

Early Iron Age Archaeological Sites on the Sengir Tam plateau, Lower Syr-darya (Kazakhstan)

The Syr-darya delta (about 400 km from east to west and about 250 km from north to south) is established where the river exits from the corridor shaped by the Karatau mountain ridge to the north, and the Kyzyl Kum desert to the south, and flows on a flat triangular plain, part of the Turanian tectonic platform. From this point onwards before flowing into the Aral Sea, the river crosses the Turanian lowland full of swamps and lakes by means of many deltaic branches, characterized by a very high instability in their rate of flow and by frequent migrations and shiftings, even of some kilometers, to the north or south. Another main geomorphological feature of the Syr-darya alluvial plain consists of stretched dunes from 2 to 20 m high, aligned in series of hundreds of kilometers north–south (being the direction of the summer winds), 4–5 km apart and cut by the course of relict and active delta distributaries. Often the space between the sand alignments was filled by a fairly number of meridional courses, as Ashchynysay and Dayraby rivers, which were linked to the Pra-Kuvan-darya and watered by it. Neolithic peoples often exploited the water resource of these north-south courses, which today are totally dry.

There are six main Syr-darya deltaic branches, here labeled from north to south: Syr-darya; Pra-Kuvan-darya (in the past called Eskidarjalyk); Kuvan-darya; Zhana-darya; Inkar-darya; and Kara-darya (or Lower Inkar-darya). They are characterized by significant seasonal changes of water regimes, with floods easing the continuous shifting of riverbed from course to palaeo-course. During past pluvial phases these distributaries were directly fed by the Syr-darya main course and some of them arrived a few kilometers from the Aral sea. Today, they are disconnected from the main course and present an intermittent flow, alternating wet and dry segments on the basis of geomorphological and hydrogeological factors. For example, the Kuvan-darya and Zhana-darya, respectively, present two sections that are relatively wetter than the rest of their courses, favoring seasonal flooding of a large territory: one 20 km long on the mid-course of the first river, corresponding with Dzshend, the largest longstanding Medieval town of the region (12th–17th AD); the other 100 km long on the lower course of the Zhana-darya corresponding with the areal distribution of the Chirik-Rabat culture (5th to 2nd BC). In the past, the final course of the Zhana-darya – Inkar-darya water system merged with palaeo-beds of the Akcha-darya [1], the easternmost part of the Amu-darya delta, today in Uzbek Karakalpakstan. In total the delta distributaries cover a huge surface of reclaimable land (up to 1.5 million ha) of which less than 20% is yearly fed by waters and has the potential to be irrigated and cultivated; and this 20% is not geographically stable but shifts between different areas, depending on water stocks, sedimentation rates and abrupt events of water redirection.

The Lower Syr-darya was intensively investigated by the Khorezmian Archaeological-Ethnographic Expedition (hereafter, KhAEE) led by S.P. Tolstov from 1946 onwards. Surveys and extensive excavations, palaeoenvironment reconstructions and analysis of the material culture were performed by dozens of scholars and copiously published in books and journals (Tolstov 1948; 1962; Itina 1977; Levina 2000; Vaynberg, Levina 1993). With the collapse of the USSR, the Russian researches in the Syr-darya delta stopped. From 2004 the deltaic region has been resumed for investigations by the “Chirik Rabat Archaeological Expedition” (hereafter, ChRAE), a team of Kazakh young scholars, led by Zh. Kurmankulov of the Institute of Archaeology “A.Kh. Margulan” of Almaty. Main objectives of this team were the extensive excavations of settlements and citadels, mausolea, funerary barrows and shaft-hole burials in different localities of the deltaic expanse: Balandy, Mirankul', Chirik Rabat, Inkar Kala and others. The Italian Archaeological Expedition in Kazakhstan (aka, IA EK) joined the ChRAE from 2007 to 2011, with the purpose to investigate Chirik Rabat, the funerary site of Sengir Tam and to explore the southernmost part of the alluvial plain, that crossed by the Inkar-darya, looking for the earliest peopling (Neolithic and Bronze Age) of the region.

