

# Nature and Geographical Features of Desert Areas in Navoi Region

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**Annotation---** Scientists have proved that the Kyzylkum region has been occupied by humans since ancient times<sup>1</sup>. Kyzylkum is a country by its size. The Kyzylkum desert occupies a large part of the Turan plain and is located between the Syrdarya and Amudarya rivers.

**Keywords---** Kyzylkum, Ayakogitma, Neolithic, Uzbek-French joint archeological expedition, Uzbek-Polish international archeological expedition, stone industry, nuclei, retouched stone tools

## I. Introduction

The Kyzylkum Desert is bordered from south to southeast by the Zarafshan Valley and the Nurata Mountains, the Amudarya Oasis in the southwest, the Aral Sea in the northwest, and the Syrdarya Oasis in the north and northeast. The total area of the desert in these areas is 300 thousand km<sup>2</sup>, and in the east and west it is bordered by the great rivers of Central Asia, the Syrdarya and the Amudarya<sup>2</sup>. It has a unique feature in terms of its geographical location and influence, due to which it affects the weather and climate of the neighboring areas. The area decreases from southeast to northwest. Its average absolute height is 200-300 m, falling to 350-400 m in the south-east and 90-100 m in the north-west. To the west of the Kyzylkum there is the Aral Sea and to the south the Kuvondarya, to the Yangidarya.

To the east of the Kyzylkum, it was bordered by Navoi and Bukhara regions and reached the banks of the Amudarya. The nature of the Kyzylkum is different from the deserts of the Karakum and Gobi-Taklamakan in Asia. The Kyzylkum region has been developing its own mining industry for thousands of years, and ores, precious and semi-precious stones, turquoise, and clay for pottery have been mined since ancient times. According to Academician Yuri Buryakov, more than 20 minerals have been extracted from Kyzylkum - such as salt, quartz, jade, copper and gold. In particular, in the territory of Konimekh district in ancient times salt was mined from Lavlakon, salt from the deposits of Mullali, turquoise from Temirchi (30 km from Konimekh) from 16 tunnel-shaped deposits<sup>3</sup>. Another key feature of

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<sup>1</sup> G.I. Lazukov The relationship between the geographic environment and Paleolithic man. In the book: Primitive man, his material culture and natural environment in the Pleistocene and Holocene. -M.: 1974; Bader O.N. The problem of displacement of landscape zones in the Holocene and archeology. - in the book: Primitive man, his material culture and natural environment in the Pleistocene and Holocene. -M.: 1974; Vinogradov A.V., Mamedov E.D. Primitive Lyavlanan. Stages of the most ancient settlement and development of the inner Kyzyl Kum. -M.: Science. 1975; Mamedov E. Paleoeology of Stone Age humans in the deserts of Central Asia. - in the book: Culture and Arts of Ancient Khorezm. - M.: Science. 1981; Mirzaev A. Evolution of sedimentation environments and material composition of Paleogene marine formations of the Kyzyl Kum. - Tashkent, dissertation abstract for the degree of Doctor of Geological and Mineralogical Sciences 2012; Khoshimov Kh. Oyqoritma maon-ilk neolithic davri tosh industry. Tarikh fanlari b'yicha falsafa doctor (PhD) dissertation and abstracts. Samarkand, 2019 yil; Zvonkova T.V. Bukhara region. \ Natural conditions and resources of South-West Uzbekistan. - Tashkent.: 1965; Orlovsky N.S. The mechanism of desertification and its consequences \ Experience of combating desertification in the USSR. - M.: Science. 1988; Szymezak K., Khudzhanazarov M. Excavation in Ayakogitma the site, Se Kyzil-Kum, Uzbekistan. Season 1999 // General Rappot. Varsovie-Samarcande, 2004;

<sup>2</sup> Odinaeva Z. Spring in the Kyzylkum desert.-T.: Muharrir, 2008.-P.9.

<sup>3</sup> Odinaeva Z. Spring in the desert of Kyzylkum.-T.: Muharrir, 2008. -B.10-13.

the Kyzylkum is the presence of groundwater, which can be extracted if excavated at a distance of 10 to 80 meters. The flora of the Kyzylkum is diverse.

