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Species of the genus *Allium* L. of the western part of the Kyrgyz Alatau ridge: the current status and prospects of studying

The results of the assessment of the current state and prospects for the study of species of the genus *Allium* L. in the western part of the Kyrgyz Alatau ridge are presented. It was found that in the herbarium fund (AA) the most part (57 %) of specimen collections of *Allium* L. species falls on the periods from 1947 to 1960, further on descending 24 % of collections — in 1984–1985. The share of scattered collections is 12 %, the share of modern collections is insignificant (7 %). The preliminary list of studied species of *Allium* Kyrgyz Alatau is represented by 27 species. In 5 gorges of the western part of the Kyrgyz Alatau ridge, locations, phytocoenotic and altitudinal distribution of 7 species were revealed. Commercial thickets are formed by *A. atrosanguineum* (Kaskasu gorge) and *A. longicuspis* (Sugaty gorge). The identified species occur as part of herbaceous-grass, herbaceous-shrubby-cereal grass, petrophytic-herb-grass-shrub, petrophytic-tree-shrub communities and grow in the altitude range from 1200 to 3390 m above sea level. *Allium caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. longicuspis, A. margaritae* are found in the low and middle mountains from 1170 to 1660 metres above sea level. The high-altitude species is *A. atrosanguineum*, occurring in the altitude range of 2520–3390 m above sea level. Maps of the locations and potential harvesting sites of the identified *Allium* species of the study region were compiled.

Keywords: genus *Allium* L., species diversity, Kyrgyz Alatau ridge.

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Introduction

The Global Strategy for Plant Conservation [1] pays special attention to solving the issues of regional research on the inventory of species composition, identifying places of concentration of rare, endemic, relict, and economically valuable species, as well as measures to preserve botanical diversity (specific territories).

Among the economically valuable plants of Kazakhstan, wild onions are characterized by significant species diversity, wide distribution and resource potential.

At present, the genus *Allium* L. (Amaryllidaceae J.St. -Hil.) has about 1000 species [2]. About one third of onions are identified in the mountains of the Tien Shan, which is the world's largest center of onion diversity. *Allium* L. is listed in 16 major genera and is represented by 56 Tien-Shan endemics [3], of which from 9 to 21 endemic species are indicated for the territory of Kazakhstan [4, 5].

Current literature data indicate that *Allium* L. species are characterized by pronounced antioxidant properties and are promising for use in the treatment of cancer and cardiovascular diseases [6–16].

Predation of wild onions because of their ornamental, food, melliferous and medicinal properties and economic activities, including intensive grazing within their range have led to a decrease in the number of onions. The Red Data Book of Kazakhstan includes 12 species [17].

The results of a previously published review on the degree of study of 134 Kazakhstani onion species, about half of which were tested in culture, indicate the prospect of their comprehensive study in theoretical and practical terms [18].

The Kyrgyz Alatau ridge is characterized by a transitional composition of flora and a special set of species, which is associated with its location at the junction of large mountain systems of the Tien Shan. An integrated approach to their study will provide new fundamental knowledge as a scientific basis for sustainable use, conservation of plant resources and forecasting of environmental protection activities in the region.

The objects of our research are species of *Allium* L. of the Kyrgyz Alatau ridge, located within Kazakhstan.

The aim of the present research: assessment of species composition, distribution and current state of natural populations of onions of the western part of the Kyrgyz Alatau ridge for their conservation and sustainable use.

Experimental

Herbarium collections (Herbarium AA) and natural populations of onions growing in the western part of the Kyrgyz Alatau ridge served as the material for research.

The research area — the Kyrgyz Alatau ridge is located within the Zhambyl, T. Ryskulov and Merken administrative districts of Zhambyl region, characterized by a variety of relief, soil and vegetation cover, represented from high-altitude subalpine and alpine vegetation to psammophilic vegetation of Moyinkum sands.

The Kyrgyz ridge is located within the Kyrgyz Mountain Subprovince, which is part of the Dzungaro-North Tianshan Mountain Province [19].

Common methods of botanical and cartographic research were used in the work.

Classical geobotanical methods [20–22] were used in the expedition studies. Determination of plant species was carried out according to floristic summaries: "Flora of Kazakhstan" [23–31], "Illustrated identifier..." [32–33]. The taxonomy of species is agreed with the Internet resources: Plantarium [34] and Plants of the World Online (POWO) [35], but the authors adhere to their own point of view on the species affiliation of some taxa. The distribution of the studied species by nature of use and pharmacological action was carried out according to the multi-volume summary: "Plant Resources..." [36–38], "Wild Usable Plants of Russia" [39], "Annotated list of medicinal plants of Kazakhstan" [40].