The Neolithic peopling of the Syr-darya delta is known thanks to the discovery of a fairly good amount of camp-sites belonging to the Middle Neolithic–middle phase of the Kel'teminar culture, dated approximately between the 4th and the first half of the 3rd mill. BC, and the Late Neolithic period–late phase of the Kel'teminar culture, chronologically comprised between the middle of the 3rd and the beginning of the 2nd mill. BC. During this period the conoid alluvial plain of the Syr-darya delta was occupied by ephemeral camp-sites located close to flowing rivers and channels. These encampments are probably the representation of mobile communities of hunters, fishermen and gatherers who seasonally lived in the delta. The finds, including a large number of microlithic harpoon insets and small projectile points, show that fishing and hunting of small animals and birds were a major part of the subsistence strategy of these communities which culturally were in a peripheral position in comparison to the very large Kel'teminar world of Central Asia.

The Bronze Age peopling in the region is represented by small temporary sites and seasonal encampments scattered across the alluvial plain, occupied by communities of pastoral breeders marked by hand-made coarse ware with incised or impressed decoration. This most characteristic signature of the Andronovo Culture Complex spread across the Eurasian steppes during the Bronze Age is found together with a few other artefacts in clay, stone and metal, the preservation of which is often very bad. Topographically, most of these sites with steppe-like pottery and very shallow stratigraphical deposits, if not deflated at all by atmospheric agents, are located along small water distributors within hollows between stabilized sand dunes (in the depressions of the dunes), but frequently they are also located on playas (*takyr*) free from sand cover or close to a sand dune ridge. To this regard it is possible to mention Kosmola, Erimbet and Tekturmas, Burly (Borly), Egiskok, Kamysyty, Suyk Bet, Bajan, Ongarbay, Kok Sengir, Tas 3 (Bonora, in press).

The most important Bronze Age archaeological monument in the Syr-darya inland delta is the Tagisken graveyard. This funerary area is located upon a plateau, standing over the point where the Zhana-darya and the Inkar-darya meet. It is composed of two sectors of funerary structures, northern and southern, 200 m apart. Both were deeply plundered in the past. In the northern half, seven monumental Bronze Age funerary buildings are present, dating back to the end of the 2nd–beginning of the 1st mill. BC (Itina and Yablonskiy 2001), in association with nine barrows (kurgans), some mud bricks rectangular- and round-shaped buildings and two rectangular earthen enclosures [2]. The southern sector is characterized by 50 funerary barrows (of which 38 were excavated by KhAEE in the seventies), pertaining to the Early Saka culture and chronologically comprised between the 8th and the 5th cent. BC.

The first half of the 1st mill BC is a period of great transformation of the cultural and natural landscape of the inner Syr-darya delta. Most of the Inkar-darya is not more fed, while the Zhana-darya system begins to develop attracting, consequently, groups and communities in want of new reclaimable lands. Unfortunately, we so far don't know any large settled site of this crucial period and it is possible that they did not exist because large part of the people were seasonally on the move; however the material culture exhibited by the burial grounds of Southern Tagisken and Uygarak and by the so-called “slag kurgans” falls into the Saka cultural complex, largely attested on the Eurasian steppe in this period.

The Uygarak graveyard is another funerary context on top of a plateau, located about 10 km south-east of Tagisken. The burial ground is composed here by 80 graves, of which 70 have been excavated. In its entirety, it is attributed by almost all researchers to the Early Iron Age, i.e. between the 7th and the 5th cent. BC. However, the presence of some pottery materials decorated by incisions, which fit very well with the Late Bronze Age steppe world, allow us to hypothesize a different chronology for Uygarak and to see within it some inhumations of the second half of

the 2nd mill. BC, for example grave 15 (Tolstov and Itina 1966: fig. 5; Vishnevskaya 1973), and many funerary barrows, the most part for sure, dated to the Early Iron Age.

