
Type: Austria, Tyrol, Innervillgraten, leg. H. Gander, holotype, BP (herbarium Limpricht), or GZU (herbarium Breidler), not seen.

Synonyms: Grimmia tenuis Roth.

Distribution: Am.1, Eur.

Description
Grimmia teretinervis forms reddish-green to blackish-green, readily disintegrating tufts with thread-like, single or scarcely branched stems, leaves of uniform length throughout stem, imbricate and shiny when dry, erecto-patent to spreading when moist, ovate-lanceolate, concave-keeled above, frequently hyaline-tipped, julace-ous innovations, in upper leaf axils, occasionally present, costa firm, convex on both sides, projecting on dorsal side, hair-points short, denticulate, margins plane and erect. Distal areolation unistratose, only margins and extreme apex bistratose, mid-leaf cells irregularly rounded-quadrate with incrassate walls, basal marginal cells quadrat with equally-thickened walls, basal juxtac. cells rectangular with straight walls. Sexuality dioicous, sporophytes unknown.

Discussion
G. teretinervis is a rare and puzzling species that occurs in Europe, North America and Canada. The plants grow with thread-like, sparsely branched stems in dense tufts on dry, usually south-facing, calcareous sand- and limestone. The leaves are concave rather than keeled, and yet the costa projects on dorsal side; further distinguishing characters are thickened but plane leaf margin and short basal cells. G. teretinervis is one of the species that is fairly difficult to describe, although the brownish-green tufts with small, imbricate, shiny leaves are very typical. In 1994, I found G. teretinervis on south-facing limestone at Hochfelln (Germany, Bavaria, Bergen, alt. 1670 m). In this locality, the plants were growing in dense short cushions, they were difficult to distinguish from associated G. tergestina, Schistidium flaccidum and S. apocarpum. It is not astonishing that G. teretinervis, never found with capsules, should disperse by gemmae, it is more peculiar that after Limpricht (1890), no author has noticed this. Being curious about its way of propagation, I investigated many samples, and finally I found the gold-coloured multicellular gemmae in richly developed plants from Canada (Nahanni mountains). The species thus propagates by gemmae as well as by innovations, formed in the
upper leaf axils. *G. teretinervis* was recently recorded from France (Vadam 1994) and its biogeography in North America was recently published by Hastings (2002).

**Specimens examined**

**Austria.** Windischgarsten, Veiditltal, alt. 750 m, leg. F. Grims; Steiermark, Tüffer, Humberg, alt. 400 m, leg. J. Breidler; **France.** Jura, Aiguille de Bauhinés, leg. C. Meylan; Doubs, Fleurey, Ramacien, alt. 720 m, leg. J.Cl. Vadam; Doubs, Soulce-Cernay, Aiguille du Sapos, alt. 710 m, leg. J.Cl. Vadam; Doubs, Ville-du-Pont, Kimmérèdgienne, alt. 820 m, leg. J.Cl. Vadam; **Germany.** Württemburg, Kr. Sigmaringen, Gutemtal, leg. G. Philippi; Schwäbische Alps, Fridingen, Burgstal, alt. 700 m, leg. M. Ahrens; Bavaria, Schlierseeer Berge, Geitau, Aiplspitz, alt. 1750 m, leg. J. Poel; Bavaria, Rosenheim, Heuberg, alt. 1310 m, leg. L. Meinunger and W. Schröder, nr. 21283; Bavaria, Traunstein, Hochfelln, alt. 1400 m, leg. R. Meinunger and W. Schröder, nr. 21531; **Switzerland.** Caslano, Giro di Sassalto, leg. Al-brech; Sassa di Gandria, leg. Albrecht; Waadt, Ergraz, alt. 820 m, leg. J.J. Amann; Jura, Grand Saragnère, alt. 1450 m, leg. C. Meylan; Canton de Bâle, Raemelsberg, alt. 830 m, leg. J.Cl. Vadam; **Alaska.** Chugach Mnts, Valdez, alt. 430 m, leg. D.H. Vitt; **Canada.** Ontario, Thunder Bay, Quimet canyon, leg. R.R. Ireland, nr. 15497; Ontario, Grey County, Oxenden, leg. R.R. Ireland, nr. 20347; Mackenzie distr., Nahanni Range, Nahanni Mnts., leg. R.R. Ireland; **Canada:** Alberta, Rocky Mts., Icefields Parkway, Mt. Coleman, limestone, alt. 1450 m, leg. H.C. Greven nr. 3043, 05-07-1998; Alberta, Rocky Mts., Banff Sulphur Mt. southwest-facing limestone alt. 2325 m, leg. H.C. Greven nr. 3040, 3041, 3042, 03-07-1998;

**References**

