

Grimmia khasiana Mitt. - J. Linn. Soc. Bot., Suppl. 1: 45. 1859.

Type: India, Sikkim, Khasian mountains, Mt. Kollong, leg. J.D. Hooker and Thomson No. 279, holotype NY!; isotype BM!

Synonyms: *Grimmia dimorphula* C. Müll.

Distribution: As.2,3

Description

Grimmia khasiana grows in dull-green to green-blackish patches on acidic rock at high elevations. The leaves are loosely appressed when dry, patent to spreading when moist, ovate-ligulate, concave-keeled, the apex suddenly contracted into a rather long hair-point, the costa is rather broad, not projecting on dorsal side, the hair-points are denticulate, not decurrent down margin, the margins are recurved on one side in the basal part of the leaf. The distal areolation is bistratose, the mid-leaf cells are irregularly quadrate with slightly incrassate walls, the basal marginal cells are quadrate, hyaline with thickened transverse walls, the basal juxtacostal cells are rectangular with incrassate slightly nodulose walls. The sexuality is dioicous, sporophytes are occasionally present, the seta is straight, the capsules are exserted, obloid to cylindrical, smooth, with an obliquely rostrate operculum.

Discussion

Grimmia khasiana is a peculiar Himalayan endemic. I found male plants in Nepal, Khumbu valley, Phakding, 2645 m (Greven 2002). By the patent concave leaves with wide apices, moistened plants are very similar to *G. laevigata*, but leaf form and areolation differs greatly from this species. *G. khasiana* is close to *G. ovalis* (Hedw.) Lindb., differing by concave ovate-ligulate leaves, margins recurved on one side but only in basal part, apex \pm suddenly contracted into hair-point, mid-leaf cells quadrate to short-rectangular with sinuose walls, and basal cells quadrate to short-rectangular. Muñoz & Pando (2000) synonymized *G. khasiana* erroneously with *G. longirostris*. However, this latter species is autoicous, sporophytes are usually present, the mid-leaf cells are short-rectangular with an urn-shaped lumen, sinuose and incrassate walls, and the costa projects greatly on the dorsal side of the leaf.

Specimens examined

Nepal. Khumbu valley, Phakding, boulder along river, associated with *Grimmia mammosa* Gao & Cao, alt. 2645 m, leg. H.C. Greven nr. N 151, 07-02-2000; Langtan area, slopes north above Thangsep, on boulder, alt. 3200 m, leg. Poelt,

04-09-1986; **India.** Sikkim, Mt. Khasian, Kullong rocks, leg. Hooker & Thomson nr. 279; **China.** Setschwan, Dugung, alt. 2225 m, leg. Handel-Mazetti nr. 429, 10-05-1914, H-Br.;

References

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- Greven, H.C. 2002. *Grimmia* (Bryopsida, Grimmiaceae) in the Nepalese Khumbu valley. *Journal of Bryology* 24: 157-161.
- Maier, E. 2002b. The genus *Grimmia* (Musci, Grimmiaceae) in the Himalaya. *Candollea* 57: 143-238.
- Muñoz, J. & F. Pando. 2000. A world synopsis of the genus *Grimmia*. *Missouri Bot. Gard. Press Vol.* 83: 1-133.