Lemani, a zoologist who studied the nature of the Kyzylkum in the 1940s, recorded the richness of the flora here. Hundreds of thousands of cattle from Samarkand, Bukhara, Karmana, Konimekh, Kyzylorda, Shymkent and Karakalpakstan grazed on the rich pastures<sup>4</sup>.

The reason why the desert is called Kyzylkum is because of the redness of the color of the sands that occupy most of it. In the Kyzylkum, the remnant sands formed by the erosion of red rocks in the ancient lowlands are often red in color. In the southern part of the Kyzylkum, the sands are dark gray. These sands were formed from the deposits brought by the Zarafshan River, not mixed with red soils. The length of the Kyzylkum is about 2,500 to 3,000 kilometers. It is up to 300 kilometers wide and is separated by mountain slopes, that is, the desert is divided into the Red and the Great. The boundary between them is separated by mountains and plain lands at their foot. Both Kyzylkum are generally called "Taeliboy" (Taelibai) by the desert people. The Kyzylkum is connected from west to east, and is divided by mountains from south to north. In this area there are mountains Aktov, Bokantov, Oltintov, Aristantov, Kuljuktov, Lau-Lautov (on the Uzunkuduk side)<sup>5</sup>.

If we analyze the scientific literature, the Kyzylkum desert has a flat relief, decreasing from south - east to north-west, and this decrease is a total of 300-53 m. However, the desert relief consists of dry and closed basins, as well as mountains that are far from each other and reach a height of 888 m above sea level. Among the large sandy landscapes in the region there are strongly degraded lowlands: Tomditov (888 m), Kuljuktov (784 m), Bokantov (758 m), Aristantov (698 m), Auminzatov (639 m), Jetimtov (521 m), Sultan- Uvaystov (485 m), Kozaktov (394 m) and others. Its landscape is also unique with its uniqueness, diversity, unique features, fascinating places, territories and objects. For example, Ayoqogitma, Mingbulak, Karakatin and Mullali, which appeared on the site of dried up ancient lakes and stretched for hundreds of kilometers or more. The geographical location of the lands of Konimekh, Tomdi, Uchkuduk districts includes the Turan plains, deserts and semi-deserts of Central Asia.

These three districts in the Kyzylkum are bordered by the Shymkent region of eastern Kazakhstan, Karakalpakstan in the west, Bukhara region in the south, and Kyzylorda region of Kazakhstan in the north. Natural and geographical zoning of desert areas in Bukhara and Navoi regions was carried out by T. Zvonkova<sup>6</sup>. He divided the Kyzylkum sands into four natural-geographical sections on the basis of landscape sorting and mapping: 1) Lower Amudarya, 2) Northern Kyzylkum, 3) Central Kyzylkum and 4) Southern Kyzylkum. Each of these sections is divided into separate natural-geographical regions. For example, the Central Kyzylkum branch is divided into the following districts:

1) Low and gravel desert region, 2) semi-desert and rocky Kuljuktov and 3) sandy-clayey, gravelly and sandy deserts<sup>7</sup>.

As the Kyzylkum occupies a large area, its climate varies from north to south. The pastures of the Kyzylkum region are characterized by a sharp continental climate. The average annual rainfall is 105-160 millimeters, and the bulk of the rainfall falls during the winter-spring season. According to L. Gaevskaya, N. Salmanov, 45-50% of the total precipitation occurs in spring, 35-40% in winter, and the remaining 10-20% in autumn and summer. Kyzylkum is characterized by its extremely dry (arid) heat. Weather temperatures fluctuate sharply depending on the seasons of the year. According to meteorological stations, the average annual temperature is +13 +170 C, the average temperature in summer is +450 +470 C, the absolute minimum temperature in winter is -25-300 C, the average relative humidity is 45-55%, and in July. This figure drops to 13-18 percent. Another feature of the climate of this region is the frequent, and in most cases strong, winds. Its speed reaches 20-25 meters per second. This has a negative impact on soil and vegetation. The wind blows mostly from the north, northwest and east. In summer, the hot wind blows "garmsel" and the relative humidity drops sharply.

