Т. 12. №4 2026
https://doi.org/10.33619/2414-2948/125

UDC 581.9; 635.711
AGRIS F70
https://doi.org/10.33619/2414-2948/125/04

NEW DISTRIBUTION AREA OF *Astragalus hamosus* L. (Fabaceae Lindl.) IN THE LESSER CAUCASUS (AZERBAIJAN)

©Aslanova E., *ORCID: 0009-0000-6393-2487, Ganja State University, Ganja, Azerbaijan, yeganeaslanova74@gmail.com*
©Ganbarov D., *ORCID: 0000-0002-9818-5554, SPIN-code: 8392-7335, Dr. habil., Nakhchivan State University, Nakhchivan, Azerbaijan, dasqinqenberov@ndu.edu.az*

НОВЫЙ АРЕАЛ РАСПРОСТРАНЕНИЯ *Astragalus hamosus* L. (Fabaceae Lindl.) НА МАЛОМ КАВКАЗЕ (АЗЕРБАЙДЖАН)

©Асланова Е., *ORCID: 0009-0000-6393-2487, Гянджинский государственный университет, г. Гянджа, Азербайджан, yeganeaslanova7@mail.ru*
©Ганбаров Д., *ORCID: 0000-0002-9818-5554, SPIN-код: 8392-7335, д-р биол. наук, Нахчыванский государственный университет, г. Нахычеван, Азербайджан, dasqinqenberov@ndu.edu.az*

Abstract. Species *Astragalus* L. Family Fabaceae Lindl. Widely represented in the flora of Azerbaijan. Descriptions of the species composition of *Astragalus* L. were previously made by the authors. In 2025, new locations of some species were discovered during field research. For the first time, new locations of *Astragalus hamosus* L. were discovered during research conducted near the village of Sus in the Lachin district (June 17, 2025), on the left bank of the Khakari River, and in the center of the village of Agaly in the Zangilan district (May 8, 2025). The morphological description and exact coordinates of the detection locations are provided.

Аннотация. Виды *Astragalus* L. семейства *Fabaceae* Lindl. Широко представлены во флоре Азербайджана. Описания видового состава *Astragalus* L. было ранее выполнено авторами. В 2025 г. В ходе полевых исследований были выявлены новые местонахождения некоторых видов. Впервые новые местонахождения *Astragalus hamosus* L. было обнаружено в ходе исследований, проведенных вблизи села Сус Лачинского района (17.06.2025), вдоль левого берега реки Хакари, и в центре села Агалы Зангиланского района (08.05.2025). Приведено морфологическое описание и точные координаты места обнаружения.

Keywords: Astragalus, flora, location, plant communities, Lesser Caucasus.

Ключевые слова: астрагал, флора, местонахождение, растительные сообщества, Малый Кавказ.

The richness of the flora and the diversity of vegetation cover in the territory of Azerbaijan are related to the variety of its physical-geographical and natural-historical conditions, as well as its complex history formed under the influence of extensive floristic regions. This rich vegetation has always attracted the attention of researchers worldwide. Plant communities occur across all relief forms, water bodies, river valley slopes, and gorges, ravines, and semi-desert vegetation zones. Often, they form completely independent phytocenoses and various types of plant assemblages. This is evidently associated with optimal soil-climatic conditions and the strong dissection of the relief,

Т. 12. №4 2026
https://doi.org/10.33619/2414-2948/125

which creates numerous diverse ecotopes. In the formation of regional vegetation, the emergence of diverse plant communities, and the enrichment of species composition, species belonging to the genus *Astragalus* L. of the family Fabaceae Lindl. occupy a special place.

Our studies have made it possible to identify important characteristics typical for species of the genus *Astragalus* of the family Fabaceae Lindl. distributed in the study area. Investigating species of the genus *Astragalus* occurring in the region, determining the plant communities they form, and identifying their new distribution areas are considered relevant.

Materials and Methods

During the research, generally accepted floristic, geobotanical, and bioecological methods, as well as phenological observations and route surveys, were applied. Literary sources and factual data obtained during field studies served as the main research material. Taxonomically rich genera of the family Fabaceae Lindl. were analyzed separately. Among these genera, species of the genus *Astragalus* L., distinguished by high species diversity, are of particular scientific interest.

Species identification was carried out using "Flora of Azerbaijan" and the works of other researchers [1, 4, 8–15].

