

SPECIES OF *PHLOMOIDES* MOENCH (LAMIACEAE) DISTRIBUTED IN THE FLORA OF YANGIKURGAN

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Abstract: This article presents a list of *Phlomoides* Moench species distributed in Yangikurgan. The aim of this study is to compile a validated checklist of species distribution in the Yangikurgan flora according to the latest data. The checklist includes the following information about each species: each taxon, a complete list of synonyms, species, life form, habitat, ecology, phenology, nomenclature, geographical distribution, and a selection of studied specimens. As a result of the study, 5 species of the genus *Phlomoides* distributed in the region were identified.

Keywords: *Phlomoides*, Checklist, Type, Fergana valley, TASH.

ВИДЫ ФЛОМОИДОВ МОЕНЧЕ (LAMIACEAE), РАСПРЕДЕЛЕННЫЕ ВО ФЛОРЕ ЯНГИКУРГАНА

Аннотация: В этой статье представлен список видов Moench *Phlomoides*, распределенных в Янгикургане. Целью данного исследования является составление подтвержденного контрольного списка распределения видов во флоре Янгикурган в соответствии с последними данными. Контрольный список включает в себя следующую информацию о каждом виде: каждый таксон, полный список синонимов, видов, формы жизни, среды обитания, экологии, фенологии, номенклатуры, географического распределения и выбора исследуемых образцов. В результате исследования были идентифицированы 5 видов рода *Phlomoides*, распределенных в области.

Ключевые слова: *Phlomoides*, Checklist, Type, Valley Fergana, TASH.

INTRODUCTION

Yangikurgan region, bordered by Kosansoy to the west, Namangan and Uychi districts to the south, Chartok district to the northwest, north and east by the Republic of Kyrgyzstan. The area is 0.54 thousand km². The territory is located on the southern slopes of the Chatkal ridge. The surface consists of plains and hills. The altitude ranges from 300 m from south to north, up to 1500 m in the central part, and 1500 - 2000 m in the north. Annual precipitation is 300 - 400 mm. The vegetation period is 175 days. The largest streams: Chartoksoy, Namangansoy (Pochchaotasoy in the upper part), Kuruksoy (Changach). The soil is mainly typical gray soil, partly dark gray soil in the northernmost part. There are sandy loams in the northeastern part.

Today, research for 2025-2026 studies are being implemented in the topic of flora (bioecology and practical significance of the Yangikurgan hills).



Figure 1. Geographical location of the Yangikurgan region

MATERIAL AND METHODS

The nomenclatural part of the checklist includes the accepted names of species according to “Conspectus Florae Asiae Mediae”. Our taxonomic review is based on the use of living and herbarium materials from various systematic collections as well as field research. The species was identified using a variety of flora and herbarium samples using large herbariums, namely TASH, Moscow State University MW, Komarov Institute of Botany, LE Institute of Biology of the National Academy of Sciences of Kyrgyzstan and the Institute of Botany.

RESULTS AND DISCUSSION

1. *Phlomoides alaica* (Knorring) Adylov, Kamelin & Machmedov.

Type. KYRGYZSTAN: “Turkestan, prov. Fergana, distr. Osch, prope Gulcza [Gulcho]”, 27.05.1900 W. Tranzschel (LE, holotype; isotypes LE).

= *Phlomoides knorringiana* (Popov ex Knorring) Adylov, Kamelin & Machmedov in Opređ. Rast. Sred. Azii 9: 107 (1987).

Type. KYRGYZSTAN: “Turkestan, prov. Fergana, distr. Osch, slopes of hills near Uzgen village [Ozgon town]”, 26.05.1916 N. Androsova (LE, holotype; isotypes LE).

Life form. Hemicryptophyte (Protohemicryptophytes), polycarpic.

Phenology. Flowering April – May, fruiting May – June.

Habitat. On chernozem-like soils among forbs in the lower and middle belt of mountains, high foothills in the forest belt, in grass-forb groups, hemisavannahs, 1.600-2.200 m a.s.l. [1,2,3,4]

General distribution. Middle Asia: Uzbekistan and Kyrgyzstan.