The similarity in the funerary ritual, with few exceptions, allows to consider that both necropolises – Southern Tagysken and Uygarak – belong to ethnic groups of very close origin and their material culture as a unique archaeological complex. The graves, in both contexts, were practiced on the surface and in simple ground pits, in relation to the inhumation ritual and, more rarely, to incineration; in both cases, above the graves, or above the place of cremation, was raised a mound, between 0.3 and 2 m in height and with a diameter between 10 and 40 m. The ground pits were of rectangular shapes and are distinguished among them for the presence, or absence, of a cover by wooden planks, of more or less deep trenches around the tomb, of traces of fire ritual that invested the wooden structure but not the body, of a *dromos* and a rich or poor funerary inventory. Usually the dead was laid on a reed mat in a supine position with the head facing west or south-west. The traces of the wooden structure, usually circular, oval or rectangular, have been preserved in the form of post holes. All the surface around the funerary structures was often covered with a layer of twigs and reeds. The tombs arranged on the surface, on the other hand, were reserved for high rank people, as female individuals, provided with stone altars at the side, interpreted as priestesses. Examples are represented by the barrow 25 of Uygarak, in which were main elements of power as bronze pins with spherical end and an axe-adze with an extremity representing a bird of prey, and the mound 59 of Tagysken, where it was laid, possibly, a famous warrior, accompanied by a long sword with a gilded scabbard decorated with zoomorphic representations in the typical style of the Eurasian steppes.

Some further considerations are advanced here. Like the plateaus of Kok Sengir, in the eastern part of the Syr-darya delta, close to Kyzyl Orda, those of Tagysken, Uygarak and Sengir Tam (see, hereafter) attests a Bronze and Iron Age human presence that exclusively favours the settlement along the southern slopes; in none of these cases was residential or funerary use of the plateaus on the northern slopes found, whipped as they are by strong and cold winds from north, Central Kazakhstan and Siberia. At the same time, the human occupation of elevated places offers protection from the floods of the Inkar-darya and Zhana-darya river systems, which are presumed to have happened frequently.

From the Early Iron Age throughout the period of the Chirik Rabat culture, the interfluvial area between the Zhana-darya and the Inkar-darya was extensively and progressively settled by tribal groups of Saka cultural roots, who modified the full deltaic landscape through the building of funerary barrows, walled and unwallied towns, mud-bricks buildings and mausoleums, small villages inhabited by farmers and breeders, and agricultural fields served by natural and artificial channels. The material culture gathered in these Saka sites fits very well with that recovered from the coeval settlements and graveyards associated with breeding communities of pastoral-type economy inhabiting the Eurasian steppes in the 1st mill. B.C.

The widespread Saka peopling happened not only when the Zhana-darya and, perhaps, the Inkar-darya flowed, but also when a series of interfluvial *palaeochannels* were active and full of water. It is evident that each of these *palaeochannels* was not a geographic element, isolate and separate, but rather formed a hydraulic system composed of numerous differently-sized water courses, characterized by an erratic and unpredictable periodicity. These are typical features of the rivers, big and small, of Central Asia. Such an environmental situation of high complexity required a multiform adaptability by the Saka communities, who responded to the absence of stability of water courses and hydraulic resources with the construction of reservoirs, embankments and, surely, channels, diverted from the main rivers.

