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MOUNTAIN ELEMENTS IN THE FLORA OF BUKANTAU

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ANNOTATION

The article discusses the features of mountain elements in the flora of Bukantau. In general, the mountain elements that are still preserved here in remnants are only a reminder of the mountain floras that once dominated here. Now these floras represent the flora of rocky deserts (hamada), which is being replaced by psammophilous groups due to the intensification of xerophilization processes

KEY WORDS: *salt marsh, psammophilus, flora, element, ridge, genus, family.*

The Kyzylkum Desert is located in the interfluve of the great Central Asian rivers Amu Darya and Syr Darya on an area of more than 300,000 sq. km. In the east, it abuts the western spurs of the Pamir-Alai (Pistalitau, Nuratau and Aktau ridges), ending in the southeast with the Sundukli sands. Along with the existing saline depressions (up to -17 m below sea level), Kyzylkum is characterized by the presence of 18 low-mountain remnant meridional ridges (Sultanuizdag, Aktau, Altyntau, Muruntau, Sangruntau, Dzhetimtau, Kazakhtau, Karaktau, Kokchatau, etc.). One of the highest among them is Bukantau (764 m), located in the north of Kyzylkum and composed of highly dislocated and metamorphosed Paleozoic shales.

P.K. Zakirov (1971) studied the flora and vegetation of the remnant lowlands of Kyzylkum (together with the flora of Nuratau) and estimated the flora of this desert to be 983 species of vascular plants belonging to 412 genera and 65 families. The reliability of these data raises very serious doubts, since they reflect a more deserted part of it. Undoubtedly, such a large number of taxa is due, first of all, to the presence of a whole network of remnant lowlands. The largest number of mountain elements has been preserved in Kuldzhuktau and Bukantau.

The species *Rhamnus coriacea (Regel) Kom*, previously given erroneously for Kyzylkum. - this is actually a well-separated race close to the Iranian bush *Rh. aff. sintenisii Rech. f.* Endemic species *Stipa aktauensis Roshev*. represents a Western Tien Shan relationship, and the remnant species *Silene tomentella Schischk.* and *Lepidium subcordatum Botsch. et Vved.* also show Mountain-Central Asian kinship.

Endemic umbrella species *Ferula kysylkumica Korovin* and the recently collected *Ferula aff. tenuisecta Korovin* also gravitate toward Western Tien Shan species. There is no doubt that the latter species is one of the few Western Tien Shan derivatives of the low-mountain semi-savannas that once dominated the remnants of central and northern Kyzylkum.

Allium rinae F. O. Khass., Shomuradov et Tojibaev, recently described from here, is a related group with the central mountainous Central Asian species *A. filidens Regel.* Another petrophytic endemic, *Astragalus holargyreus Popov,* belongs to the Caucasus-Central Asian-Dzungarian section *of Laguropsis Bunge.*

In 2010, several non-flowering plants of the monotypic petrophytic Khorasan-Mountain Central Asian genus *Chalcanthus Boiss were found here. (Ch. renifolius Boiss.).* Another endemic recently described from Bukantau, *Convolvulus afanassievii Luferov*, is close to the South Pamir-Alai *C. tujuntauensis Kinzik.*

As the remnant mountains move away to the north and northwest, the flora becomes much poorer and mountain ephemeral species are no longer present. Another remnant endemic is *Lagochilus vvedenskyi Kamelin et Zuckerw.* - also shows Western Pamir-Alai kinship.

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***Fig 1. Allium rinae* F.O.Khass., Shomuradov & Tojibaev**



***Fig 2. Astragalus holargyreus* Popov**



***Fig 3. Lepidium subcordatum* Botsch.et Vved.**

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Thus, the mountainous Central Asian floristic elements in the flora of the remnants of Kyzylkum have not yet disappeared, despite the strong aridization of the climatic situation observed throughout the territory of Turan. If we analyze the endemism of the floras of the remnants of Kyzylkum each separately, then only for Sultanwise 3 strict endemics out of 444 species were noted.

In Bukantau the number of endemics is greatest - 6 (out of about 500 species), and in Kuljuktau (about 600 species) - only 4 species. For Tamdytau, only 2 species are strictly endemic. Two species are also endemic to Kokchatau. In total, 31 endemic species were registered for all remnants, which is almost 2/3 of all endemics of Kyzylkum.

Thus, this endemism, despite its fairly high percentage (3.9%), cannot be compared with that of the Mountainous Central Asian province and its individual floristic districts and even regions. Moreover, this endemism has a young, progressive character based primarily on the Western Pamir-Alai and Western Tien Shan floras. On the other hand, endemic and, in particular, subendemic taxa (in fact, endemics of the Turanian province) undoubtedly define the core of the Kyzylkum flora as a relict desert flora, associated with African floras through Asia Minor.

The extra-arid lowlands proposed by Kamelin (1990) unite all available remnants within Turan. The floras of the variegated low mountains of the western part of the Fergana Valley undoubtedly gravitate towards those of the Turkestan and Kuraminsky ranges, just as the low mountains of Mangyshlak and Krasnovodsk, together with the Small Balkhan, are floristically close to the Kopetdag. In general, the mountain elements that are still preserved here in remnants are only a reminder of the mountain floras that once dominated here. Now these floras represent the flora of rocky deserts (hamada), which is being replaced by psammophilous groups due to the intensification of xerophilization processes.

BIBLIOGRAPHY

1. *Geldikhanov A. Flora Garakumov.: Author's abstract. dissertation d.b. n. Ashgabat, 1995, 34 p.*
2. *Granitov I.I. Vegetation cover of the southwestern Kyzylkum. Tashkent: FAN, 1964, T. 1, 417 p.*
3. *Zakirov P.Z. Botanical geography of the low mountains of Kyzylkum and the Nuratau ridge Tashkent: FAN, 1972, 417 p.*
4. *Kamelin R.V. Florogenetic analysis of the natural flora of Mountainous Central Asia. L.: Nauka, 1973b, 356 p.*
5. *Kamelin R.V. Flora of the Syrdarya Karatau. L.: Nauka, 1990, 145 p.*
6. *Khasanov F.O., Serekeeva G., G. Kadyrov. A new species of the genus Scrophularia from Bukantau // DAN, 2010, 2, pp. 76-77.*