Distribution in the Fergana Valley. I-3 Fergana district. I-3-b Sari-Chelak region: CHATKAL RIDGE (Kyrgyz SSR. Karavan district Jida-say. The upper reaches of the Kizil-Alma-Say, 14.06.1951, Nabiev 304, 309 [TASH!]; Bozbu-Too, 10.07.1995, Lazkov [FRU]; Jalalabad region. Chatkal Range mountains Bosbutau, Uspenka, 13.06.1996, Lazkov 166 [FRU]). I-3-c Arslonbob region: FERGANA RIDGE (Mountain slopes near Taran-Bazar, 12.06.1911, Knorring et al., [LE]; Eastern Fergana. Jelal-Abad region. River basin Kug-art-su. Summit of Achi-say, 17.06.1927, Korovin 63 [TASH!]; Fergana Range. Tar river basin, vicinity of Terek village, Boztekir, 12.07.1974, Aydarova et al., [FRU]). I-4 Fergana-Alay district. I-4-a Western-Alay

region: ALAY RIDGE (Between Soh and Ohna, 30.06.1871, *Fedtschenko* [LE]; Alay Range. Sokh, 06.07.1968, *Khudaiberdiev* [TASH!]; The northern slope of the Alai ridge to the east of the village. Aydarken, 15.07.1981, *Pimenov et al.*, 337 [MW!]). I-4-b Eastern-Alay region: ALAY RIDGE (Fergana, distr. Osch, pr. Gulcha, 27.05.1900, *Tranzschel* [LE]; Between Ak-Jar and Kochkor-Ata, Kyrk-Jal, 21.05.1913, *Knorring*, [LE]; Between Osh and Gulcha, 05.07.1929, *Juzepczuk*, [LE]; Osh and sat down. Gulcha. Kaplan-kul, 05.07.1929, *Linchevsky* [TASH!]; Alay Range. River basin Kara-kazyk. Upper r. Shuvali small. In the vicinity of the Shuvali pass, 07.08.1935, *Sovetkin* 155 [TASH!]; Alay Range: Shibeli, 18.07.1963, *Aydarova, Ubukeeva* [FRU]; Kirghiz SSR. The northern slope of the Alai ridge Sufikurgan, Chonkul, 05.09.1989, *Pinenov et al.*, 111 [MW!]; Taktalyk village, 01.07.2006, *Lazkov* [FRU]).

2. *Phlomoides speciosa* (Rupr.) Adylov, Kamelin & Machmedov.

Type. KAZAKHSTAN: “Tian-Schan, Schamsi pass, sudlicher Abhang”, 10.07.1867 *Fr. Osten-Sacken* (LE, lectotype).

— *Phlomoides cephalariifolia* (Popov) Adylov, Kamelin & Machmedov in *Opred. Rast. Sred. Azii* 9: 96 (1987).

Type. KYRGYZSTAN: “Arslambob” [Arstanbop], 21.05.1916 V. *Lipsky* (LE, lectotype).

Life form. Hemicryptophyte (Partial rosette plants), polycarpic.

Phenology. Flowering April – July, fruiting June – August.

Habitat. On stony, gravelly and fine-grained slopes from foothills to the upper belt of mountains. Among thickets of bushes or in walnut forests, in fescue-wormwood steppes, on river terraces, 6.00-3.200 m a.s.l. [5, 6, 7, 8]

General distribution and ecology. Middle Asia: Afghanistan, Kazakhstan, Kyrgyzstan, Pakistan (Chitral), Tadzhikistan, Turkmenistan, Uzbekistan and West Himalaya, China (Xinjiang).

