

**Grimmia shastae H.C. Greven – Grimmias of the World,
Backhuys Publishers, Leiden , p. 208-209. 2003.**

Type: U.S.A., California, Siskiyou Co., Mt. Shasta, Shastina peak, alt. 11.500 ft, August 26, 1946, leg. W.B. Cooke No. 18382, holotype, MICH!

Distribution: Am.1

Description

Grimmia shastae forms greenish-brown hoary tufts, leaves larger towards stem tips, loosely appressed when dry, erecto-patent when moist, ovate- to broadly oblong-lanceolate, not keeled, rather abruptly narrowed into a long hair-point, longitudinal plicae frequently present in extreme apex, clusters of globular, brown, multicellular gemmae abundantly present on the ventral lamina in distal leaf part, costa weak below, broadened and deeply channeled above, hair-points striate, smooth to obtusely denticulate, flattened below and decurrent, margins plane, incurved above. Distal areolation unistratose with bistratose ridges, in apex entirely bistratose, mid-leaf cells short-rectangular with slightly incrassate and sinuose walls, basal marginal cells hyaline in 3-4 rows, rectangular with thin smooth longitudinal walls and thickened transverse walls, basal juxtacostal cells rectangular with thin smooth walls. Sexuality dioicous, gametangia and capsules unknown.

Discussion:

Grimmia shastae, only known from Mt. Shasta in California, is a characteristic species that, by the abundantly present gemmae, will not be confused with any other species. Gemmae are not rare in *Grimmia*. However, they are usually produced on leaf tips (*G. anomala*, *G. hartmanii*), on the dorsal side of the leaf (*G. torquata*), or in leaf axils (*G. trichophylla*, *G. muehlenbeckii*, *G. austrofunalis*). In no other *Grimmia* species are gemmae produced in clusters on the surface of the ventral lamina at the distal part of the leaf. The position of the species within the genus is not clear. Although leaf form and areolation agree with *G. tergestina*, sinuose cell walls, characteristic for *Grimmia*, are only weakly present, and longitudinal plicae, comparable with those in *Grimmia caespiticia*, are produced in the extreme apex in most upper leaves. The discovery of a new *Grimmia* shows that the bryoflora of California is still insufficiently known. It also shows that the state is exceptionally rich in endemic Grimmias: *G. hamulosa*, *G. mariniana*, *G. nevadensis*, *G. serrana* and *G. shastae*.

Specimens examined

U.S.A., California, Siskiyou Co., Mt. Shasta, Shastina peak, alt. 11.500 ft, August 26, 1946, leg. W.B. Cooke No. 18382, MICH!

References

Greven, H.C. 2003. *Grimmias of the World*. Backhuys Publishers, Leiden, The Netherlands.