

**Grimmia pulvinata (Hedwig) Smith – J.E. Smith et al.,  
Engl. Bot. 24: plate 1728. 1807.**

**Type:** Germany, G! (Cao & Vitt 1986), the type label refers to Linné, Sp. Pl., Dillenius, Hist. Musc. and Hedwig, Spec. Musc., but no locality is indicated.

**Synonyms:** *Grimmia africana* (Hedw.) Arn., *G. ahmadiana* Nog., *G. auresia* Besch., *G. austro-pulvinata* C. Müll., *G. basaltica* Mitt., *G. callosa* C. Müll., *G. coarctata* C. Müll., *G. cygnicolla* Tayl., *G. decipiens* var. *hendersonii* (Ren. & Card.) Sayre, *G. drakenbergensis* Sim., *G. ecklonii* Spreng., *G. giberti* Mitt., *G. hendersonii* Ren. & Card., *G. hutchinsonii* R. Brown ter, *G. indianensis* (Sayre) Crum, *G. leptotricha* C. Müll., *G. montevidensis* Thér., *G. obovata* R. Brown ter, *G. obtusata* (C. Müll. & Hampe) Jaeg., *G. phyllorhizans* Broth., *G. pulvinata* var. *africana* Hook. f. & Wils., *G. pusilla* R. Brown ter, *G. pygmaea* C. Müll., *G. rotunda* R. Brown ter, *G. subcurvula* Kindb., *G. tasmanica* C. Müll., *G. trichophylla* var. *indianensis* Sayre, *G. woolsiana* C. Müll.

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

**Description**

*Grimmia pulvinata* forms light to dark green, usually hemispherical hoary cushions, leaves flexuose when dry, erect when moist, lanceolate, abruptly contracted into hair-point, carinate, costa weak below, projecting on dorsal side, hair-points short to long, smooth to denticulate, margins recurved on both sides, nearly from base to apex. Distal areolation unistratose, only margins bistratose, mid-leaf cells rounded-quadrate with slightly sinuose walls, basal marginal cells quadrate with thin walls, basal juxtacostal cells rectangular with thin walls. Sexuality autoicous, capsules on arcuate seate are usually present, they are exserted, 2 mm long, obloid, and striate when empty, the operculum is rostrate

**Discussion:** *G. pulvinata* is the most common *Grimmia* species with a nearly cosmopolitan distribution, being a pioneer on various substrates, even on trees. Var. *africana* is characterized by a 1.0-1.5 mm long capsule with an obliquely rostellate operculum. It is remarkable that in the northern hemisphere var. *pulvinata* is the most commonly occurring form, in the southern hemisphere var. *africana* is most common. However, because the gametophytes do not differ and because in the sporophytes transitions occur, it is better to consider var. *africana* as a capsule forma. The species is easily recognizable by its neat spherical cushions

with abundant capsules. *G. pulvinata* may be confused with *G. orbicularis*, having a comparable habit and growing in the same habitat. However, it differs both in gametophytic as well as in sporophytic characters; for the differences see the discussion to this latter species. Some forms with more acuminate leaf tips may be confused with *G. trichophylla*, but the thin-walled, short-rectangular basal cells and the small rounded midleaf cells will distinguish *G. pulvinata*.

### **Specimens examined**

**Cyprus.** Omodhos, alt. 400 m, leg. H.C. Greven, nr. 2439; **France.** Pyrenees, Ste. Engrace, alt. 660 m, leg. H.C. Greven, nr. 2442; **Portugal.** Serra da Estrela, Penhas Dourados, alt. 1500 m, leg. H.C. Greven, nr. 2440; **Canaries Islands.** Tenerife, Las Canadas, alt. 1500 m, leg. H.C. Greven, nr. 2441; **Corsica.** Vizzavone, alt. 1120 m, leg. H.C. Greven, nr. 2986; **Ireland.** Co. Clare, The Burren, Caher river, leg. W.D. Margadant, nr. 83-7-9-23; **Sweden.** Gotland, Lau, leg. W.D. Margadant, nr. 87-6-23-15; **The Netherlands.** Hoge Veluwe, Fransche Berg, leg. W.D. Margadant, nr. 916, 1192; Zevenaar, Oude Rijnloop bij Ooy, leg. W.D. Margadant, nr. 1353; Urk, 2665; Alkmaar-Uithoorn, Avenhorn, leg. W.D. Margadant, nr. 62-1-2-1; Texel, De Cocksdorp, leg. H.C. Greven, nr. 2461; Leerdam, leg. H.C. Greven, nr. 2460; Amerongen, leg. H.C. Greven, nr. 2455; Veluwe, Fransche Berg, leg. H.C. Greven, nr. 2468; Dordrecht, Polder De Biesbosch, leg. H.C. Greven, nr. 2456-2459 and 2462-2469.

### **var. *africana* (Hedw.) Hook.**

**France.** The Vosges, Fraize, Le Belrépaire, alt. 550 m, leg. H.C. Greven, nr. 2782; **Germany.** Quedlinburg, leg. F. Koppe; **The Netherlands.** Goilberdingen, leg. H.C. Greven, nr. 2452; Schoonrewoerd, leg. H.C. Greven, nr. 2451; Nieuwe Keverdijkse Polder, leg. H.C. Greven, nr. 2450; Werkendam, nr. 2449; Utrecht, Groenekan, leg. H.C. Greven, nr. 2443; Dordrecht, Polder De Zuidpunt, leg. H.C. Greven, nr. 2444-2448.

### **References:**

Greven, H.C. 1995. *Grimmia* Hedw. in Europe. Backhuys Publishers, Leiden, The Netherlands.