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Early History of the Formation of the Ancient Delta of the Syr Darya and its settlement (according to archaeological data till the 1st millennium AD)[1]

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Ключевые слова: Восточное Приаралье; Сырдарья; Ширикрабатская археологическая культура; стоянка; поселения; городище; курган

The article discusses the history of settled agricultural cultures in the Eastern Aral Sea Region, which should be studied considering the hydrographic factor due to their close connection to the functioning of the Amu Darya and Syr Darya delta channels. In the ancient delta of the Syr Darya, four systems of channels are distinguished: the Inkar Darya, Zhana Darya, Kuvan Darya and Prakuvan Darya systems. It has been proven that the southern Inkar Darya system and the northernmost Prakuvan Darya system already functioned in the Neolithic and Bronze Ages. In the Early Iron Age, the Saka tribes inhabited the ancient Syr Darya delta. In the second half of the 1st millennium BC. the regime of flooding of the southern delta channels changed. Some sections of the watercourse in the middle reaches of the Inkar Darya died off, primarily in its southern channel, by the middle of the 1st millennium BC. At the same time, a more straightened latitudinal channel of the Zhana Darya was formed. In the southern part of the delta, on the latitudinal channels of the Zhana Darya and the oxbow lakes of the Inkar Darya, favorable conditions were created for the formation of a settled agricultural and pastoral culture, with economy based on transhumance and irrigation farming. Such was the Chirik Rabat archaeological culture, which, according to researchers, was formed on the basis of the Saka culture. At the same time, it was formed under the influence of the ancient agricultural cultures of Central Asia.
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Сырдарияның ежелгі сағаларының қалыптасуы мен дамуы және қоныстану тарихы (б.з. I мыңжылдық басына дейін археология мәліметтері негізінде)

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Мақалада Әмудария және Сырдария сағаларымен тығыз байланысты гидрографиялық факторларды ескере отырып зерттеуді қажет ететін Шығыс Арал өңірінің отырықшы егіншілік мәдениетінің қалыптасуы мен даму тарихы

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қарастырылған. Сырдарияның көне сағасы негізгі төрт жүйеге бөлінеді: Іңкәрдария, Жаңадария, Қуаңдария және Ескідария. Зерттеу барысында ежелгі адамдар оңтүстікте Іңкәрдария мен солтүстік Ескідария жүйесін неолит пен қола дәуірінен бастап қоныстана бастағаны анықталды. Ерте темір дәуірінде ежелгі Сырдарияның сағаларына сақ тайпалары жайғасқан. Б.д.д. I мыңжылдықтың екінші жартысында Сырдарияның оңтүстік сағалары өзгере бастаған. Б.д.д. I мыңжылдықтың екінші жартысында ең алдымен Іңкәрдарияның оңтүстік арнасы, кейін орта ағысындағы кей тұстары құрғаған болуы мүмкін. Міне осы кезеңде Сырдарияның оңтүстігінде Жаңадария мен Іңкәрдария сағасында суармалы егіншілікке, отырықшы өмірге және мал шаруашылығына қолайлы жағдай қалыптаса бастаған. Зерттеушілердің пікірінше, сақ тайпаларының мәдениеті негізінде осылайша шірікрабат археологиялық мәдениеті пайда болған. Бұл мәдениеттің қалыптасуына Орта Азия аумағындағы өзгеде ежелгі егіншілік мәдениеттердің ықпалы болған.

Қаржыландыру көзі: Жұмыс ҚР, ҒБМ қаржысымен жүргізілген (ИРН «BR20280993 Ежелгі және ортағасырдағы Қазақстан: археологиялық дереккөздерді жүйелеу және талдау»).
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Из истории формирования и развития древней дельты Сырдарьи и ее заселения (по археологическим данным до начала I тыс. н.э.)

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В статье рассматривается история оседло-земледельческих культур Восточного Приаралья, которая требует изучения с учетом влияния гидрографического фактора из-за их тесной связи с функционированием амударьинских и сырдарьинских дельтовых протоков. В древней дельте Сырдарьи выделяются четыре системы протоков: Инкардарья, Жанадарья, Кувандарья и Пракувандарья. Установлено, что южная, Инкардарьинская система русел и самая северная – Пракувандарьинская, функционировали уже в эпоху неолита и бронзы. В раннем железном веке на территории древней Сырдарьинской дельты расселяются сакские племена. Во второй половине I тыс. до н.э. режим обводнения южных дельтовых протоков меняется. Вероятно, уже в середине I тыс. до н.э. отмирают некоторые участки водотока в среднем течении Инкардарьи, прежде всего в южном ее русле. В это же время формируется более выпрямленное широтное русло Жанадарьи. В южной части дельты, на широтных руслах Жанадарьи и старицах Инкардарьи, создаются благоприятные условия для формирования оседлой земледельческо-скотоводческой культуры, хозяйство которой основывалось на отгонном скотоводстве и ирригационном земледелии. Такой культурой явилась ширикрабатская археологическая культура, сложившаяся, по мнению исследователей, на основе культуры сакского населения. Наряду с этим ее формирование шло под влиянием древнеземледельческих культур Средней Азии.

