Bazzania bidentula (Steph.) Steph.- An addition to Indian bryoflora

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Bazzania bidentula (Steph.) Steph. has been reported for the first time in Indian bryoflora from Dibang Valley district, Arunachal Pradesh.

Key-words- *Bazzania*, Arunachal Pradesh, Bryoflora.

INTRODUCTION

THE genus *Bazzania* S.F. Gray, comprising about 250 species (Schuster 1968) globally, is represented in India by 13 species (Sharma & Srivastava 1993). An examination of the recent collections of the genus from Mehao wildlife Sanctuary, Arunchaal Pradesh revealed some interesting specimens which do not match with any of the species known from India. A subsequent critical investigation of the specimens and review of literature (Hattori & Mizutani 1958; Kitagawa 1967; Mizutani 1967) resulted into the discovery of *Bazzania bidentula* (Steph.) Steph., for the first time in Indian bryoflora, so far known to occur only in China, Taiwan, Korea and Japan. The species has been described and illustrated in the paper to facilitate its easy identification.

DESCRIPTION

Bazzania bidentula (Steph.) Steph. In Yasuda, Shokubutsugaku Kakuron, Inkwabu 711 (1911).

Text-figs 1-22

Mastigobryum bidentulum Steph. Soc. Sci. Nat. Cherbourg **29**: 222 (1894)

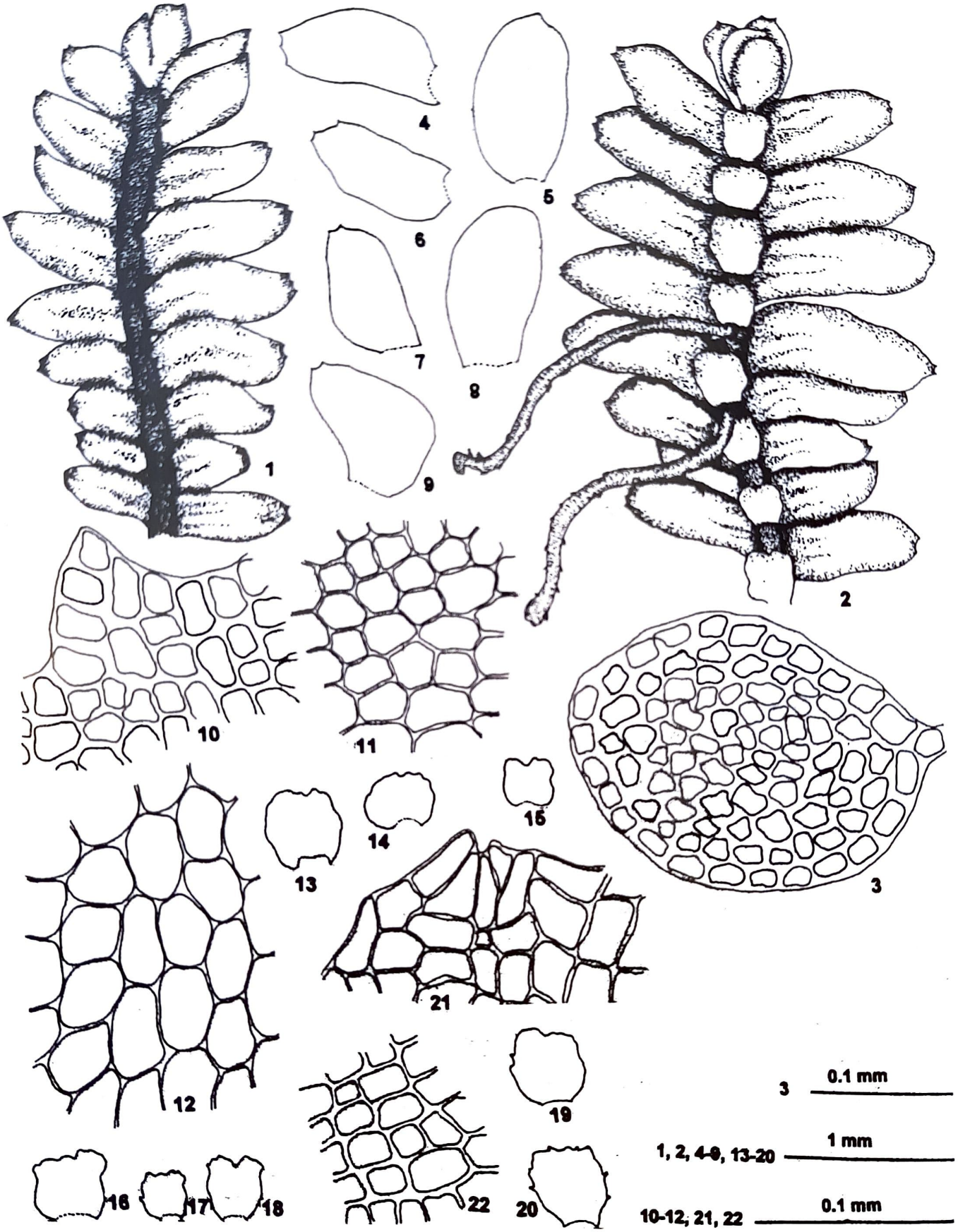
Plants dark green-olive green, 1.9-2.7 cm long, 0.5-3 mm wide; stem with ventral intercalary branching, postical flagella many, rhizoids scarce or almost absent; cross section of stem elliptical in outline, 0.14 (-0.17)- 0.2 (-0.27) mm, 8-11 cells across diameter; cortical cells larger, 20-32 x 20-28.5 µm; medullary cells 16-28 x 16-22 µm. Leaves alternate, incubously arranged, slightly imbricate, ovate-oblong, 0.8-1.25 x 0.4-0.55 mm; apex narrowed, bidentate or simple acute or obtuse or rarely tridentate; teeth short, acute, apiculate or obtuse; apical cells sub quadrate-rectangulate 20-27.5 x 11.5-20.5 µm thick walled; median cells quadrate-sub quadrate to polygonal, 16-27.5 x 16.23 µm, thin walled, trigones feeble; basal cells elongated- rectangulate, 20.5-39 x 11.5-25.5 µm, trigones conspicuous. Under leaves small to medium, 0.2-0.4 x 0.25-0.4 mm, rounded-quadrate; apex truncate or irregularly shortly locate; lobes irregular, obtuse; apical and middle cells sub quadrate-rectangulate, 20-48.5 x 16-40.5 µm, hyaline, thin walled, basal cells quadrate-sub quadrate or elongated, 10-28.5 x 12-16 µm, brown, thick walled.

