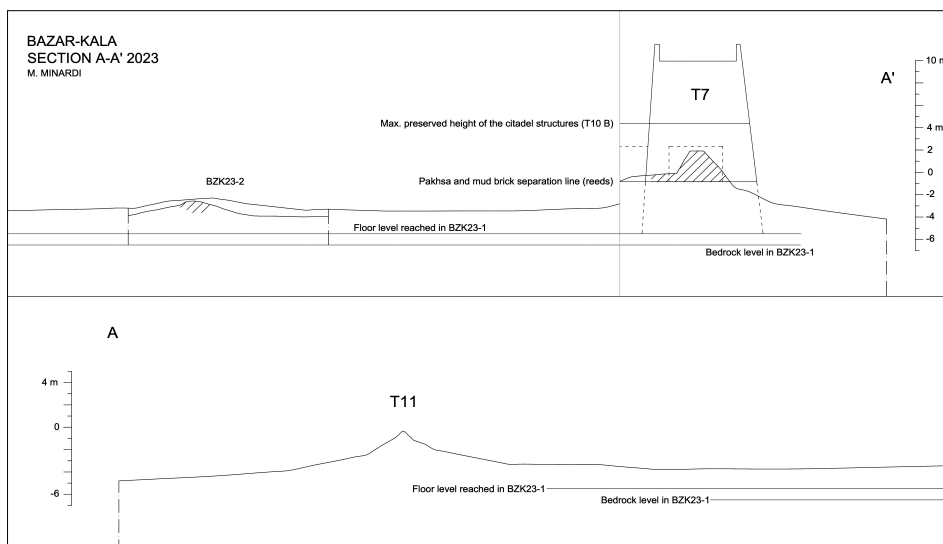


Fig. 7 - General section A-A'.

(Fig. 9).¹⁵ The *khoulm* was vertically lodged into the pit by inserting its neck into a layer of sand prepared beforehand. Clay (SU 19, not excavated) was then used to fill cut 18 up to a certain level, upon which floor level 12 was then laid. All of this was disturbed by later activities, as shown by cut 16: a round pit that intersected both floor level 12, filling 19, and the *khoulm*¹⁶ done at a certain time for a purpose yet to be better clarified. The pit, originating from floor level 12 (so the area was exposed or covered by debris which were first entirely removed), reached and penetrated bedrock; it was afterwards backfilled, as evidenced by a stratigraphic accumulation (SUs 13, 15 and covered by 10 and 11 etc.—Fig. 8) with material from an earlier stage. This includes abundance of potsherds (mostly of Antique 2 typology)—with fragments of badly fired specimens (possibly from pottery kilns), cooking pots evidently blackened by soot, vessels repaired in antiquity—few small fragments of mud-bricks (reddened by heat), small burnt debris, fragments of grindstones and whetstones, a large quantity of scattered animal bones, (including possibly camel specimens),¹⁷ and scattered grey and green-coloured small ash deposits with charcoals. SU 15 contained also a fine-clay terracotta figurine with traces of coating and painting. It was broken in antiquity, and depicts a side-sitting individual on a rectangular pedestal (Fig. 10).¹⁸ Such material clearly resulted from other nearby disturbances or spoilage activities, or more simply, it washed from ruins still rising above the level of SU 12

¹⁵ It contained the following stratigraphic accumulation: clay wash (deposited after its function ceased—SU 20), white ash (21), brown burnt dirt (22), and pure sand (23) directly overlaying SU 14. Reddening of clay occurred in SU 12, corresponding to the area around the *khoulm*, externally to it. Additionally, the vase exhibited a burnt, darkened interior, with a fabric weakened by exposure to heat.

¹⁶ Potsherds of the *khoulm* were still visible, pressed on the side of the pit, on the interface between SUs 19 and the 14.

¹⁷ Personal observation. The bones will be analysed by a specialist.

¹⁸ Unfortunately, it was damaged during the recovery, as visible in the figure.

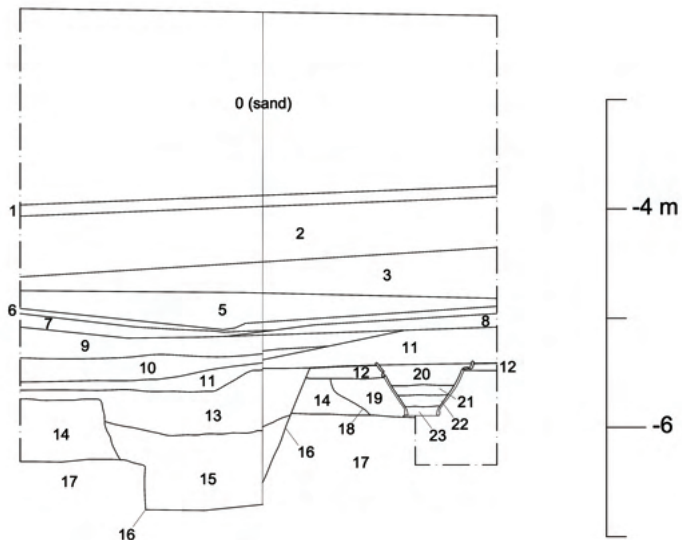
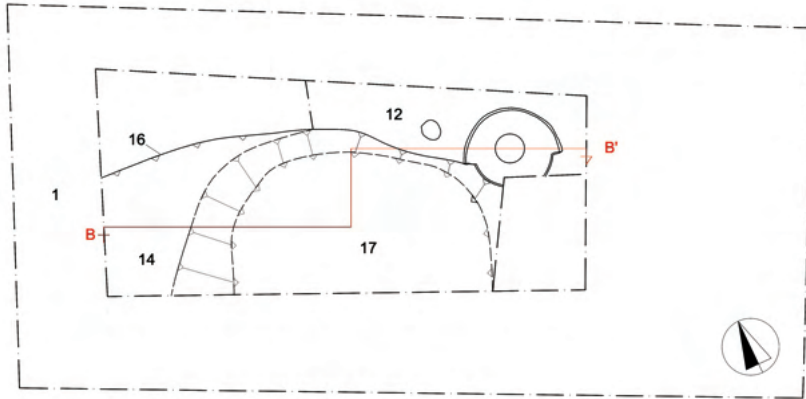


Fig. 8 - Plan and section (B-B') of sondage BZK23-1.

from the east¹⁹ into the depression formed by the pit during several, hard to precise how many, seasons of abandonment of the area. Only few fragments of mud bricks were found during the excavations, indicating the absence of a collapsed wall in the

¹⁹ For instance, SU 12 is the fill of a natural gutter formed by water flowing from the East (possibly from the ruined walls of the enclosure) towards the West (i.e., the interior of the citadel). The layers in the sondage generally exhibit a slant in the same direction.



Fig. 9 - Floor level SU 12 in BZK23-1 with halved upside-down storage vessel.



