

Typification of *Grimmia pilifera* (Grimmiaceae)

JESÚS MUÑOZ

Real Jardín Botánico, Plaza de Murillo 2, E-28014 Madrid, Spain

e-mail: jmunoz@rjb.csic.es

ELKE ZIPPEL

Botanischer Garten und Botanisches Museum Berlin-Dahlem, Königin-Luise-Str.

6–8, 14191 Berlin, Germany

e-mail: e.zippel@bgbm.org

ABSTRACT. A lectotype for *Grimmia pilifera* P. Beauv. is designated. The original description of the species is ambiguous and typification of the name with materials matching the traditional concept of the species is important in order to maintain nomenclatural stability.

KEYWORDS. *Grimmia pilifera*, typification, Palisot de Beauvois.



A recent synopsis of *Grimmia* Hedw. (Muñoz & Pando 2000) attributed 71 species to the genus, and since then at least 10 additional species have been described (e.g., Greven 2003; Maier 2002; Muñoz et al. 2002).

Members of the genus typically grow epilithically in dense cushions and occasionally on tree trunks and branches, at all elevations in temperate regions and at high altitudes in the tropics. The genus is difficult to characterize, and its species fall into at least three relatively distinct groups differing in seta orientation, leaf shape in cross-section and costa/lamina differentiation (Limpricht 1885). Although technically difficult to characterize, a particular plant is usually identified to this genus without error. Most generic confusions involve *Racomitrium* and *Schistidium*, its closest relatives. From the former, *Grimmia* is separated by its strictly acrocarpous habit (*Racomitrium* is cladocarpous). *Schistidium* differs from *Grimmia* in having systylious capsules and usually homogeneous costal cells. *Grimmia* has opercula that are not attached to the columella at maturity and the costa has 2–8 ventral guide cells and a dorsal band of (sub)stereoids.

One of the most widely distributed *Grimmia* species is *G. pilifera* P. Beauv., a species readily recognized by its large size, leaves with an ovate base

more or less suddenly narrowed to a long-acuminate apical limb that ends in a straight, stiff, toothed hairpoint, and immersed capsules on a short straight seta. The species occurs in temperate North America and Asia (China, Mongolia, Japan, Korea, Siberia; cf. Muñoz & Pando 2000). It was described by Palisot de Beauvois (1805) with only a very vague locality (“Les Etats-Unis d’Amerique”). Palisot had a remarkable life, and most of the collections he made (Africa, Haiti, North America) were destroyed or lost. During his time in Philadelphia he prepared a herbarium, and was funded by the French minister to the United States to collect from New York to Ohio southward to Georgia, an area where *G. pilifera* is common on boulders. Although most of these collections were lost in a shipwreck, some of them arrived in France, and are scattered among European herbaria (Merrill 1936). A year after *G. pilifera* was described, Bridel (1806) treated it as a variety of *Grimmia apocarpa* Hedw. (≡ *Schistidium apocarpum* (Hedw.) Bruch & Schimp.), but from the text it is evident that he did not have original materials at hand (“Hanc etiam ex America septentrionali Palisot-Beauvois retulit. Prodr. Mouss. p. 58”). Bridel (1818) later received material of *G. pilifera* from Palisot de Beauvois (**Fig. 1**) and he

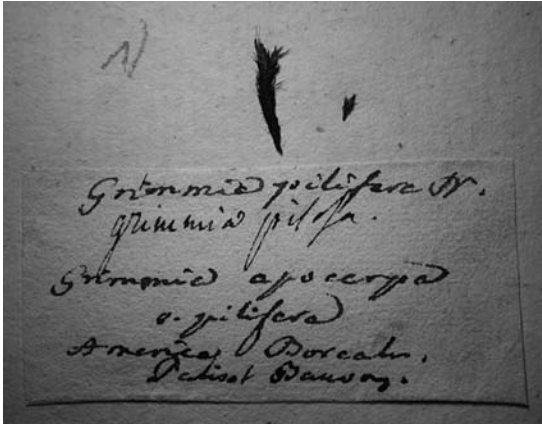


Figure 1. Lectotype of *Grimmia pilifera* Brid. Detail of the sheet number B-31 0130 01.

reevaluated its taxonomic position and treated it at the species rank, but also discussed its relationship to *G. apocarpa*. Although *Grimmia pilifera* is a well-rooted name in bryology, there exists the possibility that the original materials could pertain in fact to *Schistidium*, and this would have undesirable nomenclatural ramifications.

Palisot de Beauvois' original herbarium is at Geneva (G), but there is no original material of *Grimmia pilifera* there. Further searches for type material of *G. pilifera* in Paris (PC) and the Academy of Natural Sciences of Pennsylvania (PH) were unsuccessful. During work at the Bridel herbarium in B (Zippel 2006), we found a specimen (Fig. 1) annotated as "*Grimmia pilifera*. *Grimmia apocarpa* v. *pilifera*. America Borealis. Palisot Beauvois" in Bridel's handwriting and "*Grimmia pilifera*" [second line, thinner trace] in Palisot de Beauvois' handwriting. This material unequivocally is part of the original material used to describe the taxon. The specimen includes one shoot of about 11 mm as well as a small fragment, and it fits unambiguously within the current taxonomic concept of *Grimmia pilifera*.

The discovery of this original specimen of *Grimmia pilifera* is of particular importance because within *Grimmia* there are several old, obscure names that could replace well-established names in the genus (e.g., *Dicranum phascoideum* P. Beauv., which predates *Grimmia crinita* Brid., cf. Muñoz 2000). This typification of *G. pilifera* avoids the need to conserve the name with a new type or, worse, a change of name for this well-known and widely distributed taxon.

Grimmia pilifera P. Beauv., Prodrôme des Cinquième et Sixième Familles de l'Aethéogamie 85. 1805.

Fig. 1

G. apocarpa var. *pilifera* (P. Beauv.) Brid., Muscologia Recentiorum Supplementum 1: 97. 1806. TYPE: "Les États-Unis d'Amérique". Lectotype, designated here: "America Borealis" Palisot de Beauvois (Herbarium Bridel, B 31 0130 01!). Muñoz and Pando (2000) included an extensive list of synonyms for this taxon.

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