

Notes about *Astragalus* (Leguminosae) in Iran

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Key Words: *Astragalus*, *A. assadabadensis*, *A. neo-assadabadensis*; Flora of Iran.

The correct author for *Astragalus neo-assadabadensis*

A. assadabadensis F. GHAHREM. & PODLECH has been published in 2005 (GHAHREMANINEJAD & PODLECH 2005). One month later, using the same epithet, *Astragalus assadabadensis* MAASSOUMI was published. Thus according to the International Code of Botanical Nomenclature (MCNEILL & al. 2012), *Astragalus assadabadensis* MAASSOUMI was invalid and needed to be renamed.

As replacement for this taxon *Astragalus neo-assadabadensis* F. GHAHREM. & MAASSOUMI was published (GHAHREMANINEJAD & MAASSOUMI 2010). Three years later the need for a new name for *A. assadabadensis* was also realized by Podlech. Accidentally he chose the same epithet thus creating *A. neo-assadabadensis* PODLECH as nomen superfluum (PODLECH & ZARRE 2013).

Astragalus neo-assadabadensis F. GHAHREM. & MAASSOUMI, Ann. Naturhist. Mus. Wien, B 111: 280 (2010).

≡ *Astragalus assadabadensis* MAASSOUMI, Gen. *Astragalus* Iran 5: 401 (2005). – non *A. assadabadensis* F. GHAHREM. & PODLECH (2005).

≡ *Astragalus neo-assadabadensis* PODLECH (2013) – nomen superfluum.

Holotype: Hamadan, Assadabad, 2000 m, s. coll. D53 [TARI!].

Species number of *Astragalus* in Iran

Nobody knows the exact number of species of *Astragalus* in the territory of Iran. We can suppose that several species are not yet detected due to the abundance of the diverse habitats and the difficulties of: botanical exploration, complication of reaching areas, excessive expenses of plant collecting, relatively small number of Iranian taxonomic field-researchers, etc.

Based on the recent published treatment of the genus *Astragalus* (PODLECH & ZARRE 2013) and additional published papers (BAGHERI & al. 2011, 2013, 2014, GHAHREMANINEJAD & al. 2012; MAASSOUMI & al. 2011, 2013; MAHMOODI & al. 2013; RANJBAR & al. 2011a, b, 2012a, b, 2013) the number of published and valid species of *Astragalus* in Iran is 826 to date.

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According to ASSADI (1998), AKHANI (2006), ZARRE & al. (2008), KHOSHRAVESH & al. (2009), PODLECH & al. (2010, 2012), and RAHMANI & al. (2014) the total number of species in the flora of Iran can be estimated with 7900.

Based on these numbers the genus *Astragalus* includes 10.5% of the flora of Iran, which is slightly less than the number earlier estimated by GHAHREMANINEJAD (2011).

Today in Virtual Herbaria (RAINER & al. 2014) 792 types of *Astragalus* from Iran can be found, of these 499 are located in the Herbarium of the Natural History Museum in Vienna [W].

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References

- AKHANI H., 2006: Flora Iranica: Facts and figures and a list of publications by K.H. Rechinger on Iran and adjacent areas. – Rostaniha 7 (suppl. 2): 19–61.
- ASSADI M., 1998: Pinaceae, Taxaceae, and Ephedraceae. – In ASSADI M. & al. (eds.): Flora of Iran 19–22. – Tehran.
- BAGHERI A., MAASSOUMI A.A. & GHAHREMANINEJAD F., 2011: Additions to *Astragalus* sect. *Hymenostegis* (Fabaceae) in Iran. – Iran. J. Bot. 17: 15–19.
- BAGHERI A., RAHIMINEJAD M.R. & MAASSOUMI A.A., 2014: A new species of the genus *Astragalus* (Leguminosae-Papilionoideae) from Iran. – Phytotaxa 178 (1): 38–42.
- BAGHERI A., RAHIMINEJAD M.R. & MAASSOUMI A.A., 2013: *Astragalus hakkianus* a new species of *Astragalus* (Fabaceae) from N.W. Iran. – Feddes Repertorium 124: 46–49.
- GHAHREMANINEJAD F., 2011: Investigation of diversity and endemism of Papilionoid legumes in Iran and cooperation with ILDIS project. – XVIII international botanical congress, Melbourne, Australia, 23–30 July 2011.
- GHAHREMANINEJAD F., BAGHERI A. & MAASSOUMI A.A., 2012: Two new species of *Astragalus* L. sect. *Incani* DC. (Fabaceae) from the Zanjan province (Iran). – Adansonia, sér. 3, 34 (1): 59–65.
- GHAHREMANINEJAD F. & MAASSOUMI A.A., 2010: *Astragalus neo-assadabadensis* nom.n. for *Astragalus assadabadensis* MAASSOUMI, nom. illeg. (Fabaceae). – Ann. Naturhist. Mus. Wien, B 111: 280.
- GHAHREMANINEJAD F. & PODLECH D., 2005: *Astragalus assadabadensis* (Fabaceae), a new species from Iran. – Ann. Bot. Fennici 42 (3): 207–209.
- KHOSHRAVESH R., AKHANI H., ESKANDARI M. & GREUTER W., 2009: Ferns and fern allies of Iran. – Rostaniha 10 (suppl. 1): 1–129.
- MAASSOUMI A.A., 2005: The genus *Astragalus* in Iran, vol. 5. – Tehran: Research Institute of Forests and Rangelands.
- MAASSOUMI A.A., AMINI RAD M., BAGHERI A., MAROOFI H., JOHARCHI M.R. & GHAHREMANINEJAD F., 2013: Five new species of *Astragalus* sect. *Malacothrix* (Fabaceae) from Iran. – Rostaniha 14: 14–21.
- MAASSOUMI A.A., BAGHERI A. & GHAHREMANINEJAD F., 2011: Description of *Astragalus barnasariiformis* sp. nov. from Iran. – Rostaniha 12: 177–180.

