

## PSAMMOPHYTE PLANTS AND THEIR TYPES. RICE FIELDS IN KARAKALPAKSTAN

Tolibayev Alisher Abdulla uli

Scientific advisor: A'met Xabibullaev

Republic of Karakalpakstan

<https://doi.org/10.5281/zenodo.14234034>

**Abstract.** *This article discusses psammophyte plants and their types, the desert - the plant world.*

**Keywords:** *psammophyte plants, climate, sandy and gypsum soils, plants.*

## ПСАММОФИТНЫЕ РАСТЕНИЯ И ИХ ВИДЫ. РИСОВЫЕ ПОЛЯ В КАРАКАЛПАКСТАНЕ

**Аннотация.** *В статье рассматриваются псаммофитные растения и их виды, пустыня - растительный мир.*

**Ключевые слова:** *псаммофитные растения, климат, песчаные и гипсовые почвы, растения.*

DESERT - a type of biome in countries with a permanently dry and hot climate that does not allow the good development of the plant world. It occupies more than 20% of the Earth's land area. According to the soil and the deposits covering the surface of the earth, the following deserts are distinguished: sandy deserts on the porous rocks of ancient alluvial plains, gravelly and sandy-gravelly deserts on gypsum plateaus and foothill plains, gravelly-gravelly gypsum deserts on gypsum plateaus and foothill plains, stony deserts on low-carbon sandy soils, loess deserts on foothill plains, clayey barren deserts on the plains of foothills and in the place of ancient river deltas, clayey high deserts in low mountains formed by saline marl and clayey rocks, salt deserts on sea coasts and in salt-sand depressions. The plant species of the desert are unique.

They are one of the centers of ancient speciation. Pre-Cenozoic endemics are widespread in these places. Plant species Deserts depend on the structure of the earth's surface, soil composition, and moisture content. There are also similarities in the distribution of desert plants on different continents; vegetation is sparse and of few species, and the same plants grow in large areas. Inland deserts of temperate regions, sclerophyllous plants, including leafless shrubs, are abundant. Among them, ephemerals and ephemeroids occupy an important place. Inland deserts of subtropical and tropical regions, xerophilous shrubs and perennial grasses are abundant. The plant world of sandy deserts is quite rich, while in gravel deserts, there is little vegetation. In

deserts covered with saline soil, plants do not grow at all. The plant world of subtropical deserts is much richer. Here, small acacias and eucalyptus grow, and in the deserts with gravel and sand, salt and salt-alkali plants are found. In the subtropical and tropical deserts on the ocean coasts, there are many succulent plants. In the river valleys of the temperate deserts of Asia, deciduous trees grow - turangil, poplar, willow, and sycamore, and in the river valleys of the subtropical and tropical regions, evergreen plants grow - palms and sycamores.

Plant life in the desert (plain) is mainly associated with sand and gypsum soils and salt marshes. The sandy desert includes the Kyzylkum, the dry core of the Kashkadarya (Sandiqlykum), the Kattaqum in the lower part of the Surkhandarya and the sandy massifs of the Khorezm oasis. Most of the sand dunes are fortified with plants. Trees or large shrubs such as white saxaul, juzgun (kandim), Circassian; shrubs such as white boyalich, rabbit bone, red clover, cherry tree grow on the sand dunes.

The territory of Karakalpakstan was divided into 4 botanical-geographical regions: Ústirt, Kyzylkum, lower slopes of Ámiwdarya, and the rest of Aral. About 1,000 species of exotic plants grow here. Most of the plants have useful properties, and some of them have been used in herbal medicine since ancient times.

In Ústirte, the wide distribution of ephemeral plants - biyurgun, juwsan, seksewil, gewrek, ephemerides, all ephemeroids, gives the possibility of abundant grazing of livestock.

There are white seksewil, júzgin, juwsan, cherkez, biyurgun, ephemerals and ephemeroids in the Kyzylkum field: kızıylsha (ephedra), juwsan, selew, white-grained, colored plants, etc. it blew. Most of them are herbaceous plants, some of them are also used in medicine (gewrek, kızıylsha, juwsan).

Another region of Karakalpakstan - the lower layer of the Amiwdarya - consists of a flat plain that looks like a shale towards the Aral Sea. It is said that the pressure of the Togai horticulture in the current and former delta region of the Amiwdarya is one of the most densely populated regions in Middle Asia. Other types of vegetation in the lower reaches of the Амивдарян include reeds, grasses, sedums, and sedums.

There are few plants left in the Aral Sea, which has recently been replanted. They are all halophytes: jıñgıl, júzgin, sora, selew hám, etc. The most important of the poplar-like plants is the black type of this species.

Juzgun roots grow sideways up to 20 m and retain sand to a certain extent. Selenium from perennial grasses is of particular importance in strengthening sands. It prevents the movement of sand with its spreading roots and above-ground parts (stems) and creates conditions for the growth of other plants (juzgun, saxaul, etc.). Also, a perennial ephemeral plant adapted to growing in sand

- ilok - reproduces by root cuttings. In the short spring months, it grows rapidly, blooms, and bears fruit.

The gypsum desert includes some areas (massifs) located in Ustyurt, southwestern and northwestern Kyzylkum. The flora of the gypsum desert is not very rich in species. The formation of the plant formation (community) is mainly participated by species belonging to the salt family. In particular, from semi-shrubby shrubs, such as buyurgun, voyalich, and annual salt grasses (fish-eye), white wormwood belonging to the wormwood family, and ephemerals can be found in large numbers.