Fig. 10 - Fragment of terracotta figurine (BZK23-1, SU 15).

small area investigated. Thus, sondage BZK23-1, with its *khoum* used to extinguish embers, may have very likely intercepted part of a courtyard relative to an edifice dedicated to economic activities, although such repurposed vessels have been found in religious-related contexts (at Akchakhan-kala, in the context of the main gate of the Central Building of the Ceremonial Complex, and at Angka-kala Malaya, in a possible funerary structure).²⁰ The Bazar-kala building/courtyard, at present, appears to have been a single-stage construction belonging to the Antique 3 period (if SU 14 is not ac-

²⁰ Minardi, Amirov 2017; Betts et al. 2018. The calibrated radiocarbon dating of the sample taken from the material found inside one the Antique 3 *khoum* of Angka-Malaya was 21-133 CE.



Fig. 11 - View of wall exposed in BZK23-2.

tually a preceding, eroded, floor level—*infra* for more information on relative and absolute chronology), but most of the material of the ancient backfill of cut 16 is definitely earlier.

BZK23-2 on the other hand, has been only preliminary cleared of sand and the topmost SUs (mud wash with some debris). In the upcoming season, the area will be thoroughly investigated. BZK23-2 was chosen due to the presence of the only structural emergence visible within the citadel at the surface level of the sand dunes: previously located by Tolstov and by him indicated as the “remains of a small house,” it appeared as a little heap of compact dark brown clay. The surface clearance allowed us to discern in the area a wall, at least 10 m long and over 1 m wide, constructed of mud-bricks over *pakhsa*, oriented similarly to the citadel along the east-West axis (Fig. 11). This wall probably ran in parallel to the main street of the citadel, if we expect the gate to be in axis with a main alley (cf. Dzhanbas-kala, *infra*). Most notably, within the alluvium overlaid by the thick layer of sand in the Western corner of the excavation area, we discover poorly preserved human bones, still partially preserved in a vase used as an ossuary (Fig. 12).²¹ The pot might have been repurposed

²¹ Only fragments of two long bones were still found in the vase, which evidently fell and capsized from the top of the ruined wall into some mud. Other human remains, including a part of a cranium, were discovered close to it, in front of the mouth of the vessel (crania were the last element to be inserted into the ossuary—Minardi 2023b). The mudwash contained only fragments, brittles, of other bones. Due to the size of the skull, the individual is believed to have been young. However, due to the poor preservation conditions, it is impossible to determine if only part of a skeleton of an individual, or few parts of several ones, were originally inserted into the vase.



Fig. 12 - Vase reused as an ossuary from BZK23-2.

or dating to the 3rd century CE.²² Other small gypsum fragments, possibly of Late Antique ossuaries, testify to the use of this area of the citadel as a Zoroastrian necropolis after the abandonment of the site.²³

*Preliminary Results:
Chronology and Related Issues*

Six radiocarbon samples have been collected during fieldwork (Fig. 13).²⁴ Most notably, three of these samples came from charcoal found in sondage BZK23-1, specifically from the mud floor SU 12 and the filling layers of cut 16, SU 13 and SU 15 (Fig. 8). Two other samples were taken from a layer of charred reeds that still separates the *pakhsa* blocks foundation of the Tower 7 and its elevation in mud-bricks (T7, Sample 1 and Sample 2; this is a building technique also attested at Akchakhan-kala). Finally, one 14C sample was obtained from the top of a thick layer (at least c. 50 cm) of various carbonized material (an accumulation of layers of white ashes, and grey ashes with a concentration of seeds and small animal bones in it) visible in the interior of Tower 10(B) and exposed in section by a partial recent collapse of its structures. The latter sample is late compared to most of the evidence collected, having a calibrated range of 355-433 CE. This seems to indicate a re-occupation of the structures, for purposes yet to be established, ranging from the military to the squatter. In fact, in contrast, the two samples from the layer of construction reeds of corner Tower 7 gave two similar earlier calibrated ranges, 122-250 CE and 116-240 CE, clearly indicating that some work was done at the fortifications of Bazar-kala, or at least in correspondence with this corner tower, in the Antique 3 period, between the first quarter of the 2nd and the mid-3rd century CE. Hardly this datum marks its erection, but at the present stage this might even be the case. The Antique 3 *khoulm* discovered lodged into floor level SU 12 of BZK23-1, constituting with its typology a *terminus post quem* to place at the beginning of the abandonment period, confirms this chronology and, indeed, the three samples obtained in the sondage BZK23-1 were acquired with the specific aim to confirm the Antique 3 and post-Antique 3 chronology relative to the end and possible spoliation of the site. Sampled charcoal from floor 12 gave a 62-225 CE calibrated range, the sample from the lowest layer of the accumulation in pit

²² The pot, with a light engobe and decorated by an incised chevron under the neck, could have been recycled, as its type is attested in the 1st-3rd centuries CE (Nerazik 1976: 28 and 35, and Figs 9 and 14— with references), or just functioned as bone container at the end of this chronological window. This is not, however, a very solid *terminus post quem* for the installation of the cemetery on the ruined citadel.

²³ Cf. Rapoport 1971: 66: numerous fragments of figurative ossuaries were collected from the surface at the Northwestern corner of the citadel of Bazar-kala.

²⁴ The samples were analysed at Vilnius Radiocarbon Laboratory.

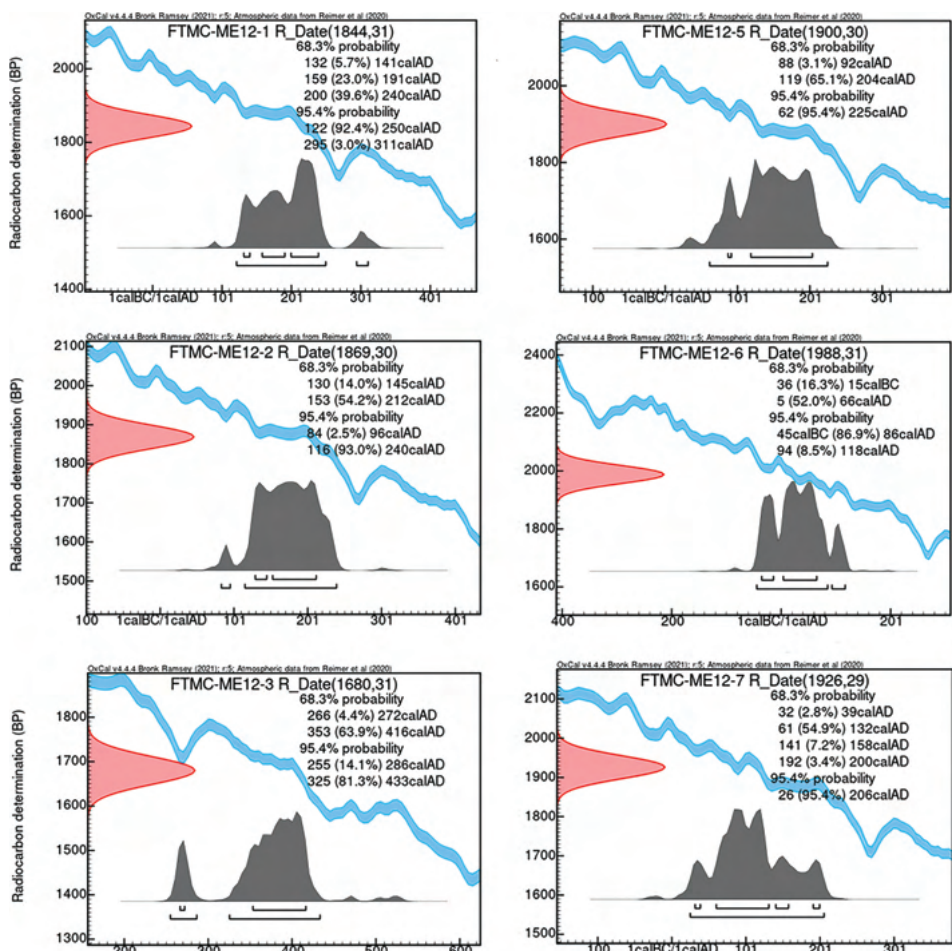


Fig. 13 - Radiocarbon calibrated dates (Vilnius Radiocarbon Laboratory).

