

Grimmia dissimulata E. Maier - Candollea 56 : 281- 300. 2002.

Type: “Flora von Zypern. *Grimmia trichophylla* Grev. v. *meridionalis* Schpr. f. *rhacomitriodes*. Bez. Kyrenia, Kalkfelsen am Pass über Lapithos, an der Strasse bei 400 m.”, F. Koppe 10-05-1972. holotype STU; isotype G., STU.

Distribution: Eur. As.

Description

Grimmia dissimulata grows in olive-green to light green, dense to loose tufts, frequently brownish to blackish below, the leaves are erect or slightly contorted and appressed when dry, patent to erecto-patent when moist, more or less broadly lanceolate, tapering to short acute apex, keeled above, clusters of multicellular gemmae are occasionally present on dorsal side of lower part of lamina; the leaves channelled near insertion, keeled throughout, margin recurved at one side, from insertion or lower part of leaf base, up to upper part of lamina, if recurved on other side, then only weakly so; in leaf base few rows of rectangular paracostal cells, other basal cell broad, short-rectangular of nearly the same length, wall thickened, more or less nodulose, at margin some rows of nearly isodiametric cells with smooth walls, in transitional zone, cells short-rectangular, walls sinuose, in lower part of lamina cells isodiametric, walls slightly sinuose, in upper part of lamina, lamina rounded, rarely without joint thickenings; lamina unistratose, upper part of lamina, occasionally in places bistratose, margins bistratose; costa rounded, on ventral side at leaf base widely channelled, at insertion in leaf base with 4 guide cells, in upper part of lamina with 2 guide cells, band of hydroids present, between hydroids and dorsal cells a band of substereids. The sexuality is dioicous, and capsules on arcuate setae are occasionally present, they are exserted, pendulous, ellipsoid, with short neck; calyptra mitrate, lobed; operculum conical, beak straight, long, margin hyaline; peristome teeth in upper part split into two branches, trabeculae in lower part of peristome teeth very broad, wavy, papillae from above base up to tip becoming gradually stronger and sharper; spores 10-15 μm , rarely 18 μm , smooth or finely granulose.

Discussion

Grimmia dissimulata was collected from riverbeds, near waterfalls, on sunny rock, on boulders in grassland, limestone, dolomite, andesite, volcanic rock and concrete. The majority of the collections were gathered from limestone or dolomite. The species was recently described after a study of a 438 European *Grimmia trichophylla* s.l. samples. Among these, 103 specimens appeared to be *G. dissimulata*, so the species is not rare but previously overlooked, or probably described as one of the 40 subspecies or varieties within the *Grimmia trichophylla* -complex (Wijk et al. 1962). It is regrettable that Maier did not study these type specimens, she also did not enter into the detailed discussion on the *Grimmia trichophylla*-complex by Loeske (1930) and Greven (1995). Maier sent me material of *Grimmia dissimulata*. Identical material was frequently collected by me in Mediterranean countries, especially on the islands Cyprus, Corsica, Sardinia and Mallorca. So far, I had always identified these plants as forms of the variable *G. lisae*. Provisionally, I accept *G. dissimulata* as a good species, because there are indeed significant differences with *G. lisae*. Maier's taxonomic view is predominantly based upon the structure of the costa. According to

Maier, you must start with good transverse sections of the costa before you can distinguish *Grimmia lisae* (6 guide cells) from *Grimmia trichophylla*, *G. meridionalis* and *G. dissimulata* (4 guide cells). In *G. meridionalis*, the guide cells are distinctly elliptic, while these in *G. dissimulata* are more or less rounded. It is my experience, that this is not the way to identify *Grimmia* taxa. The quality of the cross sections (not correctly cutted sections can show rounded cells as elliptic), and the location, where these sections have been made, are important. Further, Maier did not discuss the extreme morphological variability within the *Grimmia trichophylla*-complex. As in all taxa of this complex, leaf form, margins, cell pattern, and hair-points are extreme variable, why should the costa be excluded from variability. In my opinion, there are some more steady characters that must be used, to identify variable *Grimmia* taxa. However, because there have been so many discussions on the *Grimmia trichophylla*-complex, first of all, the type specimens of the about 40 taxa that have been described within this complex should be examined, before new species can be described within this complex. In a letter, I asked Maier, why she had not examined these type specimens. Her answer was: "There was no need for". *G. dissimulata* is related to *G. lisae* predominantly differing by the number of guide cells in the proximal part of the costa (*G. lisae* has 6 guide cells, and *G. dissimulata* has 4 guide cells). There are, however, some more differences. When moistened, the leaves of *G. dissimulata* are not squarrose but erecto-patent to patent, the basal leaf cells have incrassate, nodulose walls, the cell walls in the distal part of the leaf are not smooth and rounded, as in *G. lisae*, but irregular with slightly incrassate and nodulose walls.

Specimens examined

Germany. Rheinland – Pfalz, Niederalben, Mittagsfels, 6310/4, alt. 220 m, leg. E. Maier, 18-03-1996. **United Kingdom.** Cambridge-hire, vc 29, Ickleton church, limestone coping stones of churchyard wall, leg. R.D. Porley, 18-04-2003.

References

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position of *Grimmia trichophylla* var. *meridionalis* Müll. Hal. (Musci,
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