

**Grimmia hamulosa** Lesquereux. - Mem. California Acad. Sci. 1: 14. 1868.

**Type:** U.S.A., California, Mt. Dana, leg. Bolander, lectotype designated by Muñoz (2000), NY!; isoelectotypes FH!

**Synonyms:** *Grimmia brevirostris* Williams

**Distribution:** Am.1

**Description**

*Grimmia hamulosa* grows in green patches with homomallous-falcate leaves, that are oblong-lanceolate, from a clasping base tapering to a long, subulate, uncinuate point, the costa is firm, yellowish-green,  $\pm 80 \mu\text{m}$  below, not projecting on dorsal side, hair-points are absent, occasionally short hyaline leaf tips are present, margins are plane, erect above. The distal areolation is bistratose, mid-leaf cells are  $\pm$  isodiametric, irregular with incrassate walls, basal marginal cells are quadrate with firm walls, basal juxtacostal cells are short-rectangular with smooth firm walls. The sexuality is dioicous, the setae are straight, capsules are occasionally present, they are exserted, obloid, shiny, striate with conical operculum.

**Discussion:**

*Grimmia hamulosa*, endemic to western North America (Washington, Oregon, California), is a somewhat confusing species. The description is incomplete and partly incorrect, e.g. it lacks discussion and comparison with related taxa, and the seta is straight and not bent, as stated in the protologue. In 1999, I found it richly fruiting on boulders along Tioga road in Yosemite Nat. Park. Although isotypes studied have muticous leaves, in some of the Yosemite plants the leaves have inconspicuous short hair-points, however, these plants do not deviate in other aspects from the type specimen. The dioicous *G. hamulosa* is characterized by a glossy habit with long tapering homomallous muticous leaves with plane margins, a broad weakly-outlined costa that fills up the distal part of the bistratose upper lamina, and glossy exserted capsules without annulus on straight setae. Small specimens come very close to *G. fragilis* Schimp., a form of *G. montana* described from southern Europe. These plants are characterized by long, glossy leaves usually with broken tips. In *G. hamulosa*, the leaf tips also are frequently broken, however, in *G. montana* the costa is small and clearly defined, and the upper leaf margins are incurved.

**Specimens examined**

**U.S.A.** California, Mt. Dana, 10.000 ft, gravely soil, leg. H.N. Bolander, NY; California, Placer Co., Cisco, leg. W.A. Setchell, June 1909, FH; California, Siskiyou Co., 1 mile west of Elk Lick, Sec. 25, R6E T17N, alt. 6000 ft, leg. D.H. Norris nr. 23269, 20-08-1972, MICH; California, Fresno Co., Kings Canyon Nat. Park, Silliman Pass, above Ranger Lake, leg. D.H. Norris nr. 46597, 04-08-1975; California, Whiskey Lake, 41° 55' N - 123° 39' W, leg. D.H. Norris nr. 57732, 25-11-1980; California, Sierra Nevada, Yosemite Nat. Park, Tioga Road, alt. 6980 ft, leg. H.C. Greven nr. C66, 67, 68, 13-11-1999; California, Sierra Nevada, Yosemite Nat. Park, Yosemite valley, just west of tunnel, alt. 4780 ft, slanting granitic rock, leg. H.C. Greven nr. C 70, 105, 12-11-1999;

### **References**

Jones, G.N. 1933. Grimmiaceae. *In*: Grout (ed.), Moss Flora of North America Vol. II, Part I: 1-66. Newfane, Vermont.