

Grimmia obtusolinealis C. Müll. - Flora 71: 484. 1888.

Protologue: Africa, Tanzania, Mt. Kilimanjaro, 3000-4800 m, leg. H. Meyer.

Type: Africa, Kenya, Mt. Kenya, Sirimon stream, 3570 m, leg. C.C. Townsend No. 75/749, *neotype*, here designated, E!

Distribution: Afr.2, As. 2

Description

Grimmia obtusolinealis grows in robust, compact patches and tufts, the leaves are from an oblong sheathing base, tapering to a subulate, cucullate apex, appressed when dry, erecto-patent when moist, perichaetial leaves are enlarged, costa is not projecting on dorsal side and the ventral cells have extremely incrassate walls; hair-points are absent, occasionally short hair-points are present, margins are plane, sometimes slightly incurved above; the distal areolation is bistratose, extremely opaque, mid-leaf cells are rectangular with incrassate and sinuose walls, basal marginal cells are rectangular with slightly thickened transverse walls, basal juxtacostal cells are elongate, yellowish, walls incrassate, smooth to slightly sinuose. Sexuality is dioicous and capsules on straight setae are occasionally present, they are emergent between greatly enlarged perichaetial leaves, ovoid, smooth, brown with a subulate operculum, peristome teeth yellowish, slightly split above, papillose, $\pm 40 \mu\text{m}$ wide at mouth, exothecial cells thin-walled, with at the base of the urn some stomata.

Discussion:

Grimmia obtusolinealis was described from Africa, but in 2007, I found it also in Tibet. The species is characterized by muticous subulate leaves. Small specimens may be confused with *G. unicolor*, and some herbarium species had identified as that species but *G. unicolor* has much smaller leaves and a basal areolation with quadrate to short-rectangular cells. There is some nomenclatural confusion with *G. schimperi*. In 1850, G.W. Schimper collected a considerable amount of *Grimmia* specimens on the summit of Mt. Boahit in Abyssinia, nowadays Ethiopia. These plants, named by Hampe *G. schimperi*, were distributed in the exsiccata series Musci Abyss. Schimp. No. 584. I have seen samples from these series and although the majority is *G. longirostris*, occasionally there is a mixture with *G. obtusolinealis*, and some samples are even entirely *G. obtusolinealis*. Müller's description of *G. schimperi* (Syn. Musc. Frond. I: 792. 1849) however, clearly indicates *G. longirostris*. This confusion caused that in many herbaria *G. obtusolinealis* specimens have been named *G. schimperi*. We may assume that

the holotype of *G. obtusolinealis* has been destroyed during World War II, and because the plants from the exsiccata series Musci Abyss. Schimp. No. 584 are a mixture of *G. longirostris* and *G. obtusolinealis*, a neotype had to be chosen. Because the plants, collected by C.C. Townsend on Mt. Kenya (Townsend 75/749, Sirimon stream, 3570 m, 04-04-1975) agree in all aspects with the protologue of *G. obtusolinealis*, I have chosen this gathering as neotype.

In May 2007, I found a peculiar *Grimmia* on three localities in Tibet. With its muticous leaves, the species was close to *Grimmia unicolor*, but there were significant differences. A detailed comparison with other muticous-leaved *Grimmia* species, learned that the plants from Tibet are conspecific with the African endemic *Grimmia obtusolinealis*. Herewith, the distribution of *G. obtusolinealis* is comparable with that of *Grimmia mammosa*, also known from Afro-alpine habitats as well as from the Himalaya. In April 2010, I found *G. obtusolinealis* commonly occurring in Ethiopia, Bale Mts., Sanetti plateau, alt. 3850–4277 m.

Grimmia ovalis, at high altitudes sometimes occurring with muticous leaves, differs by leaf form, leaf position, cell pattern, $\pm 75 \mu\text{m}$ wide, deeply split, orange peristome teeth, and thick-walled exothecial cells.

Specimens examined

Ethiopia. Mount Boahit, summit, alt. 14.000 ft, leg. G.W. Schimper, 30-09-1850, 910.120.282!; Bale Mountains, Wasama, alt. 4160 m, leg. G. & S. Miede nr. 805, 09-01-1990, KRAM 99639!; Bale Mountains, east of Kara Deema, alt. 4120 m, leg. G. & S. Miede nr. 1481, KRAM 99636!; Bale Mountains, outcrops along road Dinsho-Dodola, alt. 3435 m, leg. H.C. Greven, 07-04-2010, nr. Eth. 28; Bale Mountains, Sanetti plateau, alt. 3850 m, leg. H.C. Greven, 05-04-2010, nr. Eth. 29-34; **Uganda.** Mt. Elgon, alt. 4150 m, leg. S. Lisowski nr. 2607, 23-02-1974, H-BR 45819-35!; **Kenya.** Mt. Kenya, rocks on slope west of Sirimon track, alt. 3540 m, leg. C.C. Townsend nr. 75/717, 04-04-1975; Mt. Kenya, wet rock at Sirimon stream, alt. 3570 m, leg. C.C. Townsend nr. 75/749, 04-04-1975; Mt. Elgon, damp rock under Kotaibos, alt. 4200 m, leg. C.C. Townsend nr. 85/312, 01-02-1985; **Tanzania.** Mt. Kilimanjaro, Maranga route, alt. 3950-4250 m, lava rock, leg. T. Pocz, R. Ochyra & H. Bednarek nr. 88132/D, 17-06-1988; Mt. Kilimanjaro, west slope of Mawenzi, alt. 4250-4500 m, alpine desert close to Camels back, leg. . T. Pocz, R. Ochyra & H. Bednarek nr. 88134/8, 17-06-1988; **Tibet.** North of Lhasa, 15 km north of Lhundrup Dzong, alt. 5544 m, on top of big boulder, leg. H.C. Greven and S.X. Greven, nr. Tibet 15, 16, 17, 18, 19, 20, 09-05-2007; Nyenchentanglha

mountains, 15 km n.n.e. of Yangpachen, alt. 4816 m, on dry boulder, leg. H.C. Greven & S.X. Greven, nr. Tibet 13, 21, 11-05-2007.

References:

Müller, K. 1888. Die Mooswelt des Kilima-Ndscharo's. Flora 71.
Jahrgang No. 27.