16, SU 15, instead a range of 26–206 CE, while the sample from SU 13, overlying 15, gave a range between 45 BCE and 118 CE. As expected, the mixed material of the backfill is earlier than the preparation of floor 12. The sampled charcoal collected in SU 13 (and 15) may have clearly been produced both before and during the despoiling operations, most likely, due to its scattered nature within the layers, and because of the composition of the layers, before, to eventually end in the backfill of cut 16.

Both the layer of reeds in T7 and the accumulation of charred material in T10 might be related to the “fire event” mentioned in Soviet literature (*supra*), a (not defined) layer of burnt debris, described as sealed by “alluvium” and other coatings for floors, and constituting a *caesura* followed by a hiatus in the use of the citadel—or possibly not. The bed of reeds looks to be simply compressed between *pakhsa* and bricks, while the accumulation of ashes is thick and seems to overlay a floor level of the tower; at present it is covered by unstable debris and seemingly cannot be related to the “intensively reused” upper corridor level. Only further excavation will enable us to better understand this important issue.

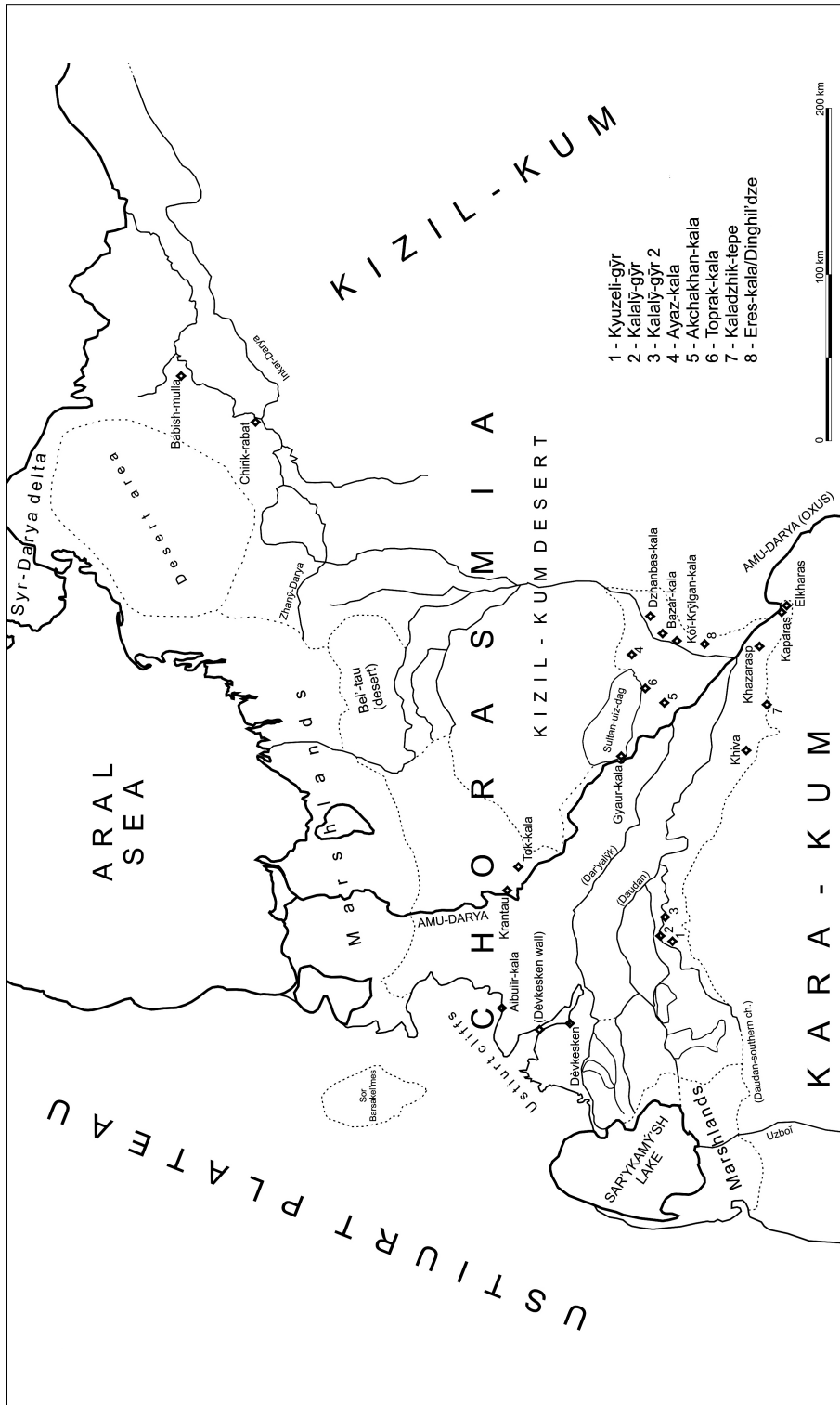


Fig. 14 - Geographical outline of the Ancient Chorasman region including the locations of key archaeological sites.

