

## **Grimmia mexicana H.C. Greven - Bryologist 102: 432-434. 1999.**

**Type:** Mexico, Puebla, volcán Orizaba, 2.5 km below Piedra Grande, 3870 m, Dec. 1997, leg. H.C. Greven No. M100, holotype NY; isotype MEXU.

**Distribution:** Am.2

### **Description**

*Grimmia mexicana* grows in waxy, olive-green, brownish to blackish, robust patches, the leaves are appressed when dry, the most upper ones with incurved tips, erectopatent when moist, oblong-lanceolate, keeled, apex obtuse-rounded or subcucullate, the costa is firm, projecting at dorsal side, hair-points are absent, the margins are recurved on one side. The distal areolation is unistratose with bistratose ridges in the apex, the mid-leaf cells are irregularly quadrate to short-rectangular with sinuose but hardly incrassate walls, the basal marginal cells are hyaline, short-rectangular with thickened transverse walls, the basal juxtacostal cells are elongate with thin to nodulose walls. The sexuality is dioicous and capsules on short and straight seta are occasionally present, they are immersed to emergent between enlarged perichaetial leaves, narrowly oblong-ovoid, smooth, shiny-yellow with an obliquely rostrate operculum.

### **Discussion**

*Grimmia mexicana*, endemic to the Mexican volcanoes is a rather conspicuous moss, characterized by robust, brown to blackish patches, the leaves muticous with incurved tips. The rarity of fruiting plants is a possible reason that the species remained undescribed, although it was collected frequently. From MICH, samples were seen, identified as *G. toluensis* (= *G. elongata*). *G. mexicana* differs from other Mexican alpine Grimmiads by a robust habit, muticous oblong-lanceolate leaves with cucullate apex and conspicuous yellow, shiny, emergent capsules with obliquely rostellate lid. The species shows resemblance to *G. ochyriana*, described from the Himalayas, and Muñoz & Pando (2000) synonymized *G. mexicana* with this latter species. Delgadillo (2000) corrected this and described the distinctions between the two taxa.

### **Specimens examined**

**Mexico.** Nevado de Toluca, alt. 4300 m, leg. Eggers & Frahm nr. 792674, 16-02-1979; Nevado de Toluca, alt. 4100 m, leg. H.C. Greven nr. M 106 – M 110, 29-11-1997; Volcan Izta, below La Joya, alt. 3910 m, leg. H.C. Greven nr. M 111, M 112, M 115, M 116, M117, 01-12-1997; Volcan Izta, track to La Joya, alt. 3875

m, leg. H.C. Greven nr. M 113, M 114, M 118, 02-12-1997; Volcan Orizaba, 2, 5 km below Piedra Grande, alt. 3870 m, leg. H.C. Greven nr. M 100, 04-12-1997; Volcan Orizaba, Piedra Grande, steep east-facing andesite wall, alt. 4460 m, leg. H.C. Greven nr. M 100 – M 105, 04-12-1997;

**References:**

- Delgadillo, C.M. 2000. The distinction between *Grimmia mexicana* and *G. ochyriana*. *Bryologist* 103: 762-764.
- Greven, H.C. 1999a. A synopsis of *Grimmia* in Mexico, including *Grimmia mexicana* sp. nov. *The Bryologist* 102: 426-436.
- Muñoz, J. & F. Pando. 2000. A world synopsis of the genus *Grimmia* (Musci, Grimmiaceae). Monogr. in Syst. Bot. from the Missouri Bot. Gard. Vol 83.