

Fabronia schensiana C. Muell., a new record from Palni Hills, Tamil Nadu, South India

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ABSTRACT

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Fabronia schensiana C. Muell., belonging to the family Fabroniaceae, is a rare taxon and has been reported from Sikkim and Nagaland in Eastern Himalaya and from Kerala in South India. During the study of bryophytes from Palni Hills, Tamil Nadu (South India), the fertile plants of this taxon were collected, growing as corticolous population in Kodaikanal (Observatory Road), which shows its extended distribution in peninsular India from Kerala to Tamil Nadu. The South Indian population has been described and illustrated along with their sporophytic details.

Key-words: Fabroniaceae, *Fabronia schensiana*, corticolous, South India.

INTRODUCTION

Fabronia Raddi is a large genus (represented by about 95 species) and occurs mainly in tropical and warm temperate regions of the world (Vohra 1983, Shabbara & Ghanem 2006). Lal (2005) listed 10 species of *Fabronia* from India, i.e. *F. assamica* Dix., *F. ciliaris* (Brid.) Brid., *F. curvirostris* Doz. & Molk., *F. goughii* Mitt., *F. madurensis* Dix. & Vard., *F. minuta* Mitt., *F. pusilla* Raddi., *F. schensiana* C. Muell., *F. schmidii*, C. Muell. and *F. secunda* Mont. Of these, *F. curvirostris* Doz. & Molk., *F. goughii* Mitt., *F. madurensis* Dix. & Vard., *F. schmidii* C. Muell. and *F. secunda* Mont. are reported from South India (see also Chopra 1975, Nath et al. 2007). However, Daniels (2010) listed 5 species from Tamil Nadu state (three species from Palni Hills and four species from Nilgiri Hills). Among these, *F. madurensis* Dix & P. Vard. is reported from Palni Hills only, *F. pusilla* Raddi and *F. schmidii* C. Muell. are reported from Nilgiri Hills only while *F. gaughii* Mitt. and *F. secunda* Mont. are reported from both Nilgiri and Palni Hills. During bryological exploration of the Palni Hills,

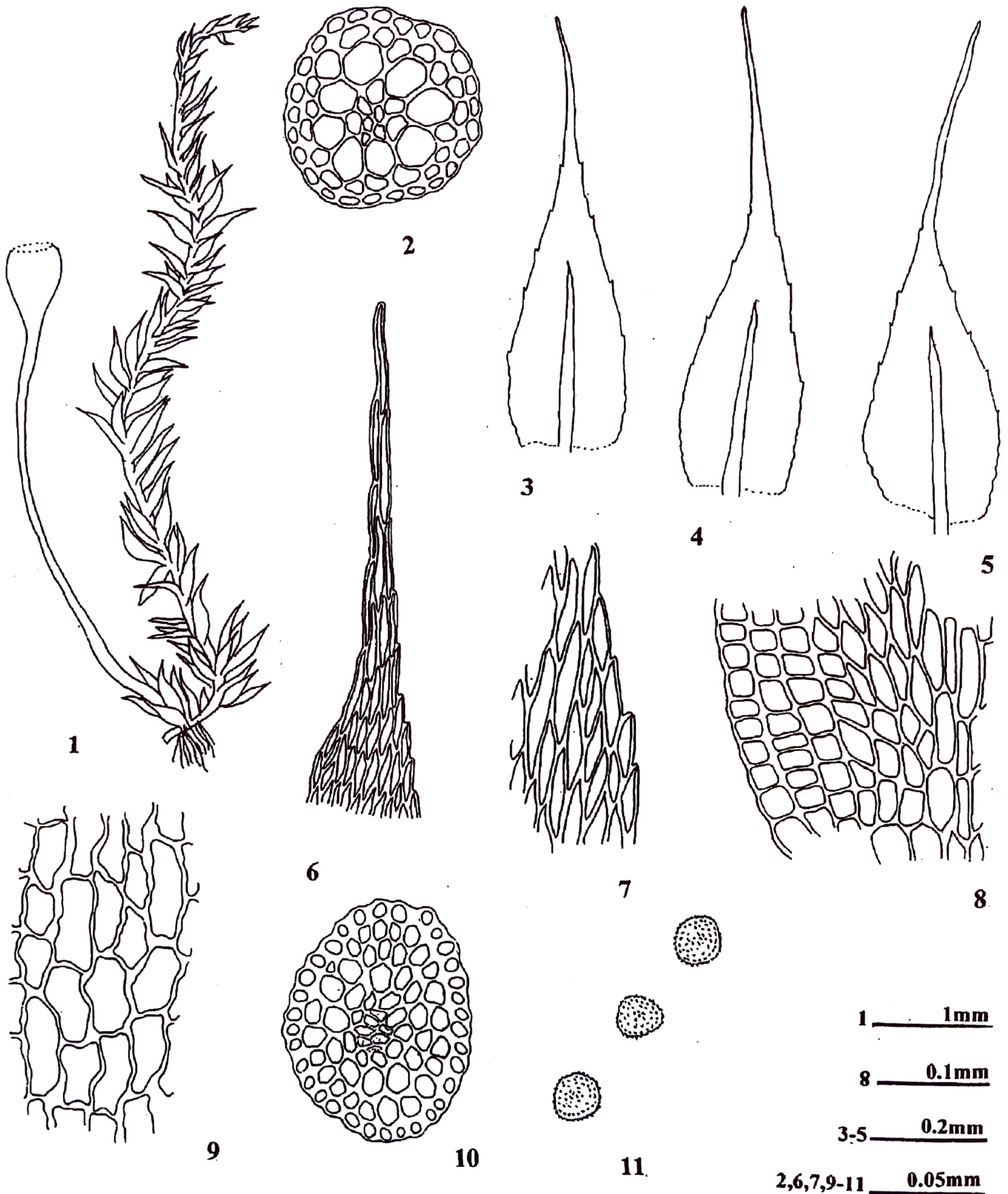
the fertile plants of *Fabronia schensiana* C. Muell. have been collected which are described and illustrated here with sporophytic details. This is an Asiatic species which is reported so far from North-east Himalayas, Nepal, China and India (Kerala, Sikkim and Nagaland) only (Gangulee 1978-1980, Vashistha 1998, Lal 2005, Nair et al. 2005, 2007, 2008, Bansal & Nath 2011). The present report shows extension in the distributional range in India in general and in the peninsular India in particular.