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Introduction

For many centuries, Eastern and Southeastern Aral Region has been an important territory of constant cultural contacts between the pastoralists of the Great Eurasian Steppe belt and the farmers of the southern regions of Central Asia. This region was the traditional wintering ground of pastoralist and semi-pastoralist tribes, located at the crossroads of historical people's movement routes, important migration routes, and trade routes. Favorable physical, geographical, and climatic features had helped the development of various economic and cultural species in this area. The conditions of sustainable life of various peoples were formed here, which is fully reflected in the

archaeological data [Levina 1997: 3]. This led Sergey P. Tolstov to call the Southeastern Aral Region "the Aral knot of ethnogenesis" as early as the 1940s [Tolstov 1948: 308–310].

The alluvial plain adjacent to the Aral Sea from the east and southeast, as well as the Amu Darya delta plain, were formed because of the activity of one of the two great Central Asian rivers, the Syr Darya. The delta of the Syr Darya plain exceeds the Amu Darya one and a half times in area and is a huge triangle stretched in the latitudinal direction. In the east and northeast, the plain is bounded by the modern Syr Darya River, and in the west by the Aral Sea. In the south-west, it joins the northern Akcha Darya delta of the Amu Darya. The southern boundary of the Syr Darya delta is the high bedrock sands of the Northern Kyzylkum Desert [Vainberg 1997: 28].

During the course of the numerous channels of the Syr Darya delta, alluvium accumulated in the plain section, resulting in the migration of ancient channels, and certain sections of the delta were periodically drained [Levina 1998: 42]. Up until the beginning of irrigation, the Syr Darya delta was a huge area with many lakes and swamps, with large and small channels winding among them (pic. 1). The water slowly flowed down the northwest in a very wide front. The delta plains gently dropped from east to west - the absolute height difference of just under fifty meters [Andrianov 1969: 187–188].

The main and largest archaeological sites in the lower reaches of the Syr Darya were discovered in the 1940s and 1950s during road, foot, and air routes on the ancient channels of the Zhana Darya and Inkar Darya, and on the channel channels of the Kuvan Darya and Eski-Daryalyk. Most of the objects were recorded during the air route in the fall of 1946 [Vakturskaya 1952: 631–632]. In 1957–1962, the route detachments of Sergey P. Tolstov, and the archaeological detachment of

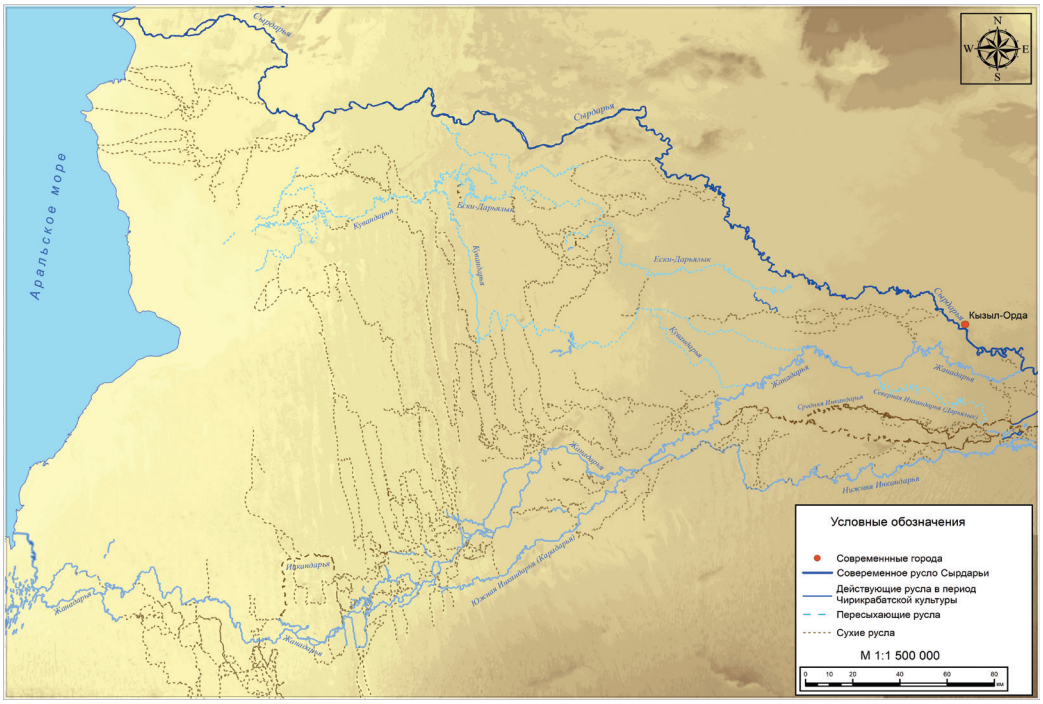

Fig. 1. Map of the Syrdarya Delta (after: E.Kazizov)
1-сур. Сырдария сағаларының картасы (Е.Казизов бойынша)
Рис. 1. Карта Сырдарьинской дельты (по: Е.Казизов)