Distribution in the Fergana Valley. I-1 Western Tian-Shan district. I-1-a Arashan region: KURAMA RIDGE (Chatkal ridge of Lake Arashan, slopes above the lake to the west h = 100 m, 11.07.1959, *Petrov* [TASH!]). I-1-b Chorkesar region: KURAMA RIDGE (Papsky district on the road from the Maidan pass to the pass. Chapana-Kuyndy, 04.06.1950, *Bondarenko, Maylun* 388, 389 [TASH!]; Chatkal ridge. Uroch. Charkesar (Pap-Chust), 12.05.1950, *Arifkhanova* 142 [TASH!]). I-3 Fergana district. I-3-a South-Chatkal region: CHATKAL RIDGE (Kurama Range: Kasan-Say forestry, middle course of Kochkor-Ata river, 26.06.1962, *Sudnitsyna, N.Gorbunova* [FRU]; Uz.SSR. North slope of the Karakorum mountain. 5 km south-west from the village. Zarkent, 15.05.1969, *Rakhimova* [TASH!]; Namangan. Yangikurgan region. 9 km south-east from the village. Hazratshah. Along the ditch near the roads, 20.04.1970, *Rakhimova* [TASH!]). I-3-b Sari-Chelak region: CHATKAL RIDGE (Chatkal Range: top of the pass NE of Sary-Chelek lake, 24.06.1912, *Knorring* 275 [LE]; Kyrgyz SSR. Dzhangji-Jol Arkit nature reserve on the slope, 27.06.1959, *Galkina* [TASH!]; At-Oynok Mts., Kok-bel pass, 07.05.1977, *Sudnitsyna et al.*, [FRU]). I-3-c Arslanbob region: FERGANA RIDGE (in valle Tal'dk surpa st. Langar versus fl. Czigirczik, 7000', 27.06.1901, *Alexeenko* 479 [LE]; Terme-Tash Mts., watershed of Urumbash and Kyzyl-Suu rivers, 13.06.1911, *Minkwitz* 1059 [LE]; Fergana ridge, walnut forestry Gava, uroch, Kirgoo, on the slope of the southern exposure. Pistachio plots, 14.04.1947, *Lebedinova* 7 [TASH!]; Fergana ridge. Kaindi. Left bank of the Yassy river, north slope. h=2375 m, 06.07.1950, *Li* 135 [TASH!]; Kyrgyzstan. Fergana Ridge. Yassi, 05.06.1965, *Pryakhin* [TASH!]; Fergana range: Babash-Ata, near Mayly-Say river, 16.04.1977, *Sudnitsyna et al.*, [FRU]). I-4 Fergana-Alay district. I-4-a Western-Alay region: ALAY RIDGE (Osh region. Bel pass on the way from Vuadil to Sokh via Haidarken, 13.06.1949, *Sakhobiddinov, Lee* 891, 911 [TASH!]; Alay ridge. Sokh river

basin. Horsemen of Chortosh-say, above Siman. South-eastern, rubble slope, 08.07.1962, *Tsukervanik* 617 [TASH!]). I-4-b Eastern-Alay region: ALAY RIDGE (Fergana dist. Andijan county Kava, 22.05.1899, *Litvinov* [TASH!]; between Sufi-Kurgan and Ak-Bosogo, 29.06.1901, *O.Fedtschenko*, *B. Fedtschenko* [LE]; Fergana region The road to the Kugart pass, 10 vertices before the ascent of Katyn-ak-chek, 02.06.1911, *Knorring*, *Minkwitz* 266 [TASH!]; Shahimardan river basin, Arpa ravine, 32 km of Skobelev, 12.04.1916, *Babenko* 8 [LE]; Fergana region the right banks of the Ak-Bura river, 1926, *Gomolitsky* 58 [TASH!]; along Gulcha river, between Shart river mouth and Kyzyl-Beles pass, 16.07.1930, *Juzepczuk* [LE]; Fergana ridge. Nut. forestry them. Kirov tract Yaradar, 06.07.1949, *Golikov* 2003, 1120 [TASH!]; Alay Range: Kyrgyz-Ata river, Karagay, juniper forest, 16.05.1956, *Janaeva* [FRU]; near Aravan village, 13.04.1990, *Sheremetova*, *Lazkov* [FRU]). I-5 Kuhistan district. I-5-a North-Turkestan region: NORTH-TURKESTAN RIDGE (right side of Layli-Mazar river, above junction with Ashat river, 23.07.1954, *Vasileva* [FRU]; Turkestan Range: Laylak river, 11.05.1962, *Aydarova*, *Ubukeeva* [FRU]; Isfana river basin, 11.06.1968, *Ubukeeva* [FRU]; Turkestan ridge of the Isfara River Basin, the headwaters of the Kshambesh River, below the farm, on the stone-gravel southern slope of the mountain h-2800, 12.07.1991, *Gazybaev*, *Gaffarov* 407 [TASH!]).

3. *Phlomoides kirghisorum* Adylov, Kamelin & Machmedov.

Type. KYRGYZSTAN: Karavan distr., Jede-Say, headstream of Parcho-Say, at the top of the slope, 21.05.1952, *Popova*, *Kirsanova* & *Schpota* (FRU, holotype).