The digital geographic base of 1:2500000 scale of FGBU "VSEGEI" was used as a cartographic basis for mapping, and updated by the authors' own efforts. Coordinates of the area, where the locations of bows were identified, were recorded in the field using GNSS-navigator "Garmin". To create maps of locations of fishery arrays, the coordinates obtained with the help of the navigator were plotted on the map base and processed in ESRI ArcGIS Desktop 10.8 software.

Results and Discussion

To identify species diversity and compile a preliminary list of onions of the studied region, including rare and endemic representatives, as well as their potential locations, we screened available herbarium material, literature and field data, and Internet resources. Field studies were carried out, primary material was collected and locations of identified *Allium* L. species of the study area were mapped.

As a result of screening of herbarium materials of representatives of the genus *Allium* L. of the Kyrgyz Alatau in the herbarium collection (AA), 82 specimens were reviewed, including 3 specimens of the rare species *Allium suworowii* Regel [17] (Fig. 1).

Analysis of the herbarium specimens viewed showed that the majority of herbarium specimens (19 or 23 %) represented the species *A. barsczewskii* Lipsky. For other species, the number of herbarium specimens varies from 2 to 7: *A. caesium* Schrenk, *A. fetisowii* Regel — 7 (8.5 %), *A. caeruleum* Pall. — 5 (6.1 %), *A. trachyscordum* Vved., *A. karataviense* Regel, *A. hymenorhizum* Ledeb., *A. atrosanguineum* Kar. et Kir., *A. platyspathum* Schrenk, *A. caricifolium* Kar. & Kir. (syn. *A. pallasii* Murray), *A. oreoprasum* Schrenk — 3 (3.6 %), *A. parvulum*, *A. oreophilum*, *A. oreoprasoides* Vved. — 2 (2.4 %). Eight species (1 (1.2 %) herbarium specimen each) are represented in the lowest number: *A. obliquum* L., *A. turkestanicum* Regel, *A. semenovii* Regel, *A. longicuspis* Regel, *A. kokanicum* Regel, *A. schoenoprasum* L., *A. longiradiatum* (Regel) Vved. It was revealed that the most part (57 %) of collections of species of the genus *Allium* L. falls on the periods from 1947 to 1960, further in descending order 24 % of collections — on 1984–1985. The share of collections of different years is 12 %, modern collections — insignificant (7 %).

To compile a preliminary list of species of the genus *Allium* L. in the Kazakh part of the Kyrgyz Alatau ridge, the analysis of available data on onions occurring in the Kyrgyz Alatau was continued. Comparison of published data on the distribution of species of the genus *Allium* L. according to floristic summaries [24, 32, 41]; Internet resources [34] and herbarium data (AA) showed that for 7 species (*A. caeruleum* Pall. *A. obliquum* L., *A. oreoprasoides* Vved., *A. turkestanicum* Regel, *A. longiradiatum* (Regel) Vved., *A. suworowii* Regel, *A. caricifolium* Kar. & Kir. (syn. *A. pallasii* Murr.) found new localities on the territory of the Kyrgyz Alatau that not indicated in the literature sources. At the same time, the onion species of the Kyrgyz ridge *A. altissimum* Regel and *A. leptomorphum* Vved. indicated in the literature sources are absent in the herbarium collection (AA) (Table 1).

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Figure 1. Herbarium specimens of some species of the genus *Allium* collected in the Kyrgyz Alatau

According to the "Flora of Kazakhstan" [24] there are 12 species of onions in the Kyrgyz Alatau; in the "Illustrated Plant Identifier of Kazakhstan" [32] there are 15 species; in the "Plant Identifier of Central Asia" [32] there are 15 species of onions; in the "Plant Identifier of Central Asia" [41] — 17 species [41]. The localities of *A. margaritae* B. Fedtsch. in the Kyrgyz Alatau are also absent in published sources (Table 1).

In the Red data book of Zhambyl region [42], out of 5 specified representatives of the genus *Allium* L. (*A. galanthum* Kar. & Kir., *A. longicuspis*, *A. kasteki*, *A. karataviense*, *A. turtschicum*), only one rare species *A. karataviense* is listed for the Almalysai gorge of the Kyrgyz Alatau.

