



Astragalus caucasicus Pall.

FABACEAE

Rainer W. Bussmann, Ketevan Batsatsashvili, Zaal Kikvidze,
Narel Y. Paniagua-Zambrana, Manana Khutsishvili, Inesa Maisaia,
Shalva Sikharulidze, and David Tchelidze

Local Names

Georgian გლერძი (glerdzi); **Russian** Астрagal (astragal); **Azeri** гөвөн (goeven); **Armenian** գազ (gas) (Grossheim 1952) (Ketskhoveli et al. 1971–2011; Makashvili 1991; Sokolov 1987).

R. W. Bussmann (✉)

Department of Ethnobotany, Institute of Botany and Bakuriani Alpine Botanical Garden, Ilia State University, Tbilisi, Georgia

Saving Knowledge, La Paz, Bolivia

e-mail: rainer.bussmann@iliauni.edu.ge; rbussmann@gmail.com

K. Batsatsashvili · M. Khutsishvili · I. Maisaia · S. Sikharulidze · D. Tchelidze

Department of Ethnobotany, Institute of Botany and Bakuriani Alpine Botanical Garden, Ilia State University, Tbilisi, Georgia

e-mail: ketevan_batt@yahoo.com; ketevan_batsatsashvili@iliauni.edu.ge; mananakhuts@yahoo.com; Inesa.Maisaia@gmail.com; bakurianigarden@yahoo.com; nickibakanidze@yahoo.de

Z. Kikvidze

4-D Research Institute, Ilia State University, Tbilisi, Georgia

e-mail: zaal.kikvidze@iliauni.edu.ge

N. Y. Paniagua-Zambrana

Department of Ethnobotany, Institute of Botany and Bakuriani Alpine Botanical Garden, Ilia State University, Tbilisi, Georgia

Saving Knowledge, La Paz, Bolivia

Herbario Nacional de Bolivia, Universidad Mayor de San Andrés, La Paz, Bolivia

e-mail: nyaroslava@yahoo.es

© Springer Nature Switzerland AG 2020

K. Batsatsashvili et al. (eds.), *Ethnobotany of the Mountain Regions of Far Eastern Europe*, Ethnobotany of Mountain Regions,

https://doi.org/10.1007/978-3-030-28940-9_19

Botany and Ecology

Astragalus is the largest genus in the Caucasus (about 200 species); with very diverse ecology and external form, a densely branched shrub, 40–50 cm tall; branches up to 20 cm long, with tomentose internodes, densely clothed in stipules and spinescent leaf rachises; spines divergent, pubescent, slender, 2–7 cm long; stipules lanceolate, acuminate, pubescent at first, becoming glabrous, stramineous, subcoriaceous-membranous; leaflets 6–8 pairs, linear-lanceolate to oblong, cineraceous with appressed hairs, glabrate above, 7–10 mm long, to 2 mm broad, terminating in a strong prickle; bracts narrow, linear-navicular, acuminate, hairy on the back, about equaling or somewhat shorter than the calyx; flowers in 2's or 3's in the leaf axils, crowded in a cylindrical spiciform inflorescence 1–2 cm broad; calyx 7–10 mm long, lanate with white hairs, not splitting, with a distinct tube, commonly glabrous toward base, the pinnose-hirsute lanceolate or subulate teeth about equaling or somewhat shorter than

Fig. 1 *Astragalus fragrans* (Fabaceae), Bakuriani, Georgia. (Photo R. W. Bussmann & N. Y. Paniagua-Zambrana)



Fig. 2 *Astragalus fragrans* (Fabaceae), Bakuriani, Georgia. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



the tube, corolla about twice the length of the calyx, 12–14 (16) mm long, whitish or yellowish; standard oblong-spatulate, 4–6 mm broad in upper part, retuse, gradually attenuate toward base, the claw broad, but narrower than the limb; wing petals about equaling the standard, the oblong-lanceolate limb about equaling the claw, auriculate at base; keel limb oval, 2/3 as long as the claw; ovary hairy, oblong; style 8 mm long, naked; pods lanate, oblong, 1–2-seeded. Flowering June–September. Caucasus, rocks and stony dry slopes (Komarov and Shishkin 1946; Figs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12).

Local Food Uses

The leaves are used as tea (Bussmann et al. 2016, 2017).

Fig. 3 *Astragalus*
sp. (Fabaceae), Svaneti,
Georgia. (Photo
R.W. Bussmann &
N.Y. Paniagua-Zambrana)



Fig. 4 *Astragalus*
sp. (Fabaceae), Cappadocia,
Turkey. (Photo
R.W. Bussmann &
N.Y. Paniagua-Zambrana)



Fig. 5 *Astragalus*
sp. (Fabaceae), Cappadocia,
Turkey. (Photo
R.W. Bussmann &
N.Y. Paniagua-Zambrana)



Fig. 6 *Astragalus* sp. (Fabaceae), Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 7 *Astragalus* sp. (Fabaceae), Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 8 *Astragalus* sp. (Fabaceae), Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 9 *Astragalus* sp. (Fabaceae), material for local art, Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 10 *Astragalus* sp. (Fabaceae), material for local art, Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 11 *Astragalus* sp. (Fabaceae), material for local art, Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Fig. 12 *Astragalus* sp. (Fabaceae), local art, Cappadocia, Turkey. (Photo R.W. Bussmann & N.Y. Paniagua-Zambrana)



Local Handicraft and Other Uses

Used as fodder (Grossheim 1952; Sokolov 1987). The root gum is used in art (Bussmann et al. 2016, 2017).

References

- Bussmann RW, Paniagua Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Tchelidze D, Khutsishvili M, Batsatsashvili K, Hart RE. A comparative ethnobotany of Khevsureti, Samtskhe-Javakheti, Tusheti, Svaneti, and Racha-Lechkhumi, Republic of Georgia (Sakartvelo), Caucasus. *J Ethnobiol Ethnomed*. 2016;12:43. <https://doi.org/10.1186/s13002-016-0110-2>.

- Bussmann RW, Paniagua Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Tchelidze D, Batsatsashvili K, Hart RE. Ethnobotany of Samtskhe-Javakheti, Sakartvelo (Republic of Georgia), Caucasus. *Indian J Tradit Knowl.* 2017;16(1):7–24.
- Grossheim AA. Plant richness of the Caucasus. Moscow: Akademia Nauk; 1952. (in Russian).
- Ketskhoveli N, Kharadze A, Gagnidze R. Flora of Georgia, 16 vols. Tbilisi: Metsniereba; 1971–2011. (in Georgian).
- Komarov VL, Shishkin BK. Flora of the USSR, Volume 12: Leguminosae: Astragalus. Leningrad: Akademia Nauk; 1946 (English 1965). 681 p, 50 b/w plates, 2 maps.
- Makashvili A. Botanical dictionary. Tbilisi: Metsniereba; 1991. (in Georgian).
- Sokolov PD, editor. Plant resources of the USSR: flowering plants, their chemical composition, use, Volume 3. Hydrangeaceae-Haloragaceae. Leningrad: Akademia Nauk; 1987, 326 p. (in Russian).