Life form. Hemicryptophyte (Partial rosette plants), polycarpic.

Phenology. Flowering April – May, fruiting May – June.

Habitat. The front of the mountain, in the lower mountain region, is the slopes of dry, fine-grained and red soils, 1.000-1.200 m a.s.l. [9, 10, 11, 12]

General distribution. Middle Asia (endemic to the Fergana Valley): Kyrgyzstan and Uzbekistan.

Distribution in the Fergana Valley. I-3 Fergana district. I-3-b Sari-Chelak region: CHATKAL RIDGE (Fergana Valley. Andijan district Uch-Kurgan steppe. 2.5 km from Kumkupyruk on the V-C-V wormwood steppe, 29.05.1929, *Joffe* 243, 244, 456, 455, 377, 79 [TASH!]; Karavan distr., Jede-Say, headstream of Parcho-Say, at the top of the slope, 21.05.1952, *Popova*, *Kirsanova* & *Schpota* [FRU]; Kirg. SSR. Caravan region, Jida-say tract. On the slopes of fine earth, 07.05.1952, *Nabiev* 81 [TASH!]; Fergana Valley, surroundings. Jede-Say with tausagiz, 24.05.1952, *Arifkhanova* 977 [TASH!]; Bozbu-Too Mts.: N of Uch-Kurgan, Jite-Say, 27.05.1978, *Takhtajan et al.*, [LE]). I-3-c Arslonbob region: FERGANA RIDGE (Southern Kyrgyzstan, state farm Suzak, 760 m Red flowers, 24.04.1945, *Viter* 19 [TASH!]). I-4 Fergana-Alay district. I-4-b Eastern-Alay region: ALAY RIDGE (Fergana region Osh district 12 versts south of the city ... roads to Naukat, 05.05.1913, *Knorring* 8 [TASH!]).

4. *Phlomoides nuda* (Regel) Adylov, Kamelin & Machmedov.

Type. KYRGYZSTAN: “Mittellauf des Yassy bei Usgent, 4000”, 28.05.1880 *A. Regel*” (LE, lectotype).

Life form. Hemicryptophyte (Partial rosette plants), polycarpic.

Phenology. Flowering April – June, fruiting June – July.

Habitat. On rocky, gravel and clay slopes in the foothills and in the lower mountain belt, 8.00-1.800 m a.s.l. [13, 14, 15]

General distribution. Middle Asia: Tadzhikistan, Kyrgyzstan and Uzbekistan.

Distribution in the Fergana Valley. I-3 Fergana district. I-3-a South-Chatkal region: CHATKAL RIDGE (near Ala-Buka village, 29.06.1960, *Ubukeyeva* [FRU]; Kirg. SSR. Karavan region, Ala-Buka, 24.06.1963, *Arifkhanova 210* [TASH!]; 20 km E of Shekoftar village, 17.05.1972, *Sultonova et al.*, [FRU]; Orto-Tokoy water reservoir, 09.07.1980, *Aydarova, Chypaev* [FRU]; Fergana Valley. Namangan region Yangikurgan region, the foot of the Ungortepa mountains, 24.05.2015, *Tojibaev et al.*, 2405201513 [TASH!]). I-3-b Sari-Chelak region: CHATKAL RIDGE (Bozbu-Too: Jede-Say, 03.05.1952, *Popova et al.*, [FRU]; Kirg. SSR Karavan region. Jida-say. To the top of the hillock, rubble, 05.06.1952, *Nabiev 204, 266* [TASH!]; Chatkal Range: confluence of Kara-Suu and It-Agar river, 30.05.1958, *Gubanov, Cherkasov* [FRU]; right side of Aflatun river, near Kara-Jygach village, 30.04.1962, *Aydarova, Ubukeyeva* [FRU]; Kyzyl-Alma, 09.04.1977, *Sudnitsyna, Batalov* [FRU]; Fergana Valley. Chatkal district. The outskirts of the village of Arbagich, high front mountains, 23.05.2015, *Tojibaev et al.*, 230520157 [TASH!]). I-3-c Arslonbob region: FERGANA RIDGE (Kogart valley, 15.08.1911, *Knorring, Minkwitz* [LE]; Fergana region, Andijan district Mineral springs Khazret-Agob, 22.05.1911, *Knorring, Minkwitz 74* [TASH!]; Fergana. River valley Arslanbob, 13.07.1926, *Korovin 385, 185* [TASH!]; Miley-Sai district. Say prone, 26.05.1930, *Joffe 307, 482* [TASH!]; Fergana range: Kara-Alma collective farm, Besh-Tangak, 09.06.1945, *Ponyatovskaya* [LE]; Gava forestry, Tamchy-Bulak, 07.05.1956, *Kozlova* [FRU]; Tar river (tributary of Kara-Daryya river), Chon -Archa (near Terek-suu village), 17.06.1964, *Aydarova, Gorbunova* [FRU]). I-4 Fergana-Alay district. I-4-b Eastern-Alay region: ALAY RANGE (Fergana. Osh, Guloza, 20.05.1900, *Eranzchel* [TASH!]; between Gulcha and Chigirchik pass, 20.05.1900, *Litwinow, Tranzschel* [LE]; Alay Range: from Gulim to Sufi-Kurgan, 28.06.1901, *Fedchenko* [TASH!]; Fergana region Osh district Kyrk-dusal, 10.05.1913, *Knorring 205, 342* [TASH!]; Kyrgyzstan. Kyzyl-Kiyya, 1930, *Fedoseev 198, 236* [TASH!]; between Osh and Naukat, 06.06.1958, *Tzvelev* [LE]; Alay Range: Ak-Tash, 06.05.1963, *Ubukeyeva, Gorbunova* [FRU]; near Kyzyl-Kiyya town, 26.05.1964, *Aydarova, Gorbunova* [FRU]; Osh. Karakuldzha, 25.06.1999, *Lazkov* [FRU]). I-5 Kuhistan district. I-5-a North-Turkestan region: NORTH-TURKESTAN RIDGE (Turkestansiy ridge Lyaila district Bulak-Boshi, 01.05.1987, *Pimenova, Vasilieva 85* [FRU]).

