

**FLORA OF SEMIDESERT  
AND DESERT AREA  
OF WESTERN-KAZAKHSTAN REGION**

Esmagulova B.Z.

*Western-Kazakhstan agrarian-technical university  
of Zhanghir khan, e-mail: bayana\_021284@mail.ru*

Vegetative surface of Western Kazakhstan is defined by a great diversity. It is related to variety of the very conditions of plants' existence, multiplicity of soil-climate areas and sub-areas. On the whole, vegetation of the research area can be referred to two zone types: in the North – to desert-steppe (semidesert) type, and in the South – to desert type.

Absinthial associations mostly dominate in vegetative surface of semidesert. White *Artemisia* is widely spread and possesses many feeding qualities, especially in combination with bluegrass, summer cypress, and wheat grass [4]. At the same time, *Selina*, *Agriophyllum*, blady grass usually grow at the surface of quicksand, and sand *Artemisia*, Siberian bluegrass, red *Artemisia*, feather grass, targa, calligonum, etc. grow at more fixated surfaces. In kettles among sands, where ground waters are located close to surface, insignificant tangles of trees and bushes can be found, especially Tamarisk. There are usually no trees in low areas between ridge sands; plain areas are covered with *Artemisia* and mixed herb vegetation, such as izon, shagyr, ebelek, terexen. Just as in sand, spots of swampy and sometimes even dry alkali soils, wastes, and naked takyr can be found in clay deserts. They are the most sterile locations in the desert, often have no vegetation at all, and only small separate areas of them are covered with juicy glasswort (*sarzasan*, fat glasswort, saltpetrous grass, seepweed, *petrosymonia*) [1]. Calligonum associations have the greatest nutritional value for cattle.

Desert communities have a weak density of surface level, here suffrutescent such as *Artemisia* *Lercha*, black *Artemisia* dominate here, and in sands – *Artemisia* of Chernyayev (sand *Artemisia*).

Travosta of desert area saline soils is represented by associations of *biyugun*, grey *Artemisia*, and white *Artemisia*. Covered surface in communities of *biyugun* varies from 30% to 60%.

In Zhalgan region there are vast massives of scattered sands that are at one of initial stages of overgrowing and are being covered with rare bushes of blady grass or more or less dense bushes of chagyr. Efficiency of such pastures equals approximately 3–3,5 center of hay hectare [3].

*Artemisia*-less deserts are the most widespread, and it is related to a high level of soil alkaline. They are associated with flat areas with loamy brown soils as well as soils of light mechanical composition, as well as sands [2, 3]. Aside from *Artemisia* here we can find *anabasis*, *ebelek*, sheep fescue, desert

blady grass, branched sedge, hair-like and Sareptsk feather grass, etc., and during spring rather many of ephemers emerge. This fact defines spring-autumn use of these pastures, and mostly young branches are consumed, they form 40% of total bush mass. Sand *Artemisia* deserts usually develop at uneven sands. *Psammophilous* grass and grain usually participate in them, they can be also combined with bushes (*tamarisk*, leafless *calligonum*) and baldy grass bushes in sand dune areas and *Artemisia*-less, *erkerk*-*Artemisia*-less, *ephero*-*Artemisia*-less communities at sand and subsand soils at plains, uneven, and small-bump sands [2, 3].

Thus, for all studied regions (*Bokeyordinskiy*, *Zhangalinskiy*, *Karatobinskiy*) kind composition of vegetation is the same, only stages of sand overgrowing with grass and wood-bush vegetation can vary. In lowlands, where depth of ground waters reaches 4 m, tree standings can be found, they are usually formed of *oleaster*, *cottonwood*, *pine trees*, and other breeds, and this fact, of course, plays a significant part in forest industry of the studied regions.

#### References

1. Geographic essays of watering area in relation to construction of Stalingrad hydroelectric complex. – Alma-Ata: Ed. office of Science academy of Kazakh SSR, 1951. – P. 14–15.
2. Monuments of natural and historical-cultural heritage of Western-Kazakhstan region. *Zhangal region* [Text]: Volume VIII / ed. by M.N. Sydykov – Uralsk, 2008. – P. 138–162.
3. *By-Ural* [Text]: ed. by A.Z. Petrenko, M.M. Fartushin, A.V. Potyanin, B.K. Suleymenov, S.S. Kadrallyev, I.M. Mukhanbetaliyev, Z.M. Turemuratov. – Uralsk: “Dastan”, 2001, P. 31–78.
4. Yundin I.A. Herbs (Characteristic and methods of using pastures and hayfields of Kazakhstan). Brief essay [Text] / I.A. Yundin. – Alma-Ata: Kainar, 1968. – 32 p.

The work is submitted to the International Scientific Conference “Ecology and environmental management”, Israel (tel Aviv), Feb 20–27, 2017, came to the editorial office on 13.02.2017.

**MORPHOMETRIC SIGNS OF THE LEAF  
PLATE OF POPLAR (*POPULUS NIGRA* L.),  
MARPLE (*ACER PSEUDOPLATANUS* L.),  
LIME-TREE (*TILIA PLATYPHYLLOS* SCOP.)  
IN THE CITY OF ROME (ITALY)**

<sup>1</sup>Kulagin A. Yu., <sup>2</sup>Tagirova O. V., <sup>3</sup>Rashitova R. S.

<sup>1</sup>*Ufa Biology Institute of Russian Academy  
of Sciences, Ufa, e-mail: olecyi@mail.ru;*

<sup>2</sup>*Bashkir State Pedagogical University  
named after M. Akmulla, Ufa*

Italy is a typical Mediterranean country located in the central part of Southern Europe. It spreads from a forest temperate zone (in the north) to a subtropical zone (in the south). It is located on the Apennine Peninsula which is surrounded with water