Based on screening of available herbarium material and analysis of published data, a preliminary list of species of *Allium* L. Kyrgyz Alatau is represented by 27 species was compiled: *Allium altissimum* Regel, *A. atrosanguineum* Schrenk, *A. barsczewskii* Lipsky, *A. caeruleum* Pall., *A. caesium* Schrenk, *A. caricifolium* Kar. & Kir. (syn. *A. pallasii* Murray), *A. dasyphyllum* Vved., *A. fetisowii* Regel, *A. hymenorhizum* Ledeb., *A. karataviense* Regel, *A. kokanicum* Regel, *A. leptomorphum* Vved., *A. longicuspis* Regel, *A. longiradiatum* (Regel) Vved., *A. margaritae* B. Fedtsch., *A. oreophilum* C.A. Mey., *A. oreoprasum* Schrenk, *A. oreoprasoides* Vved., *A. obliquum* L., *A. parvulum* Vved., *A. platyspathum* Schrenk, *A. polyphyllum* Kar. & Kir., *A. schoenoprasum* L., *A. semenovii* Regel, *A. suworowii* Regel, *A. trachyscordum* Vved., *A. turkestanicum* Regel, of which 1 endemic (*A. oreoprasoides*), 2 sub-endemics (*A. margaritae*, *A. trachyscordum*), which are also distributed in Kyrgyzstan, and 1 rare species (*A. suworowii)*.

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Table 1

Comparative data on the presence of species of the genus *Allium* L. in the flora of the Kyrgyz Alatau according to floristic summaries, herbarium (AA) and Internet resources

Name of the species by FK	Species name adopted by POWO [35]	FK [24]	IIPK [32]	PICA [41]	Herba-rium (AA)	Planta-rium [34]
Allium altissimum Regel	*Allium altissimum* Regel	+	+	+	–	–
A. atrosanguineum Kar. & Kir.	*A. atrosanguineum* Schrenk	–	+	+	+	–
A. barsczewskii Lipsky	*A. barsczewskii* Lipsky	+	+	+	+	–
A. caeruleum Pall.	*A. caeruleum* Pall.	–	+	+	+	–
A. caesium Schrenk	*A. caesium* Schrenk	–	+	+	+	+
A. caricifolium Kar. & Kir.	syn. *A. pallasii* Murray	–	–	–	+	–
A. dasyphyllum Vved.	*A. dasyphyllum* Vved.	–	–	+	+	+
A. fetisowii Regel	*A. fetisowii* Regel	+	+	+	+	+
A. hymenorhizum Ledeb.	*A. hymenorhizum* Ledeb.	+	+	+	+	–
A. karataviense Regel	*A. karataviense* Regel	–	–	–	+	+
A. kokanicum Regel	*A. kokanicum* Regel	+	+	+	–	–
A. leptomorphum Vved.	*A. leptomorphum* Vved.	–	–	+	–	–
A. longicuspis Regel	*A. sativum* L.	–	–	–	+	–
A. longiradiatum (Regel) Vved.	*A. longiradiatum* (Regel) Vved.	–	–	–	+	–
A. margaritae B. Fedtsch.	*A. margaritae* B. Fedtsch.	–	–	–	+	+
A. oreophilum C.A. Mey.	*A. oreophilum* C.A. Mey.	+	+	+	–	–
A. oreoprasum Schrenk	*A. oreoprasum* Schrenk	+	+	+	+	–
A. oreoprasoides Vved.	*A. oreoprasoides* Vved.	–	–	–	+	–
A. obliquum L.	*A. obliquum* L.	–	–	–	+	–
A. parvulum Vved.	*A. parvulum* Vved.	+	+	+	+	+
A. platyspathum Schrenk	*A. platyspathum* Schrenk ex Fisch. & C.A. Mey.	+	+	+	+	–
A. polyphyllum Kar. & Kir.	*A. carolinianum* Redouté	+	+	+	+	–
A. schoenoprasum L.	*A. schoenoprasum* L.	–	–	–	+	–
A. semenowii Regel	*A. semenovii* Regel	+	+	+	+	–
A. suworowii Regel	*A. suworowii* Regel	–			+	
A. trachyscordum Vved.	*Allium trachyscordum* Vved.	+	+	+	+	+
A. turkestanicum Regel	*A. turkestanicum* Regel	–	–	–	+	–
	Total species	12	15	17	23	7

Note – POWO — Plants of the World Online; FK — Flora of Kazakhstan; IIPK — Illustrated identifier of plants of Kazakhstan; PICA — Plant Identifier of Central Asia

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Since the territory of the Kyrgyz Alatau ridge is transboundary, it is possible to expand the preliminary list with other species of onions growing in Kyrgyzstan. Of the 87 species of the genus *Allium* L. identified in Kyrgyzstan, 24 grow in both Kyrgyzstan and Kazakhstan [43–46].