Dated, possibly, to the first period of Saka settlement (7th - 5th centuries B.C.) are some funerary structures, known in Central Asian archaeological literature as *шлаковые курганы* (barrows covered by slag). The largest and most well known of these is the *kurgan* of Sengir Tam. This culture, widespread along a branch of the Inkar-darya for some 80 km from Sengir Tam to Kum Kula, is an archaeological phenomenon that appears to have developed locally, and which is characterized by some features of great originality and peculiarity if compared to the Saka world of the Eurasian steppe. The main characteristics of the culture are represented by the cremation funerary ritual, the slag belt around, and also above, the earthen mound of the barrow and the presence in the *stratum* above the burnt osteological human and animal remains, of Early Saka three-flanged arrowheads and pottery sherds with incised and stamped decorations. The discovery of these fragments with Late Bronze Age steppe-like decorative patterns and the absence of quartzite artefacts, a typical marker of the following Chirik Rabat culture, on top and around the slag kurgans allow us to consider this peculiar phenomenon earlier than the 2nd half of the 1st mill B.C. The number of the slag kurgans so far identified is 23 (Levina 1979) and one of them, called the number 4, has been excavated at the end of the Fifties by a KhAEE team (Tolstov 1961a: 138-142; 1961b: 81-82; 1962: 181-184). The material culture associated to these kurgans is also represented by some weapons, horse harness elements and very few animal-style artefacts analogous to those found in the coeval funerary Saka mounds of the Semirech'e and eastern Kazakhstan and in the Sauromatian barrows of the Volga - Ural region. Then, in relation to the chronological question, it is not possible to advance any suggestion other than the 1st mill. BC, possibly the middle part of it.

The slag kurgan of Sengir Tam (SNG 1) is a large round structure (Ø: about 34 m) located on top of the homonymous plateau and fenced by a 6 m high round mud-bricks wall. Today, the monument is in bad conditions of preservation as the fencing wall is collapsed on the northern and southern parts and conspicuous traces of plundering as well as human and animal trampling are well visible on its surface.

The Sengir Tam plateau was the object of an extensive survey and two excavations in 2008 by IAEK members. The exploration allowed the location of, in addition to the above mentioned great kurgan, a 30 m diameter mound (SNG 3) of around 1.5 m in height excavated not completely in 2010-11 seasons, five low and small-sized funerary kurgans (SNG 32bis, SNG 38, SNG 39, SNG 40, SNG 41), located between SNG 1 and SNG 3, two of which were excavated in 2008 in association with the enclosure SNG 4-5, five rectangular-shaped enclosures (SNG 2, SNG 4-5, SNG 7, SNG 10 and SNG 22-25) the purpose of which is so far unknown (possibly, pens for animals) and four other funerary structures represented by barrows and shaft pit graves (SNG 6, SNG 9, SNG 42, SNG 60). Therefore, the Sengir Tam plateau appears to be a place of decidedly funerary character, where very interesting and unusual structures were erected, differing in shape, dimensions, function and probably also in chronology. In fact, the pottery collected from the surface of the plateau and near the archaeological features showed that only the SNG 3 mound is dated to the Chirik Rabat culture (2nd half of the 1st mill. B.C.), when most of the others are related to a period comprised between the 7th and the 5th centuries B.C.

SNG 4-5 is an earth enclosure of rectangular shape (35 x 30 m ca.), oriented east-west. The height of the walls does not exceed 0.5 m above the plateau ground. Neither archaeological structures, nor anthropogenic layers nor finds were discovered in the area within the earth walls. The south-east corner of the enclosure was covered by a barrow (SNG 32bis) of 13 m of diameter and approximately 0.3 m in height. The IAEK excavation of 2008 exposed the fill of the barrow and the south-eastern corner of the earthen enclosure. After removal of the fill, from which no archaeological artefacts were found, further excavation revealed a wide ditch, stratigraphically below the barrow, which ran around the outer perimeter of the enclosure. The ditch was 4 m wide in its upper section and 1.5 m in the lower one, while the depth did not

exceed 1 m ca. At the bottom of the ditch, in close association, a mud-brick rectangular-shaped hearth, the flat base of a hand-made rough vessel (with typical Early Iron Age shape, paste and inclusions) in a very poor state of preservation, and a few osteological remains of a caprid were found. Not having found human remains, we can assume that in this specific case, the mound was erected over the place where some kind of ritual was celebrated, in which were embedded the fire, a ceramic container and an animal, or part of it.