Boris V. Andrianov worked in the ancient Syr Darya Lake. Excavations of the two largest sites of the ancient period in the lower reaches of the Syr Darya, i.e., the sites of Chirik Rabat and Babish-mola, began in 1957 [Tolstov, Vorobeva, Rapoport 1960: 23–61]. In 1958–1961, excavations at these sites were continued, besides the research of the Uigarak and Tagisken cemeteries, as well as the Balandy Settlement [Tolstov, Zhdanko, Itina 1963: 32–33]. In 1961–1962, the geomorphological group headed by Aleksandra S. Kes' participated in the work of the Chorasmian Expedition. At that time, they surveyed already-known sites and discovered some new ones, especially large settlements in the upper and middle reaches of Inkar Darya and Zhana Darya.

As part of this work, a topographic plan of the site as well as its plan based on a visual survey were taken. In 1966, the Syr Darya team of the Chorasmian Expedition, led by Aleksandra S. Kes', together with the staff of the Institute of Geophysics of the Academy of Sciences of the USSR, studied the sites in the middle and lower Syr Darya. In 1968, the medieval sites of the eastern Syr Darya delta (the upper and middle reaches of the Inkar Darya and Zhana Darya) were studied by a separate team of the Chorasmian Expedition led by Nina N. Vakturskaya, and a stratigraphic pile was made at the ancient Asanas Settlement. The route study of the ancient Syr Darya delta was resumed by the Chirik Rabat archaeological expedition in 2005–2010. Over the course of several years, the archaeological sites discovered in the 1950s and 1960s have been re-examined, new sites have been identified, and new objects have been discovered.

All these studies have revealed many archaeological sites from different historical periods, from the Neolithic to the late Middle Ages, in the ancient mines of the Syr Darya. The data obtained allow us to reconstruct, with a greater or lesser degree of probability, the history and dynamics of human development in the South-Eastern Aral Sea Region.

Materials and methods

Within the ancient Syr Darya delta, there are four systems of channels: the Inkar Darya, the Zhana Darya, the Kuvan Darya, and the Prakuvan Darya (or Eski-Daryalyk), which are the subject of this study (pic. 1). They diverge radially from the Syr Darya riverbed to the south of Kyzylorda. Complex studies have shown that the southern Inkar Darya channel system and the northernmost Prakuvan Darya channel system functioned in the Neolithic and Bronze Age. The earliest archaeological sites in the Eastern Aral Sea region belong to the Paleolithic Age. The sites of that time were found north of the modern Syr Darya riverbed, but they do not relate directly to the ancient watercourses of the Syr Darya [Vinogradov 1981: 90–91]. During the Neolithic Age, groups of Celteminarians settled along the banks of the delta channels and migrated to the lower Syr Darya from the delta areas of the Amu Darya. Now, more than four dozen Stone Age sites have been discovered in the lower Syr Darya. Most of the sites are concentrated on the modern riverbed and in the basin of the ancient northern Syr Darya channels. The most famous of them are Kosmola 1-6, Talas 1 in the northern part of the Syr Darya delta. In the western part of the delta, in the Zhalpak tract, a cluster of Celteminarian sites has been recorded, and several of them, Zhalpak 1, 2, 4, and 6, have been reconnaissed and lifting material collected. In most cases, stone tools are made of quartz, which is characteristic of the Neolithic complex of the Eastern Aral Sea Region [Vinogradov 1981: 94; Tolstov 1962: 79; Vinogradov 1963: 96]. Additionaly, Late Celteminarian sites were found on the northeast coast of the Aral Sea, in the vicinity of Saksaulskaya railway station [Formozov 1949]. The inhabitants of these camps were the same fishermen and hunters as their contemporaries and, presumably, the tribesmen who inhabited the lower reaches of the Amu Darya no later than the early 4th millennium B.C. The archaeological complex obtained because of the examination of these sites is identical to the Celteminarian from the excavations of Neolithic settlements in Khwarazm (Chorasmia). It may be noted that the widespread use of quartzite in the manufacture of stone microlites was a distinctive feature. The most intensive development of the old rivers of the Syr Darya refers

to the late stage of the Celteminarian culture, late 3rd–early 2nd millennia B.C., when groups of Celteminarians gradually began to master the skills of distant pastoralism [Tazhekeev 2012: 102–108].