The ridge of application of onions in the Kazakh part of the Kyrgyz Alatau is very diverse. Six species are used as medicinal (*Allium altissimum, A. karataviense, A. longicuspis, A. obliquum, A. schoenoprasum, A. suworowii)*. Ornamental properties are characterized by 16 species, food — 9; honey-bearing — 5 species, fodder, technical and poisonous — 1 species each. 21 species have been tested in culture.

In August 2024, 5 gorges of the western part of the Kyrgyz Alatau (Syugaty, Kaskasu, Karakystak, Kursai, Ulken Almalysai) within Zhambyl, Merken and T. Ryskulov administrative districts of Zhambyl region were surveyed. The points of occurrence, altitudinal confinement, distribution of 7 species of the genus *Allium* L. (*A. atrosanguineum, A. caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. longicuspis, A. margaritae*).

Field surveys in 2024 showed that the species identified in the gorges of the western part of the Kyrgyz Alatau ridge occurred in the altitude range from 1200 to 3390 m a.s.l. Locations of six species (*Allium*

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caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. margaritae, A. longicuspis) were recorded in the low and middle mountains in the altitude range from 1170 to 1660 m a.s.l., and the high-mountain species *A. atrosanguineum* grew in the upper reaches of the Karakystak and Kaskasu rivers in the altitude range of 2520–3390 m a.s.l.

It should be noted that from 2 to 4 species of bows were found in the surveyed gorges: Syugates (*A. caeruleum, A. caesium, A. karataviense, A. longicuspis*), Ulken Almalysai (*A. caeruleum, A. karataviense, A. margaritae*), Karakystak (*A. atrosanguineum, A. leptomorphum*), Kursai (*A. caeruleum, A. karataviense*), with the exception of the Kaskasu gorge (*A. atrosanguineum*). At the same time, the locations of *A. caeruleum* and *A. karataviense were* recorded in three gorges (Kursai, Syugaty, Ulken Almalysai) in the western part of the Kyrgyz Alatau in the altitude ridge 1200–1440 m above sea level (Table 2).

The identified onions were often found as part of herbaceous-grass, herbaceous-shrubby-cereal grass, petrophytic-herb-grass-shrub and petrophytic-tree-shrub communities. Over 32 species of vascular plants were also observed in the above communities, along with onions: *Acer semenovii* Regel & Herder, *Achillea millefolium* L., *Althaea officinalis* L., *Artemisia dracunculus* L., *Artemisia serotina* Bunge, *Bassia prostrata* (L.) Beck, *Bromus japonicus* Thunb., *Cerasus tianshanica* Pojark., *Convolvulus arvensis* L., *Ephedra intermedia* Schrenk & C.A. Mey., *Euphorbia jaxartica* (Prokh.) Krylov, *Ferula diversivittata* Regel & Schmalh., *Galium aparine* L., *Galium verum* L., *Haplophyllum acutifolium* (DC.) G. Don, *Hypericum perforatum* L., *Hypericum scabrum* L., *Lomelosia songarica* (Schrenk) Soják, species of the genus *Lonicera* L., *Megacarpaea orbiculata* B. Fedtsch., *Mentha asiatica* Boriss., *Onosma irritans* Popov, *Origanum vulgare* L., *Poa bulbosa* L., *Rhaponticoides ruthenica* (Lam.) M.V. Agab. & Greuter, *Rheum tataricum* L. f., *Rosa persica* Michx. ex Juss., species of the genus *Rosa* L., *Sisymbrium altissimum* L., *Sisymbrium loeselii* L., *Sonchus palustris* L., *Spiraea hypericifolia* L., *Stipa caucasica* Schmalh., *Tulipa greigii* Regel etc. from 19 families (Fig. 2).

Maps of locations of studied onions in the region were created based on literature, herbarium and Plantarium data (Fig. 3), results of expedition studies (Fig. 4), indicating places of potential harvesting of *Allium* L. species identified in 2024.