5. *Phlomoidea isochila* (Pazij & Vved.) Salmaki.

Type. UZBEKISTAN: "Tian-Schan occidentalis, ad declivia argillosa secus canalem Bos-su prope pag. Niazbek, haud procul ab urbe Taschkent, 02.05.1926, *Granitov*" 1281 (TASH002891!).

Life form. Hemicryptophyte (Partial rosette plants), polycarpic.

Phenology. Flowering April – June, fruiting May – July.

Habitat. On stony and stony-fine-earth soils on the plain, in the belts of wormwood and saltwort deserts, semi-savannas and shiblyak: in wormwood-saltwort groupings, juniper forests; on pebbles, sandy soils, foothills and lower, less often middle belt of mountains, 6.00-1.600 m a.s.l. [1, 2, 3, 4, 5]

General distribution. Middle Asia: Kyrgyzstan, Tadzhikistan and Uzbekistan.

Distribution in the Fergana Valley. I-1 Western Tian-Shan district. I-1-b Chorkesar region: KURAMA RIDGE (Chatkal Ridge. The southwest slope of the Chatkal foothills. Stony talus of Chadak kishlak, 30.06.1936, *Skorokhodov, Azatyan 87* [TASH!]). I-2 Mogoltau-Kurama district. I-2-a Mogoltau region: MOGOLTAU (Western Tien Shan. Mogoltau. Kishlok John-Bulak, Slopes, 01.05.1929, *Lepeshkin* [TASH!]; Western Tien Shan. Mogoltau. Foothills against Khujand (sloping to the Syr-Darya plain), 28.04.1927, *Granitov 203* [TASH!]). I-3 Fergana

district. I-3-b Sari-Chelak region: CHATKAL RIDGE (Fergana Valley. Yangi-Aryk irrigation region. To the north-west from the villages. Chartak. On the pebbles, 09.06.1928, *Joffe* 203 [TASH!]; Fergana Valley. Andijan district Uch-Kurgan steppe. Northern section. The second terrace of the Naryn river. On the pebble, 11.05.1929, *Joffe* 177 [TASH!]). I-4 Fergana-Alay district. I-4-a Western-Alay region: ALAY RIDGE (Fergana region Sokh neighborhood on the southern slope, 12.06.1949, *Sakhobiddinov*, *Lee* 764 [TASH!]; Osh region. Western part of the road to Haidarken, 12.06.1949, *Sakhobiddinov*, *Lee* 940 [TASH!]). I-5 Kuhistan district. I-5-a North-Turkestan region: NORTH-TURKESTAN RIDGE (The northern slope of Fergana Valley. Digmay Uplands, 26.05.1952, *Arifkhanova* 1135, 1146 [TASH!]; the Turkestan ridge. Batkent region. slopes pos., Karabulak, 04.05.1987, *Pimenova*, *Vasilieva* 176 [FRU]).

