

Siddhartha SINGH DEO^a and Devendra Kumar SINGH^{b,*}: *Dinckleria singularis* (Marchantiophyta: Plagiochilaceae) — An Addition to the Indian Liverwort Flora from Arunachal Pradesh

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Summary: *Dinckleria singularis* (Schiffn.) M. A. M. Renner, Schäf.-Verw. & Heinrichs, a species so far known from Southeast Asia, China, Taiwan, Australia, and Vanuatu, is added to the Indian liverwort flora from Arunachal Pradesh in the Eastern Himalaya. This also constitutes the first Indian record of the genus *Dinckleria* Trevis., which differs from other genera of the family *Plagiochilaceae* in the presence of papillae on the leaf-cell surfaces. A detailed description of *Dinckleria singularis* is provided, and an illustration based on the Indian plants.

Heinrichs et al. (2006) recognized *Plagiochila pleurata* (Hook. f. & Taylor) Taylor & Hook. f. ex Gottsche, Lindenb. & Nees and *P. fruticella* (Hook. f. & Taylor) Hook. f. & Taylor ex Gottsche, Lindenb. & Nees, restricted to New Zealand and Australia, as sister to the remainder of *Plagiochilaceae* and transferred them to the genus *Proskauera* Heinrichs & J. J. Engel. The two species differ from all other *Plagiochilaceae* by the occurrence of strongly protruding spherical papillae on the leaf surface. Later, Engel and Heinrichs (2008) transferred these two species to *Dinckleria* Trevis. which in fact was the ‘oldest available name for *Proskaueria*’. Recently, Renner et al. (2016) transferred another widespread Malesian species of the genus *Plagiochila*, *P. singularis* Schiffn., to *Dinckleria* on the basis of papillae on the leaf-cell surfaces, monomorphic leafy shoots arising from a basal stolon, and the presence of rhizoids on the ventral surface of stem only.

Phytogeographically, *Dinckleria* is confined to Australia, Melanesia, New Zealand, and Southeast Asia with Australia harbouring all the three hitherto known species of the genus.

During the course of study on liverworts and hornworts of Indian Eastern Himalaya, the authors came across an interesting population of the genus *Dinckleria* from West Siang district in Arunachal Pradesh which is referable to *D. singularis*, a species so far known only from Myanmar, Thailand, China, Malaysia, Indonesia, Philippines, Taiwan, Papua New Guinea, Australia, and Vanuatu (So 2001, Zhu 2006, Lai et al. 2008, Söderström et al. 2010, Chuah-Petiot 2011, Wang et al. 2011, Renner et al. 2016). *Dinckleria singularis* is described and illustrated based on the Indian plants for facilitating the easy identification in future.

Dinckleria singularis (Schiffn.) M. A. M. Renner, Schäf.-Verw. & Heinrichs, in Austral. Syst. Bot. 29: 112 (2016). – *Plagiochila singularis* Schiffn., Hep. Fl. Buitenzorg: 158 (1900). [Fig. 1]

Plants bright yellowish in herbarium, fragile, shoots arising from creeping stolon; shoots 9–25 mm long, 1.5–3.0 mm wide including leaves, scarcely branched; branching lateral intercalary or ventral intercalary. Stem oval to elliptical in outline in transverse section, 150–200 × 200–290 μm, 10–17 cells across diameter, surface densely papillose; cortical cells in 1–3 layers, 4.5–10.5 × 3.0–15.0 μm,

- biogeography of the leafy liverwort *Plagiochila* with a description of *Proskauera*, gen. nov. (*Plagiochilaceae*, *Jungermanniales*). *Pl. Syst. Evol.* **258**: 227–250.
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S. Singh Deo^a, D. K. Singh^b: インドのタイ類フロラにアルナチャルプラデーシュ州から *Dinckleria singularis* (タイ類: ハネゴケ科) を追加

Dinckleria singularis (Schiffn.) M. A. M. Renner, Schäfer-Verw. & Heinrichs. はこれまで東南アジア, 中国, 台湾, オーストラリア, バヌアツから知られていたが, ヒマラヤ東部のアルナチャルプラデーシュ州で確認し, インドのタイ類フロラに追加した. これはまた, *Dinckleria* 属のインドからの最初の記録でもある. 本属は葉細胞表面

に乳頭が存在する点でハネゴケ科の他の属とは異なる. 本種についてインド産植物にもとづき詳しく記載し, 図示した.

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