Table 2

Distribution and altitudinal habitat of identified species of the genus *Allium* L. in the western part of the Kyrgyz Alatau ridge according to field surveys in 2024

Species	Coordinates	Elevation above sea level	Location, date, year
Allium atrosanguineum Kar. & Kir.	N 42°32′37″ E 73°12′12″	3390 m	Zhambyl region, Merken district, Kyrgyz Alatau ridge, Kaskasu village, south-eastern slope. Kaskasu, south-eastern slope. 28.08.2024.
	N 42°39'53" E 72°47'12"	2520 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, Karakystak gorge, southern slope. 28.08.2024.
Allium caeruleum Pall.	N 42°53'54" E 71°44'20"	1440 m	Zhambyl region, Zhambyl district, Kyrgyz Alatau ridge, gorge Kursai. 26.08.2024.
	N 42°51'49" E 71°50'56"	1290 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, gorge Syugaty, along the road, on an earthen slope. 27.08.2024.
	N 42°52'9" E 71°49'41"	1280 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, Syugaty village, south-eastern slope, gorge Syugaty, south-eastern slope. 27.08.2024.
	N42°52'12" E71°49'40"	1270 m	Zhambyl region, T. Ryskulov district, Kirghiz Alatau ridge, gorge Syugaty, lower part of stony-rubble slope of southern exposure. 27.08.2024.
	N 42°53'56" E 71°42'43"	1200 m	Zhambyl region, Zhambyl district, Kyrgyz Alatau ridge, gorge Ulken Almalysay, southern slope. 26.08.2024.
Allium caesium Schrenk	N42°51'48" E71°51'1"	1320 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, gorge Syugaty, stony-rubble slope of southern exposure. 27.08.2024.

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Continuation of Table 2

Species	Coordinates	Elevation above sea level	Location, date, year
Allium karataviense Regel	N 42°53'54" E 71°44'20"	1440 m	Zhambyl region, Zhambyl district, Kyrgyz Alatau ridge, gorge Kursai. 26.08.2024.
	N 42°52'12" E 71°49'40"	1270 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, gorge Syugaty, lower part of stony-rubble slope of southern exposure. 27.08.2024.
	N 42°53'56" E 71°42'43"	1200 m	Zhambyl region, Zhambyl district, Kyrgyz Alatau ridge, gorge Ulken Almalysay, southern slope. 26.08.2024.
Allium leptomorphum Vved.	N42°37'33" E72°53'29"	1660 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, gorge Karakystak, southern slope. 28.08.2024.
Allium longicuspis Regel	N 42°52′17″ E 71°50′13″	1170 m	Zhambyl region, T. Ryskulov district, Kyrgyz Alatau ridge, gorge Syugaty. 26.08.2024.
Allium margaritae B. Fedtsch.	N42°53'56" E71°42'43"	1200 m	Zhambyl region, Zhambyl district, Kyrgyz Alatau ridge, gorge Ulken Almalysay, southern slope. 26.08.2024.

