

**Grimmia indica (Dixon & De la Varde) Goffinet & Greven –
Journal of Bryology 22: 141. 1999.**

Type: India, Pambar Torrent, Kodaikanal, Pulney Hills, leg. R.P. Foreau, in herbarium H.N. Dixon No. 815, lectotype, designated by Muñoz & Pando (2000), BM!; isoelecto-types FH!, MO!, NY!

Synonyms: *Grimmia apophysata* Gangulee

Distribution: As.2, 3

Description

Grimmia indica grows in extended, dense, flat mats, green above, dark brown below. The leaves are ovate-lanceolate, plane to slightly carinate, the costa is greenish-brown, 60-80 µm wide and percurrent, hair-points are absent, although at apex, a few cells form an apiculus-like transparent tip, the margins are narrowly recurved on both sides. The entire leaf areolation is unistratose, the mid-leaf cells are irregularly isodiametric with sinuose and incrassate walls, the basal marginal cells are quadrate to short-rectangular, the basal juxtacostal cells are rectangular with slightly sinuose and incrassate walls. The sexuality is dioicous and capsules are occasionally present, they are clearly exserted on cygneous setae, obloid, ± striate, and an apophysis is present, the operculum is rostrate.

Discussion:

Grimmia indica was initially described as *Trigonodictyon indicum* Dixon & P. de la Varde. The Indian bryologist Gangulee (1976) described it as *G. apophysata* (nom. illeg.), and Goffinet & Greven (2000) renamed it as *G. indica*. It is the only *Grimmia* with a clear apophysis and also the leaves are not characteristic for the genus because the apex does not end in a hyaline hair, the leaves are, however, not muticous, but end in a transparent apiculus, reminiscent of some species from the Pottiaceae. As a result of these features, it can hardly be confused with any other *Grimmia* species. During a trip through the Nepalese Khumbu valley, I found it frequently on shaded rock walls. On these usually slanting to perpendicular walls, the species was growing in extended green mats, occasionally provided with abundant, straw-coloured, exserted capsules on long cygneous setae (Greven 2002).

Specimens examined

India. Sikkim, Darjeeling district, Phalut, Leg. Kurtz nr. 2344, 16-10-1868 (as *Grimmia apophysata* Gangulee), H-Br.; **China.** Lijang Co., Yunnan, Mt. Yu-Lung, Ma-Huang-Ba, 20 km nnw of Lijang, leg. T. Koponen nr. 42400, 01-08-1985;

Nepal. Khumbu valley, 1 km north of Lukla, alt. 2870 m, leg. H.C. Greven nr. N 120, 06-02-2000; Khumbu valley, 5 km north of Lukla, leg. H.C. Greven nr. N 104, 06-02-2000; Khumbu valley, 2 km south of Namche Bazar, alt. 2840 m, leg. H.C. Greven nr. N 103, 105, 07-02-2000;

References

- Gangulee, H.C. 1976. Additions to the Mosses of Eastern India and Adjacent Regions. *Nova Hedwigia* XII: 10.
- Goffinet, B. & H.C. Greven 2000. *Grimmia indica* (Grimmiaceae), a new combination. *Journal of Bryology* 22: 141.
- Greven, H.C. & T. Koponen 1996. *Grimmia apophysata* (Musci, Grimmiaceae) recorded for China. *Hikobia* 12:147-150.
- Greven, H.C. 2002. *Grimmia* (Bryopsida, Grimmiaceae) in the Nepalese Khumbu valley. *Journal of Bryology* 24: 157-161.