According to literature data, the genus comprises 2400 species worldwide, 988 species in the former USSR, 235 species in the Caucasus, 142 species in the flora of Azerbaijan, and 84 species in the flora of the Nakhchivan Autonomous Republic [1–3, 5–8].

One of these species is *Astragalus hamosus* L.

Discussion and Results

Among the plants widely distributed in the flora of Azerbaijan, species of the genus *Astragalus* belonging to the family Fabaceae deserve special mention. As noted above, the genus includes 2400 species worldwide, 988 species in the former USSR, 235 species in the Caucasus, 142 species in Azerbaijan, and 84 species in Nakhchivan AR. One of these species is *Astragalus hamosus* L. [1–3, 5–7].

Based on literature data and personal field research materials, two subgenera of the genus *Astragalus* were identified in the study area, and the floristic analysis of *Astragalus hamosus* L. by section is presented below [16].

Section Astragalus

Sect. Buceras Bunge: *A. hamosus* L.

Species name: *Astragalus hamosus* L.

Synonym: *Astragalus buceras* Willd.

Life form (Raunkiaer): Therophyte (annual herb)

Flowering period: March–April

Flower color: White, yellowish

Fruiting period: May–June (https://www.maltawildplants.com/)

Etymology: *Astragalus derives* from the Greek name of the ankle bone, referring to plants with knotted, spine-like roots; hamosus refers to the strongly curved pods resembling a hook.

Botanical description: Stem up to 60 cm; leaves 5–10 cm long; leaflets 9–11 pairs, oblong, obtuse or truncate; lower surface pubescent, upper surface glabrous. Inflorescence with 5–14 flowers. Calyx 5–6 mm. Corolla white or pale yellow; standard 7–8 mm; stamens 10. Pods 20–50 mm long and 2–3 mm wide, linear, apex acute, nearly semicircularly curved, laterally compressed.

The study of the distribution of *Astragalus* species across botanical-geographical regions of Azerbaijan is of great importance. Therefore, five distinct botanical-geographical regions were selected to determine the distribution of the studied species within the national flora, and comparative

Т. 12. №4 2026
https://doi.org/10.33619/2414-2948/125

analyses were conducted. According to literature data, *Astragalus hamosus* L. is distributed in the Greater Caucasus and Nakhchivan Autonomous Republic botanical-geographical regions. This species has not been reported in the literature for the flora of the Little Caucasus. During floristic, geobotanical, and ethnobotanical studies conducted in 2024–2025, a new locality of *Astragalus hamosus* L. was identified by us for the first time. The newly discovered habitats are presented below.

1. Agali village area, Zangilan district. The species was recorded in dry roadside habitats in the territory of Agali village, Zangilan district of the Republic of Azerbaijan. The average altitude of the site is 360 m.


Figure 1. *Astragalus hamosus* L. (39°11′03″ N, 46°45′15″ E), 08.05.2025

2. Near Sus village, Lachin district, along the left bank of the Hakari River. The Hakari River is a left tributary of the Araz River and is the second largest river in the Azerbaijani part of the Little Caucasus after the Tartar River. It flows through the territories of Lachin, Gubadli, and Zangilan districts and joins the Araz River in Zangilan distri


Figure 2. Bank of the Hakari River 39.628398, 46.533507 (39°37′35.9″ N, 46°31′59.5″ E), 17.06.2025

Т. 12. №4 2026
https://doi.org/10.33619/2414-2948/125

Thus, as a result of the conducted research, the taxonomic composition of the genus *Astragalus* L. in the flora of Azerbaijan was determined, and new distribution areas of certain species were investigated. The research results constitute an important scientific basis for studying the vegetation of the region.

Conclusions

Based on the conducted research, the sectional taxonomic composition of *Astragalus* species belonging to the family Fabaceae was determined, and new distribution areas of *Astragalus hamosus* L. were identified by us for the Little Caucasus botanical-geographical region.

References:

1. Askerov, A. M. (2016). Rastitel'nyi mir Azerbaidzhana, Baku. (in Azerbaijani).

2. Askerov, A. M. (2011). Kratkii obzor flory Azerbaidzhana. Baku. (in Azerbaijani).

3. Ganbarov, D. Sh. (2016). Fitotsenologicheskie, ekobiologicheskie kharakteristiki i sokhranenie genofonda vidov *Astracantha* i *Astragalus* (Fabaceae lindl.), rasprostranennykh v Nakhchyvanskoi Avtonomnoi Respublike. (in Azerbaijani).