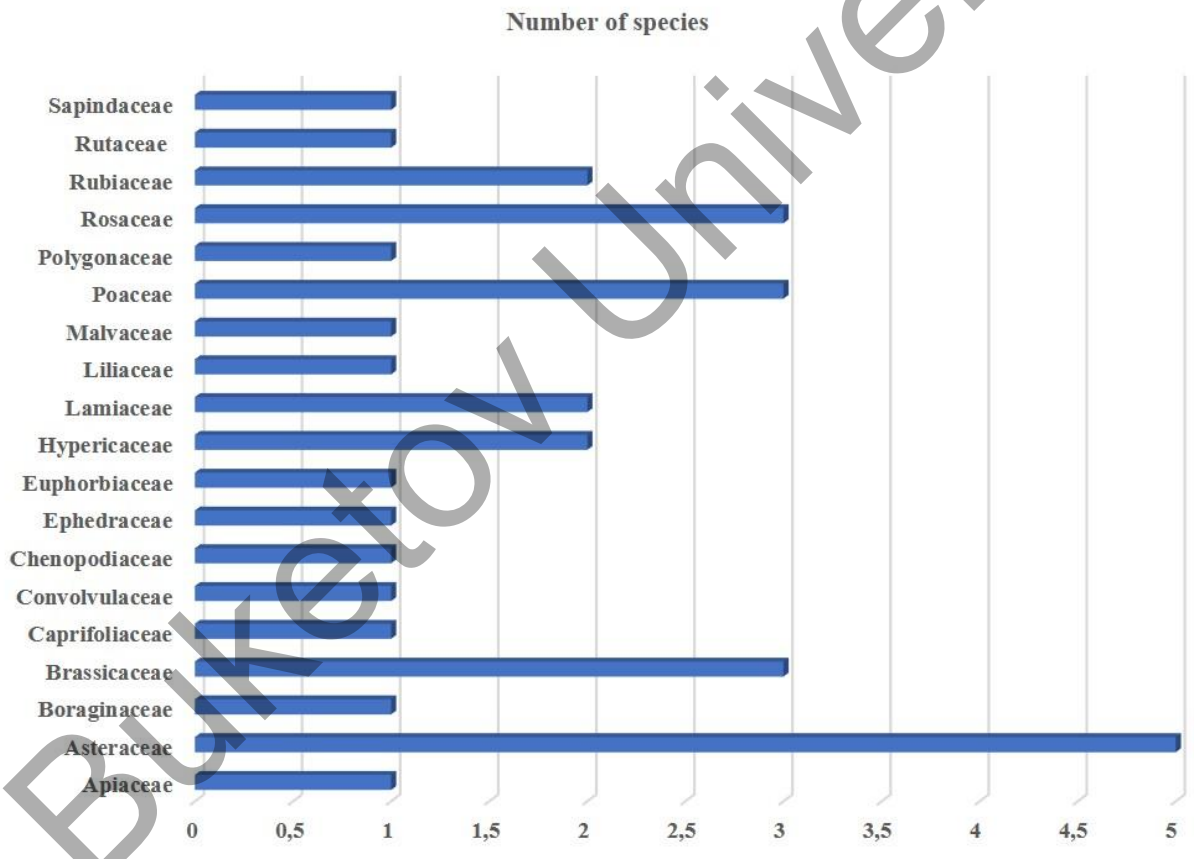

Figure 2. Distribution of associated plant species by families

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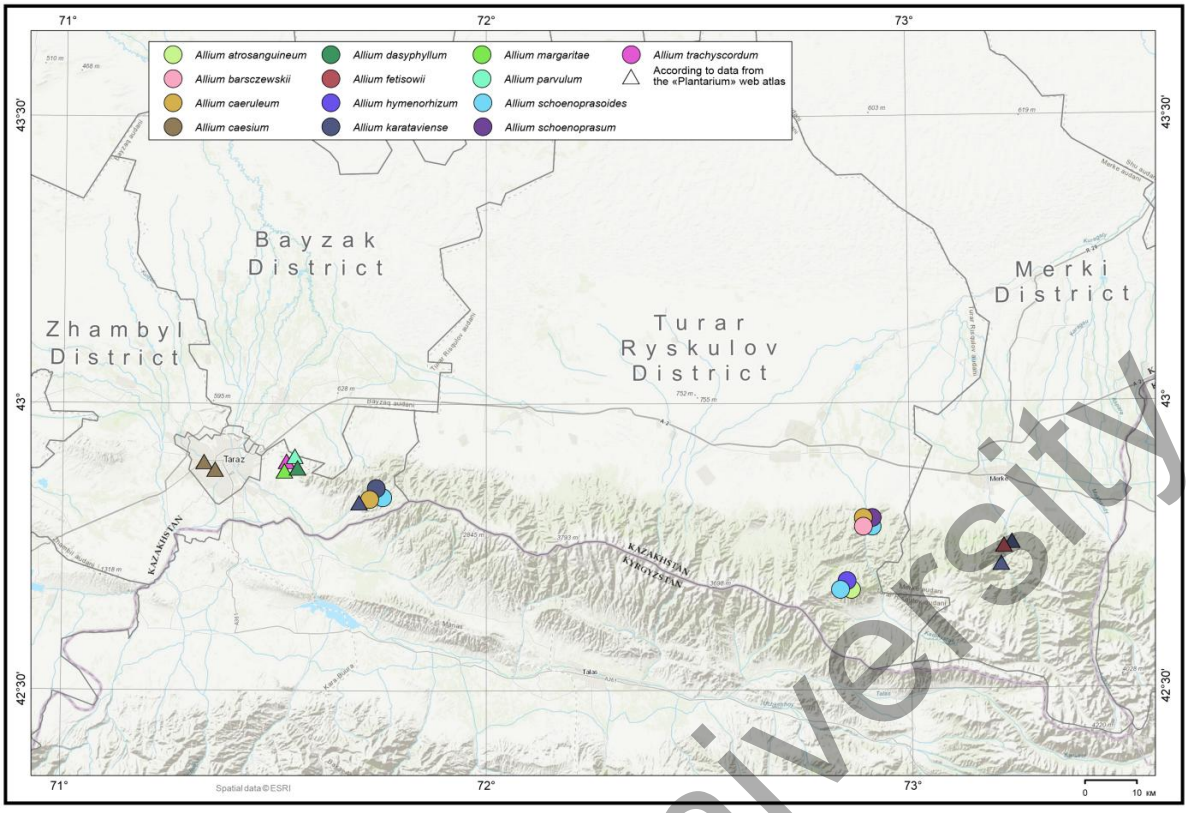

Figure 3. Map* of the locations of the studied species of the genus *Allium* L.
in the western part of the Kyrgyz Alatau according to literature, herbarium (AA) and Plantarium data
(* — author of the map Rybakov I.A.)

