Devendra Kumar SINGHa,*, and Shuvadeep MAJUMDARB: *Radula cavifolia (Radulaceae, Marchantiophyta)—an Addition to the Indian Bryophyte Flora from Eastern Himalaya

aNational Botanical Research Institute, Rana Pratap Marg, Lucknow, 226001 INDIA; bBotanical Survey of India, Central National Herbarium, Howrah, 711103 INDIA
*Corresponding author: singh_drdk@rediffmail.com

Summary: *Radula cavifolia* Hampe ex Gottsche, Lindenb. & Nees is reported for the first time from Anjaw District of Arunachal Pradesh, India. The description and illustration based on Indian plants are given. The species is characterized by extremely small plants with normal and stylar branching, 4–5 cells thick stem with yellowish brown, thick-walled cortical and medullary cells with conspicuous trigones, and orbicular, strongly concave, subequally bilobed leaves.

The genus *Radula* Dumort. is one of the most diverse genera of liverworts, consisting of about 250 species and infraspecific taxa (Söderström et al. 2016). It is widely distributed from boreal to antipodal regions with maximum diversification in warm and humid regions of the world (Devos et al. 2011). In the present state of our knowledge, the genus is represented in India by 29 species, including *R. stenocalyx* Mont. and *R. campanigera* Mont. recently confirmed to be present in Indian bryophyte flora (Promma and Chantanaorrapint 2015, Singh et al. 2016, Singh Deo and Singh 2017).

Recent examinations of the liverwort collection preserved in the Botanical Survey of India, Shillong (ASSAM) from Anjaw district of Arunachal Pradesh in the Eastern Himalaya revealed the presence of *R. cavifolia* – a species so far known from China, Indonesia, Japan, Korea, Malaysia, Philippines, Taiwan, Thailand, Vietnam and Hawaii. This species is described and illustrated here in detail based on Indian plants to facilitate its easy identification.


Plants brownish in herbarium; shoots 3–6 mm long, 0.3–0.6 mm wide including leaves, rarely branched; normal branches obliquely spreading, few, (0.12–)0.30–0.52 mm long, (0.09–)0.20–0.25 mm wide including leaves, stylar branches many, 0.1–0.2 mm long, 0.05–0.08 mm wide. Stems more or less circular in outline in transverse section, 55.0–62.5 × 72.5–80.0 µm, 4–5 cells across diameter, not differentiated; cortical cells 7.5–15.0 × 10.0–22.5 µm; medullary cells 7.5–22.5 × 7.5–17.5 µm, both cortical and medullary cells thick-walled, yellowish brown, with conspicuous trigones. Rhizoids present on carinal region of the leaf lobule, few, fasciculate, brown. Leaves mostly contiguous to imbricate, widely spreading; leaf lobe more or less orbicular, 0.20–0.31 × 0.17–0.27 mm, apex rounded, margin entire, dorsal margin arched, dorsal base of leaf lobe on stems slightly auriculate, covering 1/2 to entire stem width; apical leaf lobe cells 10.1–16.2 × 9.1–14.1 µm; median leaf lobe cells 14.1–20.2 × 10.1–14.1 µm; basal leaf lobe cells elongated, 13.1–25.2 × 8.1–20.2 µm; cells thin-walled, with small, triradiate trigones, intermediate thickenings absent; surface smooth; leaf lobules large, oblong, strongly inflated, 3/4–4/5 of leaf lobe length, 0.15–0.21 × 0.12–0.17 mm, apex obtuse to somewhat truncate, abaxial margin slightly arched, adaxial margin slightly arched to more or less straight, base occasionally covering...


D. K. Singh and M. Majumdar. 東ヒマラヤより見出されたインド新産の Radula cavifolia (ケビラゴケ科, 苔類)

インド東北部に位置するアルナーチャル・ブラデーシュ州の Anjaw district から苔類ケビラゴケ属 (ケビラゴケ科) の 1 種, Radula cavifolia Haup ex Gottsche, Lindenh. & Nees を初めて報告した。本種は, 植物体が小さいこと, stylar branch を持つこと, 基は断面で 4–5

細胞層からなること, 葉は円形で強く凹み, 二つに折りたたまれること, 腹片は大きく, 背片の 3/4–4/5 の長さになることなどの特徴を持つ。

(®インド・National Botanical Research Institute,

bインド・植物調査所国立中央標本館)