

**Grimmia ulaandamana Muñoz, Feng, Kou & Bai – Ann. Bot. Fennici
50: 233-238. 2013.**

Type: China, Inner Mongolia, Ulaan dam-Shipeng Ditch National Nature Reserve, Wanghuolou Mountain, 44°26′519″N, 118°45′955″E, on rocks, 1967 m., leg. Chao Feng 2011527-2, 12 July 2011. Holotype HIMC; isotype MA-musci 40053.

Distribution: As. 3

Description

Grimmia ulaandamana forms robust, loose, hoary, readily distintegrating tufts; stems 1.5-3.0 cm long, scarcely and irregularly branched, with a distinct central strand. Leaves appressed to slightly flexuose when dry, patent to slightly preading when, moist, lanceolate, strongly keeled, "most often with a strong and long plication in one or both sides at proximal half", 1.60-3.45 x 0.30-0.75 mm; costa percurrent, semi-terete, in distal half consisting of almost homogeneous cells and with four guide cells at mid-leaf; margins entire, recurved on one or occasionally both sides, 2-4 stratose; leaf lamina 3-4 stratose in distal part, 2-stratose in medial part, laminal cells moderately thick-walled in distal part, ovate, isodiametric, esinuose 7.2-8.0 x 4.9-5.3 µm. Sexuality dioicous, capsules extremely rare, only two of them were found in bad condition, they are probably 1.5 x 0.6 mm, smooth, with a compound and revoluble annulus of 2-3 rows of isodiametric cells, and with a long-rostrate operculum of nearly 1 mm long.

Discussion

Grimmia ulaandamana was already collected by Chinese bryologists before 2011, but not recognized as a new species and stored in herbaria as *Grimmia* spec. On 12 July 2011, two botanists from the Inner Mongolia University at Hohhot, Chao Feng and Xue Liang Bai, collected on Wanghuolou mountain, close to the Ulaan dam a *Grimmia* species that they could not identify. They studied H.C. Greven's website: "[Grimmias of the World](#)" but could not detect a *Grimmia* species with characters responding to their material, upon which they described the species as new to science. The protologue was sent to the editor of Ann. Bot. Fennici, Johannes Enroth, who asked two *Grimmia* specialists as referee: H.C. Greven and J. Muñoz. Greven reported that he could agree with *Grimmia ulaandamana* as **spec. nov.** but that the text of the protologue and photo's should be improved, e.g. the authors had compared their new species with *Grimmia trichophylla*, a taxon that belongs to a completely different group. Greven remarked that they should contrast their new species with *Grimmia elatior*, the most closely related species.

The second referee Muñoz had the same opinion, and remembered that he, years ago, during a herbarium revision of Chinese Grimmiids, had encountered comparable material. Although, being a referee, he proposed Chao Feng and Xue Liang Bai to be one of the authors and added his experience with this species to the protologue of *Grimmia ulaandamana*, which was published with his name as first author. As herbarium bryologist, he had done that previously with *Grimmia horrida* and *Grimmia serrana*, two new species, also collected by fieldbryologist and published with Muñoz as first author.

In the protologue was stated: "*Grimmia elatior* is a much larger species with long-rectangular juxtacostal cells with strongly nodulose walls, and medial and distal cells with bulging walls, not present in *G. ulaandamana*. There are also differences with the costa e.g. *G. elatior* has in its costa a narrow ventral furrow, lacking in *G. ulaandamana*". However, separately growing male plants of *G. elatior* are not larger, and they have rectangular juxtacostal cells with straight walls. The remark: "leaves, most often with a strong and long plication in one or both sides at proximal half" is not correct. I studied the holotype, sent to me by Chao Feng, and found that from 40-50 leaves only two of them had such a plication. Although, the differences between *G. ulaandamana* and male *G. elatior* are minimal, I consider *G. ulaandamana* as a good species, especially by a significant difference in the leaf posture. I moistened 10 male collections of *G. elatior* from different localities, and in all collections, the leaves posture was erect to erecto-patent, in *G. ulaandamana*, moistened leaves are patent to spreading. This important difference was not emphasized in the protologue, because, despite my request, the new species was not contrasted with male *G. elatior*.