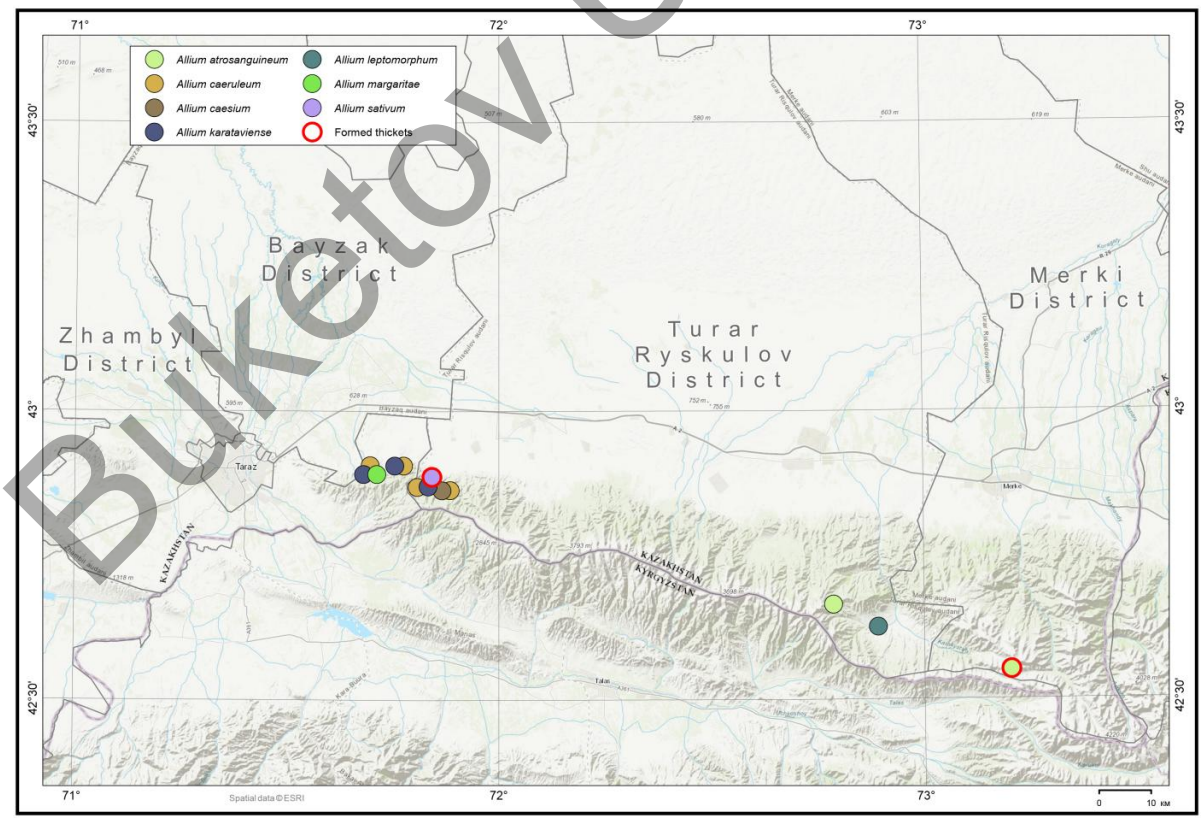

Figure 4. Map* of locations and places of potential harvesting of identified species of the genus *Allium* L.
in the western part of the Kyrgyz Alatau in 2024 (* — author of the map Rybakov I.A.)

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Conclusion

Modern assessment of species composition, distribution and state of natural populations of bows of the western part of the Kyrgyz Alatau Ridge showed that the majority (57 %) of collections of species of *Allium* L. in the herbarium collection (AA) are from 1947 to 1960, followed by 24 % of collections from 1984–1985. The proportion of collections from different years is 12 % and modern collections are negligible (7 %). The preliminary list of species of the genus *Allium* L. in the Kazakh part of the Kyrgyz Alatau ridge is represented by 27 species, including 1 endemic, 2 subendemic and 1 rare species. It is possible to expand the preliminary list with other species of onions growing in the transboundary territory with Kyrgyzstan.