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<sup>4</sup> Son of Yusup Alkozha. Taelibay. -Kenimeh, 1998 -B.5-6.

<sup>5</sup> Son of Yusup Alkozha. Taelibay. -Kenimeh, 1998 -B.6.

<sup>6</sup> Zvonkova TV Bukhara region. \ Natural conditions and resources of South-West Uzbekistan. - Tashkent.: 1965. - C. 56.

<sup>7</sup> Mirzaev A. Evolution of sedimentary deposits of the known composition of marine formations of the Paleogene Kyzylkumov. - Tashkent, abstract of the dissertation for the degree of Doctor of Geological and Mineralogical Sciences, 2012. - P.12.

The fauna of the Kyzylkum is colorful and unique. The animals here, like the plants, are highly adaptable to drought in climatic conditions, extreme summer temperatures and drought. The fauna of this place differs from other places by the small number of species, by its peculiarly colored clothing, and by the activity of the nocturnal life<sup>8</sup>.

There are more than 600 plant species in the Kyzylkum. Among them are ephemeral and ephemeroïds - Haloxylon, wormwood, Ammodendron Fisch, Calligonu, Aristida, Harmaline, Ferula, which grow in a wide spring. Plants such as dye, brown, lily of the valley, tulip, barley, lily of the valley, lentils are very nutritious for livestock. With the onset of summer, they turn yellow, and plants adapted to drought and saline soils grow<sup>9</sup>.

The animals of the Kyzylkum are diverse. As Kyzylkum is a waterless country, animals live in small numbers. Deer live only in the mountainous areas of the Kyzylkum. There are also animals such as foxes, rabbits, wolves, badgers. The most common animals in the Kyzylkum are mice. Among the birds there are sparrows, bozturgay, mullaturgay, yovturgay. Birds such as hawk, eagle in mountainous areas, eagle-owls are also found in uninhabited areas and in mountainous areas. In short, samples of the unique fauna and flora of the Kyzylkum desert are among the exhibits of the Museum of the History of the Kyzylkum Desert, founded in 1983 in Zarafshan. Among them, the left thigh bone of a one-meter-long duck-nosed dinosaur catches our attention.

This unique exhibit was found in the Jalakuduk gorge, which scientists say is evidence that this type of dinosaur lived in the Cretaceous, or 90 million years ago, in the Kyzylkum Desert. NMMC worker Saken Norkulov also said that during the expedition and reconnaissance he witnessed the hardened bones of dinosaurs from a depth of 700 meters. NMMC worker Kazbek Yakubaev found the teeth of sea creatures underground during the excavation of the site of the Karakota phosphorite plant and brought them to the local ethnographer D. Mamirov, and these items will be transferred to the district museum<sup>10</sup>.

It is well known that in ancient times there was the Titez Sea over the Kyzylkum Desert, which is equal to the territory of a country like present-day Italy. The sea existed 30 million years ago, that is, until the end of the Paleogene. By the way, the discovery of shark teeth, fossil fish heads and other paleontological materials in the museum exhibits during the geological explorations of NMMC is a real proof of the existence of this watershed<sup>11</sup>.

The presence of late terrestrial Pleuvial lakes in the desert basins is evidenced by the presence of lake terraces and the presence of freshwater mollusk shells.

In short, Kyzylkum is a unique property of our country, our nation. Its natural features are unique, its historical and cultural monuments are unique. It is a source of wealth that enriches and replenishes the treasury of our state. Preserving the Kyzylkum, along with the growing demands of people, economic growth, the development of natural resources, the preservation of nature, the protection of its flora and fauna is a responsible duty and an important task.

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<sup>8</sup> Shalatonin B. Thousands of unique Kyzylkums. - Navoi, 1997. - P.51.

<sup>9</sup> <http://geografiya.uz/ozbekiston-tabiiy-geografiyasi/11609-qizilqum-tabiiy-geografik-okrugi.html>.

<sup>10</sup> Mamyrov D. Morning of Kenimekh. Consistent data and short stories. Kenimeh: 1995. -B.11.

<sup>11</sup> Mamyrov D. Morning of Kenimekh. Consistent data and short stories. Kenimeh.: 1995. -B.12.