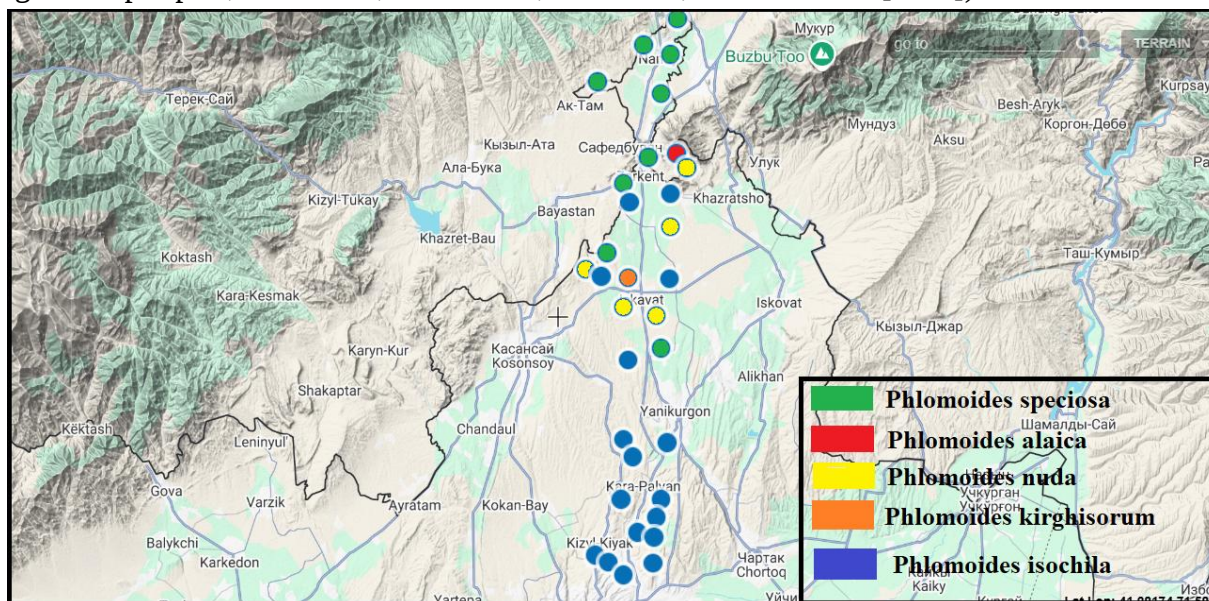


Figure 2. Growth areas of identified species

CONCLUSION

A compiled for species identification and the geographical distribution of all *Phlomoides* species in Yankurgan flora has been mapped on a GIS basis. Use of the geographic locations of the collection sites in combination with the GIS software allowed prediction of the distribution and estimation of species richness for genus *Phlomoides* in Yangikurgan area.

REFERENCES

1. Rustam Gulomov, Ibrohim Tagayev, Abdurahmon Sheraliev. Synopsis of some species of the genus *Phlomoides* Moench (Lamiaceae) (2025). Research Focus International Scientific Journal. 2025, Volume 4, Issue 1. <https://doi.org/10.5281/zenodo.14789363>
2. Lazkov GA. 2016. Labiatae (Family *Labiatae* Juss.) in Flora of Kyrgyzstan (Monography). – Korea. P. 384.
3. Gulomov R.K. Distribution of the genus *Phlomoides* Moench in the Fergana Valley (taxonomy, geography, ecology and conservation): avtoref. Diss. PhD. –Tashkent: 2022. – p. 43.
4. Gulomov R.K., Batoshov A.R. Morphological Phylogeny of the Species *Phlomoides* Moench (Lamiaceae) Distributed in the Fergana Valley // International Journal of Virology and

