

DICRANOLEJEUNEA YOSHINAGANA (HATT.) MIZUT. NEW TO INDIAN BRYOFLORE

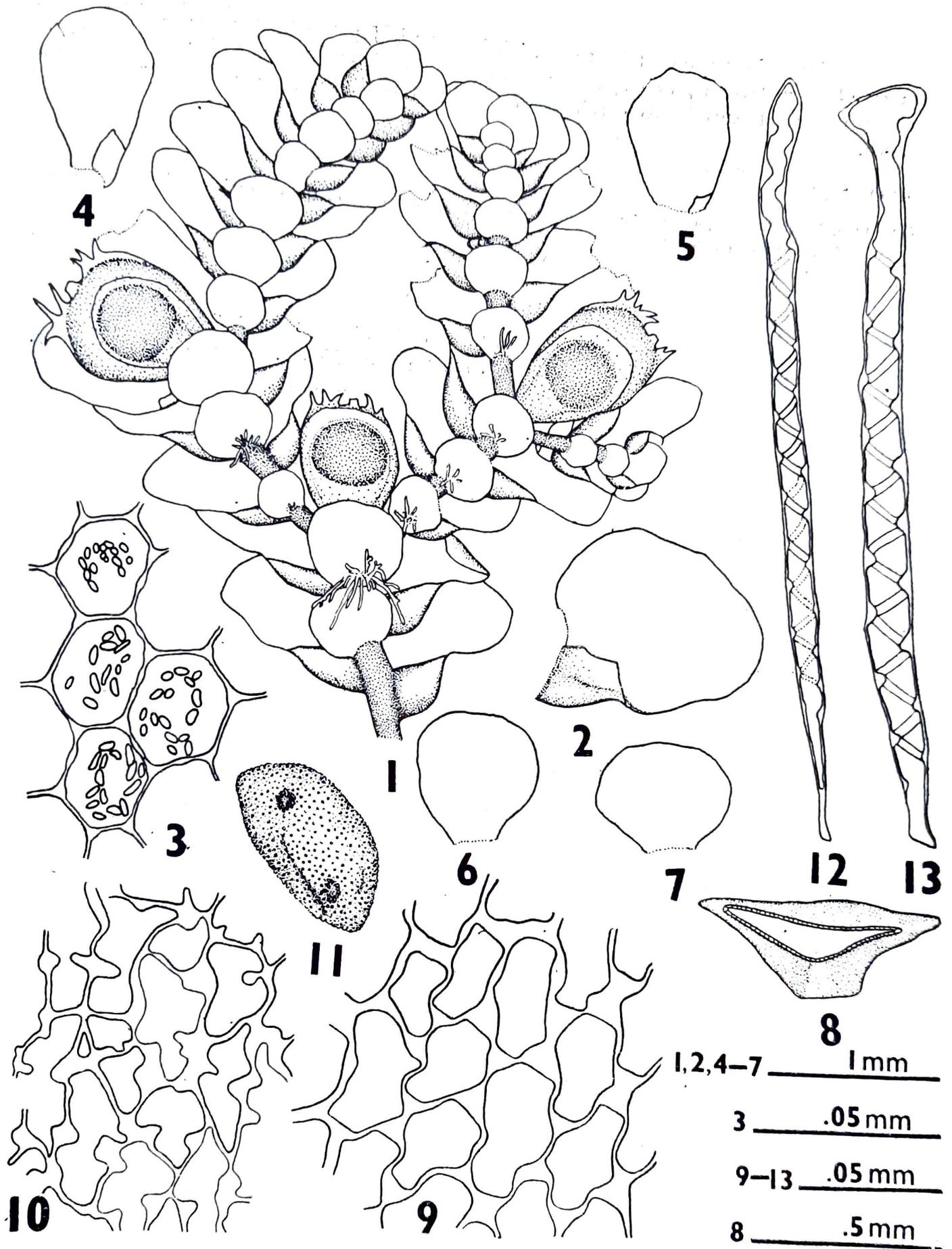
An investigation of a collection of liverworts made during April-May, 1981 from Karnataka has revealed fertile specimens of *Dicranolejeunea yoshinagana* (Hatt.) Mizut., a taxon so far endemic to Japan. The discovery of this species from India is of considerable significance as the distributional range is extended from temperate to tropics. Also, of the three species belonging to this genus in Asia [MIZUTANI, 1980; viz. : *D. gilva* St. confined to Himalayas and Khasi-Jaintia Hills, *D. javanica* St. endemic to Java and *D. yoshinagana* (Hatt.) Mizut. earlier endemic to Japan] the representation of two species in India is the highest for any single territory of Asia.