Be that as it may, in light of additional chronological markers, i.e., the typology of the ceramic unearthed in BZK23-1, with a striking majority of sherds belonging to the Antique 2 period, the presence of an Antique 3 period *khōum* still in situ in floor SU 12, and the presence of an ossuary burial positioned on a ruined wall located in area BZK23-2, we may postulate for Bazar-kala's citadel the following chronological development: the fort may have been raised in the 2nd or 1st century BCE, of even earlier on some pre-existing settlement, and then inhabited (the abundance of Antique 2 pottery testifies positively in this regard) in this first stage until, about the mid-1st century CE if not earlier, also if we compare the better known chronology of Akchakhan-kala.²⁵ Then, in the following period (marked by Antique 3 material) the citadel towers (or at least corner tower 7) were restored and some construction activity was carried out at the interior of the citadel (the possible courtyard BZK23-1).²⁶ This might be related to the aftermath of the destructive event that, according to the Soviets, led to the abandonment of the lower gallery of the citadel wall. Not much later in time—the evidence does not help in this case for the moment to obtain a better demarcation—some new activities, now possibly of despoiling, or of clay quarrying,²⁷ were carried out as witnessed by the pit dug in BZK23-1 that cut into the *khōum* and its floor level and penetrate the natural bedrock clay on which the citadel is raised.²⁸ This may have occurred in the 3rd or 4th century CE. The large pit was afterwards perhaps naturally backfilled with burnt and washed material that may have resulted from the destruction of previous nearby installations, possibly also ceramic kilns, as suggested by the presence of pieces of misfired ceramic and kiln waste. Then, the relatively late dating of the yet unexplored Tower 10 with an inner accumulation of carbonized material indicates either a reuse of the structures of the citadel or another event of large scale occurred at Bazar-kala between the 4th and the 5th century CE. After that time the citadel, and conceivably the whole site, was almost certainly abandoned and plausibly not reoccupied, as indicated by the presence of an ossuary burial (along with other gypsum fragments likely belonging to ossuaries) on the ruins of the long wall of BZK23-2, which serves as a clear marker of its reuse as a burial ground, confirming what preliminary observed in Soviet times. This circumstance often occurs in Chorasmiā for ancient sites, including Akchakhan-kala.²⁹ The layer of burnt material within Tower 10, which appears in the section exposed by erosion, seems to have been an diachronic accumulation of ashes and discharged animal bones and seeds and not the results of a destructive event, then, can be perhaps considered as the result of a partial reoccupation (military?) of one of the site's towers or, but this is only a speculation at the present stage, relative to a new funerary use of the area.³⁰ Only further

²⁵ The two calibrated ranges obtained overlap from the first quarter to the third quarter of the 1st century CE.

²⁶ The calibrated ranges do not coincide but overlap from the beginning of the 2nd century CE to the first quarter of the 3rd.

²⁷ Cf. similar activities at Zartepa see Zav'yalov 2008: 236 with references.

²⁸ Further excavations are needed to determine how the *pakhsa* foundations of the citadel were erected and what they overlay.

²⁹ E.g., Kalaly-gyūr 1 (Tolstov 1962: 114-117; Rapoport 1971: 90-95); fragments of gypsum and ceramic ossuaries have been recorded in correspondence of the ruined walls of the lower enclosure of Akchakhan-kala (personal observation).

³⁰ If the ossuary and burnt material are contemporaneous, Bazar-kala might have functioned as a dakhma/ossuary necropolis (with a *sāgrī* installed in the ruins) rather than a deserted military site next

works may shed some light on the late period of life of the monument, before its definitive abandonment that seems to have occurred quite possibly before the late antique (“Afrighid”) period.

TABLE 1

Bazar-kala, preliminary periodization. At Akchakhan-kala, guideline for the absolute Chorasmian chronology (after Minardi 2015, a work still in progress), the transition between the Antique 2 and 3 period may have occurred later than the mid-1st century BCE, in the early 1st century CE. Toprak-kala was very likely founded in the early 2nd

Bazar-kala	Chronology (preliminary)	Dating evidence	Events (possible)	Cf. Chorasmia
Period 0	Antique 1	Old data; surface finds	Pre-existing settlement	Antique 1 (east-bank Chorasmia 5 th century BCE?)
Period 1	3 rd /2 nd -1 st century BCE?-mid-1 st century CE	14C; ceramic typology	Foundation of the citadel	Antique 2 (c. 3 rd -mid 1 st century BCE)
Period 2	Mid-1 st -early 2 nd -mid-3 rd century CE	14C; SU 12; ceramic typ.	Restoration/ renovation/ strengthening of the citadel	E. Antique 3 (c. mid-1 st BCE - early 3 rd)
Period 3	Mid-3 rd -first quarter of the 4 th century CE	(Presumed) vessel-ossuary?	Abandonment & spoliation activities	L. Antique 3 (c. early 3 rd -4 th century CE)
Period 4	First quarter of the 4 th -first quarter of the 5 th century CE	14C; gypsum ossuaries?	The area is an ossuary necropolis	Late Antiquity

Table 1 shows an interpretative effort of these first preliminary data in the broader context of the Chorasmia periodization as reviewed by Minardi in 2013 (2015), which was also based on data from the excavation of the Karakalpak-Australian Expedition at the royal Chorasmian site of Akchakhan-kala.³¹ If we assume, due to the abundance of Antique 2 material at Bazar-kala, proportionally much more copious than those found in Akchakhan-kala, a foundation dating at least in the 2nd/early 1st century BCE, and evidence that seem to mark a major transformation in the following period (the restoration, or even erection, of the towers? and new construction activity within the citadel), the phases of development of the site seems, in this early stage of study with still limited data, to run in parallel with those ascertained for Akchakhan-kala. Henceforth, the transition from the Antique 2 to the Antique 3 period, falling within the mid

to a Zoroastrian cemetery. The container was recycled if Bazar-kala was not abandoned already in the 3rd century CE.

³¹Most of the material culture of Akchakhan-kala’s main stage, Stage 3, belongs to the Antique 3 period, starting around the mid-1st century BCE to the mid-1st century CE, according to archaeological data and radiocarbon dates (Betts et al. 2016).

of the 1st century BCE to the mid of the 1st century CE, once again appears to have been a pivotal moment in the history of the polity (it was even marked by the establishment of a long-lasting local era).³² In relation to the possibility of a foundation of the *gorodishche* in the Antique 1 period, as expressed by the Soviets (*supra*), the only data so far gathered are surface findings of potsherds.

Remarks on Chorasmian Urbanism and Fortifications

Bazar-kala appears to be the largest site constructed along the central canal of the easternmost section of the Chorasmian “Right Bank” irrigation system, situated east of the dry river bed of the Akcha Darya (Fig. 6).³³ Since the Antique 1 period this area, as primarily evidenced by the excavation of the walled manor of Dingil’dzhe, residence of a mid-5th-4th century member of the Chorasmian elite,³⁴ was transformed into a new, vaster and better exploited rural landscape, while the fortification network appears to have been developed in the following Antique 2 period for both defence and territorial control (*infra*).³⁵ Other main large fortified sites in the area are located both North and South of Bazar-kala at similar distances, effectively positioning the site centrally within the “oasis:” approximately 20 km South of Bazar-kala lies the fortified settlement of Eres-kala, encompassing with its towered enclosure an area of about 5.5 ha; roughly 25 km to the North, at what appears to be the border of the Chorasmian polity, stands the fortress of Kurgashin-kala, covering approximately 1.2 ha, thus of smaller dimensions than the citadel of Bazar-kala. Dzhanbas-kala, a *gorodishche* with an enclosed “urban area,” including its monumental gate, of c. 3.2 ha, is located at approximately 10 km to the North, while the fortress of Angka-kala (around 0.7 ha), and the smaller Koï-Krÿlgan-kala, are both situated at approximately 8 km South of Bazar-kala. All these sites, with the apparent exception of Angka-kala, seem to have been Antique 2 foundations. If this is indeed the case a settlement pattern is implied, with Bazar-kala at the centre of a branch of the Chorasmian irrigation network, highlighting a carefully organised defence/irrigation/settlement system³⁶ not apparently deployed earlier than the 3rd-2nd century BCE. This low chronology is also suggested by the Western-originated architectonic features used in the fortifications (*infra*).