- Molecular Biology. – USA, 2022. – № 11 (1). – P. 9-15.
<https://doi.org/10.5923/j.ijvmb.20221101.03>
5. Gulomov, R.K. (2022). Fluorosenotypes of *Phlomoides* Moench species distributed in the Fergana valley. International Journal of Life Sciences & Earth Sciences, 5(1).
<https://doi.org/10.21744/ijle.v5n1.1816>
 6. Tojibaev KS, Karimov FI, Hoshimov HR, Gulomov R, Lazkov GA, Jang C-G, Gil H-Y, Jang JE, Batoshov AR, Iskandarov A, Choi HJ (2023) Important plant areas (IPAs) in the Fergana Valley (Central Asia): The Bozbu-Too-Ungortepa massif. Nature Conservation 51: 13–70.
<https://doi.org/10.3897/natureconservation.51.94477>
 7. Min-Su Park, Nu-Ree Na, Chang-Gee Jang, Rustam Gulomov and Komiljon Tojibaev. The complete chloroplast genome sequence of *Phlomoides kirghisorum* Adylov, Kamelin & Makhmedov 1987 (Lamiaceae), an endemic species of Fergana Valley. MITOCHONDRIAL DNA PART B: RESOURCES 2024, VOL. 9, NO. 1, 104–108.
<https://doi.org/10.1080/23802359.2023.2292159>
 8. Tursinbayeva, G, Saparov, A, Turekeeva, A, Atanazarov, K, Matrasulov, G, Sindarov, SE, Alikarieva, DM, Gulomov, R, Khudayorova, SI, Ziyovuddin, B, Mardanova, AT. Leaf structure of species of the Brassicaceae Burnett family in Southwestern Kyzylkum, Uzbekistan. 2024. Caspian Journal of Environmental Sciences, Iran, Guilan, 22: 459-475.
<https://doi.org/10.22124/CJES.2024.7739>
 9. A.N. Najmiddinov, R.K. Gulomov, A.R. Batoshov, F.I. Karimov, K. Sh. Tojibaev. *Euphorbia davidii* (Euphorbiaceae) – a new invasive species for the flora of Central Asia. *Turczaninowia* 27, 4: 5–10 (2024). <https://doi.org/10.14258/turczaninowia.27.4.1>
 10. G‘ulomov R.K., Mutalibxonova M.F, Namangan shahar urbanoflorasida tarqalgan bir urug‘pallalilar (2024). Research Focus International Scientific Journal. 2024, Volume 3, Issue 11. <https://doi.org/10.5281/zenodo.13863663>
 11. Najmiddinov A.N., Xoshimov X.R., Batoshov A.R., G‘ulomov R.K. Farg‘ona vodiysida tarqalgan *Euphorbia* L. turkum turlarining balandlik va ekomintaqalarda tarqalishi. Research Focus International Scientific Journal. 2024, Volume 3, Issue 11. <https://doi.org/10.5281/zenodo.14295814>
 12. Najmiddinov A., Gulomov, R., Batoshov, A., Hoshimov, H., Rakhmatov, A., & Mullajonova, S. (2023). The conservation status of *euphorbia* L. in the fergana valley of central Asia. International Journal of Life Sciences & Earth Sciences, 6(1), 19-29.
<https://doi.org/10.21744/ijle.v6n1.2091>
 13. Dilshod Nuridinov, Rustam Gulomov, Bakhrom Toxtasinov. Bioclimatic Modeling of *Phlomoides Kirghisorum* (Lamiaceae) Species Distributed in Fergana Valley. International Journal of Current Science Research and Review. Volume 06, Issue 04, 2023.
<https://doi:10.47191/ijcsrr/V6-i4-39>
 14. Sh. Abdullaev, F. Akbarov, Sh. Abdupatteva, T. Asatulloev, D. Dekhkonov, K. Tojibaev, Kh. Khoshimov, R. Gulomov. Species Distribution Modelling of *Poa Bactriana* Roshev under Different Climate Change Scenarios. International Journal of Virology and Molecular Biology 2024, 13(1): 15-21 <http://doi:10.5923/j.ijvmb.20241301.03>.
 15. G‘ulomov R.K. Farg‘ona vodiysida tarqalgan *Phlomoides pulchra* (Lamiaceae) ustida olib borilgan tadqiqot natijalari. “Tabiiy fanlarni dolzarb masalalari va yechimlari” mavzusidagi Respublika ilmiy-amaliy konferensiya materiallari. Qo‘qon – 2024. 60-66 bet.