4. Ganbarov, D., Aslanova, E., & Abbasov, N. (2023). New Location of the Species Astragalus mollis M. Bieb. (Fabaceae) in the Flora of Nakhchivan (Azerbaijan). *Bulletin of Science and Practice, 9*(11), 75-79. (in Russian). https://doi.org/10.33619/2414-2948/96/08

5. Kamelin, R. V., Ovesnov, S. A., & Shilova, S. I. (1999). Nemoral'nye elementy vo florakh Urala i Sibiri. Perm'. (in Russian).

6. Sytin, A. K. (2009). Astragaly (*Astragalus* L., Fabaceae) Vostochnoi Evropy i Kavkaza: sistematika, geografiya, evolyutsiya: diss. ... d-r biol. nauk. St. Petersburg. (in Russian).

7. Cherepanov, S. K. (1995). Sosudistye rasteniya Rossii i sopredel'nykh gosudarstv. St. Petersburg. (in Russian).

8. Babayeva, S. (2025). Bioecological Characteristics of Species of the Genus Potentilla L. in the Rosaceae Juss. Family of the Flora of the Nakhchivan Autonomous Republic. *Bulletin of Science and Practice, 11*(2), 116-125. https://doi.org/10.33619/2414-2948/111/14

9. Babayeva, S. (2025). Study of the Subassociations Formed by Woody Species of the Rosaceae Family in the Forest-adjacent Shrublands of Zangezur National Park. *Bulletin of Science and Practice, 11*(9), 75-83. https://doi.org/10.33619/2414-2948/118/07

10. Ganbarov, D. S., & Ibrahimov, A. S. (2015). Astragalus dasyanthus L.(Fabaceae), a new species to the flora of Azerbaijan. *International Journal of Multidisciplinary Research and Development*, *2*(1), 426-427.

11. Gambarov, D., İbrahimov, A., & Nabiyeva, F. (2011). Geographical areal types of Astragalus species spread in Nakhchivan Autonomous Republic. *Kafkas Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, *4*(1), 58-64.

12. Ganbarov, D. (2024). Rosaceae in the Mountain-Xerophyte and Steppe Vegetation of Shahbuz District, Current Status of the Woody Species. *Bulletin of Science and Practice, 10*(11), 37-44. https://doi.org/10.33619/2414-2948/108/04

13. Ganbarov, D. (2025). Conclusions of Botanical Research. Discussion and Analysis of the Results Obtained. *Bulletin of Science and Practice, 11*(2), 126-132. https://doi.org/10.33619/2414-2948/111/15

14. Ganbarov, D., & Babayeva, S. (2020). Systematical Structure, Geographical Areal Classes and Ecological Groups of Rosa L. Genus Spreading in the Flora of Nakhchivan Autonomous Republic. *Bulletin of Science and Practice, 6*(6), 55-60. https://doi.org/10.33619/2414-2948/55/07

15. Ganbarov, D., Guliyeva, N. & Babayeva, S. (2024). Taxonomic Composition of the Tragopogon L. Genus in Nakhchivan and Prospects for Using Species. *Bulletin of Science and Practice, 10*(12), 71-78. https://doi.org/10.33619/2414-2948/109/09

16. Linnaeus, C. V. (1753). Scabiosa. *Species plantarum*, *1*, 98-101.

17. Ganbarov D. Sh., Ibragimov A. Sh., & Nabieva F. Kh. (2018). Dva novykh astragala dlya flory Nakhichevanskoi Avtonomnoi respubliki Azerbaidzhana. *Vestnik nauki i obrazovaniya, 1*(3 (39)), 17-21. (in Russian).

Список литературы:

1. Əsgərov A. M. Azərbaycan florası, Bakı, 2016.

2. Əsgərov A. M. Azərbaycan florasına qısa baxış. Bakı, 2011. 202 s.

3. Qənbərov D. Ş. Naxçıvan Muxtar Respublikasında yayılmış Astrakanta və Astragalus növlərinin (Fabaceae lindl.) fitosenoloji, ekobioloji xüsusiyyətləri və genofondunun qorunması. Diss. 2016. 271 s.

