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Research Article

ANALYSIS OF NATURAL MEDICINAL PLANTS OF THE REPUBLIC OF KARAKALPAKSTAN BY ECOLOGICAL GROUPS

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ABSTRACT

The article discusses analysis of natural medicinal plants of the republic of Karakalpakstan by ecological groups.

KEYWORDS

Ecological groups, Karakalpakstan, natural medicinal plants.

INTRODUCTION

The growth of plants in the territory of Karakalpakstan is greatly influenced by various environmental factors, soil-climate and annual weather conditions, the drying up of the Aral Sea, that is, the large-scale soil salinization and drought that took place in the last 20 years.

Currently, 444 species of medicinal plants belonging to 63 families and 240 genera grow naturally in the territory of Karakalpakstan. They make up 40% of the flora of this area as naturally growing medicinal plants [1;7;8;9].

The main results and findings

From the works of a number of scientists, namely R.D. In Melnikova [4], N.I. Akzhigitova [2;3.], Halophyta occurring in saline soils, I.F. Momotov [5] Gypsophyta, Z.A. Maylun [6] used the sources of the forest. According to the analysis of available scientific sources and the results of our scientific research, when 444

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medicinal plants were ecologically analyzed, it was found that they belong to the main 5 ecological groups. The results of the analysis of the obtained data are presented in Table 1.

1-Table

Ecological analysis of medicinal plants of the Republic of Karakalpakstan

№	Groups	Number of species	In relation to the general flora of medicinal plants, in %
1	Psammophytes	249	56,0
2	Petrophytes	159	35,8
3	Gypsophytes	143	32,2
4	Halophytes	117	26,35
5	Forest plants	112	25,22

According to the data presented in Table 1, the group of psammophytes made up 56% of medicinal plants with 249 species. This group includes plants adapted to grow in sandy soils. Of the 249 species belonging to this group, 67 species grow in gypsophitic soils, 62 species in petrophytic soils, 43 species in halophytic soils, and 15 species grow in forests.

When analyzing plants belonging to the group of psammophytes in Karakalpakstan by families, we found 40 species from the Asteraceae family, 40 from the amaranth family, 17 from the legume family, 13 from the cruciferous family, 12 from the bluegrass family, 10 from the Boraginaceae family, 9 from the Apiaceae family , 9 from the family Poaceae, etc. the entry of the species has been determined. These are Ferula foetida, Artemisia scoparia, Cirsium ochrolepideum, Descurainia sophia, Anabasis salsa, Atriplex sagittata, Chenopodium rubrum, Centaurea squarrosa. Plants of this ecological group are distributed over a wide range.

Plants of the petrophyte group rank second with 159 species and account for 35.8%. Of the 159 species included in this group, 88 species are adapted to grow on psammophytic soils, 40 species are adapted to grow on gypsum soils, 30 species are adapted to halophytic soils, 30 species are adapted to grow in forests. When analyzing these plants by families, it was found that they belong to Amaranthaceae - (21 species), Asteraceae - (19), Fabaceae - (14), Boraginaceae - (10) and others. Representatives of this

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family include: Amberboa turanica, Lactuca serriola, Scorzonera gageoides, Anabasis eriopoda, Chenopodium album, Gamanthus gamocarpus, Asperugo procumbens, Astragalus flexus and others.
In third place is the group of gypsophytes (143; 32.2%). Of these, 67 species grow in sandy areas with psammophytes, 36 in saline areas with halophytes, 53 in stony areas with petrophytes, and 18 in forests. In the first place are Amaranthaceae - a family (30 species), Asteraceae - (16), Polygonaceae - (13), Brassicaceae - (8), Fabaceae - (8). Representatives of these families include the following. Examples include: Anabasis salsa, Chenopodium album, Acroptilon repens, Capsella bursa-pastoris and others.

It has been established that medicinal plants naturally growing in the region belong to 5 ecological groups: psammophytes, petrophytes, halophytes, gypsophytes, forest plants, most of them belong to psammophytes, due to their ability to adapt to the soil and climatic conditions of the region. . It should be noted that some plant species are found in different environmental conditions.

The classification of plants of Karakalpakstan into ecological groups is based on the works of a number of scientists, namely N.I. Akzhigitova [2] Halophyta found in saline soils, N.I. Akzhigitova [3] used sources of halophyte plants from Central Asia.

According to the analyzed data, the group of halophytes accounted for 26.35% of medicinal plants with 117 species. This group includes plants adapted to living in saline soils. Of the 249 species belonging to this group, 47 species are found in sandy areas, 36 in saline gypsum, 37 in rocky lands, and 23 in forests. When analyzed by families Amaranthaceae - (40 species), Asteraceae - (13), Poaceae - (6), Tamaricaceae - (6), Brassicaceae - (5), Fabaceae - (5)the family is identified as the lead. Examples of this group and members of families include the following species: Eminium lehmannii (Bunge) O.Kuntze, Agriophyllum latifolium Fisch. & C.A.Mey., Amaranthus albus L., Anabasis aphylla L., Anabasis brachiata Fisch. & C.A. Mey. ex Kar. & Kir., Anabasis eriopoda (Schrenk) Paulsen, Anabasis salsa (Ledeb.) Benth. ex Volkens, Atriplex calotheca (Rafn)Fries, Atriplex patula L., Atriplex sagittata Borkh. Atriplex sibirica L. Atriplex tatarica L. Camphorosma lessingii Litv. Chenopodium album L. Chenopodium urbicum L. Climacoptera transoxana (Iljin) Botsch. Gamanthus gamocarpus (Moq.) Bunge, Girgensohia oppositiflora (Pall.) Fenzl, Halocharis hispida (Schrenk ex C.A. Mey.) Bunge, Halocnemum strobilaceum (Pall.) M.Bieb., Halothamus glaucus (Bieb.) Botsch., Halothamus iliensis (Lipsky) Botsch., Haloxylon persicum Bunge, Kalidium capsicum (L.) Ung.-Sternb., Kochia iranica Bornm., Nanophyton erinaceum (Pall.) Bunge, Salsola dendroides Pall., Suaeda altissima (L.) Pall., Asparagus officinalis L., Koelpinia linearis Pall., Artemisia songarica Schrenk it is permissible to cite Artemisia songarica Schrenk C.AMey. Medicinal plants belonging to this ecological group are distributed in a wide range.

CONCLUSION

In conclusion, when analyzing medicinal plants of Karakalpakstan by ecological groups, the fact that 93 species can grow on psammophytic, gypsum-phytic, petrophytic, halophytic and forest soils indicates a wide range of distribution of medicinal plants throughout the region, which corresponds to the soil and climatic conditions of the region.

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