
Asplenium trichomanes L.

ASPENIACEAE

Naiba P. Mehdiyeva, Valida M. Alizade, Ketevan Batsatsashvili, Zaal Kikvidze, Manana Khutsishvili, Inesa Maisaia, Shalva Sikharulidze, David Tchelidze, Narel Y. Paniagua Zambrana, and Rainer W. Bussmann

Synonyms

Asplenium melanocaulon Willd.; *Chamaefilix trichomanes* (L.) Farw.

Local Names

Azerbaijan: Tükvari qamçılıca; **Georgia:** მამასწარა – mamats’ara, გველის გვიმრა – gvelis gvimra (Imeretian), ინდორე – indore (Lechkhumuan), კლდის კილაშურა – k’ldis k’ilamura (Chanetian), მომასწარა – momasts’ara (Upper Imeretian) (Makashvili 1991; Ketskhoveli et al. 1971–2011); **English:** Mouse-ear fern.

N.P. Mehdiyeva • V.M. Alizade

Institute of Botany, Azerbaijan National Academy of Sciences, Baku, Azerbaijan
e-mail: naiba_m@mail.ru; vm_alizade@yahoo.com

K. Batsatsashvili • M. Khutsishvili • I. Maisaia • S. Sikharulidze • D. Tchelidze
Institute of Botany and Bakuriani Alpine Botanical Garden, Ilia State University, Tbilisi, Georgia
e-mail: ketevan_batt@yahoo.com; 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

Instituto de Ecología-UMSA, Herbario Nacional de Bolivia, La Paz, Bolivia
e-mail: nyaroslava@yahoo.es

R.W. Bussmann (✉)

William L. Brown Center, Missouri Botanical Garden, St. Louis, MO, USA
e-mail: rainer.bussmann@mobot.org

Botany and Ecology

Perennial, tufted fern, with black and scaly rhizome. Leaf stalks reddish brown to nearly black throughout the entire length. Leaves pinnately compound, pinnae usually opposite, these oblong, ovate, or wedge-shaped with lobes and shallow teeth, but not clasping petiole, frond veins not intertwining. Sori oblong on the undersides of leaf lobes. In shaded crevices, ledges, or boulders of chert, sandstone, or granite in shady woods. Distributed in Caucasus (Ciscaucasia, Dagestan, Southern Transcaucasia, Talysh), Central Asia, Europe, Africa, Australia, North America. *Asplenium trichomanes* is a widespread and common species, occurring almost worldwide in a variety of rocky habitats. It is widespread in temperate and subarctic areas and also occurs in mountainous regions in the tropics. The species grows in rocky habitats such as cliffs; slopes, walls and mine waste, from sea level up to 3000 m (Fig. 1).

Azerbaijan: Areal covers all regions of Greater and Lesser Caucasus, as well as Gobustan, Absheron, Mountainous part of Nakhchivan, Diabar, Lankaran lowlands and mountainous part of Lankaran. Grows in the lower and middle mountain belt. Found in forests, stony slopes, shady stony places and on rocks (Flora of Azerbaijan 1950–1961).

Georgia: One of the most widespread ferns in Georgia. Common in all the mountain forest zones. Rarely occurs in subalpine areas. Sometimes can be found in places devoid of forest. Most frequently grows on rocks, boulders, gravelly soil on steep slopes covered with forest and shrubland, on terrace edges and bare rocks, especially abundant on moss-covered rocks, boulders fallen into ravines. Sometimes occurs on rotten stumps and logs (esp. those covered with deluvial gravel). Rarely grows as epiphyte on moss-covered branches of living trees. Grows as separate individuals or groups never forming large thickets (Ketskhoveli et al. 1971–2011). Distributed throughout the country except Kiziki and Gardabani (Ketskhoveli et al. 1971–2011).

Fig. 1 *Asplenium trichomanes* (ASPLENIACEAE). Georgia (Photo: N. Paniagua-Zambrana)



Fig. 2 *Asplenium trichomanes* (ASPLENIACEAE). Leaves collected for use. Lower Svaneti, Georgia (Photo: N. Paniagua-Zambrana)



Local Medicinal Uses

Azerbaijan: The decoction of leaves is used as expectorant in diseases of the lungs. A decoction of leaves is used for scurvy and hair loss. The decoction of leaves is used as tonic, lactigenous, as well as for fever (Aleksperov 1992; Damirov et al. 1988).

Georgia: Used in Telavi against diarrhea (Sharadze 1961).

Local Veterinary and Fodder Uses

Georgia: The whole plant is given to livestock in case of urine retention (Bussmann et al. 2014, 2016a, b, 2017a, b, c) (Fig. 2).

Local Handicraft and Other Uses

Azerbaijan: Beautiful plant, can be used in designing gardens and parks.

References

- Aleksperov FU. Comparative analysis of medicinal plants of medieval (XIII-XVIII centuries) and modern Azerbaijan. Baku: Ornak; 1992 (in Russian).
- Bussmann RW, Paniagua-Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Jinjikhadze T, Shanshiashvili T, Chelidze D, Batsatsashvili K, Bakanidze N. Wine, beer, snuff, medicine and loss of diversity – ethnobotanical travels in the Georgian Caucasus. *Ethnobot Res Appl.* 2014;12:237–313.
- 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.* 2016a;12:43. doi:10.1186/s13002-016-0110-2.
- Bussmann RW, Paniagua Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Tchelidze D, Batsatsashvili K, Hart RE. Medicinal and food plants of Svaneti and Lechkhumi, Sakartvelo (Republic of Georgia), Caucasus. *Med Aromat Plants.* 2016b;5:266. doi:10.4172/2167-0412.1000266.
- Bussmann RW, Paniagua Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Tchelidze D, Batsatsashvili K, Hart RE. Plants in the spa – the medicinal plant market of Borjomi, Sakartvelo (Republic of Georgia), Caucasus. *Indian J Tradit Knowl.* 2017a;16(1):25–34.
- 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.* 2017b;16(1):7–24.
- Bussmann RW, Paniagua Zambrana NY, Sikharulidze S, Kikvidze Z, Kikodze D, Tchelidze D, Khutsishvili M, Batsatsashvili K, Hart RE. Plant and fungal use in Tusheti, Khevsureti, and Pshavi, Sakartvelo (Republic of Georgia), Caucasus. *Act Soc Bot Pol.* 2017c;86(2), 3517. <https://doi.org/10.5586/asbp.3517>.
- Damirov IA, Prilipko LI, Shukurov DZ, Kerimov YB. Medicinal plants of Azerbaijan. Baku: Maarai; 1988 (in Russian).
- Flora of Azerbaijan, vols. I–VIII. Baku: AS of Azerbaijani SSR; 1950–1961 (in Russian).
- Ketskhoveli N, Kharadze A, Gagnidze R. Flora of Georgia, 16 vols. Tbilisi: Metsniereba; 1971–2011 (in Georgian).
- Makashvili A. Botanical dictionary. Tbilisi: Metsniereba; 1991 (in Georgian).
- Sharadze L. The use of wild plants in traditional medicine of Adjara. Batumi: Works of the Sate Museum of Adjara SSR; 1961 (in Georgian).