- MAHMOODI M., MAASSOUMI A.A. & NOROOZI J., 2013: A new alpine species and a new record of *Astragalus* sect. *Stereothrix* (Fabaceae) from Iran, with comments on the phytogeography of the section. – *Willdenowia* 43 (2): 263.
- MCNEILL J. & al., 2012: International Code of Botanical Nomenclature (Melbourne Code). – <http://www.iapt-taxon.org/nomen/main.php>
- PODLECH D., MAASSOUMI A.A. & ZARRE SH., 2012. Papilionaceae VII, *Astragalus* V. – In RECHINGER K.H. (ed.): *Flora Iranica* 179. – Wien: Naturhistorischen Museum.
- PODLECH D. & ZARRE S., 2013: A taxonomic revision of the genus *Astragalus* L. (Leguminosae) in the Old World. 3 volumes, 2439 pp. – Wien: Naturhistorisches Museum.
- PODLECH D., ZARRE Sh. & MAASSOUMI A.A., 2010. Papilionaceae VI, *Astragalus* IV. in RECHINGER K.H. (ed.), *Flora Iranica* 178. – Naturhistorischen Museum Wien.
- RAHMANI A., NEJADSATARI T., HAMDI S.M.M., MEHREGANI I. & ASSADI M., 2014: A phylogenetic analysis of *Linaria* (Plantaginaceae) species from Iran based on ITS sequence data. – *European Journal of Experimental Biology* 4(3): 127–134.
- RAINER H. & al. (2014, permanently updated): Virtual Herbaria. – <http://herbarium.univie.ac.at/database/search.php>.
- RANJBAR M., KARAMIAN R. & NOURI S., 2011a: Diploid-tetraploid mixoploidy in a new species of *Astragalus* (Fabaceae) from Iran. – *Ann. Bot. Fennici* 48: 343–351.
- RANJBAR M., KARAMIAN R. & NOURI S., 2012a: Taxonomic notes on *Astragalus prilipkoanus* group of *Astragalus* sect. *Incani* (Fabaceae) in Iran. – *Novon* 22(1): 78–81.
- RANJBAR M., MAHMOUDIAN B. & VITEK E., 2013: A synopsis of genus *Astragalus* L. sect. *Stereothrix* Bunge (Fabaceae). – *Biological Diversity and Conservation* 6/1: 114–133.
- RANJBAR M., RAHIMINEJAD M.R., KARAMIAN R. & RAUFI S., 2012b: Two new species of *Astragalus* sect. *Caprini* (Fabaceae) from Iran. – *Ann. Bot. Fennici* 49: 117–122.
- RANJBAR M., ZARIN P. & GHahremani M.A., 2011b: Three new species in *Astragalus* sect. *Astragalus* (Fabaceae) from Iran. – *Ann. Bot. Fennici* 48: 63–68.
- SHEIKH AKBARI MEHR R., GHORBANI NOHOJJI M. & SAIDI A., 2011: A new isolated species of the genus *Astragalus* from Azerbaijan, Iran. – *Iran. J. Bot.* 17: 178–180.