Most of this evidence has already been considered when the Soviet “Khorezm Archaeological Expedition” rediscovered and mapped the area. The variable architectonic typology of the Chorasmian forts, their layouts, their building techniques, were also more recently discussed in details by the late G. Khozhaniyazov who referred in details to previous works.³⁷ Actual cities seem to be missing in Chorasmia,

³² As argued in Minardi 2013.

³³ Andrianov 1969. See also remarks in Minardi, Amirov 2017 with references.

³⁴ Vorob’eva 1973; Minardi 2015: 75-79; 2016c: 281-284.

³⁵ For Tolstov (1948b: 122) this system was “(...) undoubtedly an expression of a unified plan to defend the oasis from steppe tribes, indicating, like the irrigation system itself, the presence of a strong centralized state.”

³⁶ Cf. Tolstov 1948b: 122

³⁷ Khozhaniyazov 2005: 123: “The period of the 5th to 4th centuries B.C. [following the Soviet traditional chronology] saw the formation of the ancient Chorasmian state, an ‘urban explosion’, when an entire series of urban centres appeared (*e.g.*, Bazar-kala, Bol’shoi Aibuiir-kala, Khazarasp, among others) and border fortresses were established (Kalal’i-g’ir 2, Ayaz-kala I, Kurgashin-kala, among others);” *ibidem*:

although some sites have been rightly considered as of “urban type:” Toprak-kala (built in the 2nd century CE), Dzhanbas-kala, very likely Bazar-kala, Khazarasp (in Khorezm), Guldursun, and Bol’shoi K’irk-k’iz-kala,³⁸ among others, might have been centres, albeit lacking a vast scale similar to other urban settlements of antiquity,³⁹ in which extra-agricultural economic activities, such as ceramic and metal production and thus, more in general, artisans and other specialists (such as military personnel of different rank, and members of the elite and the clergy)⁴⁰ served the majority of the population of all classes inhabiting the countryside. Akchakhan-kala (1st century BCE/1st century CE-early 2nd century CE) has shown, with its citadel (the Ceremonial Complex), how some of these major centres could have mainly functioned as royal and ceremonial seats, with structures built specifically to enact royal and Zoroastrian seasonal festivals.⁴¹ What lies hidden below the massive dunes covering the lower enclosure of Akchakhan-kala is unknown, but this might have been the enclosed space, as in the case of Bazar-kala, where economic activities were concentrated, possibly for administrative and control purposes.⁴² It is important to note that although so far scarce in number, especially considering the evident and numerous architectural manifestations of control and power (palaces and fortresses) over the land diachronically attested in the country, administrative evidence from Chorasmia (showing a development of the local Aramaic script) do exist.⁴³ If it is factual that the main function of

124: “The early Antique period saw an increase in the number of fortifications, the wide utilisation of various structural elements such as socles, semi-circular and rectangular towers with chambers, and outworks. In this period there appeared new types of towers (rounded and square) and other elements such as *proteichismata*, towers of the ‘swallow-tail’ type, and arrow-shaped loopholes.”

³⁸ Conveniently see, Khozhaniyazov 2005 with literature.

³⁹ The “High Palace” and the walled settlement of Toprak-kala are about 17.5 ha; Khazarasp is about 10 ha, Bol’shoi K’irk-k’iz-kala is half the extent of Khazarasp; cfs., Ai Khanoum, including the Bala Hissar, covers an area of c. 200 ha; just the Bala Hissar of Balkh is approximately 90 ha. A striking comparison can be made between Bazar-kala and Zartepa in the Surkhandarya region, North of the Oxus. The site, founded in the 1st century BCE (by the early Kushans, see Zav’yalov 2008), was a walled settlement, with round perimetral towers, covering a square area of approximately 15.5 ha with a side of 400 m, characterised by the presence of a square citadel (c. 1.5 ha) located in one of its corners. Zartepa appears to have been a well-planned “urban” centre at the centre of an irrigation district (V.M. Masson sustained by Zav’yalov 2008: 28).

⁴⁰ The existence, and key role, of a pre-Sasanian Zoroastrian priestly class at Akchakhan-kala was substantiated by the recent analysis of its mural art.

⁴¹ Minardi 2016b; Minardi et al. 2017; 2020.

⁴² Possibly the space was initially delimited beyond the actual needs of the centre. The case seems different at Dzhanbas-kala and, later, at Toprak-kala. Recent excavations in the upper enclosure/citadel of Akchakhan-kala revealed that besides the Ceremonial Complex, the Central Monument and the “donjon,” other spaces were not completely empty (*pace* Negus-Clearly 2017: 288, who also ignores the argument presented in Minardi and Khozhaniyazov 2015; Minardi 2016b, about the possibility for the lay population to assist at the ceremonies performed at the Central Monument). The site did not “develop organically,” because it was abandoned in the 2nd century CE. Outside the walls of the site several different dwellings have been identified (Negus-Clearly 2017: figs 11.6 and 11.7) and this points out to a settlement pattern not so dissimilar from that postulated for Arsacid Parthia (Lippolis 2019: 75-76).

⁴³ There are, for instance, signet rings and seals from Dingil’dzhe and Kyuzeli-g’yr (Vishnevskaya, Rapoport 1997), a signet ring from Dzhanbas-kala (Tolstov 1948a: fig. 26), and Aramaic documents from, e.g., Akchakhan-kala (KAE, unpublished—although recently appeared in an exhibition catalogue without the consent of the mission), Khumbuz-tepe and Toprak-kala (Livshits, Mambetullaev 1986). This scarcity in number of finds is highly likely to stem from an archaeological accident (cf. e.g., the limited administrative documentation discovered at Ai Khanoum).

walled structures is defensive, in Chorasmia we also have to consider that we found them not just at the borders but also immersed within the agricultural landscape of the polity. Considering this, we must also take into account the environmental factor, as the region is almost completely flat, with rivers that do not constitute actual boundaries: here a different defensive strategy, with few reliefs to exploit as technical advantages, had to be implemented and the numerous fortified structures could have been strategically employed as a defensive method on a quite large plain. Enemies of Chorasmia could evidently not march long distances in a short period of time unmolested, because of such fortresses.