Plants vary depending on the amount of salts in saline soils. Wet, stony, and light saline soils are very unfavorable for plant development. However, in some places, plants such as sarisazan, qilyshora, karabarok, shahilak, aqbosh, buzakbosh, donashor, shora, ajriq are found. In general, the number of species growing in such conditions is more than 100. Plants widespread in the shorahoks include many representatives of the shorahoideae family (fish-eye, rabbit-ear, black shora), as well as saxaul (both species). They have adapted to growing in the harsh (hot and dry) conditions of the desert in different ways, that is, some have leaves and stems that are serrate, while others have leaves that have turned into thorns or have no leaves at all.

Plants are very rare in places that were once under shallow water - takirs. Only in some cases can you see some ephemeral plants and grain shora emerging from the cracks of the takir. Such bald spots exist in the Kyzylkum desert.

Groves are located along the banks of rivers (especially the Amu Darya and Syrdarya) of various widths and lengths. In the groves, mainly trees, shrubs and perennial herbs are widespread. Of the trees, poplar (from the poplar family), poplar, several representatives of the willow family; of the shrubs, yulgun; of the perennial herbs, sweet myrtle, some species of yantoq, reed, male reed, and famatsia grow.

The foothill plains are mainly covered with annual and perennial herbs. Trees are not found here. Some shrubs are found around the riverbeds where spring rainwater flows. Ephemeral and ephemeroïd plants are widespread in the foothill plains, forming their own groups and associations (tribes).

Annual plants (ephemerals) develop in the fall when the weather is warm and humid, and continue to grow in winter at different rates depending on the weather. Development is much more rapid in the southern regions. Ephemerals bloom and bear fruit in a relatively short time, as early as March-April. Ephemeroïds (perennial herbs), like ephemerals, grow and develop in autumn, winter and spring, depending on the weather. However, the life processes of bulbous and rhizomatous ephemeroïds continue underground in autumn and winter. For example, tulip buds



are formed under the soil.

A number of species belonging to the order of the sedge and the sedge are the most common ephemerooids. In addition to these, you can also find isryk, some species of wormwood, and kovrak. Desert plants. The western part of Central Asia is a vast plain, with sandy, stony (sandy), and clayey deserts. Much of the land, especially the low-lying clayey lands, is occupied by salt marshes, where saline plants grow.

Sandy desert plants. In Central Asia, sandy deserts occupy large areas of the Borsik desert, the Moyinkum, Karakum, Saryksuv and Balkhash-boy sands, the Aral-boy Karakum, the Unguzorty Karakum and the Kyzylkum.

In most of the sandy deserts, plants growing in the sand are abundant: from trees, white saxaul (sometimes reaching 6-7 meters in height), large juzgun. From shrubs, sand acacia, from undershrubs, wormwood, ivy and saltbush are very common. Here, among the grasses, there are many sedges, tulips, bougainvillea, and from legumes, sedges, and forbs.

Stony, that is, girshy deserts occupy a smaller area. They occupy vast areas in the Ustyurt, Korsakboy, Betbakdala, Mangishlok, Karakum, Kyzylkum, and the foothills of the mountains.

Plants in stony deserts are sparse, and only plants such as wormwood, dwarf-shrub saltwort, tuyatovan, kermak, toshbakatol, and kavrak grow. Wormwood is common. Salt-tolerant desert plants. In saline soils, mainly some species of saltwort grow: annual saltwort, black bargot, red saltwort, and the dwarf-shrub sari-sazan, as well as ajryk, black saxaul, and burgan.

Loess desert or ephemeral desert plants. Ephemeral deserts are widespread in the foothill plains of the eastern and southern parts of Central Asia, where there are thick layers of loess. They are found in Mirzachul, in the Zarafshan Valley, in the Badkhiz Desert, in front of Kopetdag, between the Murghab and Amu Darya rivers, on the Keles plain near Tashkent, as well as in the foothills of the Kashkadarya and Surkhandarya rivers on thick loess soils.

In the ephemeral deserts of Central Asia, sedges and sedges are more common than other plants. Here grow sedges, bearberry, sedge, sedge, sedge, tulips and some other plants.

Forest plants. Forest plants grow abundantly in the river valleys and along the banks of lakes in the plains of Central Asia. In these places, the sufficient availability of moisture, heat, light, and nutrients has created a unique natural complex - forests. 3 types of plants grow in forests: trees, shrubs, and herbs. Of the trees, mainly willow, willow, and willow are the most common. Shrubs include yulgun, gingil, and whitethorn. In the moist lands of the lower part of the forests, mainly reeds or sedges grow, and in higher and drier lands, large flowering plants - savachop, aqbosh, yantok, licorice, and other herbs grow.

**REFERENCES**

1. Гаращенко А.В. Флора и растительность Верхнечарской котловины (Северное Забайкалье). Новосибирск, 1993. 280 с.
2. Грубов В.И. Определитель сосудистых растений Монголии. Л., 1982. 443 с.
3. Губанов И.А. Конспект флоры Внешней Монголии (сосудистые растения) / Под ред. Р.В. Камелина. М., 1996. 136 с.
4. Губанов И.А. Дополнения и исправления к “Конспекту флоры Внешней Монголии (сосудистые растения)” // Turczaninowia. 1999. Т. 2, вып. 3. С. 19–23.
5. L.A.Alibekov, Nishonov. S.A “Tabiatni muhofaza qilish va tabiiy resurslardan ratsional foydalanish”. Toshkent. “O’qituvchi” 1983 yil.
6. P.Baratov “O’zbekiston tabiiy geografiyasi”. T.: “O’qituvchi”, 1996.
7. P.Baratov, M.Mamatqulov “O’zbekiston tabiiy geografiyasi”. T.: “O’qituvchi”, 2000.