The salient characters of the plant are given below :

Plants green, scarcely branched, branching of the *Lejeunea*-type, sometimes *Frullania*-type. Stem in cross-section (0.14-0.16 × 0.16-0.21 mm) with 10-12 thin-walled cortical cells and 30-40 comparatively smaller, thin-walled medullary cells without or with obsolete trigones. Leaves squarrose, lobe ovate, 1-1.2 mm long, 0.8-1.0 mm wide, with obtuse or rounded apex, entire-wavy margin, cells arranged in diverging rows with distinct cordate trigones and intermediate nodular thickenings, basal cells 32-60 × 32-44 μm, median cells 28-44 × 28-40 μm, marginal cells 12-24 μm long and wide; oil-bodies numerous per cell, homogeneous, rounded (2-3 μm in diameter), oval or spindle-shaped (3-5 × 2 μm); lobule ovate, 1/3 or slightly more of the lobe length, 0.32-0.45 mm long, 0.27-0.29 mm wide, mostly bi-dentate. Underleaves orbicular or reniform, 0.32-0.48 mm long, 0.38-0.56 mm wide, with entire-wavy margin and rounded apex. Female inflorescence usually with two subfloral innovations, bract-lobe obovate-oblong, 0.85-1.12 mm long, 0.61-0.72 mm wide, apex rounded, margin entire-wavy; lobule very small, 1/8-1/5 of the lobe length, 0.08-0.24 mm long, 0.06-0.16 mm wide; bracteole 0.64-0.75 mm long, 0.73-0.86 mm wide, apex rounded, margin entire-wavy; perianth obovate 0.88-0.96 (-1.04) mm long, 0.61-0.80 mm wide, tri-plicate (2 lateral and one broad ventral plicae, lateral plicae slightly winged and with 2-10 teeth, ventral plica with 1-2 dentition), capsule wall bistratose, outer layer with trigonous thickenings, inner layer with sinuate-nodular thickenings; spores variously shaped, 64-84 μm long, 24-40 μm wide, ornamented with minute papillae and isolated groups of elongated papillae; elaters trumpet-shaped or sometimes with both ends tapering, with sinuate thickening and often also with single faint spiral thickening band.

Specimen examined : LWU No. 4597/81, Loc. India, Karnataka, Mercara (12°26'N, 75°47'E), Abbi fall, on bark, alt. ca 700 m, coll. D. Kumar, A. Kumar and U. S. Awasthi, Dt. April 30, 1981, Det. R. Udar and U. S. Awasthi, LWU No. 4604/81, Loc. India, Karnataka, Mercara (12°26'N, 75°47'E), on bark, alt. ca 700 m, Coll. D. Kumar, A. Kumar and U. S. Awasthi, Dt. May 1, 1981, Det. R. Udar and U. S. Awasthi, NICH No. 26509, Loc. Japan, Uigo, Otomure, Nishimuragun, Wakayame-Ken, On rock, alt. 400 m, Coll. T. Kodama, Dt. January 10, 1965, Det. T. Kodama.

In Japanese specimen the perianth exhibits 1-3 ventral plicae (which are represented by dentition only towards apex) whereas in Indian specimens there is only one broad ventral plica either devoid of any dentition or with 1-2 dentitions.



Figs. 1-13. *Dicranolejeunea yoshinagana* (Hatt.) Mizut. :

1. Portion of the plant in ventral view. 2. Leaf. 3. Median cells of the leaf with oil-bodies. 4,5. Female bracts. 6, 7. Female bracteoles. 8. Cross-section of the perianth (semidiagrammatic). 9. Outer layer of the capsule wall. 10. Inner layer of the capsule wall. 11. Spore. 12, 13. Elaters.

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REFERENCE

- MIZUTANI, M. (1980). Notes on the Lejeuneaceae 4. Asiatic species of the genus *Dicranolejeunea*. *J. Hattori Bot. Lab.*, **48** : 235-242.

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