The number of studied sites of the Bronze Age is much higher, but they were located mainly in the southern valleys of the ancient Syr Darya. The sites and settlements of the Bronze Age (mostly Late Bronze Age), such as Burly 1-3, Bayan 2,3, Yerimbet, Kok-Sengir, Marjan 1,2, Zyaket, Tas 1-3, are located both in the native sands of the Northern Kyzylkum Desert and on the banks of the channels. According to recent data, the greatest number of sites, or perhaps short-lived settlements of the Bronze Age, are concentrated in the upper and middle reaches of the Inkar Darya at the foot of the Kok-Sengir highlands, as well as around Mount Bayan [Tazhekeev 2014: 25–28]. In recent years, sites of the Bronze Age have been found on the northern meridional channel of the Inkar Darya, Yerimbet-Jag [Tazhekeev 2010: 438–400], as well as northeast of the modern mouth of the Syr Darya [Tazhekeev, Ongar, Shoraev 2013: 167–170]. Most of these sites were pastoral, but a few settlements were also found. In the Middle Inkar Darya, not far from the Tagisken cemetery, on some of these sites, which were clearly sedentary, in addition to pottery of the Late Bronze Age, sandstone grates and ceramic slags have been found. At one of the settlements (see: 6, 1961, Chorasmian Archaeological and Ethnographic Expedition), the remains of sedentary dwellings and faint traces of an irrigation system taken away from a large channel that passed near are clearly traced [Tolstov 1962: 80; Andrianov 1969: 189]. The Late Bronze Age pastoral stand at Inkar Darya is apparently associated with the development of cattle-breeding groups of Amirbad from the southern Akcha Darya, where the water level began to decline sharply in the early 1st millennium B.C. As a result, some of the semi-nomadic pastoralists in the northeastern outskirts of the Far East moved north to the Syr Darya delta. In this area, cattle were provided with sufficient water as well as pasture [Itina 1977: 193; Itina 1998: 88–89]. It is very possible that the traces of irrigation identified in the Inkar Darya basin are also associated with the advance of the Amirabad population, who are known to have engaged in primitive farming on the Amu Darya channels [Vinogradov 1986: 197].

Thus, the settlement of the Syr Darya delta during the Late Bronze Age was primarily associated with the migration of the Amirabad cattle-breeding groups from Khwarazm (areas of the southern Akcha Darya delta). This movement was caused by the gradual drying up of the channels in the Akcha Darya delta. Its population remained exclusively agricultural in the deltas, but as can be supposed, due to the change in the water regime and the reduction of the areas suitable for farming, semi-nomadic pastoralists stood out in this environment. In search of new pasture lands, they rushed beyond the already developed southern Akcha Darya delta to the north and northeast, to the territory of the lower Syr Darya. This process is documented by numerous pastoral camps in the northern Akcha Darya delta and on the Inkar Darya river channels [Itina 1998: 88]. The cattlemen did not have to traverse the vast deserts; at that time, the northern Akcha Darya delta related to the broad, branching Inkar Darya delta to the northeast of the Beltau Mountains [Andrianov 1969: 187; Levina 2000: 125]. Note that the route has long been mastered by pastoralist tribes. In ancient times, the Eastern Aral Sea Region was one of the most important zones of constant cultural and ethnic contact between the farmers of Great Eurasia and the farmers of the ancient regions of Central Asia. There is every reason to believe that it was along this route, along the eastern bank of the Akcha Darya delta at the beginning of the 2nd millennium B.C., that contacts between the population of the lower Amu Darya and the pastoral population of the southern Trans-Ural took place [Itina 1998: 80]. At the same time, according to the data obtained by past and present archaeological research on the sites and long-term settlements of the Bronze Age in the Syr Darya delta, we can say that the processes were apparently more complex. In the archaeological complexes of these settlements, along with Tazabagyab and Amirabad pottery, there are enough Andronovo ceramics, mostly of Fedorovo

stage, and, to a lesser extent, Alakul pottery [Tazhekeev 2010: 439; Baipakov 2012: 114]. This indicates that the migrants were not only from the west, from the Amu Darya delta, but also from the north, that is, from the regions of present-day Central and Northeastern Qazaqstan and maybe from the southern Trans-Urals.

The most famous and investigated site of the Late Bronze Age of the lower Syr Darya is the burial site (cemetery) of the northern Tagisken (pic. 2), which is located on the radiation of the Inkar Darya riverbed in the middle part of its course. Several large funerary structures, i.e., mausoleums, have been excavated at the site, dating from the 9th to 8th centuries B.C. They were built of rectangular raw bricks - 54 x 28 x 10-12 cm; 48 x 32 x 10-11 cm. In the layout of the mausoleums, a square and a circle are quite cleverly combined. For the most part, it is a square outer contour into which is inscribed a circle formed by square brick columns connected with each other by clay-coated frame walls. As a result, there was an outer circular bypass corridor. Inside the circle was a square central chamber, which was also formed by brick columns connected by frame walls. Thus, a layout was created, including a square of outer walls and two circular corridors encompassing the square of the same central chamber. There is reason to suppose that these mausoleums were built with cylindrical brick and wood, framed by a square inner fence wall. The burial chambers performed a corpse-burial ceremony, during which the entire temple was burned. According to experts, this ritual envisaged not only the burial of the deceased in the central room, but also the creation of a fire ring around him. Researchers believe that the planning schemes of the Tagisken mausoleum can be interpreted as a microcosm, a miniature reproduction of the structure of the universe, i.e., the earth and the sky, in the form of a square and a circle with a common center. The most important component of the funeral rites by which burials were performed in the graves of the Northern Tagisken was to burn not only the body of the deceased but the entire funerary structure. This action, apparently, at the level of the microcosm reflected the great world fire called to renew existence, to return the world at the end of the centuries to its beginning [Lelekov 1976: 7–17]. According to the researchers at the site, chiefs were buried in the mausoleums. Around each of them were grouped more modest-scale constructions, which were rectangular fences also built of mud bricks. Inside the fence, there was a grave pit. The central chamber of the mausoleum, and sometimes in the bypass corridor, contained the funerary inventory - pottery, bronze implements, and bronze and gold jewelry. In the process of archaeological excavations in northern Tagisken an interesting archaeological complex of pottery was obtained. It combines the traditions of the steppe bronze cultures (Andronovo - Fedorovo variant) and then the Dandybay-Begazin archaeological cultures of present-day Central Qazaqstan and components that certainly resonate with the southern agricultural civilization (Bactria - Margiana Archaeological Complex). The collection contains numerous items typical of the Amirabad Late Bronze Age culture. In addition, some vessels and ornaments are very similar to the ceramics of Zamaraevo type and, to a lesser extent, to the dishes of Karasuk culture [Itina, Yablonskii 2001: 93–94].

In the Northern Tagisken cemetery, the final stage of the Bronze Age in the Syr Darya delta is archaeologically most vividly represented. The mixed typology of the ceramic complex is a phenomenon of the era. The reason for this is the differently directed migrations of the population groups of the Eurasian steppe zone, which intensified due to the ecological crisis that caused serious damage to the traditional economic system of the pastoral-agricultural communities at the turn of the 1st millennium B.C. The materials of the Bronze Age sites in the Southern Aral Sea Region, especially the Northern Tagisken cemetery, seem to fully illustrate the complex ethnocultural processes of interaction between different variants of steppe cultures, which took place in the Lower Syr Darya in the early 1st millennium B.C. It is necessary to assume, not without participation of ancient farmers of southern regions of Central Asia [Itina, Yablonskii 2001: 101–109]. Considering recent research, it seems possible to ask about the creation in the

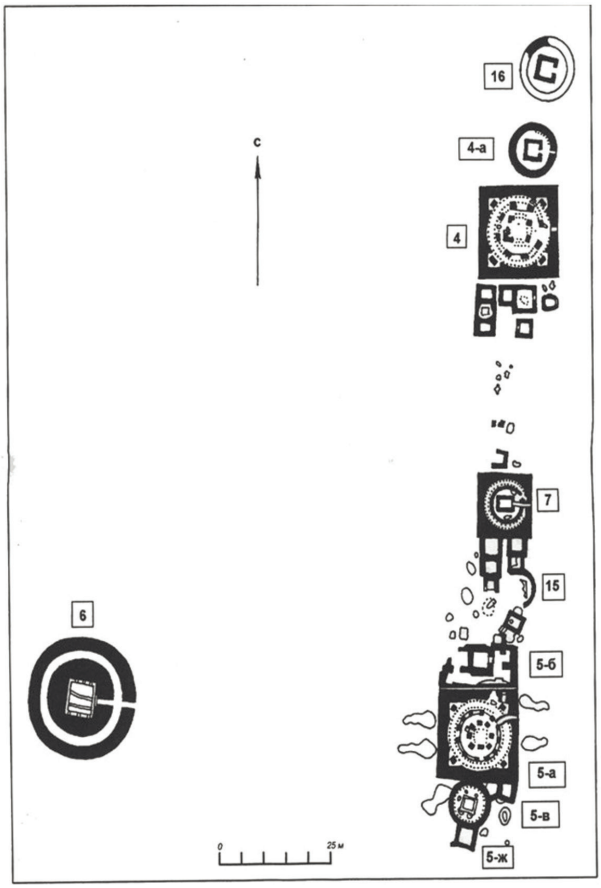

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Fig. 2. Northern Tagisken cemetery.
a) Aerial photography (after: Zh.Utubayeva); b) Plan of the site [Itina, Yablonsky 2001]
2-сур. Солтүстік Түгіскен қорымы.
а) Аэрофото (Ж.Өтебаев бойынша);
b) Ескерткіш жоспары [Itina, Yablonsky 2001]
Рис. 2. Могильник Северный Тагискен. а) Аэрофото (по: Ж.Утубаева);
b) План памятника [Itina, Yablonsky 2001]

southern part of the ancient Syr Darya of a kind of syncretic Tagisken archaeological heritage of the Late Bronze Age. In any case, the discovery of ground burials in the hole under the barrow mound with the ceramics of Tagisken type on the Sengir-Tam hilltop gives reason to believe that besides Northern Tagisken there are other monuments of this circle in the Middle Inkar Darya area [Tazhekeev, Darmenov 2012: 240–247].

In the second quarter of the first millennium B.C., significant changes occurred in the hydrography of the Syr Darya delta; many sections of the Inkar Darya began to die off, and a more straightened channel of the Zhana Darya was formed in its place [Tazhekeev 2013: 65–67]. At the same time, the flow in the Syr Darya delta did not stop, and it was still attractive to ancient pastoralists [Itina, Yablonskii 1997: 82].

In the early Iron Age, in the 7th to 5th centuries B.C., the Saka dispersed into the territory of the ancient Syr Darya. There is no evidence of direct links between these cultures and the Late Bronze Age cultures of the Southern Aral Sea Region. To a certain extent, the continuity between the Saka of the Southern Aral Sea Region as a whole and the population of the Bronze Age can be traced in the analysis of the funerary structures and burial rites. This is especially evident in the funeral rites of the Southern Tagisken, Uigarak, Sengir-tam 2[1] (pic. 3) cemeteries and, partly, in the Sakar-chaq burials in the territory of the Amu Darya delta, where one can find parallels with the burial rites of the Northern Tagisken [Yablonskii 2004: 47–48].

According to archaeological materials, two related cultures of the Saka circle and two variants of the same circle culture coexisted in the Southeastern Aral Sea Region. Noting the unity of the material cultures of the studied sites, researchers conclude that in these areas, the Saka inhabitants were divided into tribes. Some Sakas burned their dead in “cinder mounds,” some made cremations in ancient horizons, and then mounds were poured over the fire; some Sakas buried their dead in graves. It is not excluded that different funeral rites reflected not so much ethnic but social differences in the Saka society [Levina 1979: 190].

More than 70 sites from the Early Iron Age can now be found in the southern region of the Syr Darya. Among them stand out very peculiar burial sites, called in the archaeological literature “slag mounds”. They are recorded in a large area (80 km downstream of Zhana Darya) from Sengir-tam in the west to the vicinity of the medieval Kum-Qala Settlement in the east [Tazhekeev, Darmenov 2012: 242]. These were rounded structures (8–10 m in diameter), the bases of which were surrounded by a ring of blocks of pottery slag. One of them was excavated, barrow №4, which is in the northeast of one of the settlements in the Middle Inkar Darya (search of 18 Chorasmian Archaeological and Ethnographic Expedition). As a result of the research, the peculiarities of the structure of the funerary structure were found. The height of the mound is 1.4 m from the level of the modern takyr, the diameter inside the cinder fence is 10 m. The slag boulders were installed pre-digged sub-square with a depth of 20 cm and a width of 1.2 m. In the center of the structure, almost on the surface of the ancient takyr, which was 20 cm higher than the modern one, a strongly calcined spot was found with dimensions of 5 x 4 m.It seems that this is where the cadaveric burial took place. This is evidenced by numerous small cremated human bones and fragments of a small, molded vessel. The fence was built over the structure, and the space inside the fence was filled in with soil after the ritual [Tolstov, Zhdanko, Itina 1963: 48–49; Levina 1979: 180]. Settlements were discovered in the vicinity of the barrows, which were originally attributed to the same period as the slag barrows and therefore to the same archaeological culture. However, later, this assumption was not confirmed. According to the lifting material, these settlements date back to the 4th to 2nd centuries B.C., when the Chirik Rabat archaeological culture was widespread in this territory [Tazhekeev, Darmenov 2012: 246–247].

[1] The Sengir-tam 2 cemetery, discovered by the Chirik Rabat archaeological expedition in 2014, is located 40 km southwest of the Tagisken cemetery

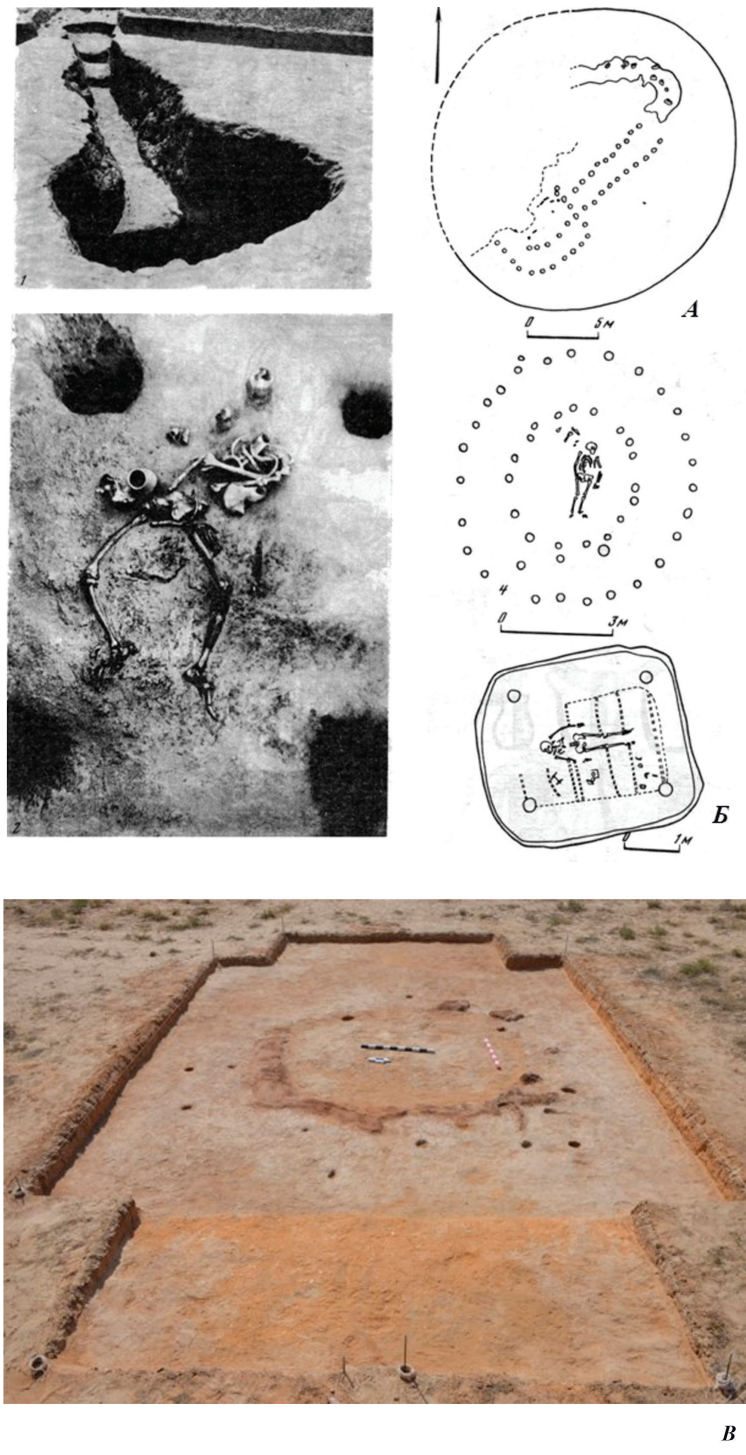

Fig. 3. Sites of the Early Iron Age. a) Southern Tagisken [Itina, Yablonskii 1997]; b) Uigarak [Vishnevskaya 1973]; c) Sengir-tam 2 [Kurmankulov, Utebaeva 2019]

3-сур. Ерте темір ғасырының ескерткіші. а) Оңтүстік Түгіскен [Itina, Yablonskii 1997]; b) Үйғарақ [Vishnevskaya 1973]; c) Сеңгір-там 2 [Kurmankulov, Utebaeva 2019]

Рис. 3. Памятники раннего железного века. *А* – Южный Тагискен [Itina, Yablonskii 1997]; *Б* – Уйгарак [Vishnevskaya 1973]; *В* – Сенгир-там 2 [Kurmankulov, Utebaeva 2019]

The most common lifting material on the sites of the "slag mounds" culture is pottery. The vast majority were locally produced. These are mostly flat-bottomed vessels with coarse hand molding and campfire firing. The outer surface of the dishes was red or red brown in color, and some fragments still show traces of a light engobe coating. Most of the pottery is undecorated. There is not much variety in the set of shapes of tableware. Most of them are pots of various sizes, hemispherical bowls, and pans. There are also small pots that have a cylindrical spout drain. All this pottery is close to Saka ceramics of various regions of Central Asia and, firstly, to materials from burial mounds of the lower reaches of Syr Darya [Vishnevskaya 1973: 74–80; Itina, Yablonskii 1997: 38–40]. Researchers of the "slag mounds" culture have no doubts about its Saka belonging; these conclusions are based on the analysis of the inventory. Indeed, the arrowheads found in the settlements, with good reason, can be attributed to the circle of Saka antiquities and find numerous analogies on a vast territory from Mongolia to the Southern Urals [Levina 1979: 181]. However, the arrows themselves, like the pottery in this case, are not ethnic indicators. The absence in the archaeological complex of the "slag mounds" culture of the "animal style" objects, horse harness, so typical for the Saka cultures of Central Asia as a whole and the Southern Aral Sea Region, attracts attention. At the same time, the appearance of the material culture (pottery, arrow set, a small amount of quartzite products) is close to the Saka culture of the lower Syr Darya, known from excavations of the cemeteries in Southern Tagisken and Uigarak.

In the next period, the second half of the first millennium B.C., the regime of the bypass of the southern channels of the delta changed again. Apparently, already in the middle of the 1st millennium B.C., some areas in the middle course of the Inkar Darya, primarily in its southern channel, died out. Part of the sections of the earlier Inkar Darya riverbed turned into oxbows and lakes [Andrianov 1969: 110; Kurmankulov, Utubaev 2017: 7–14]. This created a broader latitudinal line for the Zhana Darya. It is evident that during that period, the Syr Darya water did not reach the northern Akcha Darya delta, and the Zhana Darya flowed towards the Aral Sea via the northern meridional channels (Ashinansay, Dayrabay, Kamektinsay), where cattlemen camps and individual burial sites were discovered [Vainberg 1999: 54; Tazhekeev 2013: 65–66]

Consequently, in the southern part of the delta, particularly in the latitudinal channels of the Zhana Darya and in the old rivers of the Inkar Darya, conditions were quite suitable for the formation of a sedentary agricultural-pastoral culture, the basis of which was pastoralism and irrigated farming. Materials derived from the study of ancient sites in the Middle Zhana Darya basin cover the period from the end of the 5th to 2nd century B.C., and several essential common features are combined into one compact group, which in scholarly publications from the early 1990s was called the Chirik Rabat archeological culture [Vainberg, Levina 1992: 47].

There are about 200 known cultural sites: fortresses, fortified cities, unfortified settlements, burial grounds, or cemeteries. Undoubtedly, the Chirik Rabat culture arises from the local Saka cultures of previous periods [Vainberg 1999: 261]. Certainly, it was strongly influenced by ancient agricultural cultures of Central Asia, which is eloquently proved by archaeological materials obtained during excavations of Chirik Rabat and Babish-mola settlements and fortresses (fig. 4), as well as cemeteries [Tolstov 1962: 136–204; Vainberg, Levina 1993: 91–102; Kurmankulov, Utubaev 2017: 191–211].

Discussion

This is the first, the earliest agricultural culture in the lower Syr Darya, as evidenced by the remains of irrigation structures identified by archaeological research of the Chorasmian Archaeological and Ethnographic Expedition. The constant flooding of the southern channels of the Syr Darya delta ended in the 2nd century B.C. By the end of this century, all the forts and settlements of the Chirik Rabat culture were abandoned and the population left these areas.

A

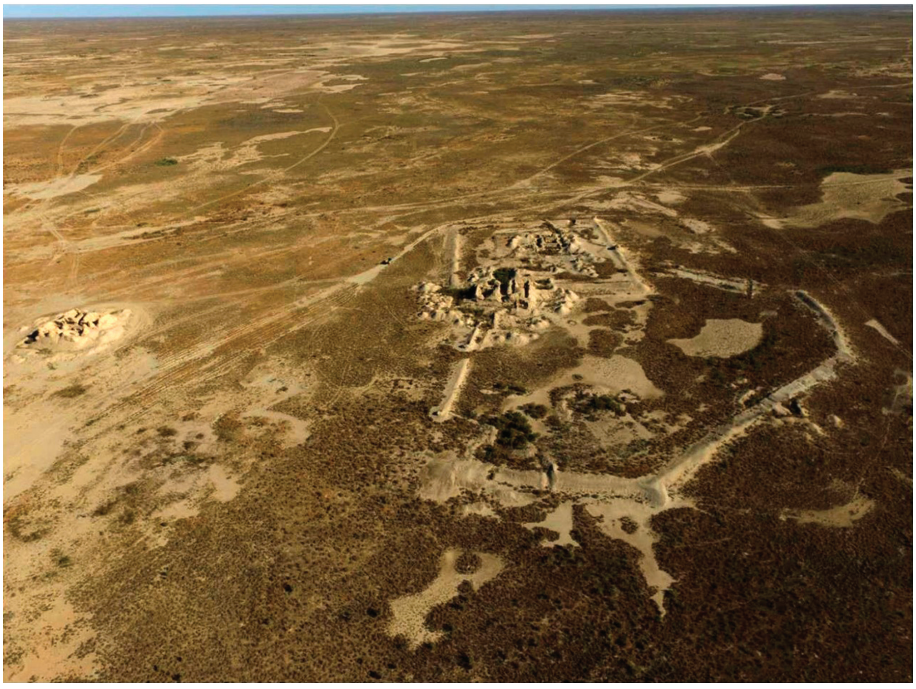

Fig. 4. a) the Chirik-Rabat Settlement (after: Zh.Utubaeva, E.Kazizova); b) the Babish-mola Settlement (after: Zh.Utubaeva)

4-сур. а) Шірік-Рабат қалашығы (Ж.Өтебаев, Е.Казизов бойынша); b) Бәбіш мола қалашығы (Ж.Өтебаев бойынша)

Рис. 4. а) городище Чирик-рабат (по: Ж.Утубаева, Е.Казизова); b) городище Бабиш-мола (по: Ж.Утубаева)

It should be noted that the Chirik Rabat culture was not directly continued in the Syr Darya or other regions of Central Asia. The later stages of the history and development of the Syr Darya delta associated with other areas of this region (Kuvan Darya, Eski-Daryalyk) and, as we can assume, with other ethnic groups, and therefore are beyond the scope of the proposed study.

Conclusions

Studies show that the ancient formation and development of the hydrographic grid in the Easte Studies show that the ancient formation and development of the hydrographic grid in the Eastern Aral Sea Region are natural factors. They significantly affect the processes of birth and destruction of archaeological cultures and the type of economic activity of the bearers of their cultures. Natural preconditions for irrigation emerged in the region during the study period.

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