Distribution: India: Arunachal Pradesh; China, Taiwan, Korea, Japan.

Specimens examined: Terrestrial, growing on rocks, between 7th and 8th km towards Tewarigaon from Roing (*ca.* 1100 m), Mehao Wildlife Sanctuary, Arunachal Pradesh, 1-12.2000, 1.13.2000 D.K. Singh 98510 (BSD)

DISCUSSION

Bazzania bidentula is an Eastern Asiatic species, so far known to occur in China, Taiwan, Korea and Japan. The species is characterized by ovate-oblong, bidentate or simply acute or obtuse or rarely tridentate leaves (figs. 4-9), round-quadrate underleaves with truncate or shortly lobately divided apex with irregular,



Text-figs1-22: *Bazzania bidentula* (Steph.) Steph. 1. A Portion of plant (dorsal view); 2. The same (ventral view); 3 . T.S. stem; 4-9. Leaves; 10. Apical cells of leaf; 11. Median cells of leaf; 12. Basal cells of leaf; 13-20. Underleaves; 21. Apical cells of underleaf; 22. Basal cells of underleaf.

obtuse lobes (figs. 13-20) and presence of postical flagella (fig. 2). It is closely allied to *Bazzania mayebarae* Hatt. which also has bidentate leaves and few flagella (Hattori & Mizutani 1958). But the former is clearly separable in having smooth cuticle as against papillose in case of the latter. The Indian specimens of *B. bidentula* differ from their East Asian counterparts in size of the plant being larger in length and breadth. However, they fully conform to each other in other morphological details, such as the size and arrangement of leaf cells, stem anatomy and structure and size of underleaves.

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