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Dynamic Changes of Vegetable Cover under Act of Anthropogenic and Technogenic Factors in the Conditions of Karakalpakstan

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Abstract: ***In article the comparative analysis of a current state of flora of Karakalpakstan on areas of growth is considered. The shape of flora is defined in many respects by the endemic plants which are its part. In total for the territory of the Republic of Karakalpakstan together with adjacent areas 176 endemic are allocated.***

Keywords: Republic of Karakalpakstan, flora, endemic plants

1. Introduction

Problem of guard and rational use of environment require the deep study of processes in the ecosystems, exposed to anthropogenic influence. Presently as a result of the inefficient use of water resources, excessive anthropogenic loading, exceeding the threshold of stability of natural ecosystems, the process of anthropogenic desertization of territory develops in Southern Priaralie (on the example of Republic of Karakalpakstan), that is a complex of the degradation processes, related to the decline of the biological productivity of ecosystems, impoverishment of vegetable specific composition, solinization, deflation of soils and other negative phenomena [1, 3].

A technogenesis is totality of processes, arising up and developing in natural ecosystems under act of building and use of engineering building, their complexes, and also the technical equipments applied at their creation. Influence of technogenesis on a vegetation is the difficult system of different processes. A technogenesis renders the strong operating on a vegetable cover. Influence it is varied and studied not sufficiently [3]. The phenomenon of technogenesis is investigational not sufficiently in the arid landscapes of Karakalpakstan.

2. Material and Methods

Every natural complex has the characteristic vegetable associations and, in this connection, specific composition of fauna and state of populations of animals. Presently, because of drying out of the Aral Sea area, the balance of ecosystem of Southern Priaralie is distorted, pressing on natural complexes here arrives at emergency force, everywhere there are an anthropogenic desertization and aridization.

On the first stage studied the ecological structure of territory on that research was assumed. Distinguished the basic general groups of ecosystems- Tugay, sandy-loam-loamy, sandy, gipseous and salt-marsh deserts. Further conducted an embryonization on signs, i.e. geomorphological signs and prevailing of phytiums or their groups on classification of K.Z. Zakirov (1978). The next stage of researches were collection and systematization of information about technogenic processes developing on investigational territory.

3. Results and discussion

Presently actuality of regional floristic researches increases for territories of the intensive economic use. Basic aspect of vegetation of plateau Usturt in Southern Priaralie is a small number of kinds in a flora and their dynamic quality. As a result of it numerous ecological niches remain unfilled, and present instability of ecosystem on the whole.

Flora of Usturt counts about 600 types of higher vascular plants among that basis is made by a pigweed (20%), cereals (10%) and cruciferous (9%), constituents together more than half of all specific variety of flora; leguminous, borage, clove, liliaceous and buckwheat together make about 20% [2, 4].

In a climatic relation Usturt is a difficult and original object, on territory of that a continental climate dominates sharply. The maximal temperature of air in July arrives at more than 47°C the average monthly temperature of July and August 30°C. Winter is cold, average monthly to the temperature of January - 12,9°C, in separate days arrives at to more - 30°C fogs, ice-storm, snow-storms and short period of time thaws, are frequent In winter annual amplitude of temperatures for central part of Usturt 36-38°C, the fall amount of atmospheric fallouts on a south makes a 90 mm, in the north – 120 mm [3, 4].

The vegetable world of Usturt is poor enough. Half is bushesis most widespread here are different types of *Artemisia absinthium, Anabasis salsa, Halocnemum*. From arboreal breeds here a *Haloxylon* grows only as small and rarely sparse groves, many of that remind rather shrub, than arboreal, planting. Last years here found out the rare jungles of *Populus diversifolia* [4, 5].

The vegetable cover of steppificated valleys very declivous and shallow is presented mainly by *Artemisia absinthium* -

saltwort associations with cereals, first of all by feather-grasses; placed there are steppe bushes and different herbares. Takyrs is especially characteristic for the landscapes of South Usturt. They have a pied enough vegetation [2, 5]. If the takyrs lowering is deeply cut in and the small lenses of underwaters appear under him, then on such takyr a camel thorn overgrows thickly. Meet on takyrs and *Capparis spinosa* is a bush with beautiful white colors. Therefore among Anabasis salsa of the gipseous desert of takyrs of South look very picturesquely.

Characteristic for Usturt internal-drainage cavities arrive at enormous sizes sometimes. For example, the famous cavity of Barsakelmes occupies an area about 2000 apt. kilometer, and one of the littlest – Shakhakhta - approximately 45 apt. km It is the most difficult of access and insufficiently known areas of Usturt [2, 5].

In general complication for territory of Republic of Karakalpakstan together with contiguous districts 176 endemics [4] is distinguished. From them karakalpak endemics 9 types and subendemics are 167 types (about 18% of all flora of Karakalpakstan) [1, 4]. The basic representatives of group of karakalpak endemics are the following: *Anabasis ebracteolata, Salsola deserticola, Salsola chivensis, Eryngium mirandaum, Ammodenron longiracemosum, Lappula parvula, Scorzonera bungei, Cousinia dolichoclada, Cousinia dolichoclada, Jurinea longicorallaris.*

Presently anthropogenic affecting vegetable cover of plateau Usturt was caused by the changes of natural vegetation. The modern dynamics of vegetable associations is related to anthropogenic influence. She is determined by the changes of graphic terms, under influence of technogenic factor, and also unsystematic pasture on a background the general aridization of climate. By basic anthropogenic factors influencing on the ecosystems of Usturt are an unsystematic pasture of cattle and technogenic factor [3]. They cause forming of man-made ecosystems, technogenic destructions of gypsiferous, destruction of surface of takyrs, and also origin of technogenic takyrs and saline lands.

Thus, basic threats for biodiversity of the vegetable world of Usturt reduction and crushing of habitats, unsteady use of pastures are considered, increase industrial mastering secret service exploitation of natural gas building of the claotype and asphalt-paved roads etc. Examining a plateau Usturt as standard to territory of the deserted area, we do not suggest to organize the guard of botanical objects with the purpose of maintenance of gene pool and biological variety of the deserts.

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