In 5 gorges of the western part of the Kirghiz Alatau ridge, the locations, phytocoenotic and altitudinal distribution of 7 species were revealed, of which *A. atrosanguineum* (Kaskasu gorge) and *A. longicuspis* (Syugaty gorge) form commercial thickets. The studied bows were found in the altitude ridge from 1200 to 3390 m a.s.l. They were found as part of various plant communities, including petrophytic communities. In the lowlands and midlands from 1170 to 1660 m a.s.l.: *Allium caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. longicuspis, A. margaritae*.

The high-altitude species is *A. atrosanguineum*, occurring in the altitude range of 2520–3390 m above sea level. Locations and potential harvesting sites of the studied species of the genus *Allium* L. of the western part of the Kyrgyz Alatau are presented on cartographic models. Floristic and resource studies of onions continue.

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Қырғыз Алатауы жотасының батыс бөлігіндегі *Allium* L. туысының түрлері: қазіргі жағдайы және зерттеу перспективалары

Мақалада Қырғыз Алатауы жотасының батыс бөлігіндегі *Allium L.* туысының түрлерін зерттеудің қазіргі жағдайы мен болашағын бағалау нәтижелері берілген. Гербарий қорында (AA) *Allium L.* туысы түрлерінің коллекцияларының көпшілігі (57%) 1947-1960 жылдар аралығына, одан кейін кему ретімен коллекциялардың 24%-ы 1984–1985 жылдарға келетіні анықталды. Жекелеген терімдердің үлесі 12% құрайды, ал қазіргі терімдердің үлесі шамалы (7%). Қырғыз Алатауында зерттелген *Allium* туысының алдын-ала тізімі 27 түрден тұрады. Жотаның батыс бөлігіндегі 5 шатқалда 7 түрдің кездесетін орны, фитоценоздық және биіктік бойынша таралуы анықталды. Өндірістік қопаларды *A. atrosanguineum* (Қасқасу шатқалы) және *A. longicuspis* (Сыуғаты шатқалы) құрайды. Анықталған түрлер көбінесе әртүрлі шөпті-дәнді, әр түрлі шөпті-бұталы-дәнді, жартас өсімдікті-әртүрлі шөпті-бұталы, жартас өсімдікті-ағашты-бұталы қауымдастықтарда кездеседі және теңіз деңгейінен 1200-ден 3390 м-ге дейінгі биіктік аралығында өседі. Теңіз деңгейінен 1170-1660 м биіктіктегі аласа және орташа таулы аймақтарда *Allium caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. longicuspis, A. margaritae* анықталды. Сонымен қатар *A. atrosanguineum* биік таулы түр, ол теңіз деңгейінен 2520–3390 м биіктік аралығында кездеседі. Зерттелген аймақтан анықталған *Allium* түрлерінің кездесетін жері мен әлеуметтік жинау орындарының карталары құрастырылды.

Кілт сөздер: түрлердің әртүрлілігі, *Allium* L. туысы, алуантүрлілік, Қырғыз Алатау жотасы.

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Виды рода *Allium* L. западной части хребта Киргизский Алатау: современное состояние и перспективы изучения

В данной работе приведены результаты оценки современного состояния и перспектив изучения видов рода *Allium* L. западной части хребта Киргизский Алатау. Установлено, что в гербарном фонде (AA) большая часть (57 %) коллекционных сборов видов *Allium* L. приходится на периоды с 1947 по 1960 годы, далее по убыванию 24 % сборов — на 1984–1985 годы. Доля разрозненных сборов составляет 12 %, доля современных сборов незначительна (7 %). Предварительный список изучаемых видов *Allium* в Киргизском Алатау представлен 27 видами. В 5 ущельях западной части хребта выявлены местонахождения, фитоценотическая и высотная приуроченность 7 видов. Промысловые заросли образуют *A. atrosanguineum* (ущелье Каскасу) и *A. longicuspis* (ущелье Сюгаты). Выявленные виды часто встречаются в составе разнотравно–злакового, разнотравно-кустарниково-злакового, петрофитно-разнотравно–кустарникового, петрофитно–древесно–кустарникового сообществ и произрастают в интервале высот от 1200 до 3390 м над ур. м. В низкогорье и среднегорье от 1170 до 1660 м над ур. м. отмечены *Allium caeruleum, A. caesium, A. karataviense, A. leptomorphum, A. longicuspis, A. margaritae*.

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Высокогорным видом является *A. atrosanguineum*, встречающийся в интервале высот 2520–3390 м над ур. м. Составлены карты местонахождений и потенциальных мест заготовок выявленных видов *Allium* исследуемого региона.

Ключевые слова: видовое разнообразие, род *Allium* L., хребет Киргизский Алатау.

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