4. Ганбаров Д. Ш., Асланова Е. А., Аббасов Н. К. Новое местонахождение вида Astragalus mollis M. Bieb. (Fabaceae) во флоре Нахичевани (Азербайджан) // Бюллетень науки и практики. 2023. Т. 9. №11. С. 75-79. https://doi.org/10.33619/2414-2948/96/08

5. Камелин Р. В., Овеснов С. А., Шилова С. И. Неморальные элементы во флорах Урала и Сибири. Пермь: Изд-во Перм. ун-та, 1999. 81 с.

6. Сытин А. К. Астрагалы (Astragalus L., Fabaceae) Восточной Европы и Кавказа: систематика, география, эволюция: дисс. ... д-р биол. наук. СПб., 2009. 301 с.

7. Черепанов С. К. Сосудистые растения России и сопредельных государств. СПб., 1995.

8. Babayeva S. Bioecological Characteristics of Species of the Genus *Potentilla* L. in the Rosaceae Juss. Family of the Flora of the Nakhchivan Autonomous Republic // Бюллетень науки и практики. 2025. Т. 11. №2. С. 116-125. https://doi.org/10.33619/2414-2948/111/14

9. Babayeva S. Study of the Subassociations Formed by Woody Species of the Rosaceae Family in the Forest-adjacent Shrublands of Zangezur National Park // Бюллетень науки и практики. 2025. Т. 11. №9. С. 75-83. https://doi.org/10.33619/2414-2948/118/07

10. Ganbarov D. S., Ibrahimov A. S. Astragalus dasyanthus L.(Fabaceae), a new species to the flora of Azerbaijan // International Journal of Multidisciplinary Research and Development. 2015. V. 2. №1. P. 426-427.

11. Gambarov D., İbrahimov A., Nabiyeva F. Geographical areal types of Astragalus species spread in Nakhchivan Autonomous Republic // Kafkas Üniversitesi Fen Bilimleri Enstitüsü Dergisi. 2011. V. 4. №1. P. 58-64.

12. Ganbarov D. Rosaceae in the Mountain-Xerophyte and Steppe Vegetation of Shahbuz District, Current Status of the Woody Species // Бюллетень науки и практики. 2024. Т. 10. №11. С. 37-44. https://doi.org/10.33619/2414-2948/108/04

13. Ganbarov D. Conclusions of Botanical Research. Discussion and Analysis of the Results Obtained // Бюллетень науки и практики. 2025. Т. 11. №2. С. 126-132. https://doi.org/10.33619/2414-2948/111/15

14. Ganbarov D., Babayeva S. Systematical Structure, Geographical Areal Classes and Ecological Groups of Rosa L. Genus Spreading in the Flora of Nakhchivan Autonomous Republic // Бюллетень науки и практики. 2020. Т. 6. №6. С. 55-60. https://doi.org/10.33619/2414-2948/55/07

15. Ganbarov D., Guliyeva N., Babayeva S. Taxonomic Composition of the Tragopogon L. Genus in Nakhchivan and Prospects for Using Species // Бюллетень науки и практики. 2024. Т. 10. №12. С. 71-78. https://doi.org/10.33619/2414-2948/109/09

16. Linnaeus C. Scabiosa // Species plantarum. 1753. V. 1. P. 98-101.

17. Ганбаров Д. Ш., Ибрагимов А. Ш., Набиева Ф. Х. Два новых астрагала для флоры Нахичеванской Автономной республики Азербайджана // Вестник науки и образования. 2018. №3 (39). С. 17-21.

Поступила в редакцию
03.02.2026 г.

Принята к публикации
16.02.2026 г.

Ссылка для цитирования:

Aslanova E., Ganbarov D. New Distribution Area of *Astragalus hamosus* L. (Fabaceae Lindl.) in the Lesser Caucasus (Azerbaijan) // Бюллетень науки и практики. 2026. Т. 12. №4. С. 34-39. https://doi.org/10.33619/2414-2948/125/04

Cite as (APA):

Aslanova, E., & Ganbarov, D. (2026). New Distribution Area of *Astragalus hamosus* L. (Fabaceae Lindl.) in the Lesser Caucasus (Azerbaijan). *Bulletin of Science and Practice, 12*(4), 34-39. https://doi.org/10.33619/2414-2948/125/04