TAXONOMIC DESCRIPTION

Fabronia schensiana C. Muell. Nuov. Giorn.
Bot. Ital. n. ser. 4: 262.1897

Text-figures 1-11

Description: Plants yellowish green and irregularly branched, 0.5-2.5 cm long and 0.4-0.6 mm wide with leaves, pleurocarpous, corticolous. Branches 5.0-8.0 mm long and 0.8-1.0 mm wide with leaves. Stem 0.05-0.09 mm in diameter, cells of outer two rows small, slightly thick walled, 7-11 x 2-4 μm , inner cells large, thin walled, 19-26 x 7-11 μm in one row, central cells



Text-figures 1-11. *Fabronia schenciana* C. Muell. 1. A plant with sporophyte. 2. Cross-section of the stem. 3-5. Leaves. 6. Apical leaf-cells. 7. Marginal leaf-cells. 8. Basal Leaf-cells. 9. Capsule wall (surface view). 10. Cross-section of the seta. 11. Spores. All figures drawn from 20441/08 (LWU).

small, thin walled, 11-15 x 4 μ m. Leaves closely arranged, erect, lanceolate, 0.78-0.94 mm long and 0.21-0.25 mm wide, apex gradually narrowed into subulate apex, margin minutely dentate almost throughout, dentitions one celled, subula smooth. Costa single, about $\frac{1}{2}$ of the leaf length. Leaf-cells rhomboidal, apical cells 38-57 x 7-11 μ m, tip cells very much elongated, up to 95-133 μ m long, middle cells 49-57 x 7-11 μ m, basal cells 11-15 x 7-11 μ m, rectangular to rhomboid near costa and quadrate - rectangular near margin in 2 or 3 rows. Sporophyte present on short lateral branches. Seta yellowish, erect, 3-4 mm long and 0.08-0.12 mm in diameter. Capsule erect, small, urn shaped, 0.43-0.64 mm long and 0.34-0.43 mm wide. Peristome teeth fragile, disintegrated. Spores small, papillose, 15-19 μ m in diameter.

Habitat: Plants grow on bark surface in association with *Metzgeria indica*, *Lejeunia flava* and *Frullania campanulata*.

Specimen examined: South India: Tamil Nadu, Palni Hills, Kodaikanal (Observatory Road), alt. ca. 2314 m, Lat. 10^o 13.776'N and Lon. 77^o 27.587' E, P. K. Verma & Afroz Alam, 29 December 2008, 20441/08 (LWU).

Range: Nepal, China, India (Gangulee 1978-1980)

Distribution in India: Eastern Himalaya: Sikkim, Nagaland (University Guest House, Mokokchung). South India: Kerala: Wayanad District - Chembra Estate, Idukki District - Munnar; Tamil Nadu: Dindigul District - Kodaikanal (Palni Hills).

DISCUSSION

Fabronia schensiana C. Muell., an Indo-Chinese (Asiatic) species, was described and illustrated by Gangulee (1978-1980). Nair et al. (2005, 2007) described and illustrated this taxon, with vegetative details only, from Kerala, showing its extended

distribution from north to south. The present study reveals the presence of this taxon in Tamil Nadu also, which shows its further extension in distributional range. The plants of *F. schensiana* from Palni Hills are fertile with mature sporophyte. They are close to Himalayan population in the size of the plants, leaf, leaf-cells, seta length and capsule size. The South Indian population reported from Kerala is vegetative and has comparatively smaller plants with smaller leaves and leaf-cells. Besides, the dentitions on the margin of the leaves are more prominent as compared to the plants from Palni Hills and Himalayan population (Nair et al. 2005, 2007).

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