

**Grimmia caespiticia (Bridel) Juratzka – Laubmoosfl. Oesterr.
und Ungarn 172. 1882.**

Type: Switzerland, St. Bernard, leg. S. E. de Bridel, holotype, B!

Synonyms: *Campylopus caespiticius* Brid., *Dryptodon caespiticius* (Brid.) Brid., *Guembelia caespiticia* (Brid.) C. Müll., *Grimmia alpestris* var. *mutica* De Not., *G. alpestris* var. *caespiticia* (Brid.) Jones, *G. alpestris* var. *manniae* (C. Müll.) Jones, *G. funalis* var. *caespiticius* (Brid.) Hampe, *G. jacquinii* Garov., *G. manniae* C. Müll., *G. nivalis* Kindb., *G. papillinervis* Kindb., *G. pyrenaica* Kern, *G. sinensi-anodon* C. Müll., *G. sulcata* Saut.

Distribution: Am.1. As.2,3,5. Eur.

Description

Grimmia caespiticia grows in dense, bluish-green to blackish-green, flat mats, the leaves are appressed and straight when dry, erecto-patent when moist, from a broad base lanceolate, keeled above, the costa is narrow at base, channeled on ventral side above, hair-points are short, smooth to denticulate, the margins are plane below, incurved above, frequently forming a cucullate apex. The distal areolation is bistratose, frequently with longitudinal plicae along costa, the mid-leaf cells are irregularly rounded-quadrangle, usually mammillose in apex, the basal marginal cells are short-rectangular with thickened transverse walls, the basal juxtacostal cells are short-rectangular with thin walls. The sexuality is dioicous, capsules on straight setae are occasionally present, they are large compared with the gametophyte, ovoid and smooth with an obliquely rostellate operculum.

Discussion:

G. caespiticia is closely related to *G. alpestris* and *G. sessitana* and all three species may be found in the same habitat. Characteristic are plicae on each side of the costa and mammillose upper lamina cells. The hair-points are usually inconspicuous, very short, and under the microscope they appear as if implanted on the cucullate apex. The species is rather variable with respect to hair-point, leaf shape and plicae, which sometimes are hardly present. For the differences from *G. alpestris* and *G. sessitana* see the discussion under those species. Muñoz and Pando (2000) present *Grimmia nivalis* Kindb., described from British Columbia, as a distinct species. However, Muñoz (1998), remarked that *G. nivalis* deviates from *G. caespiticia* by somewhat longer hair-points and by leaves plane to weakly plicate only. These characters correspond with *G. pyrenaica*, a taxon synonymized with *G. caespiticia* by Bednarek-Ochyra, Muñoz and Ochyra (1992). Plants, comparable

with *G. pyrenaica*, were found in the Canadian Rockies, not far from the locus classicus of *G. nivalis*.

Specimens examined

Austria: Tirol, Matreier Tauern, Messerlingwand, alt. 2400 m, leg. K. Koppe; Carinthia, Kreuzeckgruppe, Hochtristen, alt. 2410 m, leg. H.C. Greven, nr. 3016; Tirol, Kr. Imstal, Pitztal, Chemnitzer Hütte, alt. 2550, leg. H.C. Greven, nr. 2135; Hochalmspitze, Giessenerhütte, leg. J. Froelich; Steiermark, Schladminger Tauern, Sauberg, alt. 2300 m, leg. J. Poelt; Tirol, Pitztal, alt. 2550, leg. H.C. Greven, nr. 2135; Salzburg, Kleinarlthal, Grieszkarecks, alt. 1900 m, leg. H.C. Greven, nr. 2134; **Corsica:** Mte. Cinto, alt. 1720 m, leg. H.C. Greven, nr. 2909, 2910; Lac de Melo, alt. 1650 m, leg. H.C. Greven, nr. 2912; Col de Vergio, alt. 1750 m, leg. H.C. Greven, nr. 2908; Mte. d'Oro, alt. 1450 m, leg. H.C. Greven, nr. 2911; **France:** Hautes Alpes, La Bérarde, alt. 1820, leg. H.C. Greven, nr. 2650; Pyrenees, R'au de la Llose, Pic Réric, alt. 2300 m, leg. R.J. Bijlsma, nr. 2239; Pyrenees, Lac des Bouillouses, Mt. Louis, alt. 2050 m, leg. R.J. Bijlsma, nr. 1053; Pyrenees, Gavarnie, Col de Boucheron, alt. 2270 m, leg. H.C. Greven, nr. 2034, 2035, 2036; **Hungary:** Carpathians, Mt. Fogarasi, alt. 2000 m, leg. L. Vajda; **Italy:** Col d'Aprica, alt. 1200 m, leg. K.H. Rechninger; **Sardinia:** Monti del Gennargentu, Barancu Spina, alt. 1530 m, leg. H.C. Greven, nr. 2033; **Slovakia:** Vysoke Tatras, Lomnický štít, alt. 2340 m, leg. H.C. Greven, nr. 2030; **Spain:** Cantabria, Vega de Tiébana, Pena Prieta, alt. 2350 m, leg. J. Muñoz; **Switzerland:** Tessin, Val Piora, Murinascia grande, alt. 1950 m, leg. G. Schwab; Wallis, Arolla, refuge des Aiguilles rouges, leg. Ph. de Zuttere, nr. 21479, Wallis, Thyon, alt. 2200 m, leg. H.C. Greven, nr. 2031; Wallis, Arolla, alt. 2590 m, leg. H.C. Greven, nr. 2032; **Turkey:** Prov. Artvin, Otingol, alt. 2000 m, leg. Stainton & Henderson; Prov. Sivas, Sebinkarahisar-Giresun, alt. 1400 m, leg. Stainton & Henderson; Prov. Sivas, Pinarbasi-Gürün, alt. 1700 m, leg. Stainton & Henderson; **Canada:** British Columbia, Glacier Nat. Park, track to Glacier Crest, alt. 1950 m, leg. H.C. Greven nr. 3005, 30-06-1998;

References:

Bednarek-Ochyra, H., J. Muñoz & R. Ochyra. 1992. The identity of *Grimmia pyrenaica* (Musci, Grimmiaceae). *Fragm. Flor. Geobot.* 37: 389-393.

Muñoz, J. 1998a. A taxonomic revision of *Grimmia* subgenus *Orthogrimmia*.
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