At Tagisken, in the northern part of the Late Bronze and Early Iron Age graveyard, two walled enclosures analogues to that studied at Sengir Tam, were excavated by M.A. Itina of the KHAEE (Itina 1984). The only feature differentiating these three structures is the position of the ditch, which at Tagisken runs around the inner perimeter of the earthen enclosures. Very difficult to interpret because of the absence of material culture in association, these structures are one of the most interesting archaeological features of the Early Iron Age in the Syrdarya delta. Besides the two of Tagisken and the five surveyed at Sengir Tam, we have to mention three others on a plateau raised between Chirik Rabat and Sengir Tam and another one very close to the slag kurgan at Balandy.

The SNG 38 barrow was the object of the second IAEK excavation in 2008. Oval in shape (11 m from east to west and 8.5 m from north to south) and with a height of about 0.5 m above the surrounding ground, this barrow was deeply disturbed by a rodent and its burrow. The grave (2.45 x 1.10 m) was oriented from south-west to north-east and was about 0.7 m deep. The excavation revealed that the skeleton was placed in a supine position and that animal activity had partially disturbed the skeleton, leaving only the pelvis, the lower limbs and the right arm in anatomical connection. No artefacts were found in association with this body. A worked quartzite nucleus of pyramidal shape was found in the upper fill of the tomb, where burrowing animals had disturbed most of the fill.

During this second excavation, some thin patches of ashes and a small number of coal fragments were noted few centimeters above and around the osteological remains. These evidences and the anthropological analysis carried out by the anthropologists of the IAEK on the preserved bones suggested that a purification fire was set to the grave pit, but was put out before it touched the body, according to the old funerary traditions of the Iranian speaking people of Central and Middle Asia. A similar fire ritual is well attested among the monuments of the southern part of the Tagisken graveyard and in almost all the funerary buildings of the Chirik Rabat culture (Itina and Jablonsky 1997; Vajnborg and Levina 1993).

In the 2010 and 2011 seasons, the SNG 3 site has been the object of an extensive excavation, carried out by a team composed by Italian and Kazakh specialists. The results of the work, which will be the main subject of a specific publication, consist in a large round mausoleum (Ø: about 10 m) in mud-bricks and *pakhsa* characterized by a long *dromos* (11 m of length) facing south-east. The construction was used for funerary purposes as many other round mausolea recognized and excavated by the KHAEE members in the past in the Lower Syr-darya delta. All the skeleton bones were widespread without any order and any anatomical connection both in the *dromos* and in the round chamber. According to the first anthropological analysis, the osteological remains belong to three different individuals. Also some osteological remains of a steppe fox have been identified. The funerary inventory, which showed evident signs of plundering and destruction, consisted in about 20 gold beads and small plaques, some bone, paste and stone (jet) beads, very few pottery fragments and a shell-shaped amulet in stone. In the northern part of the filling, about 20 mud-bricks have been discovered carefully aligned in an east-west direction. They were located some 10 m south of the wall of the round funerary chamber. Some of them were plain, some were fragmentary while seven bore digital impressions depicting simple lines, parallel lines

and crosses, simple and double. Their sizes were comprised between 44 – 48 x 38 – 42 x 7 – 10 cm.

Bibliographical references:

1. Beardmore *et Alii* 2008 = R. Beardmore, G.L. Bonora and Zh. Kurmankulov “Preliminary Report on the 2007 – 2008 IAEK campaigns in the Syrdarya Delta”, *East & West* 2008, IsIAO, Rome, 2008: 385 - 391.
2. Bonora, in press = G.L. Bonora, “Updating Report on the Prehistorical Human Settlement in the Syrdarya Alluvial Plain”, B. Cerasetti and K. Lamberg-Karlovsky (eds.) *My Life is like the Summer Rose. Maurizio Tosi e l'Archeologia come modo di vita*, BAR, Oxford.
3. Itina 1977 = M.A. Itina, *Istorija stepnikh plemen Juzhnogo Priaral'ja (II – nachalo I tys. do n.e.)*, T.Kh.A.E.E. 10, Moskva, ed. Nauka, 1977.
4. Itina 1984 = M.A. Itina, “Okhrannye arkhologicheskie raboty v Khorezme: itogi i perspektivy”, *Sovietskaja Etnografija*, 1, 56 - 61.
5. Itina and Jablonskiy 1997 = M.A. Itina and L.T. Jablonskiy, *Saki nizhney Syrdar'i (po materialam mogil'nika Juzhnyy Tagisken)*, Moskva, 1997.
6. Itina and Jablonskiy 2001 = M.A. Itina and L.T. Jablonskiy, *Mavzolei severnogo Tagiskena. Pozdnyy bronzovyy vek Nizhney Syrdar'i*, Vostochnaja Literatura RAN, Moskva, 2001.
7. Levina 1979 = L.M. Levina, “Poselenija VII – V vv. do n.e. i “shlakovye” kurgany juzhnykh rayonov Syrdar'inskoy del'ty”, *Kochevniki na granizakh Khorezmia*, T.Kh.A.E.E., XI, 178 - 190.
8. Levina 2000 = L.M. Levina, “Drevnosti nizov'ev Syrdar'i”, *V nizov'jakh Oksa i Jaksarta*, Indrik, Moskva, 2000, 125 – 197.
9. Tolstov 1948 = S.P. Tolstov, *Drevnyy Khorezm*, Moskva, 1948.
10. Tolstov 1961a = S.P. Tolstov, “Priaral'skie Skify i Khorezm”, *Sovietskaja Etnografija*, 4, 114 – 146.
11. Tolstov 1961b = S.P. Tolstov, “Les Scythes de l'Aral et le Khorezm”, *Iranica Antiqua*, 1, 42 – 92.
12. Tolstov 1962 = S.P. Tolstov, *Po drevnim del'tam Oksa i Jaksarta*, Moskva, Vostochnaja Literatura, 1962.
13. Tolstov 1962 = S.P. Tolstov, *Po drevnim del'tam Oksa i Jaksarta*, Moskva, Vostochnaja Literatura, 1962.
14. Tolstov, Itina 1966 = S.P. Tolstov, M.A. Itina, “Saki nizov'ev Syrdar'i (po materialam Tagiksena)”, *Sovietskaja Arkheologija*, 2, 151 - 175.
15. Vaynberg and Levina 1993 = B.I. Vaynberg and L.M. Levina, *Chirikrabatskaja kul'tura, Nizov'ja Syrdar'i v drevnosti*, vyp. 1, Moskva, 1993.
16. Vishnevskaja 1973 = O.A. Vishnevskaja, “Kul'tura saksikh plemen nizov'ev Syrdar'i v VII – V vvdo n.e. (po materialam Uygarka)”, *Trudy Khorezmskoy Ekspedizii*, VIII, Moskva, 1973.

[1] Akcha-darya merged in Neolithic and Bronze Age with the Inkar-darya and later, from the beginning of the Iron Age, with the Zhana-darya system. Such a hydrographical phenomenon is also well documented in modern time, for example in some geographical maps of the 17th and 18th centuries on which it has be drawn the confluence point of the Akcha-darya and Zhana-darya – Inkar-darya and the joint mouth in the south-eastern part of the Aral Sea. The best known source is the Central Asian map drawn by P.J. Von Strahlenberg in 1725.

[2] Such analogous rectangular or quadrangular earthen enclosure structures were also recognized on the Sengir Tam plateau and they were one of the main objectives of the IAEK research in the Syr-darya delta. One of them, labelled SNG 3-4, was partly excavated in the 2008

fall (Beardmore *et al.* 2008) and some others were singled out on a plateau between Chirik Rabat and Sengir Tam and near the funerary barrow covered by slags of Balandy. Unfortunately, the archaeological evidences gathered on the surfaces of these enclosures and during the excavation were so scanty that it is not possible to advance clear hypothesis about their function (possibly, a corral or fence, i.e a space closed by a palisade in reeds) and their chronology (usually, these structures are found in association with sites of the middle and 2nd half of the 1st mill BC).

Gian Luca Bonora

L.N. Gumilyov Eurasian National University