

Grimmia fuscolutea Hook. - Musci Exotici 1: 63. 1818.

Type: Mexico, Tobeccae and Islahuacae, 1330 hexapod., leg. Humboldt & Bonpland No. 2673, lectotype, designated by Muñoz & Pando (2000), BM.

Synonyms: *Grimmia apiculata* Hornsch., *G. fastigiata* Cardot, *G. flexicaulis* C. Müll., *G. holleri* Mol., *G. micropyxis* Broth., *G. sanii* H.C. Greven, *G. subdon-niana* Nog., *G. trichophylloidea* C. Müll., *G. unicruris* C. Müll., *G. quatricruris* C. Müll.

Distribution: Afr.4, Am.2, 4, 6, As.1, 2, 3, 5, Eur.

Description

Grimmia fuscolutea grows in dense, not very hoary yellowish-green tufts, the leaves are curved when dry, erecto-patent when moist, ovate-lanceolate, sharply keeled above, the costa is weak at base, projecting on dorsal side, the hair-points are short, slightly denticulate, the margins are usually unequally recurved on both sides. The distal areolation is unistratose to partly bistratose, the mid-leaf cells are short-rectangular with conspicuous sinuose and incrassate walls, the basal marginal cells are rectangular, hyaline with thin walls, the basal juxtacostal cells are yellowish, elongate with incrassate smooth walls. The sexuality is autoicous. Capsules on arcuate setae are usually present, they are exserted, globose to ovoid and smooth, the exothecial cells are thin-walled, 4-8 stomata are present at the base of the urn, the operculum is conical with short obtuse beak.

Discussion

In Europe, *Grimmia fuscolutea* was known as *G. apiculata* Hornsch., a rare species with a scattered distribution in the European Alps and in Scandinavia. In South America, it was known as *G. flexicaulis* C. Müll., not rare on the Mexican volcanoes and in the South American Andes. Deguchi (1987) described the seta of *Grimmia flexicaulis* incorrectly as erect, flexuose. The species is usually provided with abundant globose to ovoid capsules on arcuate setae, the cell pattern of the leaves characterized by rectangular mid-leaf cells with conspicuous incrassate and nodulose walls, sharply contrasting with elongate thin- and smooth-walled basal cells. *G. fuscolutea* is very close to *G. nepalensis*, which differs by oblong-lanceolate, variously curled leaves and capsules with incrassate exothecial cells and only a few stomata at the base of the urn.

Specimens examined

Austria. Tirol, Meszelingkogel, alt. 2694, leg. G. Schwab; Innsbruck, Roszkogel, alt. 2630, leg. H. v. Handel-Mazetti; Hohe Tauern, Messerlingwand, alt. 2600

m, leg. J. Breidler; **Italy.** South Tirol, Sulden am Ortler, Zaithal, alt. 2650 m, leg. C.C. Townsend; **Norway.** Oppland, Lom, Dummhö, alt. 1400 m, nr. 1991; Oppland, Storgrovhö, Storgrovbreen, alt. 1300 m, nr. 2646; **Switzerland.** Murgtal, Schwartzwand, alt. 2200 m, leg. P.F. Culmann; Davos, Hörnli, alt. 2500 m, leg. J.J. Amann; Graubunden, Pischahorn, alt. 2650 m, leg. C.C. Townsend; **Japan.** Honshu, Mt. Kitadake, alt. 3020 m, leg. H. Deguchi; Mt. Ainnodaka, Ashiyasumura, alt. 3000 m, leg. H. Deguchi; Mt. Oyama, Tateyama-cho, Nakashinkawa-gun, alt. 2850 m, leg. H. Deguchi; **Bolivia:** La Paz, boulder along road nr. 3, just south of La Cumbre, alt. 4245, leg. H.C. Greven Bol. nr. 53, 21-05-2005;

References

- Cao, T. & D.H. Vitt. 1986. A taxonomic revision and phylogenetic analysis of *Grimmia* and *Schistidium* in China. Journ. Hattori Bot. Lab. No. 61: 123-247.
- Deguchi, H. in: Inoue, H. (ed.) 1987. Studies on some Peruvian species of the Grimmiaceae (Musci, Bryophyta). Tokai University Press, Tokyo.
- Greven, H.C. 1995. *Grimmia* Hedw. in Europe. Backhuys Publishers, Leiden, The Netherlands.