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PROCESSES THAT WERE IMPORTANT IN THE FORMATION OF THE PALEOECOLOGY OF THE KHOREZM OASIS IN ANCIENT TIMES

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Annotation
In this article, the development of conditions for the settlement of people in the Khorezm oasis from ancient times, and the effects of natural climatic factors are discussed.
Keywords: Pleistocene, Neogene, Karakum, Caspian Sea, Quaternary period, Khorezm, Aral Sea, Aqchadarya, Sarikamish

The main part

In the formation and further development of the natural landscape of Central Asia, the influence of the rivers and winds that flowed through the region in different directions was of decisive importance. It should be noted that the movement of Amudarya, Syrdarya and ancient Zarafshan rivers was especially important.

During the Neogene and Pleistocene periods, rivers flowing through wide latitudes formed alluvial plains in various places, where sandy and clay sediments were intensively accumulated. At the same time, alternately one or another area was flooded, the lowlands and lowlands were periodically filled with lakes, and then some of them were filled with precipitation, and the lakes moved to new places. In the open areas there were dense thickets of forest plants. Loose alluvial and lacustrine alluvial deposits were subjected to eolian processes after being freed from water, which formed the isolated eolian relief of sandy deserts typical of Central Asian deserts.

During the Tertiary and subsequent Pleistocene periods, these rivers and their variable tributaries filled the plains with alluvial deposits. The soft alluvial sedimentary rocks under the dry river and lake have been exposed to the wind and formed soft sand massifs in many parts of the area. In this process, the last stage of the Neogene period, in the Pliocene (4-3 million years ago), today's Unguzorti Karakum, a large part of Karakum was formed[1]. Amudarya played the most important and decisive role in these processes.

[1] Виноградов А.В., Итина М.А., Кесь А.С., Мамедов Э.Д. Палеогеографическая обусловленность расселения древнего человека в пустынях Средней Азии // Первобытный человек, его материальная куль- тура и природная среда в плейстоцене и голоцене. – М., 1974. – С. 291.

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Similar alluvial plains continued to form in the Early and Middle Pleistocene. Thus, the Pra-Amudarya flowed through the expanses of the lowland before Kopet-Tog to the Caspian Sea, where alluvium accumulated, which led to the appearance of the sandy desert of Karakum.
In the Upper Pleistocene, Amudarya turned north and began to form deltas in the south of the Aral Sea. At the same time, the Syr Darya formed deltas in the eastern Aral Sea. These young deltas are dominated by clay surfaces surrounded by numerous dry channels.
Such a picture of the paleogeographic development of the Central Asian plains largely determined the settlement of primitive people. However, in the resulting alluvial plains, traces of human habitation have not been preserved or have yet to be found due to the abundance of water, often migrating channels and lakes, and intensive accumulation of precipitation, which were buried under younger river sediments. Therefore, the earliest human finds for Central Asia are found outside the alluvial plains in mountains, mountain plains, and foothills, where people settled along small streams and springs, some of which are now dry.
It is known that the Amudarya River starts from the Pamir Mountains and, as a result of its movement along its course, fills these areas with rock deposits and soil piles over a long period of time.
Two main periods can be distinguished in the development history of Amudarya: the first is limited to the prehistoric period, the Pliocene and the Lower and Middle Quaternary periods, and the second developed in the Upper Quaternary and New periods[2].
In the first of these periods, according to Beruni's hypotheses, Amudarya turns west from the area of Chorju city and flows towards the Caspian Sea. The latter had a very unstable level throughout its history and either raised its water level and migrated far to the east, providing water to the western parts of the Karakum, or, on the contrary, lowered its level and moved west from this desert to the modern coastline.
At that time, sedimentary rocks were accumulated at the beginning of the Zaunguz Karakums, and after they rose, the Amudarya began to flow through the gaps of the Lower Karakum, and a wide depression filled with its sediments was located north of Kopet-Tog, forming a layer called the Karakum layer, consisting of interlayered sands and sandstones. Now, after they were collected and released from the water, they were subjected to intensive weaving. As a result, that diverse active relief was formed, which is now observed in Karakum.
Aral, Sarikamish, Assak-Kaudan and other lowlands were dry because the Amudarya flowed into the Caspian Sea and flooded the lowland Karakum. The Khorezm lowland was separated from Sarikamish and the Aral Sea by the still intact Ustyurt[3] barrier, and it was covered with water brought here from the southeast and south through the canals of the Syr Darya, which

