

## **Grimmia tergestina B.S.G. - Bryol. Eur. 3: 126. 1845.**

**Type:** Italy, Triest, between Longera and Bozzal, Bosco de Melara, leg. Tommasinii, lectotype, designated by Cao & Vitt (1986), BM!; isolectotypes, BM (3 replicates), H-SOL, PC.

**Synonyms:** *Grimmia jaeggliana* Giacom., *G. kansuana* C. Müll., *G. philibertii* Giacom., *G. tergestinoides* Culm., *G. limprichtii* Kern, *G. obtusifolia* Gao & Cao.

**Distribution:** Afr.1, Am.1.2.3,4. As.2,5. Eur.

### **Description**

*Grimmia tergestina* forms blackish, dense, white-hoary tufts or patches, leaves appressed and straight when dry, erecto-patent when moist, ovate-lanceolate, from mid-leaf tapering to a rather broad apex concave-keeled above, costa weak at base, narrowed and obscure above, ending in apex, not projecting on dorsal side, hair-points short and terete in male plants, occasionally in male plants, hair-points are absent, and then the apex is rounded-obtuse; in female plants, the hair-points are long, smooth to finely denticulate, flattened below and decurrent down margin, the margins are plane below, slightly incurved above, the perichaetial leaves greatly enlarged with broad filmy apices. Distal areolation bistratose, however, in male vegetations with muticous leaves, the distal areolation is merely unistratose, the mid-leaf cells irregularly rounded with incrassate not sinuose walls, basal marginal cells short-rectangular with thickened transverse walls, basal juxtacostal cells rectangular with thin walls. Sexuality dioicous, capsules om short, straight setae occasionally present, they are immersed, obloid, smooth, striolate when empty, with a rostrate operculum.

### **Discussion**

*Grimmia tergestina* is a thermophilous, basidophilous species characterized by a growth form in blackish white-hoary, flat mats with shiny, smooth, concave leaves. In Europe in recent time the species has spread its distribution westwards (Greven 1991, 1994). The separately growing male plants are smaller with very short hair-points. Occasionally male vegetations with muticous leaves and rounded obtuse apices have been found. In Europe, these plants have been described as *Grimmia limprichtii* Kern, from the Himalayas, they were described as *G. obtusifolia* Gao & Cao. In imitation of Limpricht (1904), Greven (1995) treated *G. limprichtii* as a distinct taxon, Loeske (1930) treated it as a muticous form of *G. anodon*, Maier & Geissler (1995) synonymized it with *G. tergestina*, but Muñoz & Pando (2000) again synonymized it with *G. anodon*. In 2007, Greven found in Tibet muticous-

leaved male vegetations, associated with sporulating *G. tergestina*, so the synonymy of Maier & Geissler appeared to be correct (Greven 2009). *Grimmia tergestina* is closely related to *G. americana*, *G. crinitoleu-cophaea* and *G. involucrata*, and sterile material of these species might easily be confused. For the differences, see the discussion under those species. Capsule-bearing plants are characterized by enlarged perichaetial leaves with broad, discoloured, filmy, apices.

### **Specimens examined**

**Andorra.** Cavillo, Riu de Montacep, alt. 1550 m, leg. A. Sotiaux, nr. 8146; **Belgium.** Dinant, leg. H.C. Greven, nr. 2524; Namur, Yvoir, Champale, leg. A. Sotiaux; **Corsica.** Erbajalo, alt. 800 m, leg. H.C. Greven, nr. 2986; Ponte Leccia, alt. 400 m, leg. H.C. Greven, nr. 2969; Corsiglièse, alt. 400 m, leg. H.C. Greven, nr. 2970; Col d'Arcarota, alt. 800 m, leg. H.C. Greven, nr. 2971; Ortra, alt. 720 m, leg. H.C. Greven, nr. 2972; Barrage de l'Alesanii, alt. 300 m, leg. H.C. Greven, nr. 2973; Venaco, alt. 750 m, leg. H.C. Greven, nr. 2974; Feo, east of Cork, leg. H.C. Greven, nr. 2975; Corte, leg. A. Sotiaux; **Cyprus.** Troodos, Ayii Vavatsinias, Mt. Kionia, alt. 1000 m, leg. H.C. Greven, nr. 2535; Troodos, Pano Amiandos, alt. 1700 m, leg. H.C. Greven, nr. 2534; Troodos, Pano Platres, alt. 1100 m, leg. H.C. Greven, nr. 2530-2533, 2668; **Greece.** Delphi, leg. H.C. Greven, nr. 2499; **France.** Jura, Aiguille de Bauhiné, leg. Meylan; Pyrenees, Bigorre, Gavarnie, alt. 1380 m, leg. H.C. Greven, nr. 2509; **Germany.** Württemberg, Unterhausen, Unterberg, leg. R. Düll, nr. 28907; Tuttlingen, Neresheim, Taschenberg, leg. R. Düll, nr. 28908; Donautal, Mühlheim, leg. R. Düll, nr. 28910; Reinland-Pfalz, Bad Dürkheim, Herxheim, alt. 200 m, leg. R. Düll; Schwäbische Jura, Blaubeuren, leg. H.C. Greven, nr. 2504; Bavaria, Bergen, Hochfelln, alt. 1670 m, leg. H.C. Greven, nr. 3060; **Italy.** Trieste, leg. Tommasinii; **Mallorca.** Embalse de George Blau, alt. 700 m, leg. H.C. Greven, nr. 2825; Puig de Massanella, alt. 1100 m, leg. H.C. Greven, nr. 2828; **Sardinia.** Silanus, Macomer, alt. 432 m, leg. H.C. Greven, nr. 2514, 2515; **Scotland.** Argyll, Cregan Sturra, Loch Melfort, leg. E.C. Wallace; **Slowakia.** Belansky Tatry, Muran, alt. 1550 m, leg. H.C. Greven, nr. 2525, 2526; Biele Karpaty, Cerveny Kamen, alt. 400 m, leg. H.C. Greven, nr. 2527; Biele Karpaty, Vrsatske Podhradie, leg. H.C. Greven, nr. 2528; Rosnava-Drienovec, alt. 655 m, leg. H.C. Greven, nr. 2529; **Spain.** Zaragossa, Caspe, leg. H.C. Greven, nr. 2516-2523; **Switzerland.** Waadt, Ste. Saphorin, alt. 400 m, leg. J.J. Amann; Wallis, Thyon, Mt. Rouge, alt. 2290, leg. H.C. Greven, nr. 2505; Wallis, Sion, alt. 600 m, leg. H.C. Greven, nr. 2507, 2510; Wallis, Ste Leonard, alt. 550 m, leg. H.C. Greven, nr. 2508; **The Netherlands.** Dordrecht, De Biesbosch, alt. Just below sea-level, leg. H.C. Greven, nr. 2501-2503.

## References

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