

***Grimmia texicana* H.C. Greven, spec. nov.**

Type: U.S.A., Texas, Jeff Davis Co., north-facing granite rock along route 166, 11 miles west of Fort Davis, alt. 1717 m, leg. H.C. Greven, Nr. Tex 11 a,b,c,d, 17 March 2009, holotype herbarium H.C. Greven, isotypes NY! BM! L!

Distribution: Am.1,2

Description

Grimmia texicana grows in greyish green, hoary mats, stems with firm central strand, leaves erect and loosely appressed when dry, patent when moist, ovate-lanceolate, rounded keeled above, costa not projecting on dorsal side, leaf apex broad, suddenly contracted into a short to long, denticulate hair-point, costa at insertion and in leaf base with 6 guide cells and three layers of stereids, margins recurved on one side up to mid-leaf, incurved in apex. Distal areolation bistratose, mid-leaf cells irregularly rounded with incrassate walls, basal marginal cells in several rows short rectangular with thickened transverse walls, basal juxtacostal cells rectangular with thin walls. Sexuality dioicous, the majority of the plants without gametocia, only a few plants with gynoecia, sporophytes unknown, propagation by young shoots arising from the protonema mat.

Discussion:

Grimmia texicana is known from one locality in Texas, Jeff Davis Co. and one in New Mexico; it will surely have a wider distribution, probably comparable with that of *G. arizonae*. In 2009, the species was found on a shaded, north-facing granite wall along route 166, at 11 miles from Fort Davis, associated with *Grimmia americana*, *G. arizonae*, *G. longirostris*, *G. laevigata*, *Hedwigia ciliata* and *Braunia secunda*. It is possible that *G. texicana* has been collected previously but not recognized as new species and in herbaria stored under *G. arizonae*. It is indeed closely related to this species, however, with a significant number of ecological and morphological differences to be treated at **spec. nov.** *G. texicana* grows in flat, usually rounded mats with unbranched stems up to 1 cm long, erect when moistened and curved when dry; every growth period (winter time), the vegetation extends by forming, at the outside, a layer of new shoots, firmly attached to the substratum, in the centre of the vegetation, the older stems gradually die of and disappear, the leaves are patent when moist, not sheathing, rounded keeled in upper part, the costa is not projecting at dorsal side, the leaf apex is broad, suddenly contracted into hair-point, shoulders are absent, the basal marginal cells are in several rows short rectangular

with thickened transverse walls, the basal juxtacostal cells are rectangular with thin straight longitudinal walls. *G. arizonae* grows in more loose cushions or mats with branched stems up to 3 cm, the leaves are spreading when moist and sheathing, keeled in upper part, the costa projects at dosal side, the leaf apex is narrow and contracts gradually into the hair-point, shoulders are present, the basal marginal cells are rectangular with thin walls, the basal juxtacostal cells are elongate with incrassate and sinuose longitudinal walls.

Specimens examined

U.S.A., Texas, Jeff Davis Co. Fort Davis, north-facing, granite rock wall along route 166, 11 miles west of Fort Davis, alt. 1717 m, leg. H.C. Greven nr. Tex 11a, b, c, d, 17 March 2009; New Mexico, Las Cruces, Dripping Springs, north-facing granite rock, alt. 1713 m, leg. H.C. Greven no. Tex 12, 21 March 2009; Oklahoma, Greer Co., north of Altus, 3.2 km west of Quartz mts. State Park, leg. Churchill nr. 8438, 24-03-1977; Oklahoma, Kiowa Co., one mile south of Lake Altus, along hwy 44, leg. Bird nr. 3435, 2-11-1959.