[2] Толстов С.П., Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и формирования человекам. – М.: «Наука»,1960. Вып-3, – С.17.
[3] Архангельский Л.Д. Геологические исследования в низовьях Аму-Дарьи, «Труды Г,л. геолого-раэвед. упр. ВСНХ СССР», вып. 12, 1931, – С. 30-171.

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had not yet reached the Aral Sea[4]. Zarafshan had a higher level and washed the entire eastern shore of the modern Caspian.

The second period of Amudarya's life begins in the Upper Quaternary (Khvalin) period, when Amudarya blocked its western path with its sediment, turned north and broke through from Zaunguz Karagum to the plains of Khorezm. This period is divided into three main stages, during which three deltas of the Amudarya, which are perfectly expressed in the terrain, were successively formed: Aqchadarya, Sarikamish and the present day Arol[5].

These stages preceded other stages when a delta formed south of the Khorezm Plain. Oversaturation of large masses of Amudarya water with sediments poured into it in the first stages led to a sharp rise in the level of Khorezm Lake, and as a result of this, in the conditions of reverse water, first underwater, and then heavy sediments were formed, and the lake was pushed to the north, to the surface delta. This delta could be considered Khorezm delta. Later, it was completely buried under the accretion of three subsequent deltas.

If we pay attention to the paleogeographic map of the Lower and Middle Quaternary period, we can see that the structure of the territory was much different from the present. In the pre-glacial period, Amudarya did not flow towards Khorezm. At that time, neither the Aral Sea nor Sarikamish Lake existed. Arol, Sarikamish, Asakavdon and other lowlands were replaced by waterless deserts[6].

There was a large Khorezm lake in the south of the depression in the place of the Aral Sea, along the entire south of the Sultan Uvais mountain to the east of the Sarikamish depression, Kyzylkum in the east, and Unguzorti Karakumi deserts in the south. Lake Khorezm was saturated with the waters of the Syr Darya flowing into it from the north-east, and the Zarafshan rivers from the south-east. By the Upper Quaternary (early Khvalin) period, Amudarya filled its bed with the sedimentary rocks it had flowed, blocking its way to the west and changing its direction to the north. Amudarya now bypasses Unguzorti Karagumi from the eastern side and begins to flow towards Lake Khorezm and in turn begins to fill the plains with alluvial deposits. From this period, as a result of long historical-geological processes, the formation of the three main riverbeds of the Amudarya: Aqchadarya, Sarikamishboyi and the current Orolboyi deltas begins[7].

At the end of the Quaternary period, i.e., the last stage of the Paleolithic, Lake Khorezm, without changing its western borders, was filled with sedimentary rocks brought by the

[4] Гиоргиевский Б.М. Южный Хорезм. Геологические и гидрогеологические исследования. – Ташкент., 1937, – С. 55.
[5] Толстов С.П., Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и формирования человекам. – М.: «Наука»,1960. Вып-3, – С.17.
[6] Герасимов И.П., Марков К.К., Четвертичная геология. –М.: «Паркомпроса РСФСР», 1939. – С.271.
[7] Матяқубов Х. Амударё қуйи ҳавзаларининг қадимги табиий-географик ҳолати ва антропоген ландшафтининг шаклланиши//История материальной культуры Узбекистана/ ред. А.Э. Бердимурадова. – Самарканд 2012. вып.37. – С. 197.

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Amudarya, and as a result, it receded from the east to the west, creating plains in place of the empty lake.