As aforementioned, it is clear, considering the dimensions of the *gorodishche* that only a portion of the population, possibly different specialists of all classes with their families,⁴⁴ lived in such Chorasmian urban centres where at the same time the royal elite had its separated residences (e.g., Akchakhan-kala, Toprak-kala, possibly Ayaz-kala 3).⁴⁵ In the case of the “High Palace” of Toprak-kala, erected on an artificial terrace of mud-bricks, we have an eloquent case of use of military architecture for a manifestation of power and wealth, possibly also having a religious significance.⁴⁶

It should also be noted that the few known royal residences, this is again the case of Toprak-kala and Akchakhan-kala whose context is the better understood, were often abandoned after a short period of time, the span of few generations.⁴⁷ The earlier site of Kalal̄y-ḡyr 1, and perhaps also Bazar-kala, seem to fall into the same case record. It also seems, at least for Toprak-kala, that the Chorasmian urban sites continued to live even in the aftermath of the event that made the palace to be condemned or displaced. The urban population evidently was not necessarily evicted from their walled home. In my opinion, in the light of the evidence available, including the royal fire altar found at Akchakhan-kala, this event might have been connected with the death of a monarch (pollution of the palace and consequent desecration?) and/or the enthronement of a new dynast, who lit a new fire.⁴⁸ It is remarkable how, and Bazar-kala seems to confirm this,

⁴⁴ The existence of specialized productive centres since the Antique 1 period, such as Khumbuz-tepe (Bolelov 1999) for pottery, again indicates the mark of a form of centralization.

⁴⁵ The ruling elite might very well have a “pastoralist nomadic origins” (cf. Stride et al. 2009) like the Arsacids or the Kushans, or the Sakas in India, or the Goths kings of Italy: is this consequential as an isolated datum when considered in a specific context? These “nomads” ruled over centralized states (and actually state formation was often ignited by the proximity of complex societies, as in the case of the Black Sea sedentarized Scythians—Ivantchik 2019). In Chorasmia the “nomadic behaviour” of the elite remains barely detectable (see Kidd, Betts 2010), unless the settlement pattern (with supposedly a majority of empty enclosures) with “diffuse urbanism” (cf. e.g., the case of Achaemenid Fars) are considered as evidence to demonstrate it. We have then to avoid the paralogism consisting in using the nomadic origins of the elite to explain the settlement pattern, and also making assumptions based on ethnographic comparisons with modern times “nomads.”

⁴⁶ As argued in Minardi 2018; 2016a. The Antique 3 palace of Toprak-kala, a newly constructed and lavish monumental edifice made possible only through accumulated wealth, adorned with a “fashionable” decorative apparatus new for Chorasmia (argument detailed in Minardi 2020a; 2021), stands as a testament to successful leadership and possibly as a reassessment of overlordship over its subjects.

⁴⁷ And in both cases after the abandonment of the main original palace, another was erected *ex novo*: the Norther Palace of Toprak-kala and, possibly, the so-called donjon of Akchakhan-kala (KAE-unpublished). Presently, it is difficult to fully comprehend whether these royal centres were regional, “national,” or even part of a system related to royal itineration.

⁴⁸ On the fire altar, see Sinisi et al. 2018. On the abandonment and the environment of Akchakhan-kala, see Dodson et al. 2015.

most of the Chorasmian sites do not show centuries-long stratifications. It is also remarkable to see now that some traumatic event must have taken place in east-bank Chorasmlia approximately 2000 years ago, and that this event sanctioned the end/ignited the further development of the Antique 2 material culture, hence it had altered somehow the social and economic fabric of the polity: there is evidence of a siege at Akchakhan-kala,⁴⁹ at Koī-Kr̄ylgan-kala,⁵⁰ fire and destruction at Tok-kala⁵¹ and at Kalaly-ḡyr 1 (in West-bank Chorasmlia)—and Bazar-kala seemed to have been at that time strengthened (after a siege?) like Akchakhan-kala and Kaparas.⁵² Hence, the fortification and defensive system deployed in the Antique 2 period (if not earlier, but still, there is only Kyuzeli-ḡyr in the West-bank of Chorasmlia) was effectively built for defensive purposes and saw a baptism of fire due to a large conflict. Whether this conflict was internal or external remains difficult to determine. What seems evident is that the system did not prevent siege machines from breaching it.⁵³

We may hypothesize a less conflictual situation during the Achaemenid sway, after the initial Persian conquest,⁵⁴ to which, in the post-*anabasis* period, follow an increased defensive need along with an enhanced military knowledge, perhaps linked to rise of a competitive elite,⁵⁵ that fought internally to gain power. This might also explain, besides their numerosity, the high variability in layout of the Chorasmian fortified centre and strongholds.⁵⁶ If we follow this preliminary hypothesis, the main output of such conflictual situation was the emergence of a new dynasty who initiated a local era, the Chorasmian Era, that lasted for hundreds of years.⁵⁷ Hardly, considering

⁴⁹ Akchakhan-kala (Stage 3) flourished after this siege occurred c. 50 BCE (Betts et al. 2009: 38). The trace of fortifications at the site was from the start, in the 2nd century BCE, set on a 3.50 m high solid *pakhsa* and mud brick battered plinth. In reaction to a siege the galleries and tower chambers were filled with rubble and the flanks and faces of tower clad in mud brick and *pakhsa* rendering the lower line of loopholes inoperative (KAE). Possibly at the same time, inoperative were also rendered the arrow slits of the Central Building of the Ceremonial Complex (KAE).

⁵⁰ Tolstov 1962: 135. See also Minardi 2015: 95-96.

⁵¹ Yagodin 2008: “After its destruction, the fortress [of Tok-kala] was abandoned, followed by a long period of desolation, lasting possibly from the 1st century BCE (or perhaps the 2nd century BCE) to the end of the 1st century CE (Gudkova 1964: 26, 40).”

⁵² Kalaly-ḡyr 1 does not have an Achaemenid palace (Minardi 2015: 97-103). Two destructive fires were documented also at Kyuzeli-ḡyr (unrelated to the conquest of Cyrus): Vishnevskaya, Rapoport 1997: 155. The same *caesura* supposed for Bazar-kala may occurred at Kaparas in Southern Chorasmlia: this “Kangyui” fortress was abandoned and then rebuilt about the 1st century CE (Itina 1991: 155).

⁵³ As remarked in Soviet archaeological literature, this kind of urban development possibly stem from a further organization of the agricultural economy and of society. The change in material culture, the inputs from sedentary Hellenized Central Asia, all point toward this interpretation.

⁵⁴ Minardi 2021; 2023a with literature.

⁵⁵ It is important to remark that, due to the religious beliefs of the Chorasmians, since at least the Antique 2 (for the previous period there is the case of Dingil’ dzhe), there is no display of funerary wealth in the polity (Koī-Kr̄ylgan-kala was not a mausoleum; the cemetery of Bazar-kala—*supra*, note 12—was of commoners, perhaps outsiders. I will discuss about some possible cenotaphs built in Toprak-kala in a further paper). Burials of the elite were not unfurnished; they simply did not seem to have existed (Minardi 2023b). Competition (we are aware of the existence of emulation behaviour and of a hereditary political leadership: Minardi 2016; 2024) should have been stressed in other forms, e.g., architecture and through the use of elite paraphernalia (e.g., the Isakovka bowl, Livshits 2003).

⁵⁶ On this manifest heterogeneity, see Khozhaniyazov 2005: figs 20-21, pp. 209-210.

⁵⁷ Additionally, according to Bīrunī, the dynastic line was singular, with a very ancient (Persian) origin (Minardi 2015: 117-118). Moreover, even if there is a dearth of written available sources, all of these deal with a single Chorasmian entity, from Pharasmanes’s embassy to Alexander, to the Dahae and

that the local widespread material culture did not radically change, but actually developed under the stimulus of Eastern Hellenistic types, and, as shown by the evidence of Akchakhan-kala, Chorasmia still preserved key aspects of its cultural Persian heritage (including Aramaic script and the ritual calendar),⁵⁸ these enemies (not just raiders, were they conquerors?) were hordes of unspecified nomads equipped with catapults and battering rams.⁵⁹ Hence, we may ponder that idea that an inner level of conflict at a certain moment escalated and a new dynasty, or leader, emerged. The Isakovka phiale with its inscription, along with the historical account of Pharasmanes/Phrataphernes's meeting with Alexander in Samarkand, may also suggest the existence of an earlier dynastic lineage that emerged following the defeats of Darius III and Bessos (Artaxerxes V). True, the borders of Chorasmia were clearly protected, and the exchanges with nomads at the border military controlled, as showcased by the Dévkesken complex in West-bank Chorasmia: a long manned defensive wall which closed a strategic access to the Oxus delta from the Ustyurt Plateau.⁶⁰ Who, semi-nomadic groups apart, the external enemy might have been? Perhaps the neighbours of the Syr Darya delta to the Northeast, or possibly some of the same groups who settled in Bactriana and Sogdiana defeating the Graeco-Bactrians, as for instance the early Kushans. But on this regard evidence is lacking. However, nothing, at present, can make us exclude a priori a bellicose involvement of the Chorasmians in the turbulent events of the period.⁶¹

In conclusion, I believe possible to see in the distribution of Chorasmian sites a pre-arranged defensive system along the large canals of the polity, so the imprint of a centralized kingdom, in which a wealthy elite started to compete and to show off their power through architecture not earlier than the 3rd century BCE. We may consider the idea that, before the Antique 2 period, the Chorasmian urbanism was characterized by the absence of large fortified centres (but by the presence of large manors in rural estates) apart from the initial stronghold of Persian domination (e.g., Kyuzeli-g̃yr). However, this has to be ascertained. At that early epoch, along the newly constructed major canals, which for the first time appeared in the region, a widespread inhabited rural landscape developed, facilitated by some form of central organization for which we lack precise documentation. We know, thanks to the work done by Vorob'eva at

Chorasmian embassy to the Han court in 110 BCE (Minardi 2015: 57-58). This indicates an economic, military and diplomatic capability of the elites. Coins (minted since the 2nd century CE?) also bear witness to the "Chorasmian kingdom" hypothesis: silver coinage is scarce, but the coins are issued by a royal authority. The art of the royal seat of Akchakhan-kala, with an imagery focused on religion, may also be considered as an index of a lower level of conflict within the Chorasmia society in the Antique 3 period. For the different views on the Chorasmian Era, see Minardi 2013, cf. Lurje 2018, with references.

⁵⁸ Argument in Minardi 2018; 2020b.

⁵⁹ Di Cosmo 2002: 5: "(...) no amount of horseback hunting and fighting could provide the skills required to mount a successful siege, and in particular the engineering knowledge that served sedentary armies since antiquity." But certainly, the nomads at the frontiers, in some circumstances, ought to have been controlled: an echo of this is provided by Bīrunī, who recorded the seasonal expedition of the king of Chorasmian at the frontier of its realm to drive away foes (already discussed in: Minardi et al. 2020: 93-94).

⁶⁰ Khozhaniyazov 2018. This wall sanctioned a physical separation from the nomadic element and agricultural Chorasmia (*ibidem*: 209; see also Betts et al. 2009).

⁶¹ The region was *terra incognita* in the West and, in general, in the sources is very difficult to catch a glimpse of the Chorasmians throughout Antiquity. On this, see Minardi 2013; 2015; 2023a; 2024 with literature. The area could have provided skilled mercenaries, especially horsemen.

Dingil'dzhe, that in the mid-5th century BCE a hierarchic society already existed in the east-bank, and that the local elite based its wealth on agricultural production. These lands, cultivated for generations (Nerazik 1976), demonstrate a lack of inherent mobility among the Chorasmian population.⁶² Canals, also in the Bazar-kala area, were progressively enhanced in the Antique 2 and particularly in the Antique 3 periods.⁶³ More than an “oasis,” Ancient Chorasmia appears to have functioned as a fortified agricultural island: it was a mostly flat area, surrounded by the deserts, thus with naturally defined borders and lacking a proper periphery vulnerable to external control. The Persians conquered this part of Central Asia to exploit its agricultural potential, and to create a buffer zone towards the steppes.⁶⁴ The entirety of Chorasmia seem to have constituted a “core” region (perhaps politically segmented in some moments of its long history) subject to permanent control by an economically successful ruling class,⁶⁵ adhering to the Zoroastrian faith and thus characterized by the warrior ethic embedded in this religion.⁶⁶ This elite ruled over a populace primarily engaged in cultivating dry lands, defended and controlled by constantly manned forts and fortified centres.⁶⁷ Thus, control over water resources (something noted by Herodotus for Central Asia), ideological tenets (manifested in class distinctions; there are clear data on a royal dynasty, a lesser aristocracy and a Zoroastrian priestly class), and militaristic strategies served to tether the population to the land and to their rulers.⁶⁸

⁶² To demonstrate this, it is sufficient to examine the diachronic development of the area of Dingil'dzhe (Vorob'eva 1973: 4: fig. 1; cf. Andrianov 1969: 123, fig. 35), with dwellings showing a clear social hierarchy; or the “Kangyui” and 1st to 3rd century CE farmsteads located 4.5 km to the South-East of Dzhanbas-kala with fields, vineyards and a possible central storage facility (Nerazik 1976: 23-35, fig. 7—Nerazik observed that there was variability in domestic architecture, apparently related to status); or the intensively cultivated rural landscape of Bazar-kala (badly preserved evidence: Nerazik 1976: 14; some data described by Yagodin, Madjarov 1986: 29-38; maps in Tolstov, Zhdanko 1958; Andrianov 1969, here Fig. 6). Cf. Gulyamov 1957: 77: “The archaeological appearance of the Bazar-kala's region indicates a high population concentration around a primitive fortified settlement in ancient times.” Observing such data, defining this diffuse settlement pattern as “low-density” would be improper (*pace* Negus-Clearly 2013: 95). Cf. the Parthian settlements (Lippolis 2019 with literature).

⁶³ Andrianov 1969: 125. This might be related with the strengthening of Bazar-kala's citadel. The canal system in the area of Akchakhan-kala predates the site; over time, the canals here became narrower and deeper (Dodson et al. 2015). The system appears to belong to the Antique 2 period.

⁶⁴ As argued in Minardi 2024. Cf. Xin 2018 on Kyzyltepa.

⁶⁵ The dynasty that initiated the Chorasmian Era likely had its seat in Akchakhan-kala where precious ivory items (pieces used in a fire altar and drinking vessels) were imported (Sinisi et al. 2017; Minardi 2016c), gold was utilized to gild its stucco decoration (Kidd, Betts 2010: 674, fig. 16), and foreign artists were involved in an elaborate decorative programme (Minardi 2016a; 2018). The ensuing capital of Toprak-kala is a further testimony of the socio-economic success of the same dynasty.

⁶⁶ On the meaning of the Chorasmian art from Akchakhan-kala that open up a whole new view of the polity's society and religious beliefs, see Minardi 2020; Minardi et al. 2023. It is worth noting in this context that the Central Building of the Ceremonial Complex of Akchakhan-kala, featuring corner and perimeter towers, and a two-story corridor with arrow slits closed in Stage 3, clearly had a symbolic martial character.

⁶⁷ Castles and fortifications are not constructed without the intention of manning them. This implies the existence of ready troops and suggests the king's capacity to raise and maintain an army.

⁶⁸ Tolstov 1948a, 1948b and Wittfogel 1957 still retain their foundational significance. I prefer trying to reconstruct a historical narrative rather than make generalizations aimed at establishing another model: it is not simply a matter of understanding whether canals appeared with or without a state as a general rule, or if some groups could have independently constructed canals without regional oversight (which is hard to believe for the Antiquity beginning with the Achaemenids—cf. *infra* note 70), because this simply depends on the socio-economic context. In Chorasmia, significant canals first appeared under Persian rule

The polity, in which a centralized power could have known some dramatic shifts (as that suspected about the turn of the 1st millennium BCE), must have been capable of a high degree of interaction with the “nomads” by the way of having a well-defended and stable socio-economic structure. Still, due to lack of sources besides archaeology, much has to be done in the field to confirm these preliminary ideas.

We may even push further the argument considering the possible root of such form of “diffuse urbanism,” comparing the apparently original Chorasmian one, non-existing before the Persian intervention (contrary, for example, to Arachosia and Bactriana), with the Persian example from Fars, which is emerging thanks to recent research in the area.⁶⁹ It is a fact that the Persian domination—attested by all sources, first and foremost Persian ones—left a long-lasting legacy (e.g., as previously mentioned, key aspects of religion, including calendar, writing, iconography) on the culture of the 1st century CE Chorasmian polity—while little, if any, of the “Saka heritage” is appreciable, as it is the case for Arsacid Parthia (e.g., Old and New Nisa). One might argue, although the Achaemenid intervention was mediated by Bactra, that the same Persian influence may have also ignited the Chorasmian architectonic/behavioural pattern developed after the initial conquest of the “oasis,”⁷⁰ and that thus Chorasmia later developed its own type of diffuse urbanism with hierarchized fortified centres (with or without ceremonial functions), owing to this initial imprint, followed or contemporary by the stimulus received from the South (as Chorasmia was under the control of the satrapy of Bactriana) and, last but not least, also due to historical conjunctures and circumstances (that is, context). As shown by Fars, and possibly also by the few known cases beyond its boundaries,⁷¹ the Chorasmian “diffuse urbanism,” with an accent on elite ceremonial centres, would not be necessarily “nomadic” at all, unless we want also to exhume the old stereotype of the nomadism of the Persians.

The Antique 2 Chorasmian fortifications clearly demonstrate another aspect that strengthens my argument from 2015 regarding the absolute chronology of the polity: their observation serves to refute the pre-Hellenistic high dating of the so-called Kangyui period.⁷²

These fortifications exhibit characteristics that in Central Asia originate from the West, e.g., the “*proteichismata*,” and perhaps this even regards the success and standardisation of the “shooting gallery.”⁷³ Additionally, the early “urban type” settlement

and continued to develop throughout the history of the sedentary Zoroastrian (if the dynasts of Akchakan-kala in the 1st century CE ruled the entire area) polity. On the other hand, there has never been any doubt about a mixed agro-pastoralist economy, with an important facet of exchange, or further adaptation to local environmental conditions.

⁶⁹ See the recent Gondet 2018; Matin 2020.

⁷⁰ Two Achaemenid documents related to Bactria and Sogdiana (Naveh, Shaked 2012: 24-25 and 96-97) record the action of the satrapal central administration in providing sites with defences (“a wall and a ditch” and “a wall,” i.e., an encircling one), and indicate the actual employment “troops” (possibly soldier-farmers).

⁷¹ Gondet 2018: 204.

⁷² See for instance Negus-Clearly 2017, who “*established* that the Khorezmian Late Iron Age/Antique fortified enclosures were part of a wider settlement pattern in Eurasia associated with agro-pastoral and mobile societies.” This assertion was done despite prior literature, archaeological and historical data, and without considering updated chronological evidence.

⁷³ Helms in Khozhaniyazov 2005: 8: “Given the complexity of Chorasmian fortifications, particularly the apparently early development of outworks (*proteichismata*[?])..., the questions arise as to why they

of Dzhanbas-kala displays a sort of “Hippodamian layout.”⁷⁴ This layout may also be present in Bazar-kala but not, on the other hand, for instance at Eres-kala.⁷⁵

To sum up, the excavation of Bazar-kala is relevant in refining our understanding of the complex issues discussed in this paper, particularly those related to the early development of “fortified urbanism” in eastern Chorasnia, with implications for social and chronological frameworks.

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were built, where the design ideas came from, and against whom they were meant to defend? (...) Greek military science could not have had any bearing on Chorasnian military developments [for it was believed to have appeared in the wrongly dated “Kangyu” period, in which Chorasnia was thought to have been isolated from the rest of the world] and it is, presumably, impossible that Chorasnia influenced the west at any stage.” *Ibidem*. p. 17: “Given the paucity of *proteichismata* in the western Hellenistic world (and their post-390 B.C. date) it is remarkable that Chorasnia apparently had similar systems, that they are said to be much earlier than the Greek works, and that clearly there are many of them of very uniform design. (...) There is, therefore, a conundrum whose resolution depends on absolute dating (not presently available) and the matter of influence which must always be speculative.” See Khozhaniyazov 2018 for the outwork (“long wall”) with loopholes (hence manned) of Akchakhan-kala. According to P. Leriche (1986: 94-95) “shooting galleries” appeared at the end of the 3rd—beginning of the 2nd century BCE in the Graeco-Bactrian Kingdom (cf. Francfort 1979). There are corridors in the fortifications of Kyuzeli-g̃yr and of Achaemenid Old Kandahar (Helms in Khozhaniyazov 2005). When addressing architecture and its elements that may have been influenced by external contributions, it is important to note that even the typical Chorasnian columned bases seem to have derived from a type earlier attested at Ai Khanoum, Takht-i Sangin, and Old Nisa (Minardi et al. 2017).

⁷⁴ Khozhaniyazov 2005: fig. 3, after Tolstov 1948: fig. 29.

⁷⁵ A fortified site larger than Dzhanbas-kala (*supra*), with a round irregular layout (Khozhaniyazov 2005: 47-49 with references). The site is covered in sand, but at close inspection, due to the abundance of surface material, also belonging to the Antique 2 *facies*, it very was probably another urban settlement (pers. obs.; cf. Helms in Khozhaniyazov 2005: 18).

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