As a result of hydrographic movements and changes, Amudarya water accumulates and forms the Aral Sea. Since the early Khvalin period, the Syrdarya began to flow towards the Aral Sea. Amudarya waters began to flow to the island 22 thousand years ago. Although the amount of Amudarya water coming to the island was three times more than that of the Syrdarya, due to the fact that Amudarya often changes its course in the lower reaches, its discharge into the sea was not stable. This did not allow the sea level to remain constant, and its territory sometimes expanded and sometimes narrowed[8]. Amudarya was able to supply water to the Aral sea only after forming its Aqchadarya and Uzboy basins. However, from the end of the Holocene period, the water of the river decreases again, and by the 2nd millennium, it begins to flow through the Aqchadarya basin to the Aral Sea, and the maximum height of the Aral Sea water is a mile. avv. It corresponds to 2.5-1 millennia.

The Aqchadarya delta is the first riverbed of Amudarya. Its formation period began in the early Khvalin (Upper Quaternary) period[9].

The Akhchadarya riverbed began near the present city of Tortkol. Its triangular basin formed by its numerous branches directed to the north is now bordered by the Amudarya on the west, the not so high Sultan Uwais mountain on the north, and the Kyzylkum dunes 20-30 m above the delta in the east. This part of Uzan is called Southern Aqchadarya. The width of the southern delta reaches its maximum (90 km) between the Sultan Uvais mountain and the Kyzylkum desert. This width extends to 70 km in the meridional direction. The southern delta consists of the West Aqchadarya, Middle Aqchadarya and East Aqchadarya deltas, from which several small tributaries branched off. The West Aqchadarya river basin, after passing around the Sultan Uwais mountain from the south side, merged with the East Aqchadarya delta in the north-eastern corner to form a single large river basin. This riverbed crosses the Kyzylkum desert to the north and forms the 75 km long Aqchadarya corridor. In the north, this river divides into several tributaries and forms the Northern Aqchadarya river. The North Aqchadarya delta also formed the Western, Central and Eastern branches. North Aqchadarya occupies a relatively large area, stretching 110-120 km from north to south and 120 km from west to east. Its southern and southeastern side adjoins the Kyzylkum desert.

According to the complex archeological-geographic investigations, the Aqchadarya basin was mainly formed in the early Khvalin period. In the middle of the Old Stone Age, the main part of Amu Darya water flowed through Aqchadarya. At this time, Aqchadarya bypassed the Sultan Uvais mountain from the eastern side and flowed through the Kyzylkum desert to the

[8] Кесь А.С. Аральское море в голоцене // Археология и этнография Средней Азии. – М., 1979. – С. 19.
[9] Толстов С.П., Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и заселения. – М.: «Наука», 1960. Вып-3, – С. 17.

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northeastern corner of Khorezm Lake, and part of the water bypassed the Beltov mountains from the northeastern side and poured into the Aral Sea[10].

At the end of the ice age, the water flow in the Aqchadarya river basin decreases sharply. This was related to the formation of the second largest Sarikamishboyi valley of the Amudarya. A plain will be formed in place of Lake Khorezm, which was filled with alluvial sediments in the Holocene period, and a large lake will be formed in place of Sarikamish bog, which was waterless in earlier times. At this time, the main part of Amudarya water flowed towards Sarikamish. In the Mesolithic and Neolithic periods after the Ice Age, there was a flow of water in the Aqchada river, which was active at the same time as the Sarikamishboi delta, but it was not as large as in earlier times. In the Neolithic period, the waters of the Amudarya were not at the level of breaking through the Aqchadarya threshold to the north. And this is a mile. avv. In the IV-III millennia, a large amount of water accumulated in the southern Aqchadarya basin, which led to the formation of a large number of lakes and marshes. miles in the North Aqchadarya Basin. avv. Relatively few settlements from the first half of the II millennium and earlier have been found, which can be justified by the lack of water flow in this area. In the South Aqchadarya basin, due to the excessive amount of water, most of the Neolithic hunter-fishermen's places are recorded on hills and hills[11].

Mil. avv. At the end of the 3rd millennium, as a result of the tributaries of the Sarikamishboyi delta being filled with mud, the tributaries of Aqchadarya revived again. This period is the most active period of Aqchadarya. A large amount of water also causes water flow in the North Aqchadarya delta. This is evidenced by the 1.5 m thick sedimentary rocks that appeared above the Neolithic settlements in the Aqchadarya basin[12].

The fact that the tributaries of the Aqchadarya are filled with water is also confirmed by the widespread distribution of settlements of the Bronze Age dating back to the II millennium in this area. M.A. Itina, a great specialist of Khorezm Oasis Bronze Age. avv. The second half of the 2nd millennium At the beginning of the 1st millennium, it is noted that people lived densely around the tributaries of the Aqchadarya River. Thus, due to the Amudarya changing its direction again to the east, the Aqchadarya riverbed was initially permanent, mil. avv. Until the beginning of the 1st millennium, it was periodically supplied with water.

The wide spread of settlements in the Aqchadarya basin is connected with the second filling of the riverbed.

Mil. avv. From the 1st millennium, the water flow in Aqchadarya began to decrease sharply. By the time of antiquity, it will completely dry up[13].

[10] Толстов С.П. Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и и заселения. – М.: «Наука», 1960. Вып.-3, – С. 35.
[11] Итина М.А. К истории изучения бронзового века Южного Приаралья // Приаралье в древности и средневековье. – М., 1998. – С. 79-80.
[12] Виноградов А.В. Неолитические памятники Хорезма // МХЭ. Вып. 8.– М., 1968. – С. 32.
[13] Толстов С.П. По древним дельтам Окса и Яксарта. – М., 1962. – С.91-92.

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The left bank of the Khorezm oasis north of Karagum, south and east of the Ustyurt and Sarikamish bogs, includes large areas, and is called the Sarikamishboi delta in geographical terminology.

As mentioned above, by the last Khvalin period, as a result of Lake Khorezm being filled with sedimentary rocks from the Amudarya, a fertile plain filled with alluvial deposits was formed in its place. The muddy water of the Amudarya begins to create the natural and geographical features of the newly formed Sarikamish delta.

The Sarikamish delta of Amudarya consists of a lowland, the ground level decreases by 0.2-0.4 m per kilometer on one side to the north - towards the Aral Sea, and on the other side to the west, towards the Sarikamish basin. The total area of the territory is 1 mln. forming a hek-tar, it is crossed by old tributaries of Amudarya such as Kankha-darya, Tunidarya, Davdon, Daryoliq (Kokhnadarya)[14].

The ancient Sarikamish delta began a little further north after the Amudarya passed through the Tuyamoin Strait, near the crossing point of the Tuynukli river.

Davdon and Daryoliq are the largest and most important of the southern and ancient valleys of Amudarya on the left bank. Davdon separated from the Amudarya between present-day Khanka and New Urganch, and Daryoliq 15-18 km north of New Urganch. They moved parallel to the west at a distance of 20-30 km.

The left bank of Khorezm is crossed by numerous rivers and streams that branch off from Davdon and Daryoliq. Amudarya waters have flowed in these riverbeds and branches since ancient times, sometimes to the west, sometimes to the south-west, sometimes to the north, and later they dried up.

Butentov, Manqir, Tuzqir, Tarimkoya, Kangkhaqir, Zangibobo, Toyqir, Qal'aliqir, Kozaliqir, Qubatov, etc., rising everywhere in the lowland, are the flat mountains, as the remnants of the Tertiary plain, 20-40 m from the surrounding areas and more. rises even higher. In addition to these main remains, the entire area is covered with various sedimentary remains of rivers and lakes.

Mil. avv. Sarikamish delta was formed as a result of the filling of alluvial sediments in most of the tributaries of the delta by 3-2 thousand years ago.

During this period, fundamental changes took place in the hydrographic system of the Amudarya, and the river began to flow completely westward, and a large part of the Amudarya waters filled the Sarikamish depression and the large and small depressions around it with water. Davdan was the most active branch of Amudarya flowing into Sarikamish in the post-glacial period. Due to its water, the level of Sarikamish tributary is 58 m. increased to The big water mass that went to the lake opened its way through the depressions between the Unguzorti Karakumi and the hills and moved in the south-west direction towards the eastern gulf of the

[14] Андрианов Б.В. Древние оросительные системы Приаралья. – М.: «Наука», 1969. – С. 146.

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Caspian Sea through the south of Ustyurt. In this way, the Uzboy waterway with a length of 550 km began to form[15].

By the Holocene period, primitive people began to settle in the vicinity of Uzboy and Sarikamish. In general, in the IV-III millennia BC, Amudarya waters filled the Sarikamish delta and reached the Caspian Sea. The main part of the water is miles. avv. Until the 2nd millennium, it flowed to the west - to the Sarikamishboi delta.

According to archaeologists, all the conditions for the settlement of Kaltaminers existed in the Uzboy and Dovdon streams in ancient times. During the 20th century, during the archaeological excavations in this area, samples of stone weapons from the Neolithic period were found. A similar scene was observed in the lower basins of ancient Davdon. First of all, this indicates that Uzboy was active as a reservoir and hunters of the Late Neolithic lived in its surroundings.

In the Bronze Age, i.e. avv. At the border of the III-II millennia, the water flow in Uzboy almost stopped. Since the beginning of the 2nd millennium BC, there has been no water flow in Uzboy[16]. The rarity of Bronze Age settlements compared to the Neolithic period is also believed to be related to these natural factors.

References

1. Виноградов А.В., Итина М.А., Кесь А.С., Мамедов Э.Д. Палеогеографическая обусловленность расселения древнего человека в пустынях Средней Азии // Первобытный человек, его материальная куль- тура и природная среда в плейстоцене и голоцене. – М., 1974. – С. 291.
2. Толстов С.П., Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и формирования человекам. – М.: «Наука»,1960. Вып-3, – С.17.
3. Архангельский Л.Д. Геологические исследования в низовьях Аму-Дарьи, «Труды Г,л. геолого-раэвед. упр. ВСНХ СССР», вып. 12, 1931, – С. 30-171.
4. Гиоргиевский Б.М. Южный Хорезм. Геологические и гидрогеологические исследования. – Ташкент., 1937, – С. 55.
5. Толстов С.П., Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и формирования человекам. – М.: «Наука»,1960. Вып-3, – С.17.
6. Герасимов И.П., Марков К.К., Четвертичная геология. –М.: «Паркомпроса РСФСР», 1939. – С.271.
7. Матяқубов Х. Амударё қуйи ҳавзаларининг қадимги табиий-географик ҳолати ва антропоген ландшафтининг шаклланиши//История материальной культуры Узбекистана/ ред. А.Э. Бердимурадова. – Самарканд 2012. вып.37. – С. 197.

[15] Толстов С.П. Кесь А.С. Низовья Амударьи Сарықамыш, Узбой. История и и заселения. – М.: «Наука», 1960. Вып-3, – С. 21.

[16] Итина М.А. Новые стоянки Тазабагябской культуры (работы 1956 гг.) // МХЭ. Вып. 1. – М., 1959. –С. 52.

Western European Journal of Historical Events and Social Science
Volume 1, Issue 4, December, 2023
https://westerneuropeanstudies.com/index.php/4
ISSN (E): 2942-1926 Open Access| Peer Reviewed

8. Кесь А.С. Аральское море в голоцене // Археология и этнография Средней Азии. – М., 1979. – С. 19.
9. Итина М.А. К истории изучения бронзового века Южного Приаралья // Приаралье в древности и средневековье. – М., 1998. – С. 79-80.
10. Виноградов А.В. Неолитические памятники Хорезма // МХЭ. Вып. 8.– М., 1968. – С. 32.
11. Толстов С.П. По древним дельтам Окса и Яксарта. – М., 1962. – С.91-92.
12. Андрианов Б.В. Древние оросительные системы Приаралья. – М.: «Наука», 1969. – С. 146.
13. Итина М.А. Новые стоянки Тазабагябской культуры (работы 1956 гг.) // МХЭ